

**Perfectionism, Overthinking and Emotions in Youth  
Footballers**

Tracy Catherine Donachie

Submitted in accordance with the requirements for the degree of  
Doctor of Philosophy

The University of Leeds  
York St John University, School of Sport

August 2018



The candidate confirms that the work submitted is her own, except where work which has formed part of jointly-authored publications has been included. The contribution of the candidate and the other authors to this work has been explicitly indicated below. The candidate confirms that appropriate credit has been given within the thesis where reference has been made to the work of others.

Publication produced from this thesis:

Donachie, T. C., Hill, A. P., & Hall, H. K. (2018). The relationship between multidimensional perfectionism and pre-competition emotions of youth footballers. *Psychology of Sport and Exercise*, 37, 33–42.

Contributions of candidate and co-authors:

Tracy C. Donachie – Thesis – Project lead and principally responsible for study design, all data collection, literature search, analysing the data, and writing of the introductions, methods, results and discussions. Lead correspondent with the Chair of the Research Ethics Sub-Committee at York St John University.

Publication – Principally responsible for writing of manuscript. Lead correspondent with the Associate Editor, Hulya Asci, during submissions and following reviews.

Andrew P. Hill – Thesis – Involved in conceiving the ideas, conceptualisation, support and guidance for analyses, and editorial work. Publication – Provided feedback on several drafts of the manuscript and response to the reviewers.

Howard K. Hall – Thesis – Provided guidance on the candidate's initial ideas for the project. Publication – Provided feedback on initial drafts of the manuscript and the rationale outlined in the introduction.

Sarah H. Mallinson-Howard – Provided feedback on one chapter of the manuscript.

Daniel J. Madigan – Provided guidance on data analysis of one chapter of the manuscript.

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

The right of Tracy Donachie to be identified as Author of this work has been asserted by her in accordance with the Copyright, Designs and Patents Act 1988.

© 2018 The University of Leeds and Tracy Donachie

## Acknowledgements

This research has been carried out by a team which has included Professor. Andrew P. Hill, Dr. Sarah Mallinson-Howard, and Dr. Daniel Madigan. I would like to say thank you to my supervisors especially Andy for steering me in the right direction, providing me with constructive feedback and helping me grow as both a researcher and a person. I would like to extend a special thank you to Professor. Howard Hall who helped guide my research from the beginning.

I would like to thank the football players, coaches, parents and teachers who gave time and energy to provide insights into their thoughts and feelings: they were fundamental to the research.

I am very grateful for the fellow PGR students and the cohesive environment of the Graduate Centre. Without the intellectual conversations, daily laughs, and Sri Lankan curries, my PhD may have been completed quicker but would not be to the calibre that I am submitting.

I thank my family and friends for supporting me and believing in me.

I thank yoga and the Yogabomb community for keeping me grounded during my PhD. Yoga helped relieve anxiety when I struggled with learning different methods of statistical analysis. Teaching yoga also gave me a sense of purpose. After every class I taught, I would read a quote to the class, many of which were relevant to the learnings of my PhD. Yoga gave me a forum to help people with overthinking by promoting staying in the moment.

I thank Lucy Millard. You help me believe in myself and stay strong when I need it the most. Thank you for loving me unconditionally.

## **Abstract**

Perfectionism entails a salient cognitive component characterised by a ruminative response to imperfection. However, research examining the influence of this cognitive component in sport is limited. The broad aim of this thesis was therefore to extend previous research in perfectionism by examining the relationships between perfectionism, overthinking (e.g., perfectionistic cognitions) and emotions in the context of football. To achieve this aim, four empirical studies were conducted. The first study adopted a cross-sectional, survey-based design and found that perfectionistic cognitions predicted negative pre-competition emotions (anxiety, anger, and dejection) when controlling for self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP). The second study adopted a longitudinal, survey-based design and found that, at between-person level, perfectionistic cognitions were a mechanism by which SOP and SPP were significantly and positively related to pre-competition emotions (anxiety, dejection, excitement, anger, and happiness) and dimensions of anxiety (cognitive and somatic) and anger (feel anger, verbal anger, and physical anger). Also, at within-person level, SOP (but not SPP) predicted changes in perfectionistic cognitions, which in turn predicted changes in pre-competition anxiety, excitement, and anger, and dimensions of anxiety and anger. The third study adopted a mixed-methods approach to identify perfectionistic footballers and interview them about their psychological experiences pre-, during-, and post-performance. Perfectionistic footballers described experiencing a range of cognitions and emotions during the course of their performances. Because the three studies provided evidence that perfectionistic cognitions are likely to impact the emotional experiences of footballers, the fourth study examined the effectiveness of a self-help intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions. The findings demonstrated that SPP, perfectionistic cognitions, anxiety, anger, and dejection significantly reduced because of the intervention. Collectively, the thesis supports the notion that the cognitive component of perfectionism is important in contributing to negative pre-competition emotions for footballers.



## Table of Contents

<b>Acknowledgements.....</b>	<b>II</b>
<b>Abstract.....</b>	<b>III</b>
<b>Table of Contents .....</b>	<b>- 1 -</b>
<b>Chapter 1 Introduction to current thesis .....</b>	<b>- 5 -</b>
1.1 Football as a context .....	- 5 -
1.2 Conclusion .....	- 13 -
<b>Chapter 2 The debate to define perfectionism .....</b>	<b>- 14 -</b>
2.1 Early conceptualisations of perfectionism .....	- 14 -
2.2 Models and measures of perfectionism.....	- 18 -
2.3 Perfectionism research outside sport .....	- 26 -
2.4 Perfectionism research in sport.....	- 29 -
2.5 Conclusion .....	- 41 -
<b>Chapter 3 Perfectionism and overthinking .....</b>	<b>- 42 -</b>
3.1 Models of overthinking .....	- 42 -
3.2 Research examining rumination.....	- 45 -
3.3 Research examining perfectionism and rumination.....	- 47 -
3.4 Perfectionism Cognitions Theory .....	- 49 -
3.5 Review of research examining perfectionistic cognitions .....	- 52 -
3.6 Perfectionistic cognitions in sport.....	- 54 -
3.7 Conclusion .....	- 55 -
<b>Chapter 4 The aims of this thesis .....</b>	<b>- 56 -</b>
<b>Chapter 5 Multidimensional perfectionism and pre-competition emotions of youth footballers.....</b>	<b>- 57 -</b>
5.1 Pre-competition emotions.....	- 57 -
5.2 Personality as a critical antecedent of emotion .....	- 63 -
5.3 Perfectionistic cognitions and emotion .....	- 65 -
5.4 Purpose of study one .....	- 67 -
5.5 Method .....	- 67 -
5.6 Results .....	- 72 -
5.7 Discussion.....	- 78 -
5.8 Conclusion .....	- 81 -

<b>Chapter 6 A longitudinal study of perfectionism and multidimensional pre-competition emotions in youth footballers</b> .....	<b>- 82 -</b>
6.1 Multidimensional pre-competition emotions.....	- 82 -
6.2 Perfectionism and multidimensional emotions.....	- 87 -
6.3 Perfectionistic cognitions and multidimensional anxiety and anger .....	- 92 -
6.4. The mediating role of perfectionistic cognitions.....	- 93 -
6.5 Longitudinal designs and between-group and within-group variance.....	- 96 -
6.7 Purpose of study two .....	- 98 -
6.8 Method .....	- 102 -
6.9 Results .....	- 105 -
6.10 Discussion.....	- 116 -
6.11 Conclusion.....	- 123 -
<b>Chapter 7 Perfectionism, overthinking, and psychological responses to setbacks in football: A mixed-methods approach</b> .....	<b>- 124 -</b>
7.1 Overthinking recap .....	- 124 -
7.2 Perfectionistic reactivity.....	- 125 -
7.3 Critique of research methods .....	- 133 -
7.4 Qualitative perfectionism studies review .....	- 137 -
7.5 Purpose of study three .....	- 141 -
7.6 Method .....	- 141 -
7.7 Results .....	- 158 -
7.8 Discussion .....	- 181 -
7.9 Conclusion.....	- 192 -
<b>Chapter 8 Helping perfectionistic athletes help themselves: A randomised control trial of the effectiveness of a psychoeducational book</b> .....	<b>- 194 -</b>
8.1 Managing perfectionism .....	- 194 -
8.2 CBT interventions for perfectionistic cognitions.....	- 203 -
8.3 Complications.....	- 205 -
8.4 Self-help interventions.....	- 206 -
8.5 Current study.....	- 213 -
8.6 Purpose of study four .....	- 214 -
8.7 Method .....	- 214 -
8.8 Results .....	- 224 -



8.9 Discussion .....	- 258 -
8.10 Conclusion .....	- 263 -
<b>Chapter 9 General discussion.....</b>	<b>- 264 -</b>
9.1 Purpose of the thesis.....	- 264 -
9.2 Summary of findings.....	- 265 -
9.3 Remaining questions and future directions .....	- 272 -
9.4 Limitations and future directions.....	- 277 -
9.5 General conclusion.....	- 281 -
<b>List of Tables .....</b>	<b>- 283 -</b>
<b>List of Figures .....</b>	<b>- 285 -</b>
<b>List of References .....</b>	<b>- 286 -</b>
<b>List of Abbreviations.....</b>	<b>- 339 -</b>
<b>Appendix A .....</b>	<b>- 340 -</b>
<b>Confirmation of ethical approval .....</b>	<b>- 340 -</b>
A.1 Study one and two ethics approval letter .....	- 340 -
A.2 Study three ethics approval letter .....	- 341 -
A.3 Study four ethics approval letter .....	- 342 -
<b>Appendix B .....</b>	<b>- 343 -</b>
<b>Study information sheets and verbal assent/informed consent .....</b>	<b>- 343 -</b>
B.1 Study one gatekeeper letter.....	- 343 -
B.2 Study one parent information sheet and opt-out consent template .....	- 344 -
B.3 Study one athlete information sheet and opt-out consent.....	- 345 -
B.4 Study one verbal assent .....	- 346 -
B.5 Study one verbal debrief .....	- 347 -
B.6 Study three debrief.....	- 348 -
B.7 Study four gatekeeper letter.....	- 349 -
B.8 Study four athlete information and consent.....	- 351 -
B.9 Study four control group letter.....	- 353 -
<b>Appendix C .....</b>	<b>- 355 -</b>
<b>Instruments used across studies .....</b>	<b>- 355 -</b>
C.1 Multidimensional Perfectionism Scale (Hewitt & Flett, 1991) ..	- 355 -
C.2 Child and Adolescent Perfectionism Scale (Flett, Hewitt, Boucher, Davidson, & Munro, 1997) .....	- 358 -
C.3 Perfectionistic Cognitions Inventory (Flett, Hewitt, Blankstein & Gray, 1998).....	- 359 -

C.4 Sport Emotion Questionnaire (Jones, Lane, Bray, Uphill, & Catlin, 2005).....	- 360 -
C.5 Competitive State Anxiety Inventory-2 (Martens, Burton, Vealey, Bump, & Smith, 1990) .....	- 361 -
C.6 Reactions-to-Mistakes Anger Scale (Spielberger, 1999) .....	- 362 -
C.7 The Attitudes Towards Seeking Professional Psychological Help (Fischer & Farina, 1995) .....	- 363 -
C.8 Book Progress .....	- 364 -
<b>Appendix D .....</b>	<b>- 365 -</b>
<b>Interview questions .....</b>	<b>- 365 -</b>
D.1 Interview Questions .....	- 365 -
D.2 Follow-up questions and prompts for interviews .....	- 367 -

## Chapter 1 Introduction to current thesis

“Football was [Gazza’s] first drug. He dedicated his whole life to it. A daily structure, a uniform, status, money, travel, a purpose in life, and I think most important of all, positive feedback. He belonged to something that he loved and that loved him.”

*Hunter Davies, Paul Gascoigne’s therapist (Davies, 2006).*

This chapter describes the unique nature of football in the UK and provides contextual information for the studies that follow. Football is the most popular sport in the UK, both in terms of number of people who participate and who spectate. It is also a highly lucrative business and includes the development of elite athletes with the aim of both improving a club’s playing squad and contributing to financial sustainability. Football academies are central to this part of the game. The academy system is harsh, challenging, and highly pressurised (Sagar, Busch, & Jowett, 2010). After successfully negotiating the academy system, professional football is a high-pressure job whereby players are expected to be “superhuman”, perform at high levels in front of 50,000 people, and meet the demands of managers, teammates, the media, and fans (e.g., Bailey, 2017). Once retired, professional footballers must adjust to a new life with few transferable skills having typically sacrificed education as part of their training. Therefore, while professional football is a highly coveted career, it also presents a highly stressful environment.

### 1.1 Football as a context

Football (or soccer) is the most commonly played team sport in the world for men, women, and children. Over 250 million people play in more than 200 countries (Fuller, Junge, & Dvorak, 2012). In England, over 11 million people participate in football: 8.2 million adults (6.2 million men, 2 million women) and 3.4 million children (2.5 million boys, 860,000 girls). In Scotland, football participation for 8–15 year-old boys outstrips any other sports participation. Sport Scotland (2008) indicated that 76% of this group play football at least once a month. Similarly, in Northern Ireland, football is the most popular sport among men with more than 58,000 people aged 4–24 years old participating in football (Irish Football Association, 2016).

Women’s football has gained considerable popularity in recent years. Between 2000 and 2006, FIFA reported 50% increase in the total number of female players worldwide (FIFA Communications Division, 2007). The number of women’s teams in affiliated football in the UK has risen 5% since 2010. Today, in England,

more girls participate in football than any other team sport and football is the ninth most popular monthly activity (UEFA, 2017). In Scotland, more than a quarter (26%) of girls participate in football at least once a month. Similarly, in Northern Ireland football is the second most popular sport among females behind Gaelic football (UEFA, 2018).

Football is considered the national sport in the UK. It has been described as “more than just a game”, “a “religion”, and “a way of life” (e.g., Jones, 1995; McLellan, 2008; Taylor, 2007). Football features daily in newspapers, television schedules, and social media (Sedghi, 2014). There is extensive television coverage, particularly on match days when Premier League stadiums are packed with crowds. For many football fans, a match involving their favourite club is the focal point of a weekend, with club football being important within families, social life, and communities (Conn, 2010). Football unites people who love the game, particularly those who support the same club, but it can also create fierce rivalries, contribute to violence, and fuel hooliganism (Dolton & MacKerron, 2018).

Football is also a multi-million pound business with Premier League clubs generating almost £7 billion in revenue annually (Deloitte, 2018). This revenue is from three key areas: match-day (e.g., ticket and corporate hospitality sales), commercial sources (e.g., sponsorship, merchandise), and broadcasting rights. The screening of the game is the most lucrative part of the business with the Premier League, in 2016–2017, generating approximately £660 million through media rights sales in Europe, the Middle East, and Africa, and about £220 million in America (Statistica, 2017). Broadcasting carries the largest percentage of revenue for most Premier League clubs (Deloitte, 2018); in 2016, the 20 clubs signed a three-year deal with broadcasters worth approximately £10 billion. In addition, on-pitch success (e.g., UEFA Champion’s League qualification) contributes to the financial success of top clubs.

The buying and selling of players is another huge source of income and expenditure for clubs, particularly those in the Premier League. Complaints are aired regularly that players are overpaid and the transfer market is out of control (Delaney, 2017). The revenue generated from exchanges of players reached an all-time high in 2017 when Neymar was bought by Paris Saint-Germain from Barcelona for £198 million, more than double the previous record of £89 million paid for Pogba by Juventus (Quick, 2017). Clubs are spending huge amounts of money on international transfer fees; in 2016-17, £4 billion was spent on 1407 international transfers (Christenson & Fenn, 2018). Manchester United recorded the biggest net

spend on transfers of £160 million despite only making £9 million from player sales that year (Smith, 2017). Subsequently, to develop their own players, Premier League clubs invest an average of £5 million yearly into their academies (the second largest expenditure for most clubs; Sports Business Group, 2015).

The landscape for aspiring female footballers in the UK is quite different. Until 2003, female footballers had to leave the UK to secure professional contracts. A four-year scholarship or professional contract overseas was the only choice for those seeking to earn a living from their talents. Fortunately, there has been a recent increase in both scholarship programs and professional clubs in the UK. The Football Association (FA) approved a one-tier, full-time structure for the 2018–19 season whereby more teams have full-time professional players. Currently, few England internationals have played professionally for their entire career, and only seven of the ten FA Women's Super League sides have all their players training on a full-time basis (BBC Sport, 2017).

The FA is investing more money into women's football to make the game more attractive to spectators, sponsors, and broadcasters. Almost £18 million a year is invested into women's football in England, nearly double of their French counterparts and a fifth more than Germany. In 2017, Sport England pledged to spend £30 million on grassroots football as a way to promote, retain, and double female football participation (Doble, 2017). Citing its financial and social benefits, the FA committed to developing the women's game to ensure success on the world stage. The effectiveness of the FA's investment is seen when looking at the success of England across World Cup competitions. In 2015, England won bronze at the FIFA's World Cup in Canada. Not only have England improved on the pitch, the number of spectators has increased. In November 2017, more than 55,000 attended their match versus Germany, more than the 40,181 for the previous friendly played by England men's' team.

### **1.1.1 Academy football**

Academies play a central role in football in the UK. The purpose of academies is to develop and nurture young talent with the vision of them becoming first team players (or to make the club money from a transfer). In 2012, the Premier League introduced the Elite Player Performance Plan (EPPP) as a long-term strategy to cultivate and retain more skilled homegrown players (Premier League, 2017). With the mission of the EPPP in mind, clubs across the four English divisions have invested significant resources in youth development and fifteen Premier League and nine Championship clubs have Category One EPPP

Academies. The EPPP works across three phases: Foundation (Under-9 to Under-11), Youth Development (Under-12 to Under-16) and Professional Development (Under-17 to Under-23). At Under-9, players sign a contract, which is renewed every 1-2 years, and play exclusively for their academy. At 16, the best players are offered a two-year, full-time scholarship contract that provides them with a chance to gain a professional contract.

Despite players gaining a scholarship that provides an opportunity to prove their potential as a professional, a survey of football academy players found that approximately two-thirds of players (65%) believed they were written off at an early stage (Mills et al., 2014). Of the 12,000 boys participating in Premier League academies, it is estimated that less than 10% make the first team and less than 1% make it to professional football (Green, 2009, Williams, 2009). Gordon Taylor, chief executive of the Professional Footballers' Association, reported that of those 16-year-old boys in a scholarship programme, 83% of them (5/6) are not playing professional football at 21-years-old. In the 2012/13 season, only 35 English under-21 players made appearances in the Premier League (Mills, Butt, Maynard, & Harwood, 2014). It is evident that, despite players showing promise at youth level, many of them do not become professional.

Football is the number one career choice for young boys in the UK (Quick, Dalziel, Thorton, & Raynor, 2008). For aspiring youth footballers, being a professional footballer is not simply a vocation or a passion, it is an identity (Manley, Roderick, & Parker, 2016). It is a result of over 10 years investment that starts in childhood and requires extraordinary dedication. However, because of the sacrifices required and the immense pressure, many youth athletes are unprepared to deal with the challenges and difficulties associated with the process of achieving a professional contract. Many young footballers suffer from psychological distress<sup>1</sup> when they do not gain a professional contract and are released from their club. The academy system been described as challenging and highly pressurised (Sagar et al., 2010), and an article in The Guardian titled "Football's biggest issue: The struggle facing boys rejected by academies" described the harsh way that youth players are rejected and the negative consequences of being released (Conn, 2017). It revealed a colourful account of the unique nature of academies and the

---

<sup>1</sup> Psychological distress is defined as a state of emotional suffering typically characterized by symptoms of anxiety and depression (Mirowsky & Ross, 2002).

dangers with the way youth players are rejected. Calvin (2017) described, “The stuff I’ve seen in academies. Coaches can be vile with the kids....” He told the story:

There was a lad, coming up to 16, a left-back. It had been deemed that he wasn’t going to be signed as a scholar...Our lad is doing what he been told to do. He’s played the ball inside...They’ve robbed it, got a counter-attack, and nearly score. The lad is berated from the sideline...Out of temper, a coach screams ‘Get off the pitch. Get off the pitch! Get off my pitch!’ I feel emotional now because the face of that child is right in the forefront of my mind. He has been demolished. There was no acknowledgement, no handshake. You could see that he wanted to cry and he didn’t want to show it. He made a mistake, but he did what we taught him, so actually we’re at fault, not the kid. He couldn’t speak to me. He had tears rolling down his face, and I just thought, ‘what the fuck have we become?’ To be treating so called elite talent, a maturing young man, in that way.

In support of the aforementioned anecdotal evidence, empirical evidence indicates that psychological distress in football academies may be common. A recent longitudinal study examined depressive symptoms in academy players ( $N = 167$ ) and found that initially 24% of the sample reported mild-to-major depressive symptoms and 11% reported major depressive symptoms. Three months later, the prevalence rates of distress increased whereby 33% of the sample reported mild-to-major depressive symptoms and 16% reported major depressive symptoms (Smith, Hill, & Hall, 2018). Smith et al. (2018) speculated that this increase may be partly explained by the increasing pressure and the reducing likelihood of retention the longer footballers remain in academies. They also highlighted that the level of depressive symptoms is likely to be an underestimation due to dropout/deselection.

Deselection from academy clubs is an especial source of psychological distress. A qualitative study explored the experience of stressors of male youth academy players. The processes of academy football and deselection were related to both short-term and long-term effects (Harwood, Drew, & Knight, 2010). In this research, the parents of players attended focus groups ( $N = 41$ ) and described that the way players were rejected from academies was particularly stressful and provided examples of insensitive comments and inappropriate ways that players were released. The manner of communication by academy staff was recognised as an ongoing stressor and parents raised concerns about the lack of empathy or consideration for their child’s future welfare. Similar to Reeves, Nicholls, and

McKenna (2011), deselection and securing contracts emerged as significant stressors for academy footballers.

Deselection from academies appears to have longer-term psychological implications for players. In a sample of youth (15 to 19 years-old) footballers ( $N = 91$ ) from English and Scottish Premier League and Football League academies, deselection was related to psychological distress (Blakelock, Chen, & Prescott, 2016). From data collected three times following deselection, 35.7% of participants reported depression and anxiety a week after deselection. The rate of psychological distress climbed to 53.5% three-weeks after deselection. The psychological distress experienced by footballers is perhaps unsurprising given, firstly, the heavy investment by young people in their football careers and secondly, based on the accounts in the aforementioned study (Harwood et al., 2010), the way in which players are treated when released from clubs.

### **1.1.2 Professional football experiences**

Psychological distress is not restricted to the players released from clubs. Professional footballers also experience psychological distress in the midst of their careers. Mellick (2017) described football as a high-pressure job where athletes are expected to be “superhuman”. In reality, footballers are more vulnerable to mental health issues than members of the public — the rates of depression and anxiety are higher (see Mental Health Foundation, 2016). For example, in a sample of professional male players ( $N = 149$ ) from six different countries, more than one quarter (26%) suffered from symptoms of depression and anxiety (Goutteborge, Frings-Dresen, & Sluiter, 2015). For comparison, 17% of the population in the UK suffer from symptoms of depression and anxiety (Mental Health Foundation, 2016). Additionally, 5% of the sample of footballers reported experiencing symptoms of burnout in the previous six-months, 26% experienced adverse nutrition behaviour, and 19% experienced adverse alcohol behaviour.

In a typical sport career, an athlete is exposed to more than 600 psychosocial, physical, and organisational stressors (see Arnold & Fletcher, 2012). The structure of elite football presents footballers with challenging situations throughout their careers (e.g., selection on weekly basis and contract renewal at the end of season). In an article “Seeking perfection in front of 50,000 people: Why football is a pressure cooker for mental health issues”, Bailey (2017) described the unique challenges faced by professional footballers. Players are constantly evaluated; at training and games, their performance is often scrutinised in order to be deemed fit for selection, or re-selection. Clarke Carlisle (Mellick, 2017) said:



Athletes, young enough to be doing their A-levels, are playing in the Premier League. We know the brain develops until the mid-20s so these players are going through changes and dealing with setbacks, criticism and feedback in the most public of positions. If we all think of the decisions we made aged 18 we would all admit we don't know how we would deal with making those decisions and then having 50,000 people criticise us for it. That pressure is not a one-off; it is a constant, weekly appraisal. We all make mistakes and learn from them. We all have bad days at work but we don't have that constant evaluation of our performance by thousands and millions of people.

For some footballers, negative psychological consequences may be related to adverse life events away from the football field, but for others, career dissatisfaction and injury have implications for their mental health. In a large sample of professional footballers ( $N = 607$ ), Gouttebauge, Aoki, and Kerhoffs (2015) investigated the prevalence of symptoms of common mental disorders (distress, anxiety/depression, sleep disturbance) and adverse health behaviours (adverse alcohol and nutrition behaviour, and smoking). Findings indicated that 38% experienced symptoms of psychological distress and 58% experienced adverse health behaviours. In addition, when professional footballers experienced adverse life events, injury and/or elevated levels of career dissatisfaction, they were more likely to experience symptoms of psychological distress and adverse nutrition behaviour. It appears that footballers who experience adverse life events, career dissatisfaction, and injury may be more susceptible to mental health issues.

Comparable prevalence rates of psychological distress exist in female footballers and it appears that poor performance, injury, and lack of support contribute to levels of psychological distress. In a sample of female footballers in Germany ( $N = 157$ ), a quarter had suffered at least one episode of mild-to-moderate depression in their career, and almost a third experienced symptoms of major depression (Prinz, Dvořák, & Junge, 2016). The career-time prevalence of depressive symptoms was 32.3%. When giving reasons for psychological distress, about half of the players (49.7%) reported "conflicts with coach/management", 48.4% reported that "poor performance" and "injury" and 40% reported "too little support/ acknowledgement by the coach when injured". Also, 46.5% of players reported that "psychological strain/stress after injury" led to poor performance. During their playing career, almost 40% of players wanted psychological support, but only 10% received it. After their career, the percentage of players wanting psychological support decreased to 24%, of whom 90% received it.

Research outside of the UK has produced similar findings. In a sample of Danish professional footballers ( $N = 348$ ), the prevalence rate of depression and anxiety symptoms (4-weeks) was 18.1% (Kilic et al., 2017). In addition, 14.7% reported psychological distress and 15.8% reported sleep disturbance. In comparison, the prevalence rates of depression and anxiety in a sample of male and female footballers in Iceland ( $N = 103$ ) were much higher. That is, 37.9% of the sample reported mild-to-severe anxiety symptoms, and 45.7% reported mild-to-severe depressive symptoms (Pálsson, 2016). Prevalence rates of psychological distress were lower in a sample of male and female football players from Switzerland ( $N = 471$ ) whereby 7.6% reported mild-to-moderate depression, 3% reported major depression, and 1.4% reported a moderate anxiety disorder (Junge & Feddermann-Demont, 2016). To explain the lower rates of depression and anxiety, Junge and Feddermann-Demont (2016) measured depression and anxiety separately and as a clinical diagnosis, whereas other studies combined anxiety and depression symptoms. More severely, 11% of overall deaths in professional footballers in Europe (2007–2013) were due to suicide (Gouttebarga & Aoki, 2014).

### **1.1.3 Post-professional football experiences**

For some players, retiring from football may be a positive experience resulting in the relief from the demands of training and competition and enthusiasm for other opportunities (e.g., Young, Pearce, Kane, & Pain, 2006). Players are more likely to adjust to retirement when they transition to other fulfilling careers (e.g., coaching or managerial roles; Lavalley, Gordon, & Grove, 1997) and when they feel supported by significant others (e.g., parents and coaches; Wylleman, De Knop, Ewing, & Cumming, 2000). But retiring from football can also be a negative experience and for some players, being a footballer is their main source of identity, making them susceptible to longer-term psychological consequences such as depression, identity crisis, lower self-worth or self-esteem, trauma, suicidal ideation, and attempted suicide (e.g., Douglas & Carless, 2009; Warriner & Lavalley, 2008; Wippert & Wippert, 2008, 2010). In addition to losing what they have been focusing on for most of their lives, players lose the daily structure, the physical demands, intense highs (and lows) of competition, and the money that professional football provides. Subsequently, they lose the interest of the public and media, praise from others, the companionship with teammates, and the sense of competence derived from being successful in sport (Drahota & Eitzen, 1998).

Initial research examining post-career psychological well-being (Guskiewicz et al., 2007) found that, in a sample of retired professional footballers ( $N = 2552$ ),

11.1% reported a previous diagnosis of clinical depression. At the time, 87.7% reported still suffering from clinical depression, almost half (46.1%) were being treated with antidepressant medication and 76.9% reported that depression limited their daily living activities. Since this study, estimates of the rate of depression in retired professional footballers have risen remarkably. In support, among samples of retired professional footballers (Gouttebarga et al., 2015, Van Ramele, Aoki, Kerkhoffs, & Gouttebarga, 2017; Kilic et al., 2017), 39% reported depression, 19–29% reported anxiety and depression, and 11–18% reported psychological distress were. Also, 42–65% of players reported adverse nutrition behaviour, 8–32% reported adverse alcohol consumption, and 11–12% reported adverse smoking behaviour. In addition, 16% reported burnout, 5% reported low self-esteem, and 28% reported sleep disturbance. Among these studies, reasons for psychological distress included concussion (Guskiewicz et al., 2007), adverse life events (Gouttebarga et al., 2015; Van Ramele et al., 2017), and injuries (Kilic et al., 2017). Also, 78% of those with one or more severe injuries reported that social support was limited (Gouttebarga et al., 2015). Thus, evidence supports that retiring from football can have negative implications for psychological well-being.

## **1.2 Conclusion**

Football, the most commonly played team sport in the world for men, women, and children, is considered the national sport in the UK. It is a multi-million pound business in which screening of the game, the trade of players, and academies account for a large proportion of the money within the sport. Academies play a central role in football, but despite increased investment and the introduction of EPPP, the chances of players obtaining a professional contract is low. Football requires not only high levels of physical performance, but also mental preparation, psychological skills, and resilience (Junge et al., 2000). As many footballers are likely to suffer negative psychological consequences, at some stage, there is a need to identify those athletes most at risk of developing psychological distress. For some footballers, life events, career dissatisfaction, injury, and lack of support make them more susceptible to distress. Personality may also be a determining factor for how individuals cope with the negative aspects of sport (e.g., rejection from clubs, injury).

## Chapter 2 The debate to define perfectionism

“Even perfection isn’t good enough so we push and push ourselves to succeed at work or at sport, in the gym, with a diet, or whatever it might be, striving for the approval we never got”

*Paul Gascoigne (Davies, 2006; Being Gazza: Tackling My Demons).*

The previous chapter described the landscape of football in the UK. Whether a footballer is participating at youth level, professional level or is retired, footballers are vulnerable to psychological distress. Psychological distress is more likely to occur for footballers who are deselected from clubs, become injured or experience adverse life events. Personality may be a determining factor for how individuals experience these situations. One personality characteristic related to psychological distress, both inside and outside sport, is perfectionism. Perfectionism is a trait or disposition reflecting a powerful need to be perfect (Hewitt & Flett, 1991). A number of different models and measures exist. However, arguably, the most complete theoretical model of perfectionism is Hewitt and Flett’s (1991) multidimensional model of perfectionism as it provides the most comprehensive account of perfectionistic behaviour available. This model differentiates three forms of perfectionism: self-oriented, socially prescribed, and other-oriented. The next section outlines the models and measures of perfectionism and provides support for the use of the Hewitt and Flett’s multidimensional model of perfectionism in the context of sport. A review of the research outside sport that pertains to the three dimensions of Hewitt and Flett’s model of perfectionism is provided. A comprehensive review of the research that has been conducted in sport using Hewitt and Flett’s measures of perfectionism is also provided.

### 2.1 Early conceptualisations of perfectionism

Perfectionism is the perceived or actual need to be perfect (Hewitt & Flett, 2004). For many years, researchers have debated exactly what constitutes perfectionism. With the abundance of different ways that researchers conceptualize and measure perfectionism, it is not surprising that when first examining the empirical evidence, it is easy to get lost in the messiness of the literature and be confused by the differences between the definitions, models, and instruments of perfectionism. In the last 27 years, over 2,500 articles on perfectionism have been published with research adopting different models and measures (Stoeber, 2018). Research has mainly focused on testing the models, examining the psychometric

properties of measures, and investigating the associated outcome variables. Hewitt, Flett, and Mikail (2017) argued that, with the growth in empirical evidence, it is too easy to simply think of perfectionism as a personality construct and forget perfectionism exists as a part of a complex person (Hewitt et al., 2017).

Clinical psychology and counselling researchers provided the first accounts of the characteristics of perfectionism (Adler, 1927; Horney, 1950; Hollender, 1965; Hamachek, 1978; Burns, 1980; Pacht, 1984). Many of these early conceptualisations emphasised the conceptual understanding of perfectionism in relation to how it manifests in people. Adler (1927) proposed that perfectionists are those who engage in rigid thought patterns about the need to be perfect. Similarly, Ellis (1958) suggested that perfectionism is characterised mainly by the belief patterns that one “should” be thoroughly competent, adequate, intelligent, and achieving in all areas of life. Further, the idea that perfectionism is characterised by “should” thought patterns was a key feature of Horney’s (1950) definition of perfectionism. Horney coined perfectionism as the “tyranny of should” in that perfectionism is associated with the frequent thinking that one should achieve perfection and one should appear flawless. The thoughts are accompanied with strenuous effort to fulfil the “should” and reach an idealized perfect self. A perfectionist’s thought processes are discoloured with absolutes and absurd extremities resulting in a pervasive undercurrent of anxiety, fear, and/or irritability. Any mistakes, exposure of flaws or even the idea of failure brings about panic, despair, and rage for perfectionists (Horney, 1950).

In addition to the self-focused cognitive despair, Horney (1950) noted an interpersonal component to perfectionism, namely that perfectionists often impose their high standards on others, holding them in contempt because of their own shortcomings. Perfectionists project their own annoyance of self onto others. If their flaws are exposed, they may turn angrily against the person whom they failed. Additionally, they often feel that people expect the impossible, and may react in two ways: either they are eager to live up to expectations and try to do so or they rebel against demands and act defiantly. According to Horney (1950), the infliction of should demands often whip perfectionists into action and drive them towards actualizing their idealized self. Consequently, anxiety and hostility arise when trying to create an idealized image of the perfect self and simultaneously move toward, move away from, and resist people.

Missildine (1963) articulated that perfectionism involves putting forth laborious effort in an attempt to achieve unattainable perfectionistic standards.

Those higher in perfectionism push themselves far beyond what is necessary and expend more energy on tasks than is warranted. Despite these superhuman efforts, perfectionists engage in constant belittling of their own accomplishments and are driven by rigid demands to do better. This driving force is psychologically troublesome and leaves a perfectionist with no lasting satisfaction. Missildine (1963) described the difference between striving for excellence—a more adaptive form of striving—and perfectionism. Striving for excellence is underpinned by the motivation to master a craft through hard work, diligence, and patience, and unlike perfectionism, striving for excellence is related to satisfaction with results and the ability to celebrate achievement. Unlike striving for excellence, perfectionism is also related to strenuous effort accompanied by a corrosive feeling of “I am not good enough, I must do better” which erodes any satisfaction and causes anxiety and worry.

Hollender (1965) proposed that perfectionism involves the demanding from oneself a much higher quality of work than is needed and that anything less than perfect is unacceptable. He emphasized the cognitive processes that maintain perfectionism whereby the person is “constantly on the alert for what is wrong and seldom focuses on what is right. He looks so intently for defects or flaws that he lives his life as though he were an inspector at the end of a production line” (Hollender, 1965, p. 95). In contrast to Horney’s perception that perfectionists try to create a perfect image of self, Hollender viewed a perfectionist as someone who strives to perform in a perfect manner. The difference between someone with a healthy pattern of motivation and a perfectionist—as noted by Hollender (1965)—is that perfectionists are unable to derive a sense of accomplishment from their efforts, and striving is accompanied with a corrosive feeling of not being good enough and rarely performing up to standard. Consequently, perfectionists engage in “self-belittlement” and periodically feel dejected.

In contrast to the mainly negative depictions of perfectionism, Hamachek (1978) postulated that perfectionism exists in both “normal” and “neurotic” forms. Hamachek differentiated these two forms based on how satisfied a person is with their achievements. Normal perfectionists strive to achieve high levels of performance and feel satisfaction in their efforts. In contrast, neurotic perfectionists are never satisfied with their achievements and instead, are likely to “stew endlessly in emotional juices of their own brewing about whether they are doing a task right” (Hamachek, 1978, p. 27). Neurotic perfectionists concentrate on their deficits, anticipate future failures, and often feel “anxious, confused, and emotionally drained before a new task is even begun” (p. 28). Hamachek argued that the behaviour of

neurotic perfectionists is driven by a fear of failure, rather than striving for success, as well as nagging “I should” thoughts, shame, and guilt, and consequently results in face-saving behaviour, procrastination, and depression.

In contrast, Burns (1980) offered a unidimensional approach to perfectionism (i.e., a single construct that is not comprised of sub-components). Burns viewed perfectionism as characterised by the compulsive strain towards impossible goals and the engagement in irrational thinking patterns (e.g., all-or-none thinking, over-generalising and should demands) when self-worth is based entirely on achievement. Based on a unidimensional conceptualisation of perfectionism, Burns created the first instrument to measure perfectionism, the Perfectionism Scale (BPS; Burns, 1980). He examined perfectionism in executives, law-students, and high-level athletes and concluded perfectionism hampered success. Like Hamachek, Burns found perfectionism to be related to negative consequences such as decreased productivity, relationship difficulties, poor self-control, and low self-esteem. Furthermore, perfectionism was related to depression, anxiety, obsessive-compulsive disorder (OCD), and health problems (Burns, 1980).

Similar to Burns’s (1980) view of perfectionism, Pacht (1984) also eschewed the notion of normal perfectionism and considered perfectionism to be fundamentally debilitating. Emphasizing the role of irrational thoughts such as “I am either perfect or I am worthless” or “I am never good enough”, Pacht described perfectionism as a “God/scum phenomenon” in that only extremes exist in performance; either perfection is achieved or it is a failure. That is, perfectionists experience constant frustration with both their need to achieve perfect standards and their inability to do so. Pacht believed that anyone claiming to be perfect “almost certainly has real psychological problems” and that “the same is probably true of any person who wants to be perfect” (p. 386).

In summary, the earliest accounts of perfectionism described the experience of perfectionism in relation to how it manifests in people. These accounts (e.g., Burns, 1980, Missildine, 1963, Pacht, 1984) mainly adopt the view that perfectionism is a unidimensional (i.e., a single construct and primarily self-focused) personality construct that is characterised by obsessively pursuing unrealistic goals. In addition, many of the early views of perfectionism emphasise a salient cognitive component, and the majority of definitions have self-directed irrational thoughts as a central feature. That is, perfectionism is characterised by rigid thoughts about the need to be perfect. Also, perfectionism was treated as pathological and related to a number of negative emotional and psychological consequences. Although many of

the early accounts of perfectionism maintain that perfectionism is unidimensional (i.e., pertain to self), several descriptions indicate an interpersonal component whereby demands are often inflicted on others.

## **2.2 Models and measures of perfectionism**

The contemporary understanding of perfectionism is that it is a complex multidimensional personality construct, which is evident in the most common models adopted to examine perfectionism. Two multidimensional models and measures of perfectionism have been predominantly adopted by researchers. These models have been used extensively in and outside sport, and are therefore reviewed in this section. Also, the similar multidimensional models and measures that have been used in sport and that align with the model and measures adopted in this thesis are briefly described.

The first major model and measure was developed by Frost and colleagues (1990) and differentiates six components. Four reflect intrapersonal qualities: (a) personal standards as the setting of and striving for high standards; (b) concern over mistakes reflecting fear about making mistakes and overly critical self-evaluative tendency; (c) doubts about actions relating to a tendency towards an uncertainty about doing things correctly; and (d) organization reflecting the need for organisation, order and precision. Two reflect interpersonal qualities: (e) parental expectations reflecting the perceptions that parents expect perfection from them, and (f) parental criticism reflecting the perceptions that parents are critical when expectations are not received.

Through studies employing samples of college students, the Frost developed the Multidimensional Perfectionism Scale (F-MPS; Frost et al., 1990). The 35-item, 5-point Likert-type scale captures the six aforementioned dimensions of perfectionism. Individual scores for each of the six subscales are calculated to represent each dimension of perfectionism, with a total score of perfectionism being obtained by combining the scores of personal standards (PS), concern over mistakes (CM), parental expectations, parental concerns, and doubts about action (DA). Higher scores on the F-MPS indicate higher levels of perfectionism. The cognitive aspects of perfectionism are reflected in the F-MPS as several items have been taken from cognitively based measures including the BPS (Burns, 1980) and the Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978). The CM subscale includes six items from the DAS (e.g., "If I fail at work, I am a failure as a person.").



Frost and colleagues (1990) suggested that CM are generally maladaptive whereas PS, the setting and striving for perfectionistic standards, are not maladaptive.

The F-MPS has been criticised. The organisation subscale was found to have weak inter-correlation with the other subscales (e.g., DA) and weak correlation with the total score of the other subscales. Conceptually, it has been argued that organisation is not a defining characteristic of perfectionism but a consequence and it was therefore recommended by Frost et al. (1990) that organisation be removed from the total F-MPS score or should not be included in the measure (see Stoeber & Madigan, 2016). Similarly, it has been argued that some dimensions (e.g., parental expectations and parental criticism) are antecedents of perfectionism rather than characteristics (see Stoeber & Otto, 2006). Most items of the parental expectations and parental criticism subscales are in the past tense and consequently, may measure how participants recall their parents raising them (i.e., parental role in the development of perfectionism) rather than reflecting how they currently view their parents (see Stoeber & Madigan, 2016). Additionally, Shafran and Mansell (2001) criticised the DA subscale suggesting that it measures the symptoms of OCD rather than perfectionism. Despite the criticisms, an abundance of research exists using the F-MPS.

Overall perfectionism scores as measured by the F-MPS have displayed significant positive relationships with psychological distress (e.g., depression, anxiety, and negative affect; Chang, 2000). When examining the predictive validity of each subscale, the CM and DA subscales are consistently the strongest predictors of negative psychological consequences (e.g., Cox, Enns, & Clara, 2002) and represent two of the most maladaptive aspects of trait perfectionism (e.g., Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000). In Frost et al. (1990), subscales CM and DA were related to psychopathology including psychoticism, OCD, and different types of depression (self-critical depression and dependency depression). In contrast, mixed findings exist for the PS subscale. In some studies, PS displayed significant positive relationships with depression, anxiety, and OCD (e.g., Frost et al., 1990; Chang, 2017; Libby, Reynolds, Derisley, & Clark, 2004). In other studies, PS displayed a non-significant or positive relationship with positive psychological consequences (e.g., positive affect), especially when controlling for other perfectionism dimensions (see Stoeber & Otto, 2006).

Hewitt and Flett (1991) developed the second major model and measure. Similar to Frost et al. (1990), their multidimensional model of perfectionism considers intra and interpersonal aspects of perfectionism. Hewitt and Flett (1991)

acknowledged that the self-imposed pursuit of perfection is a core feature of the construct but also argued that interpersonal components are crucial in defining perfectionism. Based on work in clinical settings, Hewitt and Flett's (1991) conceptualisation of perfectionism differentiates three forms of perfectionism: (a) self-oriented perfectionism (SOP), which entails setting and pursuing exceedingly high personal standards and engaging in harsh self-critical evaluations if they fail to meet their expectations; (b) socially prescribed perfectionism (SPP), which reflects externally motivated beliefs that others expect them to be perfect, and that others will be highly critical of them if they fail to meet their expectations (Hewitt & Flett, 1991, 2004), and (c) other-oriented perfectionism (OOP), which reflects internally motivated beliefs that others should be perfect, and are highly critical of others who fail to meet their expectations. Hewitt and Flett (1991) developed their own Multidimensional Perfectionism Scale (HF-MPS; Hewitt & Flett, 1991) to assess each of the three dimensions (see Chapter 7 for full details).

Each of the three dimensions has unique features. Along with the tendency to set unreasonably high standards, SOP is characterised by a strong drive to achieve the standards perfectly (Hewitt & Flett, 1991). Those higher in SOP imbue being perfect and performing perfectly with irrational importance and rather than wanting to be perfect, they are cognitively consumed by “needing” to be perfect (Ellis, 2002). They hold stringent and inappropriately negative appraisals of their own performance, and as they are always falling short of their perfectionistic standards, they tend to overgeneralise failure to the self, perceiving themselves as an utter failure (Hewitt et al., 2017). The cognitive distortions are accompanied by self-blame, self-criticism, and self-recriminations, which, in turn, leads to negative emotions and psychological distress particularly when evaluating performances. Consequently, either the high standards are maintained or increased in hope of redeeming themselves from imperfect performances and the negative emotions experienced (Hewitt et al., 2017).

In contrast to SOP, individuals higher in SPP harbour the rigid belief that other individuals set unrealistically high expectations for them (Hewitt & Flett, 1991). Those higher in SPP have a tendency to believe others are constantly evaluating them or will evaluate them harshly when expectations are not met (Hewitt & Flett, 1991). The motivation associated with higher levels of SPP is underpinned by the hope to secure acceptance from others, a sense of belonging, and to avoid rejection and abandonment (Hewitt et al., 2006). Those higher in SPP strive to please others, often deferring their own needs, in the hope of gaining others' acceptance. Nevertheless, because the feedback and acceptance from others is

out of their control, those higher in SPP are likely to feel helpless and hopeless. When they perceive that they have met others' expectations (usually through positive feedback), the experience of success is short-lived and results in higher expectations and demands that are even more impossible. The "inescapable exposure to imposed demands to be perfect can represent a chronic source of stress" and consequently, those higher in SPP are likely to experience health problems—especially if they lack the coping skills needed to respond to this interpersonal stress (Hewitt et al., 2017, p. 44).

In comparison to SOP and SPP where the demands are directed towards the self, OOP reflects the stringent standards placed upon others. Rather than requiring the self to be perfect, individuals higher in OOP require others to be perfect. The externally directed component of perfectionism is characterised by excessive blaming of others, putting others down, and the tendency to use other-directed "should" demands (Hewitt et al., 2017). Those higher in OOP are likely to feel that other people are wrong and do not feel guilty or upset when in conflict with others. Subsequently, when others do not adhere to their rigid expectations, they are likely to react in an angry and hostile manner (Hewitt, Flett, Mikail, Kealy, & Zhang, 2018). With the propensity to be hypercompetitive, those higher in OOP have a "win at all costs" approach to life, and being outperformed by others can evoke anger and aggressive behaviour (Hewitt et al., 2017). In addition, as OOP is related to grandiosity and narcissism, they often feel superior to others and consequently feel that they deserve continued praise.

HF-MPS dimensions also exist as part of a hierarchical model of perfectionism alongside other multidimensional perfectionism measures to capture two higher order dimensions of perfectionism (e.g., HF-MPS; Hewitt & Flett, 1991; F-MPS; Frost et al., 1990). Although different labels are used for the two dimensions, typically they are referred to as perfectionistic strivings (PS) and perfectionistic concerns (PC). PS captures aspects of perfectionism associated with a self-oriented striving for perfection and setting unrealistic standards. PS are measured by the SOP subscale of HF-MPS, the PS subscale of F-MPS, and sometimes includes the Standards subscale of the Almost Perfect Scale-Revised (APR; Slaney et al., 2001) or the SOP subscale of the modified form of Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983). In contrast, PC captures the aspects of perfectionism associated with critical appraisal of one's own behaviours, concerns over mistakes, excessive preoccupations with other's evaluations, and negative reactions to imperfections. PC are measured by the SPP subscale of HF-MPS, the COM and DA subscales from the F-MPS, and sometimes

the discrepancy subscale from the APS-R. In this regard, subdimensions of the two higher dimensions can be considered somewhat similar (though not the same) and each can provide a proxy measure of the higher order dimension (though not exact measure). This is useful when comparing studies adopting different measures.

Both models by Frost et al. (1990) and Hewitt and Flett (1991) have been used to examine the consequences and correlates of multidimensional perfectionism in sport. However, a number of perfectionism researchers (e.g., Dunn, Gotwals, & Causgrove Dunn, 2005; Shafran et al., 2002; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007) advocated that measures of perfectionism are better when domain-specific because research supports that there are specific areas of a person's life in which perfectionism is likely to manifest such as sport (e.g., Dunn, Causgrove Dunn, & Syrotuik, 2002; McArdle, 2010; Stoeber & Stoeber, 2009). Consequently, two sport-specific versions of the F-MPS were developed (i.e., Sport-MPS; Dunn et al., 2002; Sport-MPS-2; Gotwals & Dunn, 2009). Both versions include coach pressure and parental pressure subscales instead of parental expectations and parental criticism subscales. Researchers argue that these measures possess greater predictive ability than global measures and often supersede the use of the F-MPS in sport-related perfectionism research (e.g., Dunn, Craft, Causgrove Dunn, & Gotwals, 2011; Stoeber, Uphill, & Hotham, 2009; Vallance, Dunn, & Causgrove Dunn, 2006).

When measuring perfectionism in sport, researchers have also used the Multidimensional Inventory of Perfectionism in Sports (MIPS; Stoeber, Otto, & Stoll, 2006). The MIPS was developed based on the notion that perfectionism is best captured at the domain-level rather than at global-level. The MIPS contains seven subscales. The first two subscales are intrapersonal components: striving for perfection and negative reactions to imperfection. The other five subscales relate to the interpersonal qualities of perfectionism. Of these subscales, three focus on perceived parental pressure, coach pressure, and teammate pressure. The other two subscales focus on the high expectations that individuals place on teammates and negative reactions to non-perfect performance of teammates (see Stoeber et al., 2006). Striving for perfection and negative reactions to imperfection are the most commonly used of the subscales.

The original HF-MPS has also been adapted for use with athletes and has been used in sport. Additionally, a brief version of the HF-MPS (15-item) was developed by Cox et al. (2002). Hewitt, Habke, Lee-Baggley, Sherry, and Flett (2008) reported that the subscales of the brief HF-MPS demonstrated a large

correlation with the corresponding subscale from the original HF-MPS. Both the original and the brief HF-MPS have been used in sport whereby researchers have amended the instructions to focus on sport-specific cognitions and beliefs (e.g., Appleton, Hall, & Hill, 2010; Hill et al., 2008; Mallinson & Hill, 2011). The most common way is to amend the instructions given to respondents to focus their attention on sport (e.g., “. . . in relation to your sport participation . . .”) and/or to adapt the items to focus on sport (e.g., changing “my life” to “my sport”). Numerous studies have used a contextualised version of the HF-MPS (e.g., Hall et al., 2008), and brief HF-MPS (e.g., Hill, 2013) with satisfactory reliabilities.

When examining perfectionism in youth sport, a number of studies have employed the Child and Adolescent Perfectionism Scale (CAPS; Flett, Hewitt, Boucher, Davidson, & Munro, 1997, 2000; Flett et al., 2016). The CAPS is the only measure of perfectionism that exists for the use of children and adolescents. The measure also excludes OOP and was designed as a two-factor measure that captures SOP and SPP. This measure has been used in research in and outside sport to examine child and adolescent perfectionism. Similar to the full HF-MPS, the CAPS has been adapted to examine perfectionism in sport by amending the instructions. When used in sport, studies have demonstrated satisfactory reliabilities. Appleton and Hill (2012) used the CAPS to examine the relationship between SOP, SPP and motivation regulation and burnout in youth athletes and adapted the instructions making the CAPS more contextually relevant to sport; for example, “listed below are a number of statements concerning how you view your experiences in your sport”. They also reworded four of the original items; for example, “My teachers expect my work to be perfect” was changed to “My coach expects my performance to be perfect.” (See Chapter 5 for full details).

### **2.2.1 Hewitt and Flett’s (1991) model of perfectionism**

Hewitt and Flett’s (1991) model of perfectionism has four main distinguishable strengths.

#### **2.2.1.1 Truly multidimensional**

Hewitt, Flett, and Mikail (2017) described perfectionism as a multifaceted and multilevel personality style based on 30 years of theorizing, researching, and working in clinical practice. Their conceptualisation of perfectionism is broad and captures the unrealistic standards, the elements of criticism, and the interpersonal expressions of perfectionism. Capturing these components, Hewitt et al. (2017) developed the comprehensive model of perfectionistic behaviour (CMPB) based on psychodynamic and interpersonal models of personality, clinical experiences, and

psychometrics. This model emphasises the multidimensional nature of perfectionism. That is, the CMPB includes both motivational and relational components of perfectionism, and accentuates that perfectionism operates at several behavioural levels. Perfectionistic behaviour can function at trait/dispositional level which “energizes, directs, and focuses behaviour toward the preoccupation with perfecting the self” (p. 26; Hewitt et al., 2017), at an interpersonal/relational level which is the expression or demonstration of being perfect to others (i.e., perfectionistic self-presentation), and at an intrapersonal level which is the expression of the need to be perfect to him or herself through perfectionistic thoughts (i.e., perfectionistic thoughts). The components—traits, self-presentational facets, and cognitive aspects—overlap and interact with one another.

Based on their experiences of working with people with problems related to perfectionism, Hewitt et al. (2017) rejected the notion that perfectionism is unidimensional and emphasized that an individual’s problems often stem from the demands of perfection imposed on them by others and because they feel they cannot escape such demands. Hewitt et al. (2017) argued that perfectionism is not simply a striving to meet high expectations, but involves the requirement of, the expression of, and thoughts of perfection. Consequently, due to the complexity of the perfectionism construct, it is important to take into account perfectionistic traits, behavioural relational expressions of perfectionism, and the internal manifestations of perfectionism (i.e., cognitive patterns). Therefore, Hewitt et al.’s (2017) conceptualisation of perfectionism is truly multidimensional in the sense that it incorporates broader information-processing systems, motivational components, and intrapersonal and interpersonal behaviours.

Perfectionism as a trait/dispositional is also multidimensional. Unrealistic high standards and criticality are characteristics of perfectionism of which may be self-directed, directed towards others, or imposed by others. That is, perfectionism traits include a requirement of the self to be perfect (SOP), a requirement for others to be perfect (OOP), and perceptions that others require perfection of oneself (SPP). The multidimensional perfectionism measure, the HF-MPS, developed by Flett et al (1998) captures these trait components of the CMPB as continuous, dimensional aspects of perfectionism rather than an all-or-none personality type. Individuals can vary in terms of whether they are high in all three dimensions of perfectionism (SOP, SPP, or OOP), or just one or two dimensions (Hewitt et al., 2017). It is therefore apparent that perfectionism is truly multidimensional.

### **2.2.1.2 Complete theoretical model**

Hewitt and Flett's approach closely aligns with historical definitions of perfectionism that considered perfectionism to be an undesirable personality characteristic. Their conceptualisation of perfectionism is based on the work of clinical psychologists, theorists, and researchers. It is arguably the most complete theoretical model of perfectionism that is currently available (Hill, Appleton, & Mallinson, 2016). Hewitt and Flett's understanding of perfectionism is based upon conceptual analysis and not only addresses the consequences and correlates of perfectionism, but provides a descriptive model, a causal model, and a model of treatment (see Hewitt et al., 2017). Unlike other models, it provides an understanding of the developmental origins of perfectionism, identifies the associated factors, and outlines ways to manage perfectionism. Therefore, it is reasonable to assume that Hewitt and Flett's three-dimensional model, which integrates both intrapersonal and interpersonal relationships, has both the applied conceptualisation of perfectionism and empirical evidence to support the model.

### **2.2.1.3 Non-acceptance of “normal” perfectionism**

Hewitt and Flett's model was developed on the basis that perfectionism is generally maladaptive, and as perfectionism goes beyond the pursuit of excellence, adaptive perfectionism does not exist. Many researchers use the terms “adaptive”, “normal” or “healthy perfectionism” but operationalise these in different ways (see Blasberg, Hewitt, Flett, Sherry, & Chen, 2016). There is little conceptual clarity to what adaptive perfectionism actually means, but it is argued that adaptive perfectionism is essentially the need for achievement, conscientiousness, and/or striving for excellence (Blasberg et al., 2016). Adaptive perfectionism may be adaptive but it is not perfectionism (Hewitt et al., 2017). Although some individuals higher in perfectionism may show signs of adaptation, success, and accomplishment, the underpinning motivation is often the need to meet unrealistic perfectionistic standards to avoid failure, which is a different motivation to purely striving for excellence. Those higher in perfectionism rarely achieve satisfaction when they achieve accomplishments and, over time, may experience psychological distress. Although it can be associated with successful outcomes, the underpinning motivation is likely to render individuals vulnerable to psychological distress.

### **2.2.1.4 The debate of dichotomy and disaggregation of dimensions**

Hewitt and Flett's model captures the breadth of characteristics of perfectionism and does not segregate dimensions into two dichotomous forms (i.e., adaptive v maladaptive, positive v negative). Rather, the dimensions capture a

representation of perfectionism on a spectrum of different dimensions. The three dimensions of Hewitt and Flett's model are assessed in terms of higher and lower levels and capture the different elements of perfectionism (e.g., intra and interpersonal aspects), rather than disaggregating into adaptive and maladaptive qualities. Hewitt and Flett's model was developed based on a conceptual understanding of perfectionism. Therefore, their model attempts to capture the complexity of people, rather than categorizing based on good versus bad.

Although several models of perfectionism conceptualise perfectionism as a dichotomous construct (e.g., adaptive v maladaptive perfectionism) with positive and negative entities, Hall (2016) argues that for perfectionism to be perfectionism, it has to encompass both positive aspects (i.e., perfectionistic standards) and the negative aspects (i.e., perfectionistic concerns). That is, perfectionism is considered to reflect both heightened achievement striving and harsh self-critical appraisal, and therefore the patterns of cognition, affect and behaviour are very different compared to adaptive forms of achievement striving (Hall, 2016). Hall argued that perfectionism without the critical component is not perfectionism. The dimensions of Hewitt and Flett's model (i.e., SOP, SPP and OOP) encompass both the positive and negative aspects of perfectionism rather than disaggregating the forms. In light of these reasons, this thesis will adopt Hewitt and Flett's approach to multidimensional perfectionism.

### **2.3 Perfectionism research outside sport**

Perfectionism is likely to impact the problems endured by an individual, both directly and indirectly, by inducing a vulnerability to psychological disorders (Hewitt & Flett, 2002). Outside sport, there is an abundance of research that examines the consequences and correlates of perfectionism and provides evidence that perfectionism is directly related to psychological distress. A large body of literature supports that SOP, SPP, and OOP are differentially related to different consequences such as psychopathology, relationship functioning, and health (e.g., Hewitt & Flett, 1991; Hewitt, Flett, & Mikail, 1995; Molnar, Reker, Culp, Sadava, & DeCourville, 2006). The following section provides an overview of the research outside sport that has used Hewitt and Flett's model to examine perfectionism and its associated consequences.

Although OOP has not received the same attention from researchers as SOP and SPP, recent research draws attention to the "dark features" of OOP and suggests that this dimension is the most narcissistic and callous of perfectionism



traits (Smith, Saklofske, Stoeber, & Sherry, 2016). In contrast to SOP and SPP, OOP reflects the setting of exceedingly high standards for other people, which is more often related to interpersonal consequences rather than intrapersonal (Hewitt & Flett, 2002). As OOP involves the expectation that others will perform perfectly across areas of functioning, those higher in OOP often harshly evaluate others' performances and respond in a hostile, disparaging, and resentful way when others do not meet their standards (e.g., Hewitt & Flett, 2002; Hill, McIntire, & Bacharach, 1997). Those higher in OOP have been described as domineering, vindictive, impatient, and competitive (e.g., Flett, Hewitt, Blankstein, & Dynin, 1994; Hill, Zrull, & Turlington, 1997).

Related to "darker" qualities, research has found that OOP is negatively related to sincerity, greed-avoidance, and modesty which suggests that those higher in OOP may be dishonest, greedy, and arrogant (e.g., Stoeber, 2014b). Furthermore, OOP is positively related to social boldness, extraversion, and self-esteem (see Stoeber, 2014b; Watson, Varnell, & Morris, 1999), and therefore, those higher in OOP are often overtly self-assured and confident. A number of studies have found OOP to be related to narcissism, grandiosity, and attention seeking (e.g., Sherry, Richards, Sherry, & Stewart, 2014; Stoeber, 2014b). In addition, Stoeber (2014b) found OOP to explain unique variance in all seven DSM-5 traits indicative of antisocial personality disorder. Research also suggests that OOP is unrelated to negative affect, depressive symptoms, and anxiety but positively related to anger, hostility and distress (e.g., Hewitt & Flett, 1991; Nealis, Sherry, Lee-Baggley, Stewart, & Macneil, 2016; Short & Mazmanian, 2013). The experience of negative affect is more likely to occur when those higher in OOP are not on the winning team, faced with failure, or publicly rejected and subsequently respond to these situations in an angry and hostile manner, especially with verbal aggression (e.g., Besser & Zeigler-Hill, 2010; Miller & Vaillancourt, 2007; Zeigler-Hill, Clark, & Pickard, 2008). It is likely that OOP is related to psychological distress after repeated failure rather than being more generally related to psychological distress.

SOP and SPP are more consistently related to psychological distress than OOP; however, research suggests that the relationship between SOP and psychological distress is not as clear-cut as the relationship between SPP and psychological distress. SPP is more consistently negative, whereas, SOP appears to be an "ambiguous" form of perfectionism (Stoeber & Otto, 2006). SOP reflects the setting of high personal standards and evaluating one's own behaviour stringently and as this form of perfectionism often energises action, it may lead to

success and other beneficial consequences. For example, SOP is related to positive achievement-related outcomes such as high achievement motivation, exam performance, and a higher grade-point average (e.g., Stoeber, Haskew, & Scott, 2015). Those higher in SOP are likely to demonstrate high degrees of organisation, responsibility, persistence, and goal-directed behaviours, and consequently, SOP is sometimes regarded as a positive form of achievement striving (Hewitt & Flett, 2002). Nevertheless, it also appears to be a vulnerability factor for emotional and psychological difficulties (Flett & Hewitt, 2006).

A higher level of SOP is positively related to self-blame, self-criticism, and self-disappointment (e.g., Hewitt & Flett, 1991), and particularly under conditions of adversity or failure. Subsequently, in the presence of stressors especially achievement or self-created failures, SOP is likely to confer vulnerability to psychological distress (Hewitt, Mittelstaedt, & Flett, 1990). For example, Hill, Hall, Duda, & Appleton (2011) found that following failure on a muscular endurance task, individuals higher in SOP experienced a more pronounced increase in threat and reported withdrawing effort when completing the task again. Research also suggests that, in general, those higher in SOP may be susceptible to anxiety, anger, and hostility (e.g., Hewitt & Flett, 1991). Also, SOP predicted increases in depressive symptoms at cross-sectional and longitudinal levels (e.g., Cox & Enns, 2003; Hewitt & Flett, 1991, 1993; Hewitt, Flett, & Ediger, 1996).

In addition to negative emotional consequences, those higher in SOP may be vulnerable to body image issues; SOP was positively related to body dissatisfaction, eating disorders, and eating disturbances (e.g., Chang et al., 2008; Cockell et al., 2002; Peixoto-Plácido, Soares, Pereira, & Macedo). Issues of control related to SOP also extend to OCD (e.g., Wheeler, Blankstein, Antony, McCabe, & Beiling, 2011). Although studies have found the relationship between SOP and suicide ideation to be non-significant (e.g., Hewitt, Newton, Flett, & Callander, 1997), there are some studies found that SOP was positively related to suicide ideation in psychiatric patients, students, and women (e.g., Blankstein, Lumley, & Crawford, 2007; Hewitt, Flett, & Weber, 1994). As SOP is related to both positive and negative outcomes, it is deemed an ambivalent form of perfectionism, and it is more likely that those higher in SOP experience higher levels of psychological distress when faced with failure or stressors.

In contrast, SPP is more uniformly debilitating. SPP reflects the belief that others have overly high expectations for one's performance and are stringent in their evaluations. Those higher in SPP are overly concerned by the perfectionistic

standards set by others and feel that they must meet the perceived demands of others as a way to earn acceptance and approval (Hewitt & Flett, 2002). As the perceived demands are often unrealistic and beyond their control, those higher in SPP often feel that they have failed to meet standards held for them by others, which, in turn, leads them to be submissive, insecure, and overly dependent in relationships (Flett, Hewitt, Garshowitz, & Martin, 1997; Hewitt & Flett, 1993). As the perceived standards set by others are often out of their control and unreachable, negative emotions arise from the perceived inability to please others. Consequently, SPP is more consistently related to psychological distress.

Research suggests that those higher in SPP more consistently experience emotional and psychological distress, which has implications for a person's overall well-being (e.g., Hewitt & Flett, 1991, 2004). That is, SPP displayed significant positive relationships with lower self-esteem, anxiety, anger, sadness, shame, guilt, and hostility (e.g., Hewitt, Caelin, Flett, Sherry, Collins & Flynn, 2002; Mitchelson & Burns, 1998; Stornelli, Flett, & Hewitt, 2009). Furthermore, SPP also displayed significant positive relationships with OCD, personality disorders, and eating disorders (e.g., Cockell et al., 2002; Hewitt, Flett, & Turnbull, 1994; Wheeler et al., 2011). In addition, the negative psychological consequences extend to social phobia, depression, and bipolar depression (e.g., Antony, Purdon, Huta, & Swinson, 1998; Hewitt & Flett, 1993; Hewitt, Flett, Ediger, Norton, & Flynn, 1998), and on a more severe level, SPP displayed a significant positive relationship with suicidality (e.g., Blankstein et al., 2007; Rasmussen, Elliot, & Connor, 2012).

## **2.4 Perfectionism research in sport**

Researchers in sport psychology fail to agree whether perfectionism is desirable or debilitating. Some argue that perfectionism enhances performance while others advocate that perfectionism undermines psychological well-being. Flett and Hewitt (2005) described perfectionism in sport as a paradox. In some sports, athletes are encouraged to attain absolute perfection and endless striving towards high standards is seen as a hallmark quality (Hardy, Jones, & Gould, 1996; Stoeber, Stoll, Salmi, & Tiiikkaja, 2009). Perfectionistic athletes consequently ascribe large amounts of meaning to achievement and in turn, relentlessly strive to attain a level of performance that is often impossible. When success is achieved by perfectionistic athletes, this level of motivation appears adaptive and admirable, and can often fuel further success which can protect those higher in perfectionism from the "perils of perfectionism" (Flett & Hewitt, 2005).

Although athletes high in perfectionism are likely to present as highly motivated, this drive is underpinned by the fear of failure and accompanied by continual self-contempt. Self-deprecation occurs when goals are not met and mistakes are made, and the harsh self-criticism associated with perfectionism may render individuals vulnerable to debilitated motivation and further self-deprecation. As a consequence, perfectionistic athletes rarely gain a sense of pride or satisfaction. They are more likely to feel inadequate, and subsequently, spend time dwelling on their inadequacies. Perfectionism has been described as a “double-edged sword” (Stoeber, 2014a, p. 385) because although perfectionism may give rise to positive behaviours, it may also lead to self-defeating behaviours and negative emotions and, consequently, contribute to psychological distress (Flett & Hewitt, 2005). The relationship between perfectionism and self-defeating behaviours and emotions is evidenced by the research conducted in sport.

As the research on perfectionism in sport grows rapidly, meta-analyses and review papers are also increasingly available. Stoeber (2011) provided the first review in sport ( $N = 16$  studies), in which he examined if perfectionistic strivings (PS) and perfectionistic concerns (PC) were related to adaptive and/or maladaptive consequences<sup>2</sup>. The findings of this review indicated that PC (includes SPP) were positively related to maladaptive motivation (e.g., fear of failure, ego orientation, mastery avoidance) and emotion (e.g., negative affect, anxiety, and anger), and unrelated to athletic performance. In comparison, PS (includes SOP) were more ambiguous and related to a mix of motivation (e.g., task and ego orientation) and emotion (e.g., positive and negative affect). The review did not provide a discussion on the relationship between PS and performance. It was concluded that higher PC are clearly maladaptive, whereas PS may be associated with striving for excellence (Stoeber, 2011).

As a large proportion of the studies in sport have examined the relationship between perfectionism and burnout, Jowett, Mallinson, and Hill (2016) provided a review of the research in sport, dance, and exercise. The aim of this review was to examine the independent effects of PS (including SOP) and PC (including SPP) on athlete burnout. Athlete burnout is a psychosocial syndrome that includes three

---

<sup>2</sup> As stated in section 2.2, PS is not the same as SOP and PC is not the same as PC, but as PS is captured by SOP and other measures and PC is captured by SPP and other measures of perfectionism, it is therefore advocate that there are strong similarities.

core symptoms: a reduced sense of accomplishment, emotional and physical exhaustion, and devaluation (Raedeke & Smith, 2001). This review yielded approximately 70 studies, 53 of which were in sport. Of these studies, 16 used Hewitt and Flett's measures to capture the relationship between SOP and SPP and dimensions of burnout. Findings indicated that higher SPP is consistently related to burnout, whereas SOP displays a mixed pattern of findings.

To build upon their previous review (Jowett et al., 2016), Hill, Mallinson-Howard, Madigan, and Jowett (2018) provided an updated overview of the research that has examined multidimensional perfectionism in sport, dance and exercise. Firstly, instead of only including adaptive or maladaptive criterion variables, they conducted a search that included all criterion variables for both PS and PC. The search yielded 44 more studies, and the findings were similar to earlier reviews (Gotwals, Stoeber, Dunn, & Stoll, 2012; Stoeber, 2011) whereby PS (similar to SOP) displayed a mix of positive relationships with adaptive and maladaptive outcomes. That is, PS were related to both intrinsic *and* introjected motivation; task *and* ego orientation; positive *and* negative affect; and confidence *and* worry. Conversely, PC (similar to SPP) were related to maladaptive outcomes. That is, PC were positively related to extrinsic motivation, ego orientation, worry and anxiety. Furthermore, PC were also negatively related (or not significantly related) to adaptive outcomes (e.g., intrinsic motivation, self-esteem). Secondly, they searched studies over the period since the previous review and used the same search parameters which, after reviewing the studies, yielded 11 studies that were not included in the previous review. Overall, the findings of these studies were also consistent with the previous review whereby PC tend to be more consistently related to maladaptive outcomes (e.g., training distress) while PS tend to be negatively related to maladaptive outcomes (e.g., burnout).

Hill, Mallinson-Howard, and Jowett (2018) provided a meta-analytical review of research examining multidimensional perfectionism in sport. Specifically, they reviewed studies that examined the relationships between PS (including SOP) and PC (including SPP) and a range of motivation, emotion/well-being and performance outcomes. This review yielded 52 studies with 679 effects sizes for 29 criterion variables. Of these studies, 15 included Hewitt and Flett's measures (either HF-MPS or CAPS). Overall, findings indicated that PS (includes SOP) displayed significant positive relationships with a mix of adaptive and maladaptive motivation and emotion/well-being outcomes, and better performance. In comparison, PC (includes SPP) displayed significant positive relationships with maladaptive motivation and emotion/well-being outcomes and was unrelated to performance.

## 2.4.1 Hewitt and Flett's model in sport

### 2.4.1.1 Motivation and burnout

In addition to providing a strong empirical grounding that a positive relationship exists between perfectionism and burnout, a number of studies have examined the motivational mechanisms by which perfectionism leads to burnout. Burnout—a psychosocial syndrome that is associated with motivational, performance, and psychological difficulties (Hill & Curran, 2016)—is said to occur as the result of chronic sport-related appraisals of stress that are not effectively alleviated by coping efforts (see Lazarus, 1966, 2006). The majority of studies have used the Athlete Burnout Questionnaire (Raedeke & Smith, 2001) to capture three dimensions of burnout: reduced sense of accomplishment (i.e., the reduction in the feeling of achievement), emotional and physical exhaustion (i.e., depletion of emotional and physical resources), and devaluation (i.e., the reduction in the value placed on sport achievement). Both cross-sectional (e.g., Hill et al., 2008) and longitudinal (e.g., Smith et al., 2018) research supports that, for the most part, SOP is negatively related to burnout symptoms and SPP is positively related to burnout symptoms. Research has demonstrated that dimensions of motivational regulations, psychological needs thwarting, and passion play different roles in the relationship between perfectionism and burnout.

Eleven studies have employed the HF-MPS to examine the relationship between perfectionism and burnout in sport (see most recent review). The first study in sport to use the HF-MPS examined the relationship between perfectionism and burnout, and the role that unconditional acceptance plays in the relationship (Hill et al., 2008). In a sample of male youth soccer players ( $N = 151$ ), SPP was positively related<sup>3</sup> to burnout. In contrast, SOP was negatively related to burnout; however, there was a significant positive indirect effect via unconditional self-acceptance (i.e. the acceptance of oneself regardless of judgement by others). That is, conditional self-acceptance is likely to render perfectionistic athletes vulnerable to burnout.

A number of the studies have examined the role of different types of motivation in the perfectionism–burnout relationship. Appleton, Hall, and Hill (2009) examined the moderating influence of achievement goal orientations and

---

<sup>3</sup> The statements “positively or negatively related to...” indicates that a significant positive or negative relationship existed between the variables.

perceptions of goal progress in the relationship between SOP and SPP and burnout. In a sample of male youth and adult athletes ( $N = 201$ ) competing in soccer, cricket, and tennis, SOP was negatively related to reduced accomplishment and sport devaluation, whereas SPP was positively related to all burnout symptoms. These differences may be a function of the underpinning motivations; SOP was positively related to both task orientation (i.e., primarily motivated by personal mastery, improvement, and achievement of higher ability; Nicholls, 1989) and ego-orientation (i.e., primarily motivated to demonstrate normative competence such as beating an opponent and/or showing off; Nicholls, 1989), whereas, the relationships between SPP and both task and ego-orientation were non-significant. SOP and SPP also differed in perceptions of goal progress. The relationship between SOP and perceived athlete and coach satisfaction with goal progress were non-significant, but SPP was negatively related to perceived athlete and coach satisfaction with goal progress. Therefore, the positive relationship between SPP and burnout may exist due to internal and perceived external dissatisfaction.

Also examining the underpinning motivation associated with perfectionism and burnout, Hill, Hall, Appleton and Murray (2010) tested the mediating role of growth-seeking (i.e., participation in sport for personal development) and validation-seeking (i.e., participation in sport to validate oneself through achievement) in the perfectionism–burnout relationship. In a sample of youth and adult polo and kayak slalom athletes ( $N = 150$ ), results supported that SPP appears to be more consistently related to burnout compared to SOP; SPP was positively related to all symptoms of burnout (e.g., reduced accomplishment, physical and emotional exhaustion, and devaluation), whereas, the relationships between SOP and burnout symptoms were non-significant. Both SOP and SPP were positively related to validation-seeking, and higher levels of validation-seeking partially mediated the relationship between SPP and burnout. SOP was positively related to growth-seeking, but neither growth-seeking nor validation-seeking mediated the relationship between SOP and burnout.

Appleton and Hill (2012) introduced motivational regulations to examine the relationship between perfectionism and burnout from another angle. In a sample of footballers and athletes ( $N = 231$ ), similar to other studies, SOP was negatively related to all burnout symptoms, whereas, SPP was positively related to all burnout symptoms. SOP was positively related to intrinsic motivation (i.e., an individual participates in sport because of the interest or enjoyment inherent in the activity; Ryan & Deci, 2006), introjected regulation (i.e., behaviour that is performed to escape feelings of guilt or shame or to reinforce one's self-worth), external

regulation (i.e., behaviour that is regulated by rewards, fear of punishment, or coercion), and negatively related to amotivation (i.e., relative absence of motivation and the lack of intentionality to act; Vallerand, 2001). Similar to the findings in Hill et al. (2010), SPP was positively related to identified regulation, introjected regulation, external regulation, and amotivation. Amotivation mediated the SPP–burnout relationship, and amotivation and intrinsic motivation mediated the SOP–burnout relationship.

More evidence exists for the relationship between perfectionism, motivation regulation and burnout. Jowett, Hill, Hall, and Curran (2013) examined whether the relationship between perfectionism and burnout could be explained by regulation of motivation (composed of autonomous motivation: intrinsic motivation, integrated regulation and identified regulation; and controlled motivation: introjected regulation and external regulation) in a sample of youth athletes ( $N = 211$ ) from football, cricket, netball, and swimming. SOP was positively related to intrinsic, identified, introjected and external regulation and SPP was positively related to all dimensions of motivation regulation except intrinsic motivation which was non-significant. Furthermore, higher levels of controlled motivation mediated the SPP–burnout relationship. In contrast, higher levels of autonomous motivation (but not controlled motivation) mediated the SOP–burnout relationship. The results suggested that SOP is underpinned by motivation that is more desirable whereas SPP appears to be underpinned by motivation that is more undesirable.

Also in a sample of youth athletes ( $N = 205$ ) recruited from after-school sport clubs (sports not reported), Mallinson and Hill (2011) examined the relationships between SOP, SPP and perceived psychological need thwarting (i.e., the frustration, or thwarting, of psychological needs; Deci & Ryan, 2000). As outlined by Bartholomew, Ntoumanis, Ryan, and Thogersen-Ntoumani (2011), there are three components of needs thwarting: autonomy thwarting (i.e., when an individual's sense of choice and self-control is quashed), competence thwarting (i.e., when an individual feels ineffective or that the context is demeaning), and relatedness thwarting (i.e., when an individual feels the environment is cold and neglectful). SOP was positively related to autonomy thwarting. In contrast, SPP was positively related to autonomy, competence, and relatedness thwarting. Both SOP and SPP emerged as significant predictors of perceived competence thwarting. Furthermore, perceived coach pressure was a significant predictor of perceived autonomy thwarting, while perceived parental pressure was a significant predictor of perceived relatedness thwarting.



Ho, Appleton, Cumming and Duda (2015) examined the relationships between perfectionism and burnout symptoms, negative affect, and physical symptoms of ill-health in a sample of 417 youth and adult athletes (sport not reported; hearing = 205, deaf = 212). The findings for burnout were somewhat different from the aforementioned studies. For deaf participants, SPP was positively related to exhaustion and devaluation but the relationship between SPP and reduced accomplishment was non-significant. Similar to other studies (e.g., Hill & Appleton, 2011), the relationships between SOP and devaluation and emotional exhaustion were non-significant, but SOP was negatively related to reduced accomplishment. In contrast to other studies, SOP was positively related to negative affect, but the relationship between SOP and physical symptoms of ill-health was non-significant. For the hearing participants, SOP was negatively related to all symptoms of burnout, whereas, SPP was positively related to reduced accomplishment while the relationships between SPP and exhaustion and devaluation were non-significant. Furthermore, in contrast to the results found with the sample of deaf participants, SOP was negatively related to both negative affect and physical symptoms of ill-health.

Also examining the motivational properties related to perfectionism, Curran, Hill, Jowett, and Mallinson (2014) examined the relationship between SOP, SPP and harmonious and obsessive passion in a sample of youth athletes ( $N = 266$ ) competing in soccer, rugby, cricket, swimming, synchronized swimming, and diving. Harmonious passion arises from autonomous motivation whereby individuals willingly engage in an activity because they enjoy it and are more likely to experience positive emotions towards that activity. In contrast, obsessive passion arises from controlled internalization whereby individuals engage in an activity because they highly identify with the activity but only because it serves to fulfil some important contingency (e.g., gain approval), resulting in compulsive and rigid engagement. Consequently, such individuals may experience anger or be anxious when unable to partake in the activity. SOP was positively related to harmonious passion and obsessive passion, and SOP predicted higher levels of both types of passion. In contrast, SPP was positively related to obsessive passion and predicted an increase in obsessive passion, but the relationship between SPP and harmonious passion was non-significant. These findings provide further evidence that SOP and SPP may be underpinned by different patterns of motivation.

The relationship between perfectionism and burnout may be a result of the type of coping used to deal with imperfections. Hill, Hall, and Appleton (2010a) examined whether coping tendencies (problem-focused and avoidance-coping)

mediated the perfectionism-burnout relationship. In a sample of youth elite athletes ( $N = 206$ ) competing in judo, swimming, track athletics, and field athletics, higher levels of SPP were related to higher levels of avoidance-coping which, in turn, was related to higher levels of athlete burnout. In contrast, higher levels of SOP were related to higher levels of problem-focused coping and lower levels of avoidance-coping, which, in turn, were related to lower levels of athlete burnout. Therefore, the findings suggest that different coping tendencies may underpin the relationship between SOP and SPP and athlete burnout.

#### **2.4.1.2 Achievement goals, fear of failure and other motivation-related temperaments**

Research suggests that athletes who report higher levels of perfectionism are likely to respond negatively to not reaching perfection. Hill, Hall and Appleton (2010b) examined the relationships between SOP, conscientious achievement striving, and dimensions of perfectionism. In sample of male youth cricketers ( $N = 255$ ), both SOP and conscientious achievement striving were positively related to high personal standards. However, SOP was also positively related to concerns over mistakes, a fear of failure and negative reactions to imperfection. Furthermore, the relationship between SOP, high standards, and perfectionistic strivings remained significant after controlling for conscientious achievement striving. Distinct from conscientious achievement striving, SOP is underpinned by an irrational belief that one must perform perfectly and, if a perfect performance is not achieved, then those higher in SOP are likely to respond negatively.

In order to support or dispute the notion that SOP may be a positive dimension of perfectionism, Hill, Hall, Duda, and Appleton (2011) aimed to test whether those higher in SOP are vulnerable to motivational and psychological difficulties when perfectionistic standards are not met. In a sample of student-athletes ( $N = 68$ ) competing in hockey, football, rowing, rugby, swimming, taekwondo, tennis, athletics, lacrosse, and netball, Hill et al (2011) compared the cognitive, affective and behavioural responses of those reporting higher and lower SOP after experiencing two consecutive failures on a muscular endurance task (cycling trials). Following the first failure, those higher in SOP reported an increase in threat, a greater reduction in effort, and a decrease in satisfaction. Moreover, the effects on threat and effort remained statistically significant when controlling for differences in levels of SPP between the two groups. Although individuals higher and lower in SOP did not exhibit a wide range of differences in their responses to consecutive failures, the findings of the current study suggest that individuals higher

in SOP find failure, and the possibility of future failure, more difficult than those who are lower in SOP. Therefore, rather than being consistently debilitating, those higher in SOP may be vulnerable to psychological and motivational difficulties when perfection is not achieved.

Perfectionism appears related to fear of failure and different motivational temperaments. Furthermore, perfectionism may have implications for the type of goals that individuals set for performance. In a sample of student-athletes (sports not reported;  $N = 371$ ), Kaye, Conroy, and Fifer (2008) found that both SOP and SPP were positively related to fear of failure. Specifically, SOP was positively related to four of the five dimensions of fears of failure (the relationship with fear of having an uncertain future was non-significant), and SPP was positively related to all fear of failure dimensions. However, only SPP predicted increases in the fear of important others losing interest and fear of upsetting important others. In relation to types of goals, SOP was positively related to approach goals. In contrast, SPP was positively related to mastery avoidance goals, performance approach and avoidance goals. Therefore, SOP and SPP are likely to have implications for the types of goals that athletes set for competition and their underpinning motivation for achieving such goals (e.g., fear of failure).

Perfectionism may have implications for being fully present in competition. In devising a sport-specific mindfulness measure, Thienot, Jackson, Dimmock, Grove, Bernier, and Fournier (2014) examined the relationship between perfectionism, mindfulness and psychological consequences known to impede mindfulness (e.g., worry, concentration disruption). In a sample of elite and sub-elite athletes ( $N = 343$ ) from seven team sports and 18 individual sports (sports not reported), SOP was positively related to worry and flow, but displayed non-significant relationships with mindfulness and rumination. In contrast, SPP was positively related to worry and concentration disruption, and negatively related to flow and mindfulness. Inconsistent with studies outside of sport, the relationships between SOP and SPP and rumination were non-significant. Both SOP and SPP were related to worry, but SOP was also related to positive outcomes, compared to SPP which was likely to interrupt flow and mindfulness.

Perfectionism appears to play a role in athletes' view of performance success. The aim of the Dunn, Causgrove Dunn and McDonald (2012) study was to examine the domain-specific nature of perfectionism in sport and schools and the relationships between perfectionism and perceived competence and perceived importance of success. In a sample of university student-athletes ( $N = 255$ )

competing in the team sports of soccer, basketball, volleyball, field hockey, rugby, ice hockey, and Canadian football, student-athletes were more perfectionistic (SOP, SPP, and OOP) in sport than in school. Also, perceived competence was a positive predictor of SOP and student-athletes who reported higher perceived competence in sport than in school tended to have higher SOP and lower SPP in sport than school. Further, perceived importance was also a positive predictor of SPP and OOP. In other words, student-athletes who placed more importance on success in sport than in school tended to have higher SPP and OOP in sport than in school.

Not only is the research examining OOP in sport limited, the majority of studies have been at the individual level (e.g., athletes' perfectionism) rather than at team level (e.g., a team's perfectionism). As OOP has an intrapersonal component, Hill, Stoeber, Brown, and Appleton (2014) explored the impact of OOP (and SOP and SPP) on team performance. A sample of competitive rowers ( $N = 231$ ; 36 boats) completed measures of SOP, team-oriented (OOP towards teammates), and team-prescribed (SPP from teammates) before a 4-day rowing competition. Team-oriented perfectionism (OOP towards teammates) had a larger positive relationship with team performance than SOP and team-prescribed perfectionism (SPP from teammates). Also, team-oriented perfectionism positively predicted better day-by-day boat performance. Although OOP may be beneficial to performance, more research outside of sport exists that supports that OOP is debilitating for interpersonal functioning (e.g., Stoeber, 2014). Therefore, better performance may come at the expense of team morale and positive interpersonal relationships.

#### **2.4.1.3 Body image and exercise related issues**

Expanding on previous research that demonstrated unconditional self-acceptance played a significant role in the perfectionism and burnout relationship, Hall, Hill, Appleton, and Kozub (2009) examined the role of unconditional self-acceptance in the perfectionism and exercise dependence relationship. In a sample of middle-distance runners ( $N = 307$ ), both SOP and SPP were positively related to exercise dependence and labile self-esteem, and negatively related to unconditional self-acceptance. Furthermore, unconditional self-acceptance fully mediated the relationship between SPP and exercise dependence, which suggests ones' acceptance of self plays a role in rendering individuals vulnerable to exercise dependence particularly if they believe others hold unrealistic expectations of them.

Perfectionism is related to body dissatisfaction and unhealthy eating habits and a number of studies in sport have examined the relationship between SOP, SPP and body-image outcomes. Ferrand, Magnan, Rouveix, and Filaire (2007)

examined the relationship between perfectionism and body-esteem satisfaction in a sample of female youth swimmers ( $N = 33$ ). Both SOP and SPP were negatively related to body-esteem satisfaction. SOP was positively related to dietary restraint whereas the relationship between SPP and dietary restraint was non-significant. Furthermore, body-esteem satisfaction mediated the relationship between SOP and dietary restraint. These findings suggest that individuals higher in SOP and SPP may not be satisfied with their body but those higher in SOP are more likely to engage in restricting eating and unhealthy weight loss methods (e.g., self-induced vomiting, fasting, and skipping meals) depending on their body satisfaction.

Similarly, Dunn et al. (2011) examined the relationship between dimensions of perfectionism and different aspects of body image in a sample of female youth figure skaters ( $N = 119$ ). Both SOP and SPP were positively related appearance orientation (i.e., the importance one places on appearance), overweight preoccupation (i.e., excessive concern about weight), self-classified weight, and body-image ideal. Furthermore, both SOP and SPP were negatively related to appearance evaluation (i.e., one's satisfaction with appearance) and body satisfaction. The results for OOP were different: OOP was positively related to overweight preoccupation and the relationships between the other body image variables were non-significant. While SOP, SPP, and OOP may be preoccupied with their weight, findings suggest that individuals higher SOP and SPP, rather than OOP, are unlikely to feel satisfied with their appearance and their body.

#### **2.4.1.4 Satisfaction with life and self, well-being, and emotional experience**

Perfectionism may also have implications for life satisfaction and well-being. Gaudreau and Verner-Filion (2012) examined the relationship between perfectionism and subjective well-being (i.e., positive affect, subjective vitality, and life-satisfaction) in a sample of adult athletes ( $N = 208$ ) competing in soccer, volleyball, ice hockey, broomball, tennis, badminton, and alpine skiing. The relationships between SOP and life satisfaction and subjective vitality were non-significant but by contrast, SPP was negatively related to life satisfaction and subjective vitality. The relationships between SOP and SPP and positive affect were non-significant. However, pure SOP (i.e., predominance of SOP rather than an absolute absence of SPP) was related to higher levels of positive affect, vitality, and life-satisfaction compared to non-perfectionism, whereas, pure SPP was related to lower levels of positive affect, vitality, and life-satisfaction compared to other perfectionism subtypes. In contrast, the interaction between SOP and SPP positively predicted positive affect, subjective vitality, and life-satisfaction. That is, when individuals experience higher levels of SOP and SPP, they are likely to

experience more positive outcomes as the self-directed standards may be able to buffer against the potentially negative effects related to the pressure emanating from the social environment.

SOP and SPP may also have implications for athletes' emotional experiences in sport. That is, in Kaye, Conroy, and Fifer (2008), SOP was positively related to both positive and negative affect, whereas SPP was positively related to negative affect. In addition, perfectionism is likely to impact athletes' perceptions of themselves in the context of success or failure. Carter and Weissbrod (2011) found differences in the emotional experiences related to SOP and SPP based on gender in a sample of university students who indicated that athletics was important to them (sports not reported;  $N = 137$ ). For female athletes, SOP was positively related to depressive symptoms while the relationships between SOP and somatic anxiety, worry, trait anxiety, and concentration disruption were non-significant. SPP was also positively related to depressive symptoms, but in contrast to SOP, SPP was positively related to somatic anxiety, worry, trait anxiety, and concentration disruption. Both SOP and SPP were positively related to negative self-perception when losing and SOP was positively related to positive self-perception when winning. For male athletes, SOP was positively related to enjoyment of competition, depressive symptoms, and worry. Similar to research outside sport, SPP was positively related to only negative outcomes (trait anxiety, depressive symptoms, and worry). SPP was positively related to negative self-perception when losing whereas SOP was positively related to positive self-perception when winning.

In addition to SOP and SPP being related to different emotions, the dimensions of perfectionism also have implications for the ability to regulate emotions in sport. In a sample of adult coaches from various sports including football, rugby, athletics, and swimming ( $N = 238$ ), Hill and Davis (2014) examined the relationship between PS (as measured by SOP and PS) and PC (as measured by SPP, COM, and DAA) and emotional regulation. Both PS and PC were positively related to expressive suppression (i.e., the tendency to inhibit on-going emotion-expressive behaviour). Furthermore, PS were related to higher levels of cognitive reappraisal and higher control of anger (inwards and outwards) compared to non-perfectionists. In contrast, PC were related to lower levels of control of anger (inwards and outwards) compared to non-perfectionists. Findings suggest that coaches with higher levels of PS (including SOP) may have a better capacity for managing their emotions while those higher in PC (including SPP) may have a lower capacity for managing their emotions.

Similar to studies outside sport, initial evidence supports that a positive relationship between perfectionism and depressive symptoms exists in sport. In a longitudinal study of youth soccer players ( $N = 108$ ), Smith et al. (2018) examined the relationships between SOP, SPP and symptoms of depression and burnout at two time points, three months apart. The aims of the study were to test three alternative theoretical models: perfectionism as (a) a vulnerability factor for burnout and depression (vulnerability model), (b) a consequence of burnout and depression (complication/scar model), and (c) that the relationships are reciprocal (reciprocal relations model). Findings supported a reciprocal relations model for burnout symptoms (i.e., a positive reciprocal relationship between SPP and devaluation) and a complication/scar model for depressive symptoms (i.e., depressive symptoms predicted increases in SPP over time). At both time points, SOP was negatively related to burnout symptoms and depressive symptoms, while, in contrast, SPP was positively related to burnout symptoms and depressive symptoms. SOP did not predict, nor was it predicted by, burnout symptoms or depressive symptoms over time. The findings suggest that, over time, SPP may influence burnout in youth football players, and burnout may influence footballers' levels of perfectionism.

## **2.5 Conclusion**

As illustrated by the preceding review of studies that used the HF-MPS in sport, SOP is a more ambivalent form of perfectionism, while SPP is consistently debilitating. The majority of studies in sport exclude the measure of OOP, instead examining the intrapersonal (as opposed to interpersonal) side of perfectionism. SOP and SPP, rather than OOP, are influential in athletes' cognitive appraisal (see Hall & Hill, 2012), and have clear theoretical associations with various negative psychological consequences (see Hall, Hill, & Appleton, 2013). SPP is consistently related to negative outcomes (i.e., burnout and depressive symptoms; Hill et al., 2008; Smith et al., 2018). As those higher in SPP often fail to meet unrealistic standards held for them by others, they are prone to experiencing negative emotions and psychological consequences. SOP, in contrast, is more ambiguous. That is, SOP has been related to positive achievement outcomes, but is a vulnerability factor for emotional difficulties (Flett & Hewitt, 2006). As SOP is characterised by self-critical appraisal in response to imperfection, the cognitive preoccupation with failure may lend itself to increased negative emotions and reduced positive emotions (Bieling, Israeli, & Antony, 2004; Hewitt & Flett, 1991).

## Chapter 3 Perfectionism and overthinking

“I’m terrible. I beat myself up the whole time because I’m striving for something I’ll basically never achieve...I’m never satisfied and I am never content...”

*Victoria Pendleton (2008; The Guardian)*

The previous chapter provided an overview of the early conceptualisations of perfectionism. From this overview, it is apparent that perfectionism includes a salient cognitive component whereby thinking patterns unique to perfectionism are a central and defining feature of perfectionism. Also, the previous chapter provided a description of Hewitt and Flett’s (1991) model of perfectionism, and the reasons why this model is adopted for this thesis. Arguably, it is the most complete theoretical model of perfectionism that is currently available (Hill et al., 2016) as it provides an understanding of the developmental origins of perfectionism, identifies the associated factors, and outlines ways to manage perfectionism effectively. The model also includes dimensions (i.e., SOP, SPP and OOP) that encompass both the positive and negative aspects of perfectionism rather than disaggregating the forms. Research adopting this model, outside and in sport, was subsequently reviewed and while it is apparent that both SOP and SPP are underpinned by different motivations, both can impact well-being and performance, and are related to a number of psychological difficulties. Both SOP and SPP are characterised by self-critical appraisal in response to imperfection and a tendency to be cognitively preoccupied with failure (Hewitt & Flett, 1991). Consequently, people higher in perfectionism have been described as chronic over-thinkers and “perseverating perfectionists”, due to their tendency to engage in repetitive, maladaptive thinking about not reaching perfectionistic standards or about the need to attain standards in the future (Flett, Nepon, & Hewitt, 2016). This chapter outlines the models of overthinking (i.e., rumination), provides an overview of the research examining rumination and its relationship with perfectionism. It also describes the cognitive elements of perfectionism based on Perfectionism Cognitions Theory (PCT; Flett, Hewitt, Nepon, & Besser, 2018). A review of the studies examining perfectionistic cognitions and psychological consequences in and outside sport is then provided.

### 3.1 Models of overthinking

To “overthink” is to think too much or too long about something (Nolen-Hoeksema, 2003). In simple terms, overthinking is putting too much time and effort into analysing something in a way that is more harmful than helpful. There are a number of different types of overthinking that exist and the term *cognitive*



*perseveration*—the cognitive representation of one or more psychological stressors (Clancy, Prestwich, Caperon, & O'Connor, 2016)—has been used as an umbrella term to encompass the different types of overthinking (e.g., continuous thinking about negative events in the past, concerns about events in the future, or the cognitive focus on the symptoms of psychological distress). According to *cognitive perseveration hypothesis*, cognitive perseveration occurs in response to an extensive range of stressors and tends to prolong the stress response in ways that can have negative psychological and health-related consequences (see Brosschot, Gerin, & Thayer, 2006). Research suggests that multiple types of overthinking may coexist (Watkins, 2008), and although each type of overthinking is distinct, there are overlapping features. Rumination is the most widely studied type of overthinking and the models and theories are briefly described in the next section.

### **3.1.1 Rumination**

Rumination has been extensively researched. But because of the multiple definitions and theories, there is no universal definition or standard way of measuring rumination. Much of the research on rumination has drawn on the work of Nolen-Hoeksema who has made pivotal contributions in understanding this type of overthinking. According to Nolen-Hoeksema (1991), rumination is best considered as a cognitive preoccupation with personal feelings of sadness and distress. That is, sad and distressed individuals focus on the causes and consequences of a depressive or distressed state related to past failures or errors and dwell on the discrepancy between desired emotional state and current emotional state (Nolen-Hoeksema, 1991; Nolen-Hoeksema, Morrow, & Fredrickson, 1993). Rumination is comprised of two subtypes: reflective pondering and brooding (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Reflective pondering, a more helpful form of thinking, is accepted as adaptive contemplation with the purpose of overcoming problems (Treynor et al., 2003). Brooding, on the contrary, is considered the most maladaptive type of rumination and is defined as the persistent, involuntary, negative form of self-focus whereby an individual compulsively focuses their attention on symptoms of distress, the causes, and the consequences, as opposed to the solutions.

Response Styles Theory (RST; Nolen-Hoeksema, 1987) asserts that the maintenance and exacerbation of depressed mood can be explained, in part, by rumination. Nolen-Hoeksema developed a line of empirical research that provided an understanding of how and why rumination, in the form of brooding, increases vulnerability to depression and perpetuates negative moods (see Lyubomirsky,

Layous, Chancellor, & Nelson, 2015). Rumination prolongs stress and sustains activation of emotional response systems, which can have severe physical and mental health consequences (Brosschot et al., 2006). For example, being consumed by thoughts of sadness, and repeatedly asking, "Why do I feel this way?" will heighten the feeling of sadness. Individuals who hold a negative self-concept and dwell on emotionally arousing events may find themselves trapped in a cycle whereby the cognitive focus on negative emotions influence each other and ultimately prolong depressed mood (Ciesla & Roberts, 2007).

Another model of rumination is goal-oriented rumination. Goal-oriented rumination involves the repetitive thinking about perceived failure in moving towards one's goals (Martin & Tesser, 1996). The understanding of goal-oriented rumination stems from Goal Progress Theory (Martin & Tesser, 2006). This theory articulates that rumination is not a reaction to a mood state but instead is the recurrence of pervasive thoughts in response to a discrepancy between actual position and desired goal (Martin et al., 1993). For example, when someone does not achieve their goals, they may dwell on this, and ruminate about the difference between current level and ideal level. This type of thinking will result in negative emotions until the goal is achieved or until the desire for this goal is managed (Martin & Tesser, 1989). Consequently, rumination can result in a lack of action toward goal pursuit. This is because, when ruminating, an individual is likely to be focused on and consumed by previous experiences and/or accompanying negative emotions. Consequently, rumination may interfere with the choice of goals (e.g., Nolen-Hoeksema, Gilbert, & Hilt, 2015).

As rumination (brooding) involves a highly abstract, analytical focus on the past, it leaves individuals repetitively focusing on past events or symptoms of distress (e.g., "Why do I always react this way?", "Why am I a failure?") rather than leading to constructive planning or problem solving (reflective pondering). Rumination appears to impede the ability and motivation to use effective self-regulation techniques (Nolen-Hoeksema et al., 2015). It is also devoid of productive problem-solving and is conceptualised as emotion-focused coping (e.g., Lyubomirsky et al., 2015; Nolen-Hoeksema, 1991). However, in contrast to other forms of emotion-focused coping (e.g., distancing), rumination does not achieve the desired goal of feeling better about the situation or rendering the situation less threatening (Lyubomirsky et al., 2015). This is because people who are ruminating remain fixated on the problems and their feelings instead of taking action (Nolen-Hoeksema et al., 2008). Consequently, rumination may deplete cognitive resources

required for effective coping such as active problem solving (Papageorgiou & Wells, 2004). Although rumination may initially be an effort to understand the causes and consequences of one's emotions, it is often an endless cycle of repetitive and overlearned responses to stressors or particular emotions (Lazarus, 1999).

### **3.2 Research examining rumination**

Rumination is related to a range of negative psychosocial outcomes and several forms of psychopathology. In addition, rumination has consequences for daily functioning. For example, rumination has displayed significant and positive relationships with exhaustion, reductions in executive functioning, attention problems, and performance deficits (e.g., Connolly et al., 2014; Flaxman, Ménard, Bond, & Kinman, 2012; Verduyn, & Lavrijsen, 2015). Rumination is likely to interfere with problem solving and instrumental behaviour, contribute to negative thinking, and may immobilise individuals in indecision (e.g., Nolen-Hoeksema et al., 2008; Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003). Further, rumination mediated the relationship between induced negative affect and working memory capacity (e.g., Curci, Lanciano, Soletti, & Rimé, 2013). Rumination is also related to lower levels of social support and higher levels of interpersonal problems (e.g., Nolen-Hoeksema & Davis, 1999; Spasojevic & Alloy, 2001). Rumination is likely to have implications for daily functioning due to the isolative tendencies or repeated discussion of negative feelings with others.

Four key meta-analyses/reviews provide the empirical backdrop for studying rumination. In the first, Mor and Winquist (2002) examined the relationships between self-focused attention (rumination, private and public self-focus, self-focus valence) and negative affect. This included 226 studies (149 correlational studies and 77 experimental) and 406 effect sizes. Results indicated that self-focused attention was positively related to negative affect with a moderate weighted effect size across the correlational studies and a small weighted effect size across experimental studies. Overall, rumination displayed a large positive relationship with negative affect and rumination was more strongly related to negative affect than other types of self-focused attention in both correlational studies and experimental studies. The results of the meta-analysis support Nolen-Hoeksema's (1987, 1991) contention that rumination is a maladaptive type of self-focus.

In the second meta-analysis, Aldao, Nolen-Hoeksema, and Schweizer (2010) examined the relationships between six emotion-regulation strategies (acceptance, avoidance, problem solving, reappraisal, rumination and suppression)

and psychological distress (anxiety, depression, eating disorders, and substance-related disorders). This included 114 studies and 241 effect sizes. Results indicated that, overall, the relationship between psychopathology and rumination was the largest compared to other emotion-regulation strategies. Furthermore, rumination was significantly positively related to anxiety, depression, eating disorders, and substance abuse with large effect sizes. The longitudinal studies that examine the relationships between rumination and psychopathy over time were also reviewed. Overall, rumination predicted significant increases in depression, anxiety, alcohol abuse, substance abuse, and eating disorders.

The third meta-analysis provided a comprehensive quantitative review of existing research that has examined the relationship between rumination and eating disorder psychopathology (Smith, Mason, & Lavender, 2018). The review yielded 38 studies and one effect size per study. The studies were mainly cross-sectional with non-clinical samples. Overall, rumination was positively related to eating disorders. When examining the relationships between rumination and the symptoms of eating disorders, rumination was positively related to restricted eating, binge eating/bulimic symptoms, body dissatisfaction/overvaluation of shape/weight, eating concerns, and general eating disorder psychopathology. Rumination was also positively related to emotional eating and expectancies that eating helps manage negative affect. Greater rumination was found in those with eating disorder symptoms versus non-eating disorder controls. Also, a narrative review of five experimental studies suggested that rumination in response to eating disorder-related stimuli was related to decreased body satisfaction and increased negative affect and negative body-related cognitions in clinical and non-clinical samples.

The fourth meta-analysis demonstrated that rumination has implications for suicidal ideation and suicide attempts. Rogers and Joiner (2017) conducted a meta-analysis reviewing the research that has examined the relationships between rumination and both suicidal ideation and suicide attempts. The review yielded 23 studies and one effect size per study and the vast majority of studies used Nolen-Hoeksema and Morrow's (1991) Ruminative Response Scale to measure rumination. Overall, rumination was positively related to suicidal ideation and suicide attempts. Furthermore, brooding rumination was positively related to suicidal ideation, and reflection was positively related to suicidal ideation. Overall, brooding was positively related to suicide attempts while the overall relationship between reflection and suicide attempts was non-significant. There was little evidence for age, gender, and race/ethnicity as moderators.

Following the death of Nolen-Hoeksema, Lyubomirsky and colleagues (2015) provided a historical account of the research conducted by Nolen-Hoeksema and colleagues. Nolen-Hoeksema dedicated her research to examining the rumination–depression relationship, and how rumination exacerbates negative moods and prolongs depression. The review supports rumination as a robust predictor of the onset and duration of depression (e.g., Nolen-Hoeksema, Larson, & Grayson, 1999; O'Connor, O'Connor, & Marshall, 2007; Sarin, Abela, & Auerbach, 2005). Rumination appears to be a risk factor for a range of psychological disorders, including anxiety, substance abuse, and eating disorders. Furthermore, when reviewing the research conducted by Nolen-Hoeksema, it is evident that, in addition to predicting increases in depression, rumination can also contribute to other negative thoughts among people with negative moods (see Lyubomirsky, Tucker, Caldwell, & Berg, 1999). That is, rumination is cyclic in nature; rumination prompts people who are in a negative mood to experience negative thoughts, which reinforces their negative mood.

In addition to the aforementioned psychological consequences, rumination is related to other harmful behaviours. Rumination is related to self-harm (see Aldao et al., 2010) especially in young people (e.g., Nolen-Hoeksema et al., 2007; Hilt, Cha, & Nolen-Hoeksema, 2008). Also, rumination is related to substance/alcohol abuse (e.g., Nolen-Hoeksema, Stice, Wade, & Bohon, 2007). As in adults, rumination is also related to substance/alcohol misuse in young people. For example, a four-year longitudinal study showed that adolescent girls prone to rumination were more likely to develop symptoms of substance misuse over time than those not prone to rumination (Nolen-Hoeksema et al., 2007). The relationships between rumination and binge-drinking and misusing substances have been explained as attempts to escape from the aversive self-awareness maintained by rumination (Heatherton & Baumeister, 1991).

### **3.3 Research examining perfectionism and rumination**

A number of studies have examined the relationship between perfectionism and rumination. Overall, findings support that a significant positive relationship exists between perfectionism and rumination (Flett et al., 2016). At least 16 studies have been conducted using a measure of perfectionism and a measure of rumination (see Flett et al., 2016). Of these studies, 12 examined the relationships between perfectionism and rumination using measures of SOP, SPP and OOP (e.g., HF-MPS, CAPS). Overall, both SOP and SPP were positively related to

rumination (e.g., Flett, Madorsky, Hewitt, & Heisel, 2002; Olson & Kwon, 2008; O'Connor et al., 2007). Although the relationship between SPP, compared to SOP, and rumination was larger and more consistent, the positive pattern found for the relationship between SOP and rumination provides support that those higher in SOP may also be prone to rumination.

Rumination may be a mechanism by which those higher in perfectionism may experience psychological distress (e.g., Ciesla & Roberts, 2007; Flett et al., 2016). That is, research has found that rumination serves as a full or partial mediator in the relationship between perfectionism and depression (Harris, Pepper, & Maack, 2008). O'Connor et al. (2007) examined the perfectionism–rumination relationship in three studies and found that SOP and SPP were positively related to rumination. In addition, rumination mediated the relationship between SOP and SPP and depression and hopelessness both cross-sectionally and longitudinally (over 8-weeks). Similar results were found over a 4-week period with SOP and SPP interacting with ruminative brooding and stress to predict greater depressive symptoms (Olson & Kwon, 2008). Short and Mazmanian (2013) also found that both SOP and SPP were positively related to rumination, and SPP and rumination and worry were positively related to higher levels of negative affect. Furthermore, rumination mediated the relationship between SPP and negative affect. However, this was only the case for those lower in mindfulness. It was therefore suggested that mindfulness might alleviate the psychological distress associated with SPP by removing the mediating effect of rumination.

The relationship perfectionism and rumination appears to extend to children and young people. A longitudinal study by Burwell (2015) found that, in a sample of adolescents, perfectionism was positively related to brooding rumination across three time points. Similarly, in a sample of elementary school aged children, SOP and SPP were positively related to rumination (Flett, Coulter, Hewitt, & Nepon, 2011). Additionally, this study supports that rumination serves as a mechanism by which perfectionism is related to psychological distress in young people. That is, rumination mediated the relationship between perfectionism and depressive symptoms. Rumination appears to play an important role in the perfectionism–psychological distress relationship in both youth and adult samples.

It is also noteworthy that some researchers have included Hill and colleagues' (2004) measure of perfectionism, the Perfectionism Inventory (PI), which includes rumination as a subscale. Through exploratory and confirmatory factor analysis, rumination emerged as a subscale capturing “the tendency to obsessively worry

about past errors, less than perfect performance, or future mistakes". The rumination subscale was positively related to the other subscales of the PI, as well as with SOP and SPP (Hill et al., 2004). The PI has been used in the sport to measure two higher-order factors of perfectionism: conscientious perfectionism and self-evaluative perfectionism (e.g., Cremades, Donlon, & Poczwadowski, 2013; Elison & Partridge, 2012), but, to our knowledge, no studies exist that have contextualized the PI to measure perfectionism in sport. The PI has, however, been contextualised to be used in dance (e.g., Nordin-Bates, Hill, Cumming, Aujla, & Redding, 2014; Nordin-Bates, Walker, & Redding, 2011).

### **3.4 Perfectionism Cognitions Theory**

Perfectionistic cognitions feature in Hewitt, Flett and Mikail's (2017) comprehensive model of perfectionistic behaviour (CMPB). The CMPB emphasises both the relational and motivational elements of perfectionism and was developed based on psychodynamic and interpersonal models of personality, clinical experiences, and psychometrics, which support that perfectionism can operate at several behavioural levels. That is, perfectionistic behaviour can function at trait/dispositional level of which motivates an individual to perfect the self-based on own expectations or others' expectations (i.e., multidimensional perfectionism). It can also operate at an interpersonal/relational level whereby an individual is focused on demonstrating the "perfect self" to others (i.e., perfectionistic self-presentation). Lastly, perfectionism operates at an intrapersonal level where by an individual expresses the need to be perfect to him or herself in the form of perfectionistic themed thoughts (i.e., unidimensional perfectionistic cognitions).

Perfectionism Cognitions Theory (PCT; Flett et al., 2015, 2018) is a theoretical model that provides a conceptual framework to explain and understand the cognitive mechanisms, processes, and consequences that are related to perfectionism. PCT is built upon the initial work of Flett, Hewitt, Blankstein and Gray (1998) and recognises that perfectionism is related to a quick onset of rumination. Such thinking leads to an overdeveloped memory for mistakes, failures and events, and draws attention to a discrepancy between the actual self and the perfect self. Accordingly, the overthinking related to perfectionism has little benefit and is mainly related to negative consequences such as difficulties concentrating, particularly during stressful situations. Therefore, those higher in perfectionism are likely to experience negative emotions in response to being cognitively aware of unreach perfectionistic ideals. Perfectionistic individuals are likely to be self-critical for

experiencing negative emotions, while concurrently ruminating about not achieving perfection. In a cyclical nature, this awareness of imperfection and experience of negative emotions may disrupt goal pursuit or alternatively result in a stronger desire to improve and perfect the self.

Those higher in perfectionism are likely to engage in ruminative thoughts unique to perfectionism (i.e., perfectionistic cognitions). Flett et al. (1998) recognised that perfectionism involves a salient cognitive component in which those higher in perfectionism are likely to experience frequent perfectionistic cognitions. Perfectionistic cognitions are the automatic thoughts reflecting the need to be perfect. Although more of a state-like manifestation of perfectionism, perfectionistic cognitions represent a stable feature of a perfectionist's mental experience (Flett et al., 1998). This mental experience is characterised by ruminative self-statements about the self-imposed pressure to be flawless such as "Why can't I be perfect?" and "I should be perfect" and can be measured by the Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998). As Burns (1980) contended, those higher in perfectionism will frequently engage in cognitive distortions such as overgeneralisation, all-or-none thinking, and "should" statements. Such thoughts draw attention to the discrepancy between the actual self and the perfect self (both in the past and possibly in the future).

Also, the PCI is underpinned by a useful framework based on the cognitive taxonomy (e.g., Ingram, 1990; Ingram & Kendall, 1986; Ingram, Miranda, & Segal, 1998) which consists of four levels: (a) structural level; (b) propositional level; (c) operational level; and (d) cognitive products level (Flett et al., 2018). At the structural level, cognitions are at a deep level and reflect core schemas about self, long-term memories, and cognitive networks derived from deeper cognitive processing. At this level, perfectionism is underpinned by a core sense of self that reflects a deep-seated need to be perfect, and over-sensitivity to memories that are characterised by "great accomplishments and failures that are personally significant and emotionally charged will be enduring and vividly remembered" (p. 101).

At the propositional level, the focus is on the cognitive representation of perfectionistic dysfunctional attitudes that reflect contingent self-worth (e.g., if I am perfect, I will be loved). A key element at propositional level is "emotional perfectionism" which is the dysfunctional belief about the importance of maintaining perfect emotional control (Flett et al., 2018). The experience of intense negative emotions will repeatedly evoke accompanying perfectionistic cognitions (e.g., "I should be able to control my emotions"), which subsequently draws attention to a



lack of emotional control. For those higher in perfectionism, this perceived lack of emotional control is likely to evoke psychological distress. In addition, cognitive perfectionism at this level also reflects “approach-avoidance conflict” which signifies the simultaneously occurring striving for high standards and the relentless need to avoid failure. A cognitive conflict is likely activated where on one hand, the motivation is to achieve perfection, and on the other, the motivation is to avoid shame, guilt and humiliation of not achieving perfection.

At operational level, PCT proposes that perfectionists are especially susceptible to attending to threats, particularly those with evaluative cues. Perfectionists who have chronic fears of negative evaluation and being publicly shamed will attend to social cues that denote failure or rejection. In addition to being overly sensitive to social cues of evaluative threat, perfectionists will have a cognitive bias towards perfectionism-relevant cues. Negative moods are likely to activate the schema that one needs to be perfect and should be perfect. Such cognitive biases are likely to impede other cognitive processes and cause individuals to be distracted and consumed by cognitive biases, particularly when experiencing emotional distress.

Lastly, at product level, PCT postulates that “cognitively activated” perfectionists will experience perfectionistic cognitions and other forms of overthinking (e.g., mistake rumination, worry, rumination; Flett et al., 2018, p. 104). The experience of frequent, uncontrollable, and invasive images of perfectionistic standards will draw attention to the falling short of perfection. The thoughts reflect the frustration of not achieving important goals (see Martin & Tesser, 1989). The occurrence of frequent perfectionistic cognitions is likely to drain cognitive resources and contribute to the activation of other forms of cognitive interference (e.g., distressing thoughts, mind-wandering). Consequently, a perfectionist will expend energy trying to suppress such thoughts, but such attempts are often ineffective (Flett et al., 2018).

Based on this model, perfectionistic cognitions reflect a more cognitively immediate element of perfectionism that may arise in response to current situation or emotions. Flett et al. (2018) maintain that such cognitions serve to encourage perfection, to put forth effort to achieve perfection, to prepare for feedback, and to appease the self when experiencing failure. Although thoughts of perfectionistic themes (e.g., I should be perfect) can serve the purpose of motivating an individual, perfectionistic cognitions form a sense of internal pressure and serve the purpose of self-punishment, self-belittling, and harsh self-criticism. Thus, they are likely to

have implications for cognitive capacity and emotional responses. Those who engage in frequent perfectionistic cognitions will experience more thoughts and intrusive images related to their own perceived inadequacies in daily life.

### **3.5 Review of research examining perfectionistic cognitions**

Research has found that perfectionistic cognitions play a salient role in psychological distress for those higher in perfectionism. Firstly, perfectionistic cognitions are related to other negative thinking patterns. Research suggests that individuals who experience frequent perfectionistic cognitions are also likely to experience intrusive thoughts about stressful events, and engage in self-criticism, failure perseveration, overgeneralisation, and self-blame (e.g., Flett et al., 2002; Rudolph, Flett, & Hewitt, 2007). In addition, perfectionistic cognitions are related to rumination and worry (e.g., Flett et al., 2011; Flett et al., 1998; Flett et al., 2002), which is supported by longitudinal data. For example, Macedo et al. (2017) found that, over a year, higher perfectionism (measured by PC) significantly predicted increases in perfectionistic cognitions, which in turn were related to higher levels of catastrophising and rumination. Therefore, the findings suggest that, in addition to experiencing frequent perfectionistic cognitions, those higher in perfectionism may also experience other negative thinking patterns.

Secondly, the experience of perfectionistic cognitions may be related to difficulties with coping due to the pervasive thought patterns impeding the resources for coping. Higher scores on the PCI and SPP were related to negative forms of cognitive emotion regulation coping and deficits in positive forms of cognitive emotion regulation coping (e.g., Rudolph et al., 2007). Flett, Hewitt, Whelan and Martin (2007) found that, in addition to being related to psychological distress, perfectionistic cognitions are related to deficits in cognitive self-management, including lack of self-reinforcement, lack of a positive self-focus and perfectionistic inflexibility. In addition, Kobori, Yoshie, Kudo, and Ohtsuki (2011) found that frequent perfectionistic cognitions displayed a significant positive relationship with task-oriented, emotion-oriented, and avoidance-oriented coping, but were also positively related to performance anxiety in musicians. In sum, those who experience frequent perfectionistic cognitions may have difficulties with coping both cognitively and emotionally.

Lastly, frequent perfectionistic cognitions are related to a number of negative emotional and psychological consequences. That is, perfectionistic cognitions were positively related to guilt, sadness, and worry (e.g., Flett et al.,

1998; Flett et al., 2002). Moreover, perfectionistic cognitions were positively related to anxiety, anger, and negative affect (e.g., Ferrari, 1995; Flett, Greene, & Hewitt, 2004; Flett et al., 1998). In addition to general distress, perfectionistic cognitions were positively related to hostility and depression, and negatively related to vigour (Macedo et al., 2017). The experience of frequent perfectionistic thoughts may also have implications for eating habits. That is, perfectionistic cognitions were positively related to eating disorder symptoms (e.g., Flett, Newby, Hewitt, & Persaud, 2011).

### **3.5.1 The unique predictive ability of perfectionistic cognitions**

Importantly, perfectionistic cognitions appear to predict unique variance in psychological distress beyond trait perfectionism. The evidence that supports the unique predictive ability of perfectionistic cognitions is growing. In the initial study examining perfectionistic cognitions (Flett et al., 1998), frequent perfectionistic cognitions were found to explain unique variance in anxiety and depression after controlling for SOP and SPP. The unique predictive ability of perfectionistic cognitions was further supported by Flett et al. (2007) who found that PCI has substantial incremental validity and is not redundant with trait measures of perfectionism when clinical patients completed both types of measures. They found that the PCI accounted for unique variance in anxiety and depression, and suggested that, relative to trait perfectionism measures, perfectionistic cognitions may be a more robust predictor of distress. Later studies also evidenced that the PCI explained additional unique variance in anxiety, depression and bulimic thoughts after controlling for SOP and SPP (e.g., Flett, Hewitt, Demerjian, Sturman, Sherry, & Cheng, 2012; Flett et al., 2011).

Some studies have examined perfectionistic cognitions as a potential mediator between trait perfectionism and psychological consequences. Research has found that, in a sample of college freshmen, frequent perfectionistic cognitions fully mediated the relationship between trait perfectionism and psychological distress (Wimberley & Stasio, 2013). That is, perfectionistic cognitions mediated the relationships between perfectionism and depressed mood and perfectionism and tension-anxiety. Furthermore, the experience of frequent perfectionistic cognitions may have implications for eating issues. That is, frequent perfectionistic cognitions fully mediated the relationship between SOP, SPP and dieting behaviour among a sample of female college students. In addition, frequent perfectionistic cognitions fully mediated the relationship between SOP and bulimic behaviour in male college students (Downey, Reinking, Gibson, Cloud, & Chang, 2014).

In contrast to testing perfectionistic cognitions as the mediator between trait perfectionism and psychological distress, other studies have tested possible mediators of the relationship between frequent perfectionistic cognitions and psychological distress (e.g., negative affect, anxiety sensitivity). For example, in samples of university students, Flett, Molnar, Nepon, and Hewitt (2012) found that negative affect and daily hassles mediated the relationship between PCI and psychosomatic symptoms while Pirbaglou et al. (2013) found anxiety sensitivity and negative automatic thoughts mediated the relationship between PCI and psychological distress (i.e., depression and anxiety). Both studies provide evidence for the possible mechanisms by which perfectionistic cognitions leads to psychological distress. Although the studies did not include measures of trait perfectionism, Flett et al. (2012) anticipated that future tests of frequent perfectionistic cognitions compared to trait perfectionism would provide evidence for the unique role of perfectionistic cognitions in psychological distress.

In summary, research outside sport provides evidence that there is a significant relationship between perfectionism, perfectionistic cognitions, and negative emotions such as depression and anxiety. Evidence suggests that perfectionistic cognitions are a mechanism by which perfectionism is related to negative emotions and psychological distress. That is, perfectionistic cognitions predicted unique variance in psychological distress beyond trait perfectionism. Previous research supports that future research would benefit from examining perfectionism from a cognitive perspective. Researchers in sport have started to follow such recommendation. The next section outlines the research examining the consequences of experiencing frequent perfectionistic cognitions in sport.

### **3.6 Perfectionistic cognitions in sport**

There is far less research in sport examining perfectionistic cognitions compared to multidimensional perfectionism. Two studies exist. The foundation to these two studies was Frost and Henderson's (1991) study which illustrated the interplay of self and cognitive factors related to perfectionism in sport. In this study, female athletes with higher levels of perfectionism (as measured by CM) engaged in negative self-talk 24-hours prior to competition. The athletes had a cognitive tendency to engage in thoughts such as "images of my mistakes clog my mind" and "images of my mistakes control my mind for the rest of competition". Additionally, athletes higher in perfectionism worried prior to competition, worried about making mistakes in performance, and worried about the audience's evaluation.

Only two studies to date have used the PCI to examine perfectionistic cognitions in sport. The first of the two studies suggest that the environment may contribute to a higher frequency of perfectionistic cognitions. In a sample of elite youth athletes ( $N = 190$ ) from individual and team sports (rugby, netball, cricket, rowing, badminton, swimming, ice hockey, basketball, tennis, squash, and judo), Appleton, Hall, and Hill (2011) investigated the influence of parent-initiated and coach-created motivational climate upon athletes' perfectionistic cognitions. Parent-initiated motivational climate was a significant predictor of athletes' levels of PCI. Specifically, the strongest predictor of male and female athletes' levels of PCI was a worry-conducive climate initiated by the parent of the same sex. The results suggest that frequent perfectionistic cognitions are likely to occur in athletes whose same-sex, parent-initiated climate is perceived as highly critical and disapproving of mistakes. A parent- and coach-created motivational climate that is disparaging of mistakes can contribute to a higher frequency of perfectionistic thinking.

The second study by Hill and Appleton (2011) examined the relationship between PCI and symptoms of athlete burnout in male youth and adult rugby union players ( $N = 202$ ). It was found that the PCI displayed a significant positive relationship with a reduced sense of athletic accomplishment and emotional and physical exhaustion but was not significantly related to sport devaluation. Moreover, PCI predicted unique variance in symptoms of athlete burnout above that explained by trait perfectionism. That is, the frequency of perfectionistic cognitions explained 3 to 4% of unique variance in symptoms of athlete burnout after controlling for SOP and SPP. The findings illustrate that perfectionistic rumination is likely to be detrimental to athletes' motivation, and emotions, independent of SOP and SPP.

### **3.7 Conclusion**

Perfectionistic individuals may be vulnerable to engaging in rumination in the form of the perfectionistic cognitions. The findings outside sport suggest that the experience of frequent perfectionistic cognitions has implications for psychological well-being, beyond those that are explained by trait perfectionism. The findings in sport suggest that the environment may play a role in directing athletes' thoughts towards perfectionistic themes and that perfectionistic cognitions are important to the emotional experiences (e.g., burnout) of athletes. Based on previous research, it is reasonable to suggest that perfectionistic cognitions may play a wider role in the psychological processes and other emotional experiences (e.g., pre-competition emotions) of athletes. Therefore, it would be valuable to gain a greater understanding of the experience of frequent perfectionistic cognitions in sport.

## **Chapter 4 The aims of this thesis**

Based on the preceding overview, the broad aim of this thesis is to extend previous research in perfectionism by examining the relationships between perfectionism, overthinking (e.g., perfectionistic cognitions) and emotions in the context of football.

In line with this aim, study one of this thesis adopts a cross-sectional, survey-based design to examine (i) the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers and (ii) whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP.

The second study of this thesis adopts a longitudinal, survey-based design to examine (i) whether perfectionistic cognitions mediate the relationship between SOP and SPP and positive and negative pre-competition emotions by examining the within- and between-person effects and (ii) whether perfectionistic cognitions mediate the relationship between SOP and SPP and multidimensional anxiety and anger by examining the within- and between-person effects.

The third study adopts a mixed-methods approach to first quantitatively identify perfectionistic footballers and then interview them for two purposes: to explore and describe (i) the psychological processes that perfectionistic footballers experience during the course of performances (pre-, during-, and post-performance) and (ii) how adverse experiences in football impact their psychological responses.

The fourth study of this thesis adopts an experimental, randomised control design that (i) evaluates the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions, and increasing help-seeking attitudes in footballers.

## **Chapter 5 Multidimensional perfectionism and pre-competition emotions of youth footballers**

“The team was outside in a huddle waiting for me. I was supposed to be giving the ‘come on we can do this’ speech and I was a shivering wreck in the toilet...I was so anxious because I needed to know everything would go how I wanted it to—95 per cent of me was trying to live in the future.”

*Jonny Wilkinson (Squires, 2018; The Express)*

In the previous chapter, models of rumination and perfectionistic cognitions were described, and Perfectionistic Cognitions Theory was introduced. Research that examined the consequences of perfectionistic cognitions in sport was outlined. This chapter provides descriptions of pre-competition emotions and a brief overview of the research that has examined the relationship between perfectionism and pre-competition emotions. Additionally, the chapter provides an overview of the relationship between perfectionistic cognitions and psychological and emotional consequences outside and in sport. While research outside sport has found that the experience of frequent perfectionistic cognitions positively predicts negative emotions (e.g., anxiety, depression and anger), studies in sport have not examined frequent perfectionistic cognitions as a predictor of emotions. Addressing this limitation, the aim of study one of this thesis is to provide an initial examination of the relationship between two dimensions of trait perfectionism (SOP and SPP) and pre-competition emotions, and whether perfectionistic cognitions predict pre-competition emotions after controlling for trait perfectionism. The chapter concludes with an empirical study that examines the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers, and whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP.

### **5.1 Pre-competition emotions**

How an athlete feels prior to competition is important. Pre-competition emotions have been shown to influence the behavioural, motivational, physical, and cognitive functioning of athletes (e.g., Martinent & Ferrand, 2009). Athletes experiencing positive pre-competition emotions are normally better prepared, braced for competition and energised, whereas athletes experiencing negative pre-competition emotions are more prone to being ill-prepared, distracted, and having displaced energy (e.g., Vast, Young, & Thomas, 2010). Apart from the implications

for performance, over time, pre-competitive emotions are also likely to influence athlete well-being. Again, positive emotions are conducive to better well-being and negative emotions are not (Diener, 2000). Research suggests that athletes vary considerably in the emotions that they experience before competition with many athletes regularly reporting difficulty managing their emotions (Campo et al, 2016). Therefore, in order to better understand why some athletes report more negative and less positive pre-competition emotions, and vice versa, it is necessary to identify the factors that explain the differences between athletes in their pre-competition emotions.

Emotions are complex experiences of consciousness, bodily sensation, and behaviour that reflect the significance of an event (Barrett, Mesquita, Ochsner, & Gross, 2007). Although emotion, mood, and affect are often used interchangeably, emotion is distinct from mood and affect. Emotions (e.g., happiness) are generally short in duration, high in intensity, and relate to specific events (Lazarus, 2000). Mood (e.g., a good mood), by contrast, is a more prolonged experience encompassing a global set of emotions. We experience mood on a day-to-day basis and it is relatively long-lasting, lower in intensity, and less specific than emotion (Ekkekakis, 2013). Moods can occur without a specific event whereas emotions are activated by a significant event. For example, when a person is angry, that person is typically angry about something specific, whereas someone can feel down without an obvious reason. Finally, affect refers to two broad aspects of all emotional experiences: hedonic (pleasure-displeasure) and arousal (sleepy-activated) (Barrett et al., 2007). Affect is categorised into positive (e.g., feeling good) and negative (e.g., feeling bad) experiences, and is experienced continually, but with varying degrees of intensity over time.

One popular approach to understanding emotions is cognitive-motivational-relational theory (CMR; Lazarus, 1991). In this theory, emotions are deemed to arise from the interdependent effects of primary and secondary appraisal of meaningful events (Lazarus, 2000). Primary appraisal determines whether a situation or an event is personally relevant and congruent with an athlete's goals and core values. Secondary appraisal represents an evaluation of perceived coping options, which then forms the basis for behaviour. Lazarus argued that different emotions emerge because of broadly different appraisal patterns and that each emotion is underpinned by a core relational theme. A core relational theme is the perception of benefit or harm underlying positive and negative emotions. For example, a positive emotion (e.g., happiness) is considered to emerge when



individuals appraise progress towards a goal, whereas a negative emotion (e.g., anxiety) is believed to arise when individuals appraise uncertain existential threat.

Athletes can express a range of pre-competition emotions both positive (e.g., excitement and enjoyment) and negative (e.g., anxiety, anger, and dejection) (Jones, Lane, Bray, Uphill, & Catlin, 2005). The function of these emotions is complex. Some pre-competition emotions can facilitate performance but the same emotion, under different circumstances, may impair performance (Hanin, 2010). For example, anxiety—an emotion underpinned by a core relational theme of facing uncertain existential threat—is a common and normal experience for athletes and can fuel greater mental effort when experienced as facilitative (Campo et al., 2016). However, anxiety may also cause muscle tension, concentration disruption, and impaired performance (Hanin, 2010). Anger is similar in its complexity. Anger, an emotion underpinned by the core relational theme of a demeaning offence against “me and mine” (Lazarus, 2000), has the potential to mobilize energy and therefore improve performance but may also impair performance because it can disrupt the focus of attention, decision-making, and skill execution (Campo et al., 2016).

Notwithstanding the complexities, generally, negative emotions are considered more undesirable than positive emotions because they are more likely to drain energy, overload attention, and decrease readiness for competition. Positive emotions, in contrast, are likely to energize behaviour and help maintain mental states that are conducive to better performance (Hanin, 2010). Despite the evident complexities of emotions (i.e., some emotions which are deemed negative can sometimes have positive outcomes), based on Jones et al. (2005), excitement and enjoyment are considered to be generally be more positive and anxiety, anger, and dejection to generally be more negative in terms of outcomes. Therefore, the terms positive emotions and negative emotions will be used throughout to encapsulate the aforementioned grouping of emotions. Understanding the causes, correlates and consequences of emotions has dominated sport psychology research and researchers have primarily focused on the relationship between emotions and performance.

An issue of the sport emotions literature is that the majority of research examining emotions has focused on anxiety and disregarded other negative emotions (e.g., anger) and positive emotions (e.g., happiness). By focusing purely on negative emotions, important information about what emotions athletes are experiencing prior to competition may be missed. Therefore, understanding what individual factors are likely to influence the competition-related emotions that a

footballer feels, both positive and negative, is important. Through understanding what factors lead to more positive and negative emotions, sport practitioners will be more able to support players. Based on confirmatory factor analysis, Jones and colleagues (2005) found five emotions to be important as athletes prepare for competition: happiness, excitement, anxiety, anger, and dejection.

Happiness is deemed a positive emotion that occurs when “making reasonable progress toward the realization of a goal” (Lazarus, 2000, p. 234). Happiness signals that things are going well and there is no immediate need to change things (e.g., Carver & Scheier, 1998; Mackie & Worth, 1989; Melton, 1995). Happiness is likely to occur before competitions that athletes appraise as manageable and where success may be possible. In addition to having positive implications for well-being, happiness is also likely to have positive implications for performance. Totterdell (2000) found that happiness was positively related to the subjective rating of performance in cricketers. Consistent with this finding, through experimental design outside of sport, happiness is related to enhanced performance compared to neutral, anxiety, and sadness conditions (Rathschlag & Memmert, 2014). Perhaps due to the functioning associated with happiness, happiness was positively related to effective problem solving and creativity (e.g., Erez & Isen, 2002; Estrada, Isen, & Young, 1994). Given the findings on happiness (e.g., Jones et al., 2009; Lyubomirsky et al., 2005; Vast et al., 2010), happiness is deemed as more a positive emotion, than a negative emotion. Similarly, it is advocated that excitement is a positive emotion.

Excitement is characterised by a strong feeling and usually an impulse towards a definitive form of behaviour (Smith & Lazarus, 1990). Excitement arises when individuals feel they can achieve their goals, or in a difficult situation where they feel able to deal with the challenge to progress towards goal achievement (Jones et al., 2005; Smith & Lazarus, 1990). As excitement often drives the desire to act, the experience of excitement is likely to improve performance (e.g., Cropanzano, James, & Konovsky, 1993; Jamieson, Mendes, Blackstock, & Schmader, 2010; McConnell, Bill, Dember, & Grasha, 1993). Athletes who are excited about the prospect of competition tend to focus on the potential positive outcomes of upcoming events and feel more capable of achieving performance goals (e.g., Jamieson et al., 2010; Scheier, Weintraub, & Carver, 1986; Schnall, Roper, & Fessler, 2010). The excitement for competition is likely to fuel motivation to perform well. Although it is evidenced that positive emotions have implications for well-being, positive emotions, such as excitement, do not appear as frequently in research as negative emotions such as anxiety.

Anxiety, the most researched emotion in relation to sports competitions, is characterised by high arousal, negative valence and a low sense of control (e.g., Gray, 1991; Raghunathan & Pham, 1999; Smith & Ellsworth, 1985). Anxiety is defined as “a state of distress and/or physiological arousal in reaction to stimuli including novel situations and the potential for undesirable outcomes” (Brooks & Schweitzer, 2011, p. 44). When an athlete perceives an upcoming competition as threatening and potentially unmanageable, it is likely that anxiety will be experienced. Feeling higher levels of anxiety before or during an event is likely to harm performance due to the cognitive focus on the potential undesirable outcomes (e.g., Lerner & Keltner, 2001; Raghunathan & Pham, 1999). Consequently, anxiety can destructively influence motivational mechanisms such as self-confidence, self-efficacy and creativity (e.g., Bandura, 1997, Kashdan et al, 2007, Raghunathan & Pham, 1999).

Anger is a cognitive, emotional and physiological state characterised by a strong feeling of annoyance, displeasure, or hostility. Anger can vary in intensity from mild annoyance to intense rage (Spielberger, Jacobs, Russell, & Crane, 1985). Anger is triggered by perceived endangerment, which can be an entirely physical threat or a perceived threat to self-esteem. The anger evoked by competition is likely to be state anger which is a temporary emotion generally accompanied by increased muscular tension and arousal of the neuroendocrine and autonomic nervous system (Spielberger, 1999). Anger is the most difficult emotion to control (Goleman, 1998) and is likely to have implications for performance. On one hand, anger is related to an action tendency, but, on the other hand, it is likely to narrow focus of attention and lead to poorer decision-making (Rusting & Nolen-Hoeksema, 1998).

Lastly, dejection is highlighted as another important pre-competition emotion. Dejection is defined as “a low intensity negative emotion characterised by feelings of deficiency and sadness” (Jones et al., 2005, p. 411). Characterised as the feeling of sadness, disappointment or depression, dejection is likely to arise when an individual appraises that they are not making sufficient progress to achieve a meaningful goal, or in response to perceived or actual failure (Jones et al., 2005). Higgins (1987) suggests that dejection-related emotions arise from an awareness of the discrepancy between actual self and ideal self. Dejection is positively related to other debilitating mood states (including confusion, anger, tension, and anxiety) and is negatively related to athletes’ ability to maintain emotional control in competition (see Jones et al., 2005). The five sport-related emotions (anxiety, dejection, excitement, anger and happiness) are defined in Table 5.1.

**Table 5.1** Definitions of pre-competition emotions (Jones et al., 2005)

Emotion	Definition
Anxiety	A state of distress and/or physiological arousal when one faces uncertain, existential threat (Brooks & Schweitzer, 2011, Lazarus, 2000)
Dejection	“A low intensity negative emotion characterised by feelings of deficiency and sadness which arises when one does not believe he or she is making sufficient progress to achieve a meaningful goal, or following actual or perceived failure to achieve a meaningful goal” (Jones et al., 2005, p. 411)
Excitement	A feeling of arousal that may be experienced when individuals in a challenging situation believe they will achieve a goal (Jones et al., 2005, p. 411)
Anger	Feelings varying in intensity from mild annoyance to fury and rage which is underpinned by “a demeaning offense against me and mine” (Lazarus, 2000 p. 234)
Happiness	A positive emotion which occurs when “making reasonable progress towards the realization of a goal” (Lazarus, 2000, p. 234).

## 5.2 Personality as a critical antecedent of emotion

Personality characteristics influence the experience of emotions as they imbue achievement contexts with meaning that affect the appraisal process (Duda & Hall, 2001). They can also encapsulate goals, intentions and coping behaviours that are relevant to the overall stress/emotion process (Lazarus, 2000). For these reasons, researchers and practitioners have been interested in identifying personality characteristics that may provide resiliency, or may confer vulnerability, in emotion and stress-related processes. Research has found that a number of factors may buffer individuals from stress and negative emotions during primary appraisal. These factors increase the likelihood of significant events being appraised as challenging rather than as threatening and include self-confidence, task orientation, and conscientiousness (Nicholls & Polman, 2007). Conversely, other factors have been found to increase stress and negative emotions by increasing the likelihood of a significant event being appraised as threatening and that the demands of the situation exceed coping resources. These factors include (low) self-esteem, ego orientation, and neuroticism (Nicholls & Polman, 2007). With these findings in mind it is evident how, in response to the same events, personality characteristics will contribute to how “people perceive themselves differently, think differently, cope differently, and experience and display emotions differently” (Lazarus, 1998, p. 213).

Perfectionism is a multidimensional personality characteristic which reflects the need to perfect the self (Hewitt et al., 2017). Some researchers consider perfectionism to be a disposition (e.g., Stoeber, Corr, Smith, & Saklofske, 2018), whereas others consider it to be a trait (e.g., Hewitt et al., 2017). Hewitt and Flett’s (1991) model of perfectionism includes three trait dimensions: perfectionistic standards directed toward the self (SOP), directed toward others (OOP), or perceived to come from others (SPP). SOP and SPP are particularly relevant to this study because both of these dimensions are related to personal outcomes. In the case of SPP, it is related only to negative outcomes. In the case of SOP, it is more ambivalent as it is related to both negative and positive outcomes (e.g., Stoeber & Childs, 2010). On the role of SOP and SPP in stress/emotion processes, Hewitt and Flett (2002) describe processes of stress generation, anticipation, perpetuation, and enhancement. These processes are underscored by the notion that unrealistic goals are tied to self-worth and that a preoccupation with the importance of goals features heavily in the way meaning is given to attainment. These features in turn influence the thoughts experienced when pursuing goals including prompting the

experience of self-defeating cognitive styles (e.g., rumination), the tendency to catastrophise and exaggerate the consequences of failing, and unconstructive coping behaviours (e.g., avoidance) (Flett & Hewitt, 2016).

When considering the relationship between perfectionism and pre-competition emotions specifically, competition provides an especially important situation for athletes with higher levels of SOP and SPP. For both SOP and SPP, competition offers a means of self-validation, enhancement, or annihilation, when important goals are achieved or not. However, based upon the features of SOP and SPP, the specific emotions experienced are likely to be different. SOP is complicated in that movement towards goals is possible due to greater perceived control over personally meaningful goals (i.e., SOP is associated with the pursuit of personal goals; Powers, Koestner, Zuroff, Milyavskaya, & Gorin, 2011). As such, the anticipatory experience prior to competition may include both positive emotions associated with the possibility of success and negative emotions associated with the possibility of failure. Conversely, SPP includes goals over which the individual has little control (i.e., SPP is associated with the pursuit of goals imposed by others). In which case, there is little opportunity for respite from negative emotional experiences via goal attainment. The anticipatory experience prior to competition is therefore more likely to be dominated by negative emotions as personal effort is considered largely futile and failure, to some degree, is likely to be perceived as inevitable (Frost & Henderson, 1991).

There is a significant amount of research that examines SOP, SPP and general emotions outside of sport (e.g., in university students, school-aged children, and adult community samples). This research indicates that SPP is consistently related to negative emotions. SPP has displayed significant positive relationships with anxiety, anger, and sadness (e.g., Hewitt & Flett, 1991, Hewitt & Flett, 2002; Stornelli et al., 2009). SPP has also displayed a significant negative relationship with happiness (e.g., Stornelli et al., 2009). The relationship between SOP and emotions, on the other hand, is less straightforward. In relation to specific emotions, SOP has displayed significant positive relationships with anxiety, anger and sadness (e.g., Flett, Hewitt, & Cheng, 2008; Saboonchi & Lundh, 2003; Smith et al., 2016), whereas on other occasions these relationships have been non-significant (e.g., Akram, Ellis, Myachykov, Chapman, & Barclay, 2017). With regard to positive emotions, SOP has displayed a significant negative relationship with happiness (e.g., Stornelli et al., 2009), whereas on other occasions this relationship has been non-significant (e.g., Flett et al., 2008). SOP has also displayed a significant positive relationship with enjoyment (Flett et al., 2016).

Findings outside sport are comparable to those in sport. Perfectionism has been examined in relation to general emotions (i.e., emotions associated with sport participation) and emotions following mistakes, and mainly concerning negative emotions. In terms of this research, significant positive relationships have been found between perfectionism dimensions similar to SOP and SPP and negative emotions in the form of anxiety, anger, and dejection (e.g., Dunn, Gotwals, Causgrove Dunn, & Syrotuik, 2006; Lizmore, Dunn, & Causgrove Dunn, 2016; Martinent, Ferrand, Guillet, & Gauthier, 2010). In regard to pre-competition emotions, the majority of studies have focused on anxiety. Dimensions of perfectionism similar to SOP and SPP displayed significant positive relationships with cognitive anxiety in the lead up to competition in some studies (e.g., Hall, Kerr, & Matthews, 1998), whereas other studies have found that the relationship between PS (similar to SOP) and pre-competition anxiety to be non-significant (e.g., Frost & Henderson, 1991). There is also some research examining anger in sport, which has found significant positive relationships between CM (similar to SPP) and trait anger and anger in response to mistakes during performance (e.g., Dunn et al., 2006). However, to our knowledge, the relationship between perfectionism and pre-competition anger has not been examined. Further, research regarding other pre-competition emotions in sport is limited. The first purpose of this study is to build on existing research by examining, for the first time, whether multidimensional perfectionism (SOP and SPP) predicts a range of pre-competition emotions in sport (anxiety, anger, dejection, happiness, and excitement).

### **5.3 Perfectionistic cognitions and emotion**

It is likely that some of the emotions associated with trait or dispositional perfectionism are a result of a ruminative response style. Perfectionistic cognitions are frequent automatic thoughts and images about the need to be perfect (Flett et al., 1997). These thoughts are characterised by recurrent thoughts about the self-imposed pressure to be flawless, such as, “Why can’t I be perfect?” and “I should be perfect” (Flett et al., 1998). Perfectionistic cognitions are a state-like manifestation of perfectionism but their occurrence reflects a stable feature of a perfectionist’s cognitive experience when they are chronically activated (Hewitt et al., 2017). Because perfectionistic cognitions reflect a preoccupation with the attainment of perfection, they tend to be activated by perceived failure or stressful events (Hewitt et al., 2017). Following a stressful event, perfectionistic individuals engage in rumination about falling short of their ideal standard and, therefore,

rumination plays an important role in the subsequent emotions and distress they experience.

The majority of research that has examined perfectionistic cognitions has been outside sport. Together with a strong relationship with SOP and SPP, this research has found a positive relationship between frequent perfectionistic cognitions and a range of negative emotions and stress-related factors. Frequent perfectionistic cognitions have been related to self-criticism, negative forms of cognitive emotion coping, and deficits in positive forms of cognitive emotion coping (e.g., Macedo et al., 2017). Frequent perfectionistic cognitions have also been found to have a significant positive relationship with negative affect (e.g., Downey et al., 2014) and a number of specific emotions, such as anxiety, anger and depressive symptoms (e.g., Flett et al., 1998). In addition, Flett and colleagues have found that frequent perfectionistic cognitions were a unique predictor of anxiety and depression after controlling for trait perfectionism (e.g., Flett et al., 2007). Therefore, as suggested by Flett et al. (2007), the frequency of perfectionistic cognitions appears to offer additional information about the emotional experiences associated with perfectionism.

Research that has examined the experience of perfectionistic cognitions in sport is sparse. In one of two studies to date, Appleton et al. (2011) found that parent-initiated motivational climates were a significant predictor of athletes' perfectionistic cognitions. Specifically, athletes engage in more frequent perfectionistic cognitions when they perceive that their parents create an achievement climate that is highly critical and disapproving of mistakes during competition. In the other study, Hill and Appleton (2011) examined the relationship between perfectionistic cognitions and symptoms of athlete burnout. Perfectionistic cognitions displayed significant positive relationships with reduced sense of accomplishment, emotional exhaustion and physical exhaustion. In this study, perfectionistic cognitions also explained unique variance in burnout dimensions beyond dispositional perfectionism (SOP and SPP in the context of sport). These findings suggest that not only is the sport environment potentially important in directing athletes' thoughts towards perfectionistic cognitions, but such cognitions may play a role in negative emotional experiences such as burnout. Based on this research, it is reasonable to suggest that frequent perfectionistic cognitions may also play a wider role in regard to the pre-competition emotions experienced by athletes.



## 5.4 Purpose of study one

The current study had two purposes: (i) to examine the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers and (ii) to examine whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP.

Based on previous findings, it was hypothesised that:

- (1) SPP would positively predict negative emotions (anxiety, anger, and dejection);
- (2) SOP would positively predict both positive (happiness and excitement) and negative emotions (anxiety, anger, and dejection);
- (3) Perfectionistic cognitions would predict negative and positive emotions after controlling for SOP and SPP.

## 5.5 Method

### 5.5.1 Participants

Participants were 206 high level male and female footballers (male = 78, female = 128, age  $M = 15.53$  years,  $SD = 1.93$ , Range = 11 to 19 years) recruited from sports clubs, sports academies and national teams across the UK. The mean number of years of sport participation was 9.07 years ( $SD = 2.98$ , Range = 1 to 17 years).

### 5.5.2 Procedure

Following institutional ethical approval (see Appendix A.1), initial contact was made with gatekeepers (e.g., coaches) of football academies, national squads and clubs across Scotland and England (see Appendix B.1). An information sheet was distributed to players and parents (see Appendix B.2 and Appendix B.3). Parent/guardian and child assent was gained for those willing to participate (see Appendix B.4). Participants completed a multi-section questionnaire at their training session or before their game. The questionnaire was completed either at their training venue or at competition location between 45 minutes and 120 hours before their next game. The average time until their next game was 24.32 hours ( $SD = 25.79$ ). Participants were asked to rate the importance of their next competition on a scale of 1 = *not important* to 7 = *very important*). The mean of importance was 5.70 ( $SD = 1.49$ ). The participants were verbally debriefed following the completion of the questionnaire (see Appendix B.5).

### 5.5.3 Measures

### 5.5.3.1 The Child and Adolescent Perfectionism Scale

The Child and Adolescent Perfectionism Scale (CAPS; Flett et al., 1997) is a multidimensional perfectionism scale for use with children and adolescents (see Appendix C.2). It measures self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP). It contains 22 items rated on a 5-point Likert-type scale (1 = *not at all true of me*, 5 = *very true of me*). An example item for SOP is “I try to be perfect in everything I do” and an example item for SPP is “there are people in my life who expect me to be perfect”. Twelve items reflect SOP and 10 items reflect SPP. The CAPS takes approximately 15 minutes to complete. The stem of the instrument was adapted to focus athletes on their participation in sport (“When practising/playing football...”). By making this amendment the measures captures dispositional perfectionism (e.g., perfectionism specific to the domain of sport). Readability analyses suggest that individuals completing the CAPS should have at least a third-grade reading level (i.e., 8 to 9 years old). The CAPS has been used with clinical and non-clinical samples of children aged 7-18 years (e.g., Donaldson, Spirito, & Farnett, 2000; Enns Cox, & Inayatulla, 2003; McVey, Pepler, Davis, Flett, & Abdoell, 2002). When the CAPS has been used with children under 10 years old, it is recommended that items are read aloud by the experimenter (Kenney-Benson & Pomerantz, 2005).

The CAPS was designed under the premise that perfectionism can develop early in childhood (Flett et al., 1997). In their unpublished manuscript, Flett et al. (2000) described the CAPS as valid and reliable for use with children and adolescents and the validity and reliability of the scale was further supported in Hewitt, Caelian, Flett, Collins, and Flynn (2002). Flett and colleagues (1997) examined internal consistency, test-retest reliability, concurrent and discriminant validity, and the factor structure of the CAPS. Internal consistency was reported for SOP ( $\alpha = 0.85$ ) and SPP ( $\alpha = 0.81$ ). Test-retest reliability over 5-weeks was reported for SOP ( $r = 0.74$ ) and SPP ( $r = 0.66$ ) in a child/adolescent sample. Evidence of concurrent and discriminant validity was also found. Self-oriented perfectionism was significantly related to school effort and enjoyment, personal desire for perfection, and internal locus of control. Socially prescribed perfectionism was related to school effort but not school enjoyment, external locus of control, and parents’ desire for perfection. Large correlations were found between the CAPS and the perfectionism subscale of the EDI. Furthermore, the CAPS appears to have predictive ability for examining the relationship between both SOP and SPP and psychological outcomes (e.g., Donaldson et al., 2000; Hewitt et al., 1997, 2002; O’Connor, Rasmussen, Miles, & Hawton, 2009).

The two-factor structure of the CAPS was confirmed (Flett et al., 1997), and Flett et al. (2016) provided further examination of psychometrics of the scale which provides reasonable support for the internal consistency and temporal stability of the CAPS. Although some items load onto both SOP and SPP (e.g., Castro et al., 2004; Flett et al., 2016; Flett et al., 2000), Flett et al (2016) claim that double loading does not impact the structural integrity of the CAPS. Three factor structures have also been reported for the CAPS: SOP-strivings, SOP-critical, and SPP (e.g., McCreary, Joiner, Schmidt, & Lalongo, 2004, O'Connor, Dixon, & Rasmussen, 2009). Nevertheless, in line with the original model, the current study used CAPS in the way it was originally intended (i.e., measuring SOP and SPP). In support of our decision, measuring perfectionism as two dimensions has adequate psychometric properties when used to measure dimensions of perfectionism in athletes (e.g., Appleton et al., 2009). As previously described, Flett et al. (2016) suggested that the scale is comprehensible for 8–9 year olds, and therefore, it can be assumed that the measure is suitable for the use with youth athletes.

### **5.5.3.2 The Perfectionistic Cognitions Inventory**

The Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998) is a 25-item measure of the frequency of perfectionism-related thoughts (see Appendix C.3). Participants indicate how frequently they experienced each of the cognitions (e.g., “Why can’t I be perfect?”, “I should never make the same mistake twice”) over the last week on a 5-point Likert-type scale (0 = *not at all*, 4 = *all of the time*). There are no reverse-coded items, and higher scores indicate more frequent perfectionistic thinking. Flett and colleagues (1998) examined internal consistency, test-retest reliability, concurrent and discriminant validity, and the factor structure of the PCI. Evidence to support the validity and reliability associated with the scale has been provided by Flett et al (1998). The PCI had a high level of internal consistency in a clinical sample. The Cronbach alpha coefficient was  $\alpha = .96$ , and the mean inter-item correlation was  $r = .49$ . Flett et al. (2007) also found in their clinical sample that PCI displayed a high level of internal consistency with  $\alpha = .95$ .

To examine the test-retest reliability of the PCI, the PCI was completed at two time-points over 3-months and it was found that the PCI had adequate test-retest reliability ( $r = .85$ ; Flett et al., 1998). The test-retest reliability of PCI was supported by MacKinnon, Sherry, and Pratt (2013) who found the test-retest reliability to be  $r = .76$  when examined over an interval of 130 days with students. The test-retest reliability suggests that the tendency to experience frequent perfectionistic thoughts is a relatively persistent feature associated with

perfectionism and indicative of the general belief that automatic thoughts are states that reflect the activation of latent self-schemas (Beck, Epstein, & Harrison, 1983). As for the stability of perfectionistic cognitions, PCI scores at Time 1 were correlated significantly with PCI scores at Time 2. This high level of temporal stability is not uncommon for measures of automatic thoughts (see Ingram, Kendall, Siegle, Guarino, & McLaughlin, 1995).

Evidence of concurrent and discriminant validity was also found in Flett et al. (1998). The concurrent validity of the PCI among clinical patients was examined by correlating PCI scores with the scores obtained with the two multidimensional perfectionism measures. PCI was significantly and positively correlated with SOP, SPP, and OOP. In addition, the PCI was significantly and positively correlated with all of the subscales of the F-MPS, with the exception of the organisation subscale. Furthermore, PCI was significantly and positively related to Type A characteristics and elements of self-punitiveness, self-criticism and failure perseveration. High scorers on the PCI were especially likely to report images involving fear of failure. Also, significant positive and large relationships were found between the PCI and measures of general feelings of distress and performance difficulty, and a significant positive relationship was found between the PCI and somatic difficulties.

The PCI has also been used for investigations in sport (e.g., Hill & Appleton, 2011). To focus the athletes on their participation in sport, researchers adapted the stem ("Please read each thought and indicate with respect to your most recent performances in training and matches how frequently, if at all, the thought occurred to you over the last week or so"). Researchers have suggested that this scale also has adequate psychometric properties when used to measure dimensions of perfectionism in athletes (e.g., Hill & Appleton, 2011). The PCI showed high level of internal consistency in an athlete sample ( $\alpha = .91$ ; Hill & Appleton, 2011). Furthermore, predictive validity of the PCI in sport was demonstrated by Hill and Appleton (2011) who found the PCI predicted a significant amount of unique variance in athlete burnout (3–4%) over and above SOP and SPP. Furthermore, the readability was tested to determine whether the PCI was suitable for youth participants. The Flesch-Kincaid Grade Level was 2.3 and the Flesch-Kincaid Reading Ease score was 94.0. These scores indicate that the PCI is very easy to read and easily understood by the average 11-year-old student. Also, the PCI has been previously used in sport with athletes aged 10 to 18 years old (Mean age = 15.2,  $SD = 1.5$ ) in Appleton, Hall, and Hill (2011). Therefore, the PCI was deemed suitable for the use in the current study with youth athletes aged 11 to 19 years old.

### 5.5.3.3 The Sport Emotion Questionnaire

The Sport Emotion Questionnaire (SEQ; Jones et al., 2005) is a 22-item measure of the emotions that athletes commonly experience prior to competition (see Appendix C.4). The SEQ examines five emotions which can be grouped into two higher-order dimensions: negative emotions (anxiety, anger, and dejection), and positive emotions (excitement and happiness). The measure comprises of three 4-item and two 5-item scales assessing anxiety (e.g., “nervous”), anger (e.g., “annoyed”), dejection (e.g., “upset”), excitement (e.g., “enthusiastic”), and happiness (e.g., “cheerful”). The participants were asked to indicate on the item scales “how they feel right now, at this moment” in relation to their upcoming sports competition on a 5-point Likert-type scale (0 = *not at all*, 4 = *extremely*).

Jones et al. (2005) provided evidence of the reliability and validity of the SEQ with particular reference to its reliability and factorial, concurrent, content, construct, and face validity. The SEQ had a high level of internal consistency in an athlete sample. The Cronbach alpha coefficients ranged from  $\alpha = .81$  to  $\alpha = .88$ . In addition, support was provided for the factorial validity of the SEQ: comparative fit index (CFI) = .93; root mean square error of approximation; (RMSEA) = .07 (Jones et al., 2005). Confirmatory factor analysis indicated that a 22-item and 5-factor structure provided acceptable model fit. Although the SEQ has not been validated in youth sport, The Brunel Mood Scale (BRUMS; Terry, Lane, Lane, & Keohane, 1999; Terry, Lane, & Fogarty, 2003), a sport version of the Profile of Mood States scale, was used to test concurrent validity. Concurrent validity coefficients showed that the BRUMS and SEQ scores displayed positive and large relationships with the corresponding anger, tension and anxiety, depression and dejection scales. The relationship between vigour and excitement was larger than that between vigour and happiness.

The construct validity of SEQ scores was examined by looking at the relationships between the SEQ scores and scores from the emotional control-in-competition subscale from the Test of Performance Strategies (TOPS; Thomas, Murphy, & Hardy, 1999). The emotional-control-in-competition subscale of the TOPS provides an indication of athletes' use of psychological skills and strategies to control emotions during competition. The relationships between SEQ scores and those from the emotional-control in-competition subscale from the TOPS supported the construct validity of the SEQ. That is, high scores on psychological skills to control emotions during competition were associated with lower scores of anger and dejection and higher scores of excitement and happiness. These findings lend

support to the notion that psychological skills to control emotions before competition are related to pre-competition emotions other than anxiety, which showed a weak non-significant relationship.

Furthermore, to test whether the SEQ was suitable for youth participants, the readability was tested. The Flesch-Kincaid Grade Level was 9.0 and the Flesch-Kincaid Reading Ease score was 66.1. These scores indicate that the SEQ is easily understood by 13- to 15-year-old students. Therefore, to improve readability, the emotions that may be more difficult to understand were provided with an example: exhilarated (ecstatic), apprehensive (nervous), and dejected (feeling down). McCarty, Jones, and Allen (2012), used the SEQ with a sample of youth sport athletes (Mean age = 13.13 years,  $SD = 1.79$ ) and with youth rhythmic gymnasts (Mean age = 10.30 years,  $SD = 1.74$ ). Therefore, the SEQ was deemed suitable for the use in the current study and was chosen to have a balanced number of positive and negative emotions.

#### **5.5.4 Analytical approach**

To test the hypotheses, five hierarchical regression analyses (one for each emotion) were conducted. In Step 1, a predictor block consisting of SOP and SPP was entered so to assess the unique predictive ability of each dimension. In Step 2, a predictor block consisting of PCI was entered so to evaluate the incremental predictive ability of PCI.

### **5.6 Results**

#### **5.6.1 Preliminary analysis**

Due to missing data from individual responses (> 5%), two participants were removed from the sample. Once these values were removed, there were 174 complete cases and 30 cases with incomplete data. In the cases of incomplete data, the average of missing data due to non-response was 1.82% ( $SD = 0.75$ , Range = 1.45 to 4.35%). Given the low number of missing items, each missing item was replaced using the mean of each case's available non-missing items from the relevant subscales. This method of imputation is considered an appropriate strategy when the amount of missing data is low (Graham, Cumsille, & Elek-Fisk, 2003).

Next, internal reliability analysis (Cronbach's alpha) was performed on each subscale. Internal consistencies are displayed in Table 5.2. All scales demonstrated sufficient internal consistency ( $\alpha > .70$ ). The measured variables were then screened for univariate outliers (see Tabachnick & Fidell, 2013). Standardized z-

scores  $\pm 3.29$  ( $p < .001$ , two-tailed) were used as criteria for univariate outliers. This procedure led to the removal of seven participants. Because multivariate outliers can severely distort the results of correlation and regression analysis, one participant with a Mahalanobis distance larger than the critical value of  $\chi^2(8) = 21.96$  ( $p < .001$ ) was removed. The final sample was 196 participants.

When testing for normality, the dejection and anger variables were positively skewed (dejection: skewness = 1.97,  $SE = 0.17$ ; anger: skewness = 1.74,  $SE = 0.17$ ). All other variables were considered univariate normal (absolute skewness: mean = -0.26,  $SE = 0.17$ ; absolute kurtosis: mean = -1.04,  $SE = 0.35$ ). The two skewed variables (dejection and anger) were subsequently transformed per the guidelines provided by Tabachnick and Fidell (2013, pp. 93–151). The transformed variables were substantially less skewed (dejection skewness = 0.37,  $SE = 0.17$ ; anger skewness = 0.47,  $SE = 0.17$ ) and both had a significant positive and large linear relationship with the original variable (dejection:  $r = 0.81$ ; anger:  $r = 0.85$ ). These transformed variables were used in subsequent analyses.

### **5.6.2 Descriptive statistics, reliability coefficients, and bivariate correlations**

Means, standard deviations, reliability coefficients and bivariate correlations are reported in Table 5.2. Participants reported high levels of SOP (5-point scale), medium levels of SPP (5-point scale), and medium levels of perfectionistic cognitions (5-point scale). The sample also reported low-to-moderate levels of pre-competition emotions. Pearson correlation coefficients were computed between SOP, SPP, PCI and pre-competition emotions (Table 5.2). Using Cohen's recommendation (1988), SOP displayed a significant positive and large relationship with PCI. Also of note, SOP displayed a significant positive and small relationship with anxiety while SPP displayed a significant positive and small relationship with dejection and anger, but the relationships with anxiety, excitement and happiness were non-significant. The PCI displayed significant positive and small-to-medium relationships with all pre-competition emotions.

**Table 5.2** Descriptive statistics, bivariate correlations, and internal reliability coefficients for self-oriented and socially prescribed perfectionism, perfectionistic cognitions, and sports emotions before competition ( $N = 196$ )

Variable	<i>M</i>	<i>SD</i>	$\alpha$	1	2	3	4	5	6	7
1. Self-oriented perfectionism	3.55	0.56	.76							
2. Socially prescribed perfectionism	2.20	0.76	.87	.25**						
3. Perfectionistic cognitions	1.84	0.67	.91	.58**	.34**					
4. Anxiety	1.38	0.99	.87	.21**	.02	.35**				
5. Dejection	0.44	0.73	.87	.04	.16*	.22**	.35**			
6. Excitement	2.60	0.98	.85	.20**	-.06	.18*	.21**	-.16**		
7. Anger	0.50	0.81	.88	.08	.23**	.29**	.25**	.73**	-.10	
8. Happiness	2.32	1.06	.89	.15*	-.01	.16*	.03	-.24**	.78**	-.19**

Note. \* $p < .05$ , \*\* $p < .01$ , two-tailed.



### **5.6.3 Hierarchical regression analyses**

The results of the hierarchical regression analyses are reported in Table 5.3. The first hierarchical regression included anxiety as the criterion variable. SOP and SPP accounted for 5% of variance in anxiety. SOP was a significant positive and small predictor within the block. Entering PCI resulted in an additional 8% of variance being explained in anxiety. This increase was statistically significant.

The second hierarchical regression included dejection as the criterion variable. SOP and SPP accounted for 3% variance in dejection. The model was not statistically significant. However, it is noteworthy that SPP was a significant positive and small predictor. Entering PCI resulted in an additional 4% variance being explained in dejection. This increase was statistically significant.

The third hierarchical regression included excitement as a criterion variable. SOP and SPP accounted for 5% variance in excitement. The model was statistically significant. SOP was a significant positive and small predictor. Entering PCI did not account for any significant additional variance. SOP was no longer a significant predictor of excitement.

The fourth hierarchical regression included anger as the criterion variable. SOP and SPP accounted for 5% variance in anger. The model was statistically significant. SPP was a significant positive and small predictor of anger. Entering PCI resulted in an additional 7% variance being explained in anger. This increase was statistically significant.

The fifth hierarchical regression included happiness as the criterion variable. SOP and SPP accounted for 2% of variance. However, the model was not statistically significant. SOP was a significant positive and small predictor. Entering PCI did not account for any significant additional variance. SOP was no longer a significant predictor of happiness.

**Table 5.3** Hierarchical regression analyses with self-oriented and socially prescribed perfectionism and perfectionistic cognitions predicting pre-competition emotions ( $N = 196$ )

Criterion Variable	Predictor Variables	$F$	$Df$	$R^2$	$R^2$ change	$B$	$t$
<i>Anxiety</i>							
Step 1		4.75**	2, 193	0.05**			
	SOP					.22**	3.07
	SPP					-.04	-0.49
Step 2		9.63***	3, 192	0.13*	0.08***		
	SOP					.03	0.35
	SPP					-.11	-1.55
	PCI					.37***	4.31
<i>Dejection</i>							
Step 1		2.43	2, 193	0.03			
	SOP					.01	0.07
	SPP					.16*	2.12
Step 2		4.51**	3, 192	0.07*	0.04**		
	SOP					-.13	-1.53
	SPP					.10	1.38
	PCI					.26**	2.91
<i>Excitement</i>							
Step 1		5.33**	2, 193	0.05**			
	SOP					.23**	3.17
	SPP					-.11	-1.54
Step 2		4.27**	3, 192	0.06			
	SOP					.16	1.88
	SPP					-.14	-1.86
	PCI				0.01	.13	1.45
<i>Anger</i>							
Step 1		5.37**	2, 193	0.05**			
	SOP					.02	0.33
	SPP					.22**	3.08
Step 2		8.60***	3, 192	0.12**	0.07***		
	SOP					-.15	-1.77
	SPP					.16*	2.16
	PCI					.33**	3.78

*Happiness*

Step 1		2.42	2, 193	0.02		
	SOP				.16*	2.20
	SPP				-.05	-0.61
Step 2		2.32	3, 192	0.04	0.01	
	SOP				.09	1.06
	SPP				-.07	-0.95
	PCI				.13	1.45

---

*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , all two-tailed.

## 5.7 Discussion

The aims of this investigation were: (i) to examine the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers and (ii) to examine whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP.

Based on previous findings, it was hypothesised that:

- (1) SPP would positively predict negative emotions (anxiety, anger, and dejection);
- (2) SOP would positively predict both positive (happiness and excitement) and negative emotions (anxiety, anger, and dejection);
- (3) Perfectionistic cognitions would predict negative and positive emotions after controlling for SOP and SPP.

### 5.7.1 Multidimensional perfectionism and pre-competition emotions

Consistent with the hypotheses, SPP was a unique positive predictor of anger. The predictive ability of SPP for pre-competition anger is aligned with research in sport that has reported similar findings for general anger (i.e., trait anger; Dunn et al., 2006) and anger following mistakes (i.e., anger/dejection following mistakes; Lizmore et al., 2016). However, unlike previous research, the current study findings illustrate for the first time that a relationship between perfectionism and anger exists in context of anticipatory pre-competition experiences for athletes. In doing so, a clearer picture is emerging of the likely emotional experiences associated with higher SPP at key points in the performance process. Given the complex role of anger with regard to performance, it is difficult to assert that the experience of anger is necessarily debilitating. However, it highlights the possibility that the ability to regulate anger effectively may be particularly important for athletes reporting higher SPP (see Hill & Davis, 2014). In addition, with regard to well-being, there is likely to be little benefit in an emotional experience that is characterised by higher levels of anger generally, anger when preparing for competition, and anger during competition.

Consistent with the hypotheses, SPP was also a unique positive predictor of dejection (in the context of a non-significant model). The predictive ability of SPP for pre-competition dejection aligns with research in sport that has reported similar findings for depression (i.e., depressive symptoms; Smith et al., 2018) and dejection following mistakes (i.e., anger/dejection following mistakes; Lizmore et al., 2016). However, unlike previous research, the findings of this study illustrate for the

first time that a relationship between perfectionism and dejection exists in context of pre-competition emotions for athletes. Given that the research for understanding the implications of feeling dejection prior to performance is limited, it is difficult to assert that the experience of dejection is necessarily debilitating. Nevertheless, dejection is likely to arise when insufficient progress is made towards goals and is subsequently likely to have implications for motivation for upcoming performance. Furthermore, if footballers are experiencing dejection pre-competition for an extended time, it is likely to have implications for well-being.

The relationships between SPP and anxiety, happiness, and excitement were non-significant. In contrast, research outside sport found that SPP was negatively related to positive emotions (e.g., happiness; Stornelli et al., 2009; Mor, Day, Flett, & Hewitt, 1995) and positive affect (e.g., Saboonchi & Lundh, 2003). Similarly, in sport, SPP was related to significantly lower levels of positive affect (Gaudreau & Verner-Filion, 2012). These results support that individuals higher in SPP are likely to experience lower levels of positive emotions. With regards to negative emotions, the relationship with SPP was non-significant, which is inconsistent with other studies whereby SPP was positively related to anxiety both outside sport (e.g., Einstein, Lovibond, & Gaston, 2000) and inside sport (e.g., Carter & Weissbrod, 2011). It is likely that athletes higher in SPP are likely to feel pre-competition emotions in the form of dejection and anger, rather than anxiety, because they are likely to focus on goal blockage (e.g., externally sourced goals), and consequently, anger and dejection may arise pre-competition out of not reaching others' expectations, rather than perceiving competition as an existential threat.

As hypothesised, SOP was more complex. SOP was a unique positive predictor of anxiety, excitement, and happiness (in the context of a non-significant model). In the same manner that it is now known that pre-competition emotion experiences associated with SPP includes higher anger and dejection, the findings add to evidence that anxiety is central to the pre-competition emotional experiences of athletes higher in SOP. It is noteworthy that research has provided more mixed evidence regarding dimensions similar to SOP and pre-competition anxiety. For example, Frost and Henderson (1991) found the relationship between PS and pre-competition anxiety to be non-significant. Stoeber et al. (2007) also similarly found little evidence of a significant relationship between striving for perfection and cognitive anxiety across four athletic samples, including one sample of female football players. These findings contrast with those of Hall et al (1998) who found

that PS displayed a significant positive with cognitive anxiety 30 minutes before athletic competition. Both studies (Frost & Henderson, 1991; Stoeber et al., 2007) found little or no correlation when measuring general pre-competition anxiety (i.e., how athletes usually feel before competition), but the findings of Hall and colleagues' study evidence this relationship when measuring pre-competition in relation to an actual forthcoming competition. It appears that SOP may not be related to any general sense of pre-competition anxiety but is related to pre-competition anxiety when measured in context of a specific and important event (i.e., an actual competition).

With regard to SOP predicting positive pre-competition emotions, there is a small amount of evidence of similar relationships outside sport with general emotions (e.g., enjoyment; Flett et al., 2016). There is also a small amount of evidence for similar relationships in sport for general positive affect (e.g., Kaye et al., 2008) and the enjoyment of competition generally (Carter & Weissbrod, 2011). To our knowledge, however, it is the first time the relationship between SOP and specific positive pre-competition emotions has been found in sport. On one hand, then, SOP may contribute to more anxiousness but, on the other, it contributes to more excitement and happiness prior to competition. Although at first glance perplexing, this mix of emotions might be explained by the complex motivational underpinnings of SOP that includes both avoidance and approach goals (Kaye et al., 2008). Approach goals are typically associated with positive emotions whereas avoidance goals are typically associated with negative emotions (Huang, 2011). What is observed here may be reflective of these goals working in tandem, with positive emotions being explained by the opportunity that competition provides to demonstrate competence, and the negative emotions being explained by the trepidation of the perceived consequences of performing poorly. Support for this possibility is provided by achievement goal research in sport where higher levels of avoidance and approach goals are associated with a similar mix of pre-competition emotions (e.g., Nicholls, Perry, & Calmeiro, 2014).

### **5.7.2 Perfectionistic cognitions and pre-competition emotions**

In partial support of the hypotheses, frequent perfectionistic cognitions were found to be important when considering some but not all pre-competition emotions. Corroborating the results of previous studies of perfectionistic cognitions and emotions (e.g., Flett et al., 1998), it was found that perfectionistic cognitions account for significant additional variance in negative emotions (anxiety, anger, and dejection) over and above the variance predicted by SOP and SPP. As

perfectionistic cognitions reflect a cognitive preoccupation with the attainment of perfection and the discrepancy between the actual self and the desired perfect self, it is therefore unsurprising that these cognitions are related to negative emotions in athletes (Flett et al., 2007). The findings support that to better understand the pre-competition emotional experiences of athletes, practitioners need to consider whether athletes are higher or lower in SOP and SPP and whether they are experiencing more or less frequent perfectionistic cognitions as they approach competition.

Perfectionistic cognitions did not predict any positive emotions above SOP and SPP (happiness and excitement). Therefore, perfectionistic cognitions appear comparatively unimportant with regard to the experience of positive emotions. While the role of perfectionistic cognitions in the experience of negative emotions is more intuitive, it is less clear why—given the prediction of negative emotions here—perfectionistic cognitions were not also negatively related to positive emotions beyond SOP and SPP (or related to negative emotions at all in the bivariate correlations). This finding may be indicative of the notion of co-activation whereby the experience of higher levels of negative emotions does not necessarily coincide with the experience of lower levels of positive emotions, and that positive and negative emotions can be experienced concurrently (e.g., excitement and anxiety; see Ekkekakis, 2013). It is also considered that the finding indicates that perfectionistic cognitions are more relevant to the core relational themes that underpin negative emotions, such as perceptions of harm and threat, but are less relevant to the core relational themes that underpin positive emotions, such as perceptions of benefit or goal progress.

## **5.8 Conclusion**

This study is the first in sport to examine the relationships between SOP, SPP, perfectionistic cognitions, and pre-competition emotions. It revealed that SPP was a unique significant positive predictor of anger and dejection, while SOP was a unique significant positive predictor of anxiety, excitement and happiness. Moreover, perfectionistic cognitions predicted negative pre-competition emotions (anxiety, anger, and dejection) beyond SOP and SPP, but not positive emotions (happiness and excitement). Whether an athlete expects perfection of him or herself, believes others expect it of them, or experiences thoughts centred on perfection, perfectionism appears important in regard to pre-competition emotions.

## **Chapter 6 A longitudinal study of perfectionism and multidimensional pre-competition emotions in youth footballers**

“She's become a real perfectionist. She spent two or three days here, but she wasn't satisfied, so she came back and spent another two or three days with me. She becomes very angry when she makes a mistake. Right now, she feels that she shouldn't be missing anything. This year I believe she's going to be competing against herself.”

*Bollettieri, Serena William's Coach (Williams, 2003; The Guardian)*

The findings of study one provided initial evidence that perfectionistic cognitions are important in relation to pre-competition emotions. In particular, perfectionistic cognitions predicted unique variance in negative emotions (anxiety, anger, and dejection) when controlling for SOP and SPP. Therefore, perfectionistic cognitions may be one mechanism by which SOP and SPP are related to anxiety and anger. But, since study one was cross-sectional, mediation could not be properly tested. In order to properly test mediation, longitudinal data is required (Cole & Maxwell, 2003). Therefore, the purpose of study two is to test whether perfectionistic cognitions mediate the relationship between perfectionism and both general pre-competition emotions and multidimensional anxiety and anger. This chapter defines and describes multidimensional anxiety and anger and provides an overview of research that has examined the relationship between perfectionism and dimensions of anxiety and anger in sport. A theoretical explanation and supporting research from outside and inside sport that supports perfectionistic cognitions role as a potential mediator in the perfectionism and pre-competition emotions relationship is also provided. The chapter concludes with an empirical study that longitudinally tests whether perfectionistic cognitions mediate the relationship between SOP and SPP and general pre-competition emotions and multidimensional anxiety and anger at within- and between-person level.

### **6.1 Multidimensional pre-competition emotions**

#### **6.1.1 Multidimensional anxiety**

Anxiety is defined as the subjective feeling of apprehension, worry, and tension caused by perceiving a situation as psychologically or physically threatening (Spielberger, 1972). Anxiety is evoked by initial perceptions of threat when the uncertainty of harm is not yet known (Parsafar & Davis, 2018). Anxiety can be distinguished as either trait anxiety or state anxiety. Trait anxiety is a



dispositional tendency to view situations as threatening and, consequently, experience state anxiety more persistently (Spielberger, 1966). State anxiety is a momentary emotion characterised by feelings such as fear, tension, and apprehension, which occurs in response to perceived threats in the environment. These forms of anxiety can be further described as cognitive or somatic. Cognitive anxiety is the mental manifestation of anxiety involving concerns about possible failure and worrying about upcoming performances, whereas, somatic anxiety is the activation of bodily symptoms and negative arousal such as “butterflies” in the stomach or elevated heart rate.

Cognitive anxiety includes negative expectations and cognitive concerns about oneself, the situation at hand, and potential consequences (Morris, Davis, & Hutchings, 1981, p. 541). Cognitive anxiety is likely to manifest as thoughts of worry about performance ability such as “I am concerned about this competition” but also as thoughts of fear about the consequences of not performing well such as “I’m concerned that others will be disappointed in my performance.” Furthermore, cognitive anxiety may present itself as worry or unease and consequently, may result in difficulties in concentration. Cognitive anxiety has two functions: firstly, it consumes some attention capacity and reduces working memory capacity due to task-irrelevant thoughts impairing processing efficiency, and secondly, cognitive anxiety signals the importance of a task to the individual, which may lead to increased investment in the task (Tod & Lavalley, 2013). Therefore, a high level of cognitive anxiety has the capacity to impede performance due to worrying thoughts taking up resources required to focus on the task at hand, but also has the capacity to increase effort. As cognitive anxiety manifests as concerns about aspects of performance, it can evoke higher levels of vigilance which fuels action as a means to avoid the consequences associated with not performing well (Mathews, 1990).

Somatic anxiety is defined as “one’s perception of the physiological affective elements of the anxiety experience, that is, indications of automatic arousal and unpleasant feeling states such as nervousness and tensions” (Morris, Davis, & Hutchings, 1981, p. 541). Somatic anxiety is the physical symptoms of anxiety and is likely to manifest as butterflies in the stomach, sweaty palms, racing heart, shortness of breath etc. Somatic anxiety appears to be a preparatory response to competition that dissipates once the competition is over. Higher levels of somatic anxiety may impede performance, as the bodily responses associated with somatic anxiety are likely to drain energy resources. In contrast, somatic anxiety may indicate a sense of readiness for competition and therefore, energize individuals for competition (Martens, Burton, Vealey, Bump, & Smith, 1990).

Martens and colleagues (1990) developed the Competitive State Anxiety Inventory-2 (CSAI-2) to measure the intensity of competition-related cognitive and somatic anxiety (and self-confidence). Research employing this measure supports the cognitive and somatic components of anxiety as antecedents (e.g., Jones, Swain, and Cale, 1991), performance outcomes (see Craft, Magyar, Becker, & Feltz, 2003), temporal characteristics (e.g., Gould, Petlichkoff, & Weinberg, 1984; Jones et al., 1991; Martens et al., 1990), goal attainment expectation (e.g., Krane et al., 1992), and as a means to examine intervention effectiveness (e.g., Maynard & Cotton, 1993). A range of personal and situational moderators have been identified that influence cognitive and somatic anxiety. Personal factors include trait anxiety, self-confidence, cognitive bias, neuroticism, hardiness, and coping strategies (see Mellalieu, Hanton, & Fletcher, 2006). Situational factors include skill level, competitive experience, sport type, and performance level. That is, research has found that competitive state anxiety differs as a function of sport type, skill level, gender, and competitiveness (e.g., Jones et al., 1991; Martens et al., 1990; Swain & Jones, 1992).

Anxiety also differs in relation to the time before competition. In a notable study examining the temporal ordering of emotions, high school wrestlers ( $n = 45$ ) and gymnasts competing at championships ( $n = 40$ ) completed the CSAI-2 at several time points in the lead up to competition (Martens et al., 1990). The wrestlers completed the CSAI-2 on five occasions in the pre-competition period: 2-days, 1-day, 2-hours, 1-hour, and 15- to 20-minutes before competition. The gymnasts completed the CSAI-2 on four occasions in the pre-competition period: 4-days, 1-day, 2-hours, and 5-minutes before competition. Somatic anxiety was lower several days before competition but increased as the event approached whereas cognitive anxiety remained stable across data points for both groups. Also examining multidimensional anxiety prior to competition, Wiggins (1998) found that somatic anxiety intensity increased as competition approached whereas cognitive anxiety intensity did not change. Mabweazara, Andrews and Leach (2014) found that, in a sample of swimmers ( $N = 62$ ), cognitive and somatic anxiety scores seven days before competition were significantly different to scores one hour before competition.

A key focus of the anxiety research has been to examine the impact of cognitive and somatic anxiety on performance. As findings have been inconsistent, Craft et al. (2003) conducted a meta-analysis ( $N = 29$  studies) examining the effect of state anxiety on athletic performance, measured by the CSAI-2. Overall, the relationships between both cognitive and somatic anxiety and performance were

weak (e.g., non-significant). Moderators were examined and the relationship between cognitive and somatic anxiety and performance was larger for individual than team sports, open skills (i.e., skills performed in constantly changing environments) than closed skills, and higher level (e.g., European club) than lower level groups (e.g., physical education students). Furthermore, results showed that the largest relationships between anxiety and performance were at 31–59 minutes prior to competition.

To extend the previous study, Woodman and Hardy (2003) conducted a meta-analysis examining the effect of cognitive anxiety and athletic performance ( $N = 43$ ) and included a number of competitive state anxiety measures. Of the 43 studies reporting a relationship between cognitive anxiety and performance, 26 (60%) reported a negative relationship, seven (16%) reported non-significant results and ten (23%) reported a positive relationship. The mean overall effect demonstrated a significant negative relationship between cognitive anxiety and performance. The results support that, although a large proportion of the studies found cognitive anxiety to have negative implications for performance, it is unlikely that anxiety will be problematic or beneficial in all circumstances. That is, based on two meta-analyses, the relationship between anxiety and performance is inconsistent and subject to moderation.

The relationship between anxiety and ill-being is clearer. If anxiety is experienced at high levels over time, it is likely to have negative implications for well-being. There is extensive research supporting co-occurrence, or comorbidity, between anxiety and depression (e.g., Axelson & Birmaher, 2001; Essau, 2008; Cummings, Caporino, & Kendall, 2014). Research also suggests that anxiety and anorexia nervosa, attention deficit hyperactivity disorder and substance abuse disorders can co-occur (e.g., Kaye, Bulik, Thornton, Barbarich, & Masters, 2004; Jarrett & Ollendick, 2008; Smith & Book, 2008). In addition to the psychological consequences, the experience of heightened anxiety is likely to put individuals at greater risk of negative physical consequences such as high blood pressure, coronary heart disease, arthritis, migraines, allergies, and thyroid disease (e.g., Matcham, Ali, Irving, Hotopf, & Chalder, 2016; Roest, Martens, de Jonge, & Denollet, 2010; Roy-Byrne et al., 2008). As such, experiencing high levels of anxiety over extended time is likely to place individuals at risk of negative physical and psychological consequences.

### **6.1.2 Multidimensional anger**

Anger is also a well-recognised emotion in sport (Lane, Terry, Beedie, Curry, & Clark, 2001; Lazarus, 2000). Anger is defined as a cognitive, emotional and physiological state characterised by a strong feeling of annoyance, displeasure, or hostility. Anger, as with anxiety, can be described as both a state emotion, or as a trait. Trait anger is a stable personality trait that is characterised by the tendency to experience anger frequently and intensely (Miller, Smith, Turner, Guijarro, & Hallet, 1996). State anger is the temporary, short-lasting experience of negative feelings similar to being annoyed or irritated or, at its greatest extent, rage, with associated activation of the autonomic nervous system (Spielberger, Jacobs, Russell, & Crane, 1983). In a sport context, state anger varies across different situations in relation to performance.

Anger is underpinned by the core relational theme of “a demeaning offence against me and mine” (Lazarus, 2000, p. 242). Lazarus suggests anger is associated with an action tendency that directly represents the manifestation of the person’s appraisal of the stimulus in relation to the self (Lazarus, 2000). Anger heavily depends on the goal of preserving or enhancing self-esteem or social-esteem (Lazarus, 1999). Therefore, anger is triggered by perceived endangerment, which could be due to perceived threat to self-esteem or a physical threat. That is, the experience of anger stems from appraising situations as harmful to self and often arises from the feeling that one should, or could, do better, when highly desired goals are blocked, or when an event is deemed unfair or undeserved. In turn, the action tendency associated with anger is often the impulse to gain revenge in order to protect or restore self-esteem (Lazarus, 2000, p. 243).

Spielberger (1991) postulates that anger is multidimensional and comprised of three components: (a) feel anger, (b) verbal anger, and (c) physical anger. Feel anger—when an individual experiences feelings of anger—is sometimes referred to as anger-in. Anger-in is defined as how often an individual experiences, but does not express, angry feelings. In contrast, anger-out is the frequency that an individual expresses angry feelings in verbally or physically aggressive behaviour (Spielberger, 1988, p. 95). Anger-out has two distinctions: when an individual feels like expressing anger verbally (e.g., shouting, swearing) and when an individual feels like expressing anger physically (e.g., punching, hitting).

Research on anger in sport has predominately focused on aggressive acts or the relationship between anger and performance rather than the emotional experience of anger (e.g., Bredemeier & Shields, 1986). Anger may facilitate physical performance if the required skill is similar to anger’s action tendency (i.e.,

to lash out). As such, anger was related to better performance on a gross muscular task than neutral-emotions, especially in combative and contact sports (e.g., Lane & Chappell, 2001; Robazza & Bortoli, 2007; Terry & Slade, 1995). Other studies show that anger has the potential to increase one's effort, but not necessarily improve performance (Woodman et al., 2009). In contrast, anger has the potential to distract athletes from the task at hand, particularly if anger fuels verbal or physical expression of anger.

In addition to the relationship with performance, studies have examined the role of gender, age and level of play, and sport in the experience of anger (e.g., Coulomb-Cabando & Rasclé, 2006). With regard to the consequences of anger, it is known from research outside sport that anger, if experienced at high levels over time, is likely to have negative implications for well-being. That is, anger is related to high blood pressure, coronary heart disease and even morbidity and death (e.g., Davidson & Mostofsky, 2010; Kitayama et al., 2015; Suinn, 2001). The antecedents of dimensions of anger are still relatively under-researched. Nonetheless, study one of this thesis showed that perfectionism and perfectionistic cognitions may be antecedents to the experience of anger prior to competition.

## **6.2 Perfectionism and multidimensional emotions**

### **6.2.1 Perfectionism and multidimensional anxiety in sport**

In line with the findings of study one, perfectionism appears to influence the cognitive appraisal process and is related to pre-competition anxiety. For those higher in SOP and SPP, competition provides an especially important situation whereby athletes are presented with an opportunity to validate self-worth, enhance self-worth or reduce self-worth depending on goal progression (Hall, 2006). However, as evidenced in study one, the emotions experienced are likely to be different for SOP compared to SPP. For example, SOP was positively related to anxiety, whereas the relationship between SPP and anxiety was non-significant. SOP is also a vulnerability factor for emotional difficulties (Flett & Hewitt, 2006). This is partly because athletes higher in SOP imbue competition with an irrational sense of importance that places considerable pressure on coping resources and can result in pre-competition anxiety. For those higher in SOP, competition is likely to elicit anxiety when failure is possible, however, it is unclear what type of anxiety (e.g., cognitive and/or somatic). By contrast, study one showed that individuals with higher levels of SPP are more likely to experience anger and dejection pre-competition, rather than anxiety. With SPP, individuals are likely to have little control

over their goals (i.e., SPP is associated with striving for goals set by others) and as the externally sourced goals are difficult to attain, individuals are likely to experience more anger and dejection via the lack of goal attainment.

Seven studies exist in sport that examined the relationship between perfectionism and competitive state anxiety in the form of cognitive and somatic anxiety (Carter & Weissbrod, 2011; Frost & Henderson, 1991; Hall et al., 1998; Koivula, Hassmén, & Fallby, 2002; Martinent & Ferrand, 2007; Martinent et al., 2010; Stoeber et al., 2007). Of these studies, one study used Hewitt and Flett's model of perfectionism (Carter & Weissbrod, 2011), whereas, most of the other studies used the F-MPS to capture personal standards (PS) and concern over mistakes (CM; e.g., Hall et al., 1998), with the exception of Stoeber et al. (2007) who examined perfectionistic strivings (similar to SOP and PS) and negative reactions to imperfections (similar to SPP and CM). Overall perfectionism (combined perfectionistic strivings and negative reactions to imperfections) was positively related to cognitive and somatic anxiety (Stoeber et al., 2007). Although not the same as SOP and SPP, PS has components and characteristics similar to SOP, and CM has components and characteristics similar to SPP (see Chapter 2). Using this way of measuring perfectionism, overall perfectionism (PS and CM combined) was positively related to competitive anxiety (Frost & Henderson, 1991).

Some studies have shown that dimensions of perfectionism similar to SOP (e.g., PS) are related to cognitive anxiety but not somatic anxiety (e.g., Frost & Henderson, 1991), whereas other studies examining SOP have found the opposite (e.g., Carter & Weissbrod, 2011). Differences were found with regard to gender, whereby the relationships between SOP and cognitive anxiety were non-significant in both male and female athletes but SOP was negatively related to somatic anxiety in male athletes and the relationship between SOP and somatic anxiety was non-significant in females (Carter & Weissbrod, 2011). With regards to PS (similar to SOP), Frost and Henderson (1991) found that PS was positively related to competitive anxiety, difficulty concentrating, and worry about the audience before competition (indicative of cognitive anxiety). Stoeber (2007) found that the relationships between striving for perfection (similar to SOP and PS) and cognitive anxiety were non-significant apart from in the sample of university athletes in which SOP was positively related to cognitive anxiety.

The majority of studies have found that SPP or CM are consistently related to higher scores on competitive anxiety including both cognitive and somatic anxiety (e.g., Frost & Henderson, 1991; Martinent & Ferrand, 2007), whereas other

studies have found this to be true only for female athletes but not for male athletes (Carter & Weissbrod, 2011). That is, SPP was positively related to cognitive anxiety but the relationship with somatic anxiety was non-significant in male athletes (e.g., Carter & Weissbrod, 2011). In a sample of female athletes, Frost and Henderson (1991) found that CM was positively related to difficulty concentrating and worry about the audience before competition (indicative of cognitive anxiety). In addition, negative reactions to imperfection (similar to SPP and CM) were positively related to both cognitive and somatic anxiety across four different sport samples of both genders (Stoeber, 2007).

The relationships between dimensions of perfectionism and competitive anxiety may be different depending on the time to competition. Hall et al. (1998) examined the relationships between perfectionism and competitive state anxiety in the lead-up to an actual competition at different time points. A sample of high school cross-country runners ( $N = 119$ ) completed the F-MPS and then the CSAI-2 at four time-points: 1-week, 2-days, 1-day, and 30-minutes before competition. At all time-points, total perfectionism and CM were positively related to cognitive anxiety. In contrast, those higher in PS are more likely to experience cognitive anxiety closer to competition. That is, PS was positively related to cognitive anxiety at 30-minutes before competition, but these relationships were non-significant at earlier time points. Different relationships were found for somatic anxiety. DA (similar to SPP) was positively related to somatic anxiety two days, one day, and 30 minutes prior to competition, whereas PS and CM were not (Hall et al., 1998). Therefore, it appears that cognitive anxiety is heightened at 30-minutes before competition for both PS and CM, but only DA (similar to SPP) is related to somatic anxiety prior to competition.

Alternatively, Koivula et al. (2002) compared three groups of perfectionists: (a) positive perfectionists: those with higher levels of PS and lower levels of CM; (b) negative perfectionists: those with lower levels of PS and higher levels of CM; and (c) overall perfectionists: those with overall higher levels of perfectionism, and their relationships with competitive anxiety. In a sample of Swedish elite individual athletes (sports not reported;  $N = 178$ ), overall perfectionists displayed relatively higher cognitive and somatic anxiety than the positive perfectionists and negative perfectionists, however, negative perfectionists also displayed relatively high cognitive anxiety. Also, athletes with higher levels of PS and lower levels of CM are likely to experience lower levels of cognitive and somatic anxiety compared to athletes with higher levels of both PS and CM and those with lower levels of PS and higher CM. Similar to findings by Frost and Henderson (1991) and Stoeber et

al. (2007), athletes higher overall perfectionism (combined PS and CM) are likely to experience both cognitive and somatic anxiety.

In contrast, Martinent et al. (2010) found that PS and CM differed in relation to intensity, direction, and frequency of cognitive and somatic anxiety. In a sample of athletes ( $N = 166$ ) competing in athletics, basketball, soccer, gymnastics, handball, judo, rugby, and table tennis, both SOP and SPP were positively related to both somatic anxiety intensity and cognitive anxiety intensity. By contrast, the relationships between SOP and SPP and somatic anxiety frequency were non-significant, but both SOP and SPP were positively related to cognitive anxiety frequency. SPP was negatively related to cognitive anxiety direction but the relationship with somatic anxiety direction was non-significant, whereas the relationship between SOP and cognitive anxiety direction was non-significant, but SOP was negatively related to somatic anxiety direction.

In summary, both SOP and SPP, and similar dimensions, are related to competition-related anxiety. Nevertheless, mixed findings exist regarding the relationships between dimensions of perfectionism and dimensions of anxiety (e.g., cognitive and somatic anxiety). The research employing Hewitt and Flett's model of perfectionism to examine the relationship between perfectionism and multidimensional anxiety is limited with only one study employing this model. SPP was related to cognitive anxiety in both male and female athletes, but different results were found for somatic anxiety and between male and female athletes. In contrast, the first study of this thesis showed that only SOP predicted pre-competition anxiety, but not SPP. It is, however, unclear what type of anxiety it was (e.g., cognitive or somatic). In addition, there are few studies which have examined the relationships between SOP, SPP, and anxiety dimensions and the few studies are primarily cross-sectional. Therefore, research would benefit from a further understanding of these relationships using more than one time-point of data.

### **6.2.2 Perfectionism and multidimensional anger in sport**

Perfectionistic reactivity is a characteristic style of responding to adversity that includes both psychological and physiological reactivity (Flett & Hewitt, 2016, p. 300). It is suggested that those higher in perfectionism frequently feel under pressure to be perfect and tend to react intensely to life circumstances and important situations in which they find it difficult to be perfect. When goals are blocked, perfectionistic athletes may engage in avoidance-coping, however, they may also be inclined to engage in negative forms of approach coping and react to situations by feeling angry, expressing anger physically or verbally. It is likely that



individuals higher in SPP are beleaguered by the perception they cannot reach the unrealistic standards imposed upon them by others (Flett et al., 2016). In response to a sense of inadequacy and helplessness, the pressure to satisfy unfair standards will generate anger and resentment (Flett et al., 2016) and thus, those higher in SPP may feel like expressing anger both verbally and physically. In contrast, those higher in SOP may be prone to feeling anger but may not feel like expressing it. As SOP is characterised by self-focused attention, and harsh self-critical evaluation, particularly when not achieving perfectionistic standards, it is likely that an individual with higher SOP will feel anger towards self but not direct it verbally or physically towards others.

In sport, Dunn et al. (2006) examined the relationship between perfectionism and trait anger, as well as anger in response to poor personal performance. In a sample of Canadian football players ( $N = 138$ ), participants completed measures of sport-specific perfectionism (Sport-MPS) and a sport-modified version of the Trait Anger Scale from the State-Trait Anger Expression Inventory-2 (STAXI-2; Spielberger, 1999). Findings indicated that PS (similar to SOP) displayed significant positive relationships with angry reactions, but the relationships with verbal anger and physical anger were non-significant. Also, CM (similar to SPP) displayed a significant positive relationship with feeling anger, and significant positive relationships with trait anger, angry reactions, verbal anger, and physical anger.

Building upon the previous study, Vallance et al. (2006) examined perfectionism and anger in relation to situation criticality (i.e., the athletes' perceived importance of a competitive situation, such as a close score, where opportunities to make up for mistakes are limited). In a sample of male ice hockey players ( $N = 227$ ), results indicated that PS (similar to SOP) displayed a significant positive relationship with angry reactions, whereas the relationship with anger-temperament was non-significant. Furthermore, the angry reactions were examined in relation to whether they differed in low criticality versus high criticality situations in which the personal mistake was made. Regardless of whether the situation was high or low criticality, when mistakes occur, athletes higher in perfectionism were more likely to experience intense feelings of anger and feelings of expressing anger verbally and physically compared to athletes reporting lower levels of perfectionism.

More recently, with a sample of Canadian curling athletes ( $N = 343$ ), Lizmore et al. (2016) examined the relationship between perfectionism and the intensity of anger (e.g., fury and annoyance) and dejection (e.g., disappointment

and unhappiness) in relation to personal errors in low criticality (i.e., making a mistake when losing by one point early in the game) and high criticality (i.e., making a mistake when losing by one point late in the game) competition scenarios. Findings indicated that regardless of when the mistake was proposed to occur, athletes reporting higher levels across PS (similar to SOP), CM (similar to SPP), perceived parental pressure, DA and organisation dimensions of perfectionism were likely to experience the most intense levels of anger and dejection following errors. Therefore, these findings suggest that those higher in perfectionism may be particularly prone to angry reactions.

In summary, both SOP and SPP may be related to competition-related anger especially as a function of perfectionistic reactivity (i.e., perfectionistic individuals' psychological and physiological responses to setbacks; Flett & Hewitt, 2016; see Lizmore et al., 2016). Nevertheless, mixed findings exist regarding the relationships between dimensions of perfectionism and the dimensions of anger (e.g., feel anger or feel like expressing anger). Although the first study of this thesis showed that SPP predicted pre-competition anger, it is unclear what type of anger it was (e.g., physical or verbal). In addition, as the number of studies examining the relationships between SOP, SPP and dimensions of anger are limited, and those studies are primarily cross-sectional, research would benefit from further understanding of these relationships using more than one time-point of data.

### **6.3 Perfectionistic cognitions and multidimensional anxiety and anger**

Perfectionistic cognitions are also important with regard to anxiety and anger. Evidence supports significant positive relationships between perfectionistic cognitions and anxiety and anger (e.g., Flett et al., 1998). In study one, a significant positive relationship was found between perfectionistic cognitions and pre-competition anxiety and anger. Furthermore, perfectionistic cognitions predicted unique variance in anxiety and anger when controlling for SOP and SPP. This finding is consistent with studies outside sport that have illustrated perfectionistic cognitions have predictive ability in anxiety and anger over and above trait perfectionism (e.g., Flett et al., 1998; Kobori et al., 2011). However, the majority of studies examining these relationships have not differentiated between the dimensions of anxiety and anger. Studies outside sport have predominately examined the relationship between perfectionism and general anxiety and anger or

trait anxiety and anger (e.g., Pirbaglou et al., 2013), rather than multidimensional anxiety and anger.

Evidence from research outside sport suggests that the experience of frequent perfectionistic cognitions has implications for general performance anxiety. Kobori et al. (2011) found a significant positive relationship between perfectionistic cognitions and performance anxiety in musicians. Similar to Kobori et al. (2011), study one of this thesis found that perfectionistic cognitions predicted pre-competition anxiety above SOP and SPP. However, it is unknown what type of anxiety it was (e.g., cognitive or somatic). Apart from the first study in this thesis, it seems that no studies exist in sport that examines the relationship between perfectionistic cognitions and pre-competition anxiety. Similarly, despite perfectionistic cognitions appearing to have implications for pre-competition anger, the studies examining perfectionistic cognitions and sport-related anger are scarce. Again, study one in this thesis found a significant positive relationship between frequent perfectionistic cognitions and pre-competition anger, and that frequent perfectionistic cognitions predicted an additional variance in anger above SOP and SPP. Perfectionistic cognitions were related to anxiety and anger, albeit with cross-sectional data.

## **6.4. The mediating role of perfectionistic cognitions**

### **6.4.1 Theory supporting mediation**

Those higher in SOP and SPP may experience negative emotions to the extent that the individuals are aware of their imperfections, mistakes, and experience automatic thoughts about the need to be perfect. There is some empirical evidence that perfectionistic cognitions are activated in relevant situations (Besser, Flett, Hewitt, & Guez, 2008). Aspects of a situation that are deemed as highly significant are likely to be different for those higher in SOP compared to those higher in SPP and therefore, the experience of negative emotions and psychological distress is likely to reflect a different process for those higher in SPP compared to SOP. For SPP, the process to psychological distress may reflect the significance of meeting others' expectations in order to validate their own self-worth and, when also accompanied with cognitions about the need to be perfect, then it is likely that individuals will feel a sense of hopelessness and subsequently experience more negative emotions (e.g., dejection).

For those higher in SOP, the process reflects a disparaging belief that self-acceptance is contingent on success and one needs to achieve perfectionistic

standards to feel worthy. Therefore, as perfectionistic cognitions draw awareness to the discrepancy between actual standards and ideal standards, higher SOP, accompanied by frequent perfectionistic cognitions, is likely to place individuals under considerable strain. The experience of perfectionistic cognitions may explain the patterns of emotionality for both SOP and SPP (e.g., anxiety, anger, and dejection). If those who are compelled to achieve unattainable personally meaningful goals also cognitively focus on imperfections then it is likely they will experience negative emotions (see Flett et al., 2007). As perfectionistic cognitions appear to predict negative emotions when controlling for SOP and SPP, it is therefore possible that perfectionistic cognitions will mediate the relationship between SOP, SPP and multidimensional anxiety and anger.

#### **6.4.2 Research outside sport: PCI as a mediator**

Perfectionistic cognitions have previously been studied as a mediating factor in an attempt to explain the process by which trait perfectionism elicits emotional responses (Kobori & Tanno, 2005; Wimberley & Stasio, 2013), and some evidence exists to support mediation. In a cross-sectional study, Kobori and Tanno (2005) examined whether perfectionistic cognitions (as measured by Multidimensional Perfectionism Cognition Inventory; Kobori & Tanno, 2004) mediated the relationship between trait perfectionism and positive and negative affect in a sample of college students ( $N = 358$ ). Results indicated that SOP displayed a significant positive relationship with negative affect. Mediation analyses found that perfectionistic cognitions (about personal standards) mediated the relationship between SOP and positive affect, whereas perfectionistic cognitions (about mistakes) mediated the relationship between SOP and negative affect. It is therefore likely that, in consideration of the findings of the first study, perfectionistic cognitions would mediate the relationship between SOP and excitement and anxiety.

A further cross-sectional study by Wimberley and Stasio (2013), examined the relationships between perfectionism and psychological distress in a sample of college freshman students ( $N = 113$ ; 60 honours students and 53 non-honours). Results indicated that perfectionistic cognitions fully mediated the relationship between trait perfectionism and psychological distress. Specifically, perfectionistic cognitions mediated the positive relationship between evaluative concerns perfectionism (similar to SPP) and anxiety. Further, perfectionistic cognitions also nullified the direct inverse relationships between PS (similar to SOP) and anxiety, and between PS (similar to SOP) and depression. That is, those higher in SOP may

be vulnerable to the experience anxiety and depression because they experience frequent perfectionistic cognitions.

Further evidence exists to support the contention that perfectionistic cognitions may be one mechanism by which trait perfectionism is related to emotions that are more negative. In a two-wave longitudinal study with a sample of college students ( $N = 258$ ), Macedo et al. (2017) examined whether perfectionistic cognitions (and rumination and catastrophising) and cognitive emotion regulation strategies would mediate the relationship between perfectionism and psychological distress, when controlling for perceived stress, social support and outcome measure at one year before. At two time points (one year apart), participants completed measures of perfectionism (PS and PC), perfectionistic cognitions, cognitive emotion regulation strategies, perceived stress, social support and psychological distress (depression, hostility-anxiety, and amiability-vigour). Across time points, higher PC contributed significantly to perfectionistic cognitions, which, in turn, predicted higher levels of catastrophizing and rumination and, altogether, ultimately contributed to greater anxiety/hostility and depression. That is, perfectionistic cognitions and the relationship with catastrophising and rumination linked the relationship between perfectionism and anxiety/hostility and depression. As some evidence, outside sport, supports that perfectionistic cognitions may play an important role in the relationship between trait or dispositional perfectionism and psychological consequences, it is likely perfectionistic cognitions are important to perfectionism–emotion relationship in sport.

#### **6.4.3 Research in sport: PCI as mediator**

Currently, to our knowledge, there are no studies in sport that examine perfectionistic cognitions as a mediator of the relationship between perfectionism and psychological consequences. However, the findings from Hill and Appleton (2011) support the predictive ability of PCI in symptoms of burnout when controlling for SOP and SPP. Furthermore, the findings from study one of this thesis perhaps supports the idea that perfectionistic cognitions play an important role in relation to pre-competition emotions. When controlling for SOP and SPP, PCI predicted negative emotions (e.g., anxiety, anger, and dejection). Therefore, through longitudinal data, it can be determined if perfectionistic cognitions mediate the relationship between perfectionism and pre-competition emotions and multidimensional anxiety and anger.

## **6.5 Longitudinal designs and between-group and within-group variance**

Generally, perfectionism research has been overly-reliant on using cross-sectional correlational designs which means that means our ability to understand temporality and/or causality is limited (Taris, 2000). Other methodological improvements are needed to advance understanding of the relationship between SOP and SPP, PCI, and pre-competition emotions. It is well understood that correlation does not mean causation, and although correlational studies help us understand if a relationship exists, they do not provide evidence for causal effects (Hagger & Chatzisarantis, 2009). Most research suggesting a relationship between perfectionism and emotions utilises cross-sectional designs (e.g., Flett et al., 1998; Hewitt et al., 2002; Rudolph et al., 2007) and such methodology is ill-suited to testing changes over time and does not allow the use of state-of-the-art statistical modelling (Gautreau, Sherry, Mushquash, & Stewart, 2015; Keijsers, 2016). Study one provided a foundation to understand that a relationship exists between SOP, SPP, PCI, and pre-competition emotions before one competition, but—to our knowledge—no studies using longitudinal data have examined pre-competition emotions in relation to perfectionism. It is therefore necessary that, to advance the understandings of these relationships, to advance scientific research and test theoretically plausible relationships, robust tests of causal effects are required.

Mediation allows us to answer questions about underlying processes. After discovering a significant relationship between two variables, researchers often seek to clarify the mechanism (or mediational process) underlying the relationship. Even though mediation consists of causal processes that unfold over time, most empirical tests of mediation use cross-sectional data and the methods described by Baron and Kenny (1986) which disregards any consideration of time sequence. Cross-sectional data leaves out key predictors (e.g., variables measured at previous times), assumes that the causes are instantaneous and that the magnitude of the effect is not dependent on the length of time that elapses between the measurements of the variables (Maxwell & Cole, 2007). To properly test mediation, three-waves of data are required, as the potential cause must precede the outcome in time (Cole & Maxwell, 2003). That is, X predicting Y via M involves at least two causal relations ( $X \rightarrow M$  and  $M \rightarrow Y$ ). In other words, a variable X influences a mediator M, which in turn influences an outcome variable Y (Cole & Maxwell, 2003). Tests of mediation using longitudinal data have much to offer for improving statistical inference (Selig & Preacher, 2009).

The majority of statistical models (e.g., cross-lagged panel models) only account for temporal stability. Such models capture the co-variation in rank order of positions of individuals—relative to the position of other individuals both at a given time point and over time—to gain an understanding of causal processes (Keijsers, 2016). It is assumed that every person varies over time around the same mean and that there are no trait-like individual differences that endure (Hamaker, Kuiper, & Grasman, 2015). Consequently, cross-lagged panel models capture the between-person differences (or inter-individual differences) and do not disaggregate the between-person changes (the stable differences between-persons) from the within-person fluctuations (how individuals fluctuate over time). A strength of longitudinal data is the ability to use multilevel structural equation modelling to disaggregate the between-person and within-person effects (Curran & Bauer, 2011).

The between-person effect refers to the positioning of individuals relative to a normative sample (i.e., mean of the sample) and represents the inter-individual processes which reflect the variability in perfectionism and emotions across individuals (Hoffman & Stawski, 2009). The between-person effect is best conceptualised as investigating whether the trait-like, time-invariant component of X correlates with the trait-like, time-invariant component of Y (Hamaker, Kuiper, & Grasman, 2015). For example, on average, individuals who are higher in SOP are more likely to experience perfectionistic cognitions compared to those lower in SOP and those higher in perfectionistic cognitions are more likely to experience pre-competition anxiety than those lower in perfectionistic cognitions.

The study of within-person processes (intra-individual differences) can only be accomplished through repeated measures data (Curran & Bauer, 2011). The within-person model represents the state-like, intra-individual changes, which in this case reflect a specific individual's variation in perfectionism and emotions. The within-person variation is the positioning of individuals relative to their own average across several time points and is best conceptualised as: if a person scores highly on X, relative to their usual level, does that person score highly on Y, relative to their usual level? (Hamaker, Kuiper, & Grasman, 2015). More specifically, the within-person model allows for the investigation of how personality processes are related to changes in thoughts, feelings and actions and whether the fluctuations are attributable to the situation (e.g., impact of competition, perception of competition importance). For example, an individual who experiences higher levels of SOP than their own average is likely to experience higher levels of PCI, which results in increases in pre-competition anxiety.

As well as providing the first test of whether perfectionistic cognitions mediate the relationship between SOP, SPP and pre-competition emotions in athletes, two notable weaknesses in how mediation is typically examined were addressed. Mediation consists of causal processes that unfold over time. However, most empirical tests of mediation use cross-sectional data that lacks the temporal component required to establish mediation. Many theories claim to examine the within-person processes—the responses of an individual in X (e.g., perfectionistic cognitions) over the course of several competitions and corresponding changes in Y (e.g., emotions)—but are largely studied using between-person analyses (i.e., position of an individual relative to other participants, both at a given time point and over time; see Curran & Bauer, 2011, Keijsers, 2016). This is the case for research to date that has examined the mediating effects of perfectionistic cognitions between perfectionism and emotions (Kobori & Tanno, 2005; Wimberley & Stasio, 2013). To avoid these two pitfalls, a three-wave longitudinal design was adopted, and multilevel analytic techniques were employed to test mediation at both the between- and within-person levels (Selig & Preacher, 2009).

## **6.7 Purpose of study two**

The current study had two purposes: (i) to examine whether perfectionistic cognitions mediate the relationship between SOP and SPP and positive and negative pre-competition emotions by examining the within- and between-person effects and (ii) to examine whether perfectionistic cognitions mediate the relationship between SOP and SPP and multidimensional anxiety and anger by examining the within- and between-person effects.

Based on cross-sectional findings, it is hypothesised that:

- (1) PCI would mediate the relationship between SOP and anxiety and excitement at both within-person and between-person level;
- (2) PCI would mediate the relationship between SPP and anger and dejection at both within-person and between-person level;
- (3) PCI would mediate the relationship between SOP and multidimensional anxiety (i.e., cognitive and somatic) at both within-person and between-person level;
- (4) PCI would mediate the relationship between SPP and multidimensional anger (i.e., feel anger, verbal anger, and physical anger) at both within-person and between-person level.



The hypotheses are displayed in Table 6.1 and Table 6.2.<sup>1</sup>

---

<sup>1</sup> No hypotheses were formulated for happiness because in study one the model for happiness in hierarchical regression analyses was non-significant and limited research exists examining the relationship between perfectionism, perfectionistic cognitions, and happiness.

**Table 6.1** Model 1 hypotheses (PCI as mediator of perfectionism-general pre-competition emotions relationship)

	Anxiety	Dejection	Excitement	Anger	Happiness
<b>Within person</b>					
SOP → PCI	*		*		
SPP → PCI		*		*	
<b>Between person</b>					
SOP → PCI	*		*		
SPP → PCI		*		*	

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* hypothesised.

**Table 6.2** Model 2 hypotheses (PCI as mediator of perfectionism-multidimensional pre-competition emotions relationship)

	Cognitive anxiety	Somatic anxiety	Feel anger	Verbal anger	Physical anger
<b>Within person</b>					
SOP → PCI	*	*			
SPP → PCI			*	*	*
<b>Between person</b>					
SOP → PCI	*	*			
SPP → PCI			*	*	*

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* hypothesised.

## 6.8 Method

### 6.8.1 Participants

A sample of 352 youth football players competing at the highest level within their age group was recruited. Participants' mean age was 14.03 years old ( $SD = 2.27$ , Range = 10 to 19 years). The average number of years of playing football was 8.31 years ( $SD = 2.75$ , Range = 0 to 16 years).

### 6.8.2 Procedure

Following institutional ethical approval (see Appendix A.1), initial contact was made with gatekeepers (e.g., coaches) of football academies, national squads and clubs across Scotland and England. An information sheet was distributed to players. Parent/guardian and child assent was gained for those willing to participate. Participants completed a multi-section questionnaire at their training session or before their game at three different time points; Time 1 (T1; February/March 2017;  $N = 352$ ), Time 2 (T2; 21 days later;  $N = 285$ ) and Time 3 (T3; 21 days later,  $N = 262$ ). Using three waves of data, this study employed a short-term longitudinal design. Short-term longitudinal design involves data that are several waves closer together and are subsequently better suited to assessing dynamic short-term patterns (Rice & Aldea, 2006). Short-term, multi-wave longitudinal design may increase reliability by repeating measures close to events as it helps to decrease recall bias by assessing variables (e.g., emotions) closer to their actual occurrence (Bolger, Davis, & Rafaeli, 2003). Therefore, the time period of 21 days between data collection points was chosen to ensure individuals had competitive matches and subsequently to best capture changes in pre-competition emotions over several matches. Other studies have employed shortitudinal designs to capture the relationships between perfectionism and burnout in sport (e.g., Madigan, Stoeber, & Passfield, 2015, Chen, Kee, & Tsai, 2009).

Participants were asked the importance of their next competition on a 7-point Likert-type scale (1 = *not important*, 7 = *very important*). At T1, the average rating of importance was 6.30 ( $SD = 1.05$ , Range = 2 to 7). The average time until their next game was 75.53 hours ( $SD = 32.27$ , Range = 1 to 120 hours). At T2, the average rating of importance was 6.29 ( $SD = 1.13$ , Range = 1 to 7) and the average time until the next game was 76.08 ( $SD = 37.38$ , Range = 0 to 122 hours). At T3, the average rating of importance was 6.16 ( $SD = 1.32$ , Range = 1 to 7), and the mean time until the next game was 51.86 ( $SD = 34.11$ , Range = 1 to 120 hours).

### 6.8.3 Measures

### **6.8.3.1 The Child and Adolescent Perfectionism Scale**

The Child and Adolescent Perfectionism Scale (CAPS; Flett et al., 1997) measured self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP). See Chapter 5 for a discussion of this measure and Appendix C.2 for the measure.

### **6.8.3.2 Perfectionistic Cognitions Inventory**

The Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998) measured perfectionistic cognitions. See Chapter 5 for a discussion of this measure and Appendix C.3 for the measure.

### **6.8.3.3 Sport Emotion Questionnaire**

The Sport Emotion Questionnaire (SEQ; Jones et al., 2005) measured pre-competition anxiety, dejection, excitement, anger, and happiness. See Chapter 5 for a discussion of this measure and Appendix C.4 for the measure.

### **6.8.3.4 Competitive State Anxiety Inventory-2**

The Competitive State Anxiety Inventory-2 (CSAI-2; Martens et al., 1990) measured footballers' cognitive and somatic state anxiety in the lead up to their next competition (see Appendix C.5). It has been widely used by researchers to measure athletes' pre-competitive state anxiety (Jones et al., 1991). The CSAI-2 consists of 27 self-report statements designed to measure three components of state anxiety (i.e., cognitive anxiety, somatic anxiety, and self-confidence). As the current study aims to capture anxiety responses, only the 18 items for anxiety were included: nine items capturing cognitive anxiety (e.g., "I am concerned I may not do as well in this competition as I could") and nine items capturing somatic anxiety (e.g., "I feel tense in my stomach"). The self-confidence questions were excluded. For each subscale, intensity level responses were scored on a 4-point Likert-type scale (1 = *not at all* to 4 = *very much so*) with total scores for subscales ranging from 9 to 36.

The CSAI-2 has shown high levels of reliability and validity (see Smith, Smoll, & Weichman, 1998). Martens et al. (1990) reported Cronbach alpha reliability coefficients of  $\alpha = .83$  for cognitive and  $\alpha = .83$  for somatic anxiety thereby revealing a high degree of internal consistency (Martens et al., 1990). Other studies employing the CSAI-2 measure anxiety in sport confirmed its internal consistency by reporting alpha reliability coefficients that range from  $\alpha = .76$  to  $.91$  (Duda, 1998). The internal consistency for the subscales of the CSAI-2 has been reported

between  $\alpha = .79$  to  $.90$  (Mellalieu, Hanton, & O' Brien, 2004), and specifically  $\alpha = .80$  to  $.89$  for cognitive anxiety and  $\alpha = .72$  to  $.84$  for somatic anxiety (Hanton, Thomas, & Maynard, 2004; Mellalieu et al., 2004).

### **6.8.3.5 Reactions-to-Mistakes Anger Scale**

The Reactions-to-Mistakes Anger Scale (RTM-Anger; Spielberger, 1999), a modified version of the State Anger scale of the STAXI-2, measured multidimensional pre-competition anger (see Appendix C.6). Participants were asked how they felt right at that moment when thinking about making a mistake or playing poorly in the next game (see Dunn et al., 2006). The three subscales (each containing five items) were: *Feeling Angry* (e.g., "I feel angry"), *Feel like Expressing Anger Verbally* (e.g., "I feel like swearing"), and *Feel like Expressing Anger Physically* (e.g., "I feel like hitting someone"). Respondents were asked to rate items on a 4-point Likert-type scale (1 = *not at all* to 4 = *very much so*) with higher scores reflecting a greater tendency to feel angry when performing poorly in competition. Three items were reworded to make them context-relevant to the sport environment being studied and to improve face validity. Specifically, Item 7 ("I feel like banging on the table") was reworded as, "I feel like hitting something"; Item 12 ("I feel like cursing out loud") was reworded as, "I feel like swearing out loud"; and Item 14 ("I feel like pounding someone") was reworded as, "I feel like hurting someone". All changes were consistent with those made by Dunn et al. (2006).

The original State Anger scale has been shown to possess good psychometric properties (see Spielberger, 1999), but these characteristics were also re-evaluated in this study due to the aforementioned modifications. Furthermore, Dunn et al. (2006) found the RTM-Anger scale demonstrated acceptable internal reliability (feel anger  $\alpha = .88$ , feel like expressing anger verbally  $\alpha = .86$ , and feel like expressing anger physically  $\alpha = .86$ ).

## **6.8.4 Data analyses**

### **6.8.4.1 Multilevel structural equation modelling**

To examine whether perfectionistic cognitions mediated the perfectionism-emotions relationship, multilevel structural equation modelling was employed with the measurement occasions (T1–T3) representing the within-person level, nested within participants (between-person level) (Preacher, Zyphur, & Zhang, 2010). Multilevel structural equation modelling differentiates between the within- and between-person effects while testing mediation. The defining feature of multilevel modelling is the capacity to provide quantification and prediction of random

variance due to multiple sampling dimensions (e.g., across competitions, across persons) (Hoffman & Stawski, 2009). Multilevel modelling involves all waves being aggregated so that the between and within level effects can be disaggregated. It is therefore not interpreted in the same ways as a cross-lagged (i.e., differences across time points) as all waves are analysed together (i.e., differences at between- and within-person level).

Full Information Maximum Likelihood (FIML) in Mplus 7.0 was used (Muthén & Muthén, 2012) to test the models and the accompanying mean-adjusted chi-squared test statistic. As recommended by Byrne (2013), the model fit was assessed using a combination of absolute fit indices: comparative fit index (CFI) > .90, Tucker-Lewis Index (TLI) > .90, root mean square error of approximation (RMSEA) < .10 (Hu & Bentler, 1999), and the standardized root mean square residual < .10, (SRMR). These cut-off values were used to deem the models as acceptable. Additionally, a Monte Carlo method was used to test the indirect effects (Preacher and Selig, 2012). If the 95% confidence interval (CI) does not contain zero, the test can be considered significant at the  $p < .05$  level (Hayes & Scharkow, 2013).

Two models were tested. The first model examined whether perfectionistic cognitions mediate the relationship between multidimensional perfectionism and pre-competition emotions (anxiety, anger, dejection, happiness, and excitement) at within- and between-person level. The second model examined whether perfectionistic cognitions mediate the relationship between multidimensional perfectionism and dimensions of anxiety and anger (cognitive anxiety, somatic anxiety, feel anger, verbal anger, and physical anger).

## **6.9 Results**

### **6.9.1 Preliminary analyses**

Data were screened for inputting errors, outliers, and normality before the main analysis (see Tabachnick & Fidell, 2007). Missing data for questionnaire item responses was less than 5% across all three time points. Given the low number of missing items, each missing item was replaced using the mean of each case's available non-missing items from the relevant subscales (Graham et al., 2003). From an overall sample of 352, 262 participants completed questionnaires at all three time points. Across the three time points, where questionnaire non-response accounted for missing data, the Full Information Maximum Likelihood (FIML) method for model estimation was used (Enders & Bandalos, 2001). Standardized z-

scores  $\pm 3.29$  ( $p < .001$ , two-tailed) were used as criterion for univariate outliers. This procedure led to the removal of 11 participants. Because multivariate outliers can severely distort the results, four participants with a Mahalanobis distance larger than the critical value of  $\chi^2(39) = 72.06$  ( $p < .001$ ) were excluded. Thereafter, data was normally distributed. The final sample was 337 participants.

### **6.9.2 Descriptive statistics, reliability coefficients, and bivariate correlations**

Internal reliability analysis (Cronbach's alpha) was performed on each subscale. As Table 6.3 shows, all scales demonstrated sufficient internal consistency ( $\alpha > 0.70$ ; Nunnally & Berstein, 1994). Descriptive statistics for dimensions of perfectionism, the frequency of perfectionistic cognitions, and sports emotions are reported in Table 6.3. Participants demonstrated high levels of SOP, medium levels of SPP, and low-medium levels of PCI across all three time points. Participants also demonstrated low levels of anxiety, anger, and dejection and medium levels of happiness and excitement. The mean scores of emotions stayed relatively stable across time points.

The bivariate correlations between dimensions of perfectionism, perfectionistic cognitions and sport emotions are reported in Table 6.4. With regard to the bivariate correlations, SOP and SOP displayed a significant positive and medium relationship with each other at T1, but a significant positive and small relationship at T2 and T3. There was a significant large and positive relationship between SOP and PCI at T1, and a significant positive and medium relationship at T2 and T3. There was a significant positive and medium relationship between SPP and PCI at all three time points.

SOP displayed significant positive and small-to-medium relationships with anxiety and excitement across all three time points, but also had a significant positive and medium relationship with happiness at T3. SPP displayed significant positive and small relationships with anxiety, anger, and dejection at all three time points. Lastly, PCI displayed significant positive and medium relationship with anxiety, anger, and dejection, and a significant positive and small relationship with excitement at T1. The relationship between PCI and anxiety was significant, positive and medium at T2 and T3, whereas the relationship between PCI anger and dejection was significant positive and small at T2 and T3. At T3, PCI showed significant positive and medium relationships with happiness and excitement.

The bivariate correlations between dimensions of perfectionism, perfectionistic cognitions, and multidimensional anxiety and anger are reported in



Table 6.5 and Table 6.6. SOP displayed a significant positive and small-to-medium relationship with both forms of anxiety and all forms of anger at all time points. SPP displayed significant positive and medium relationships with both forms of anxiety at all the time points. At T1, SPP displayed significant positive and small relationships with all forms of anger, but in T2 there was a significant positive and small relationship between SPP and verbal and physical anger (but not feel anger) and, at T3, SPP displayed a significant positive and small relationship with physical anger. PCI displayed a significant positive and medium relationship with all forms of anxiety and anger at T1. At T2 and T3, PCI displayed a significant positive and medium relationship with both cognitive and somatic anxiety but a significant positive and small relationship with all forms of anger.

**Table 6.3** Means, standard deviations and internal reliability for self-oriented perfectionism, socially prescribed perfectionism, perfectionistic cognitions, general pre-competition emotions and dimensions of anxiety and anger ( $N = 337$ )

	Time 1			Time 2			Time 3		
	<i>M</i>	<i>SD</i>	$\alpha$	<i>M</i>	<i>SD</i>	$\alpha$	<i>M</i>	<i>SD</i>	$\alpha$
SOP	3.61	0.51	.75	3.48	0.54	.76	3.46	0.57	.78
SPP	2.41	0.66	.82	2.37	0.69	.87	2.38	0.69	.86
PCI	1.92	0.69	.91	1.81	0.76	.93	1.75	0.76	.93
Anxiety	1.28	0.91	.85	1.21	0.91	.86	1.16	0.94	.88
Dejection	0.38	0.63	.85	0.34	0.61	.88	0.39	0.64	.89
Excitement	2.58	0.81	.72	2.40	0.90	.78	2.35	0.94	.80
Anger	0.54	0.79	.84	0.49	0.75	.84	0.49	0.70	.81
Happiness	2.56	0.88	.80	2.50	0.95	.89	2.42	1.07	.90
Cognitive Anxiety	1.93	0.58	.84	1.97	0.65	.88	1.90	0.62	.87
Somatic Anxiety	1.71	0.53	.76	1.79	0.58	.82	1.77	0.59	.82
Feel Anger	2.10	0.84	.90	2.05	0.84	.90	2.05	0.80	.90
Verbal Anger	1.73	0.80	.89	1.73	0.82	.91	1.72	0.79	.91
Physical Anger	1.31	0.55	.87	1.31	0.58	.91	1.33	0.55	.90

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions.

**Table 6.4** Bivariate correlations for trait perfectionism, perfectionistic cognitions and general pre-competition emotions ( $N = 337$ )

	Time 1								Time 2								Time 3							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
<u>Time 1</u>																								
1. SOP																								
2. SPP	.32**																							
3. PCI	.54**	.48**																						
4. Anxiety	.20**	.30**	.32**																					
5. Dejection	.04	.24**	.29**	.42**																				
6. Excitement	.19**	-.01	.15**	.14**	-.12*																			
7. Anger	.03	.27**	.33**	.37**	.83**	-.04																		
8. Happiness	.07	-.02	.08	.03	-.12*	.75**	-.08																	
<u>Time 2</u>																								
9. SOP	.64**	.23**	.53**	.28**	.19**	.26**	.12	.16**																
10. SPP	.27**	.64**	.50**	.19**	.23**	-.01	.26**	-.03	.41**															
11. PCI	.44**	.40**	.77**	.27**	.27**	.13*	.31**	.12	.56**	.51**														
12. Anxiety	.19**	.29**	.37**	.55**	.34**	.05	.26**	.03	.25**	.33**	.44**													
13. Dejection	.08	.23**	.28**	.22**	.61**	-.19	.50**	-.03	.13*	.35**	.34**	.50**												
14. Excitement	.14*	.07	.19**	.05	-.04	.55**	-.03	.54**	.24**	.02	.17**	.19**	.04											
15. Anger	.10	.28**	.29**	.20**	.54**	-.03	.58**	-.01	.14*	.37**	.36**	.47**	.86**	.04										
16. Happiness	.07	.09	.17**	-.02	-.04	.51**	-.04	.60**	.18**	.03	.17**	.11	.03	.77**	-.03									
<u>Time 3</u>																								
17. SOP	.59**	.23**	.52**	.27**	.15*	.20**	.07	.08	.68**	.26**	.50**	.24**	.07	.32**	.05	.19**								
18. SPP	.18**	.60**	.38**	.18**	.23**	-.05	.25**	-.09	.21**	.74**	.40**	.17**	.29**	.01	.29**	-.03	.29**							
19. PCI	.39**	.36**	.65**	.31**	.35**	.17*	.34**	.08	.45**	.43**	.70**	.33**	.28**	.23**	.27**	.21**	.60**	.42**						
20. Anxiety	.18**	.25**	.30**	.53**	.37**	-.10	.22**	-.10	.20**	.23**	.31**	.66**	.34**	.05	.25**	-.03	.29**	.30**	.39**					
21. Dejection	.02	.27**	.29**	.26**	.53**	-.23**	.42**	-.16*	.05	.29**	.27**	.33**	.69**	-.06	.56**	-.09	.02	.36**	.31**	.43**				
22. Excitement	.14*	.07	.28**	.05	.00	.51**	-.01	.49**	.28**	-.00	.30**	.15	.03	.66**	.04	.58**	.30**	-.03	.38**	.12	-.05			
23. Anger	-.02	.25**	.24**	.26**	.50**	-.18**	.50**	-.14*	.05	.31**	.26**	.32**	.65**	-.05	.65**	-.08	.05	.37**	.35**	.41**	.87**	-.05		
24. Happiness	.15**	.13**	.27**	-.02	-.07	.46**	-.01	.56**	.23**	.05	.30**	.10	.02	.54**	.02	.64**	.23**	-.03	.27**	.05	.00	.77**	-.02	

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* $p < .05$ , \*\* $p < .01$ , two-tailed.

**Table 6.5** Bivariate correlations for trait perfectionism, perfectionistic cognitions and multidimensional anxiety ( $N = 337$ )

	Time 1					Time 2					Time 3			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<u>Time 1</u>														
1. SOP														
2. SPP	.32**													
3. PCI	.54**	.48**												
4. Cognitive Anxiety	.32**	.32**	.45**											
5. Somatic Anxiety	.16**	.30**	.34**	.66**										
<u>Time 2</u>														
6. SOP	.64**	.23**	.53**	.32**	.21**									
7. SPP	.27**	.64**	.50**	.22**	.18**	.41**								
8. PCI	.44**	.40**	.77**	.38**	.29**	.56**	.51**							
9. Cognitive Anxiety	.24**	.36**	.45**	.60**	.48**	.34**	.37**	.50**						
10. Somatic Anxiety	.17**	.30**	.33**	.40**	.62**	.21**	.29**	.37**	.67**					
<u>Time 3</u>														
11. SOP	.59**	.23**	.52**	.28**	.15*	.68**	.26**	.50**	.26**	.14*				
12. SPP	.18**	.60**	.38**	.22**	.19**	.21**	.73**	.40**	.30**	.22**	.29**			
13. PCI	.39**	.36**	.65**	.32**	.28**	.45**	.43**	.70**	.36**	.30**	.60**	.42**		
14. Cognitive Anxiety	.22**	.34**	.41**	.49**	.46**	.23**	.31**	.41**	.61**	.44**	.34**	.44**	.50**	
15. Somatic Anxiety	.14*	.28**	.34**	.33**	.57**	.16*	.27**	.35**	.48**	.65**	.18**	.34**	.38**	.69**

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* $p < .05$ , \*\* $p < .01$ , two-tailed.

**Table 6.6** Bivariate correlations for trait perfectionism, perfectionistic cognitions and multidimensional anger ( $N = 337$ )

	Time 1						Time 2						Time 3				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<u>Time 1</u>																	
1. SOP																	
2. SPP	.32**																
3. PCI	.54**	.48**															
4. Feel Anger	.28**	.15**	.31**														
5. Verbal Anger	.28**	.24**	.35**	.67**													
6. Physical Anger	.17**	.29**	.32**	.55**	.73**												
<u>Time 2</u>																	
7. SOP	.64**	.23**	.53**	.29**	.23**	.20**											
8. SPP	.27**	.64**	.50**	.13*	.23**	.26**	.41**										
9. PCI	.44**	.40**	.77**	.28**	.29**	.27**	.56**	.51**									
10. Feel Anger	.25**	.09	.25**	.51**	.37**	.28**	.36**	.15**	.32**								
11. Verbal Anger	.24**	.15*	.26**	.41**	.65**	.47**	.26**	.19**	.30**	.62**							
12. Physical Anger	.13*	.20**	.26**	.28**	.47**	.57**	.20**	.27**	.31**	.51**	.70**						
<u>Time 3</u>																	
13. SOP	.59**	.23**	.52**	.27**	.24**	.18**	.68**	.26**	.50**	.30**	.20**	.14*					
14. SPP	.18**	.60**	.38**	.08	.17**	.21**	.21**	.73**	.40**	.02	.10	.18**	.29**				
15. PCI	.39**	.36**	.65**	.21**	.22**	.21**	.45**	.43**	.70**	.22**	.21**	.18**	.60**	.42**			
16. Feel Anger	.23**	-.02	.18**	.46**	.35**	.21**	.30**	.04	.21**	.61**	.45**	.26**	.37**	.01	.29**		
17. Verbal Anger	.17**	.12	.18**	.35**	.56**	.39**	.18**	.15*	.21**	.41**	.71**	.48**	.26**	.12*	.27**	.65**	
18. Physical Anger	.13*	.20**	.24**	.30**	.51**	.55**	.24**	.25**	.29**	.33**	.55**	.57**	.17**	.22**	.31**	.48**	.74**

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \*  $p < .05$ , \*\*  $p < .01$ , two-tailed.

### **6.9.3 Multilevel structural equation modelling analyses**

#### **6.9.3.1 Interclass correlations**

To determine the amount of variance attributable to the between person effects the intraclass correlations for each variable were calculated: SOP = .62, SPP = .67, PCI = .70, anxiety = .58, dejection = .64, excitement = .57, anger = .60, happiness = .58, cognitive anxiety = .58, somatic anxiety = .61, feel anger = .52, verbal anger = .65, and physical anger = .57. As a rule, intraclass correlation coefficients above .05 suggest that data are suitable for multilevel structural equation modelling (Preacher et al., 2010). Intraclass correlation coefficients above .05 mean that while a large amount of variance is explained at between-person level, there is substantial variance left to be explained at the within-person level, so multilevel structural equation modelling is justified.

#### **6.9.3.2 General pre-competition emotions (model 1)**

The model in Figure 6.1 was tested using multilevel structural equation modelling. The model provided good model fit ( $\chi^2 [20] = 102.86$ , scaling factor = 1.03, CFI = .96, TLI = .89, SRMRwithin = .05, SRMRbetween = .07, RMSEA = .07; Marsh, Hau, & Wen, 2004). In the between-person model, SOP and SPP positively predicted PCI (moderate to large effect sizes). PCI positively predicted all emotions (small to moderate effect sizes). At within-person level, SOP significantly predicted PCI and PCI predicted anxiety, excitement and anger (small effect sizes). No other paths were significant.

#### **6.9.3.3 Multidimensional anxiety and anger (model 2)**

The model in Figure 6.2 (CSAI-2 and STAXI) was tested and the model provided good fit ( $\chi^2 [20] = 107.09$ , scaling factor = 1.01, CFI = .99, TLI = .92, SRMRwithin = .05, SRMRbetween = .05, RMSEA = .07; Marsh et al., 2004). At between-person level, PCI positively predicted both forms of anxiety and all three dimensions of anger (moderate to large effects). At within-person level, SOP predicted PCI and PCI predicted both forms of anxiety and all three dimensions of anger (small effects).

### **6.9.4 Indirect effects**

#### **6.9.4.1 General pre-competition emotions (model 1)**

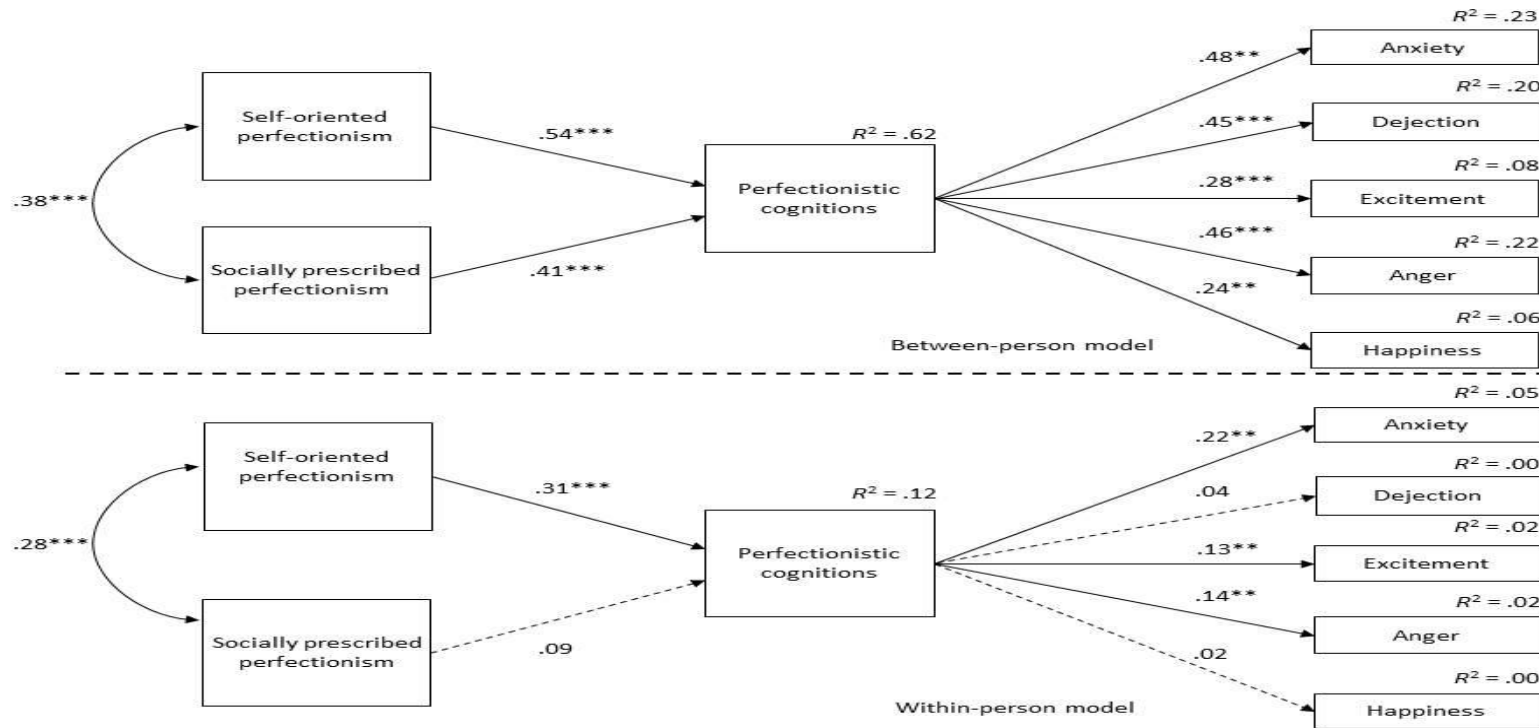
The between-person model showed that SOP had a positive and significant indirect effect on all emotions: anxiety (indirect effect = .25,  $p = .000$ , CI = .13 to

.25); dejection (indirect effect = .24,  $p = .000$ , CI = .10 to .19); excitement (indirect effect = .15,  $p = .000$ , CI = .04 to .13); anger (indirect effect = .25,  $p = .000$ , CI = .09 to .17); and happiness (indirect effect = .13,  $p = .001$ , CI = .03 to .13). At within person-level, SOP had a positive indirect effect on anxiety (indirect effect = .07,  $p < .001$ , CI = .03 to .08), excitement (indirect effect = .04,  $p < .05$ , CI = .01 to .05), and anger (indirect effect = .01, CI = .01 to .02) via PCI.

The between-person model showed that SPP had positive indirect effects on all variables: anxiety (indirect effect = .20,  $p = .000$ , CI = .09 to .17), dejection (indirect effect = .19,  $p = .000$ , CI = .06 to .14), excitement (indirect effect = .11,  $p = .000$ , CI = .03 to .09), anger (indirect effect = .19,  $p = .000$ , CI = .01 to .18) and happiness (indirect effect = .10,  $p = .002$ , CI = .02 to .09). There were no significant indirect effects between SPP and emotions at within-person level.

#### **6.9.4.2 Multidimensional anxiety and anger (model 2)**

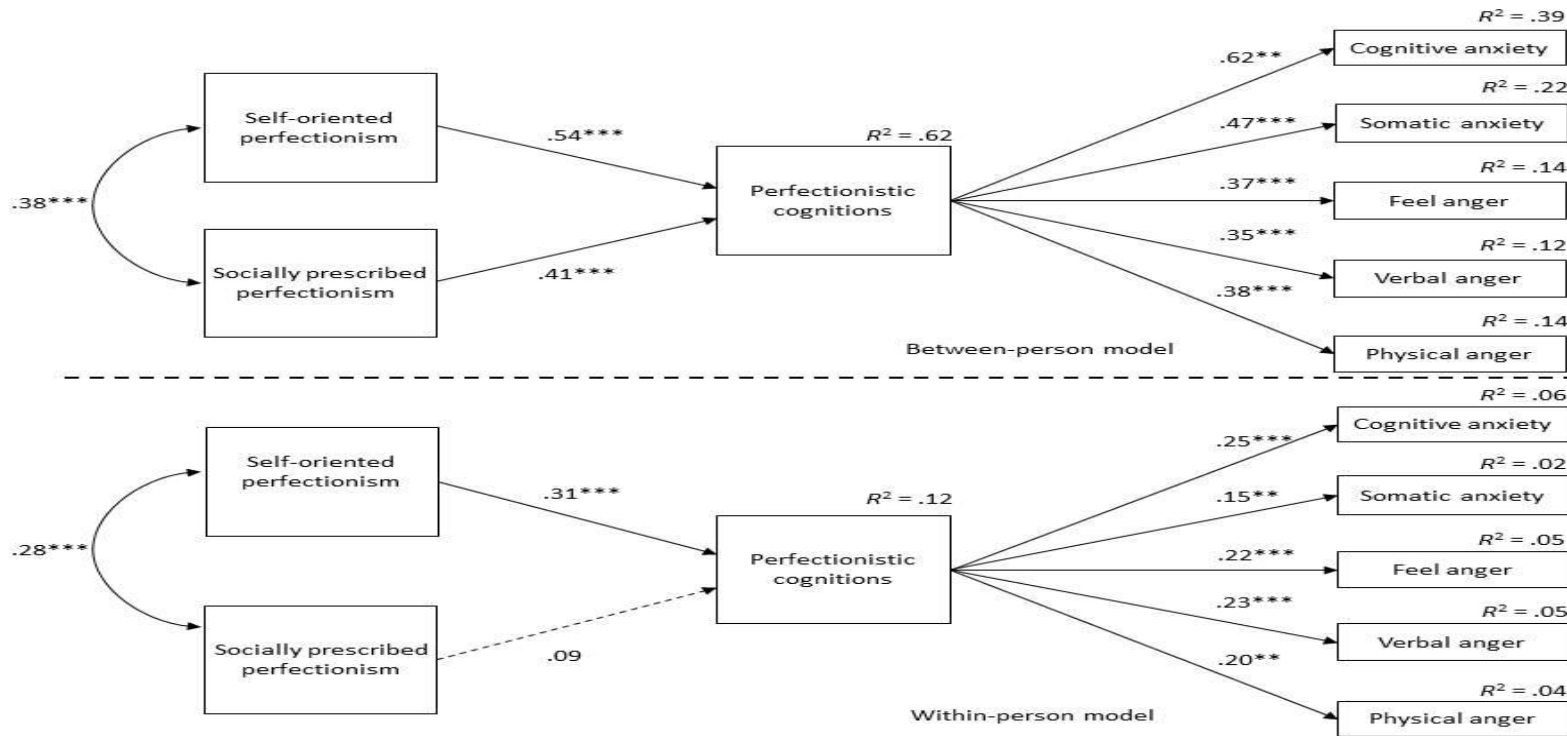
In the between-person model, SOP had a positive indirect effect (via PCI) on all anxiety and anger dimensions: cognitive anxiety (indirect effect = .34,  $p = .000$ , CI = .21 to .37); somatic anxiety (indirect effect = .25,  $p = .000$ , CI = .14 to .28); feel anger (indirect effect = .20,  $p = .000$ , CI = .07 to .18); verbal anger (indirect effect = .15,  $p = .000$ , CI = .07 to .18); and physical anger (indirect effect = .20,  $p = .000$ , CI = .06 to .12). In the within-person model, SOP had a positive and significant indirect effect (via PCI) on all anxiety and anger dimensions: cognitive anxiety (indirect effect = .08,  $p = .000$ , CI = .04 to .11), somatic anxiety (indirect effect = .05,  $p = .005$ , CI = .01 to .07), feel anger (indirect effect = .07,  $p = .005$ , CI = .02 to .09), verbal anger (indirect effect = .07,  $p = .004$ , CI = .02 to .08) and physical anger (indirect effect = .06,  $p = .01$ , CI = .01 to .05). In the between-person model, SPP had positive indirect effects on all variables: cognitive anxiety (indirect effect = .26,  $p = .000$ , CI = .13 to .26); somatic anxiety (indirect effect = .19,  $p = .000$ , CI = .09 to .20); feel anger (indirect effect = .15,  $p = .000$ , CI = .05 to .12); verbal anger (indirect effect = .15,  $p = .000$ , CI = .05 to .13); and physical anger (indirect effect = .16,  $p = .000$ , CI = .03 to .09). In the within-person model, there were no significant indirect effects between SPP and anxiety and anger.



**Figure 6.1** Multilevel structural equation model ( $N = 337$ ). Path coefficients are standardized. Dashed paths are non-significant ( $p > .05$ ).  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .<sup>1</sup>

<sup>1</sup> Multilevel modelling involves all constructs measures at all waves with change scores being aggregated so that the between and within level effects can be discerned. It is therefore not interpreted in the same ways as a cross-lagged (i.e., differences across time points) as all waves are analysed together (i.e., differences at between- and within-person level).





**Figure 6.2** Multilevel structural equation model ( $N = 337$ ). Path coefficients are standardized. Dashed paths are non-significant ( $p > .05$ ).  $*p < .05$ .  $**p < .01$ .  $***p < .001$ .<sup>1</sup>

<sup>1</sup> Multilevel modelling involves all constructs measures at all waves with change scores being aggregated so that the between and within level effects can be discerned. It is therefore not interpreted in the same ways as a cross-lagged (i.e., differences across time points) as all waves are analysed together (i.e., differences at between- and within-person level).

## 6.10 Discussion

The current study had two purposes: (i) to examine whether perfectionistic cognitions mediate the relationship between SOP and SPP and positive and negative pre-competition emotions by examining the within- and between-person effects and (ii) to examine whether perfectionistic cognitions mediate the relationship between SOP and SPP and multidimensional anxiety and anger by examining the within- and between-person effects.

Based on cross-sectional findings, it was hypothesised that:

- (1) PCI would mediate the relationship between SOP and anxiety and excitement at both within-person and between-person level;
- (2) PCI would mediate the relationship between SPP and dejection and anger at both within-person and between-person level;
- (3) PCI would mediate the relationship between SOP and multidimensional anxiety (i.e., cognitive and somatic) at both within-person and between-person level;
- (4) PCI would mediate the relationship between SPP and multidimensional anger (i.e., feel anger, verbal anger, and physical anger) at both within-person and between-person level.

**Table 6.7** Model 1 hypotheses (PCI as mediator of perfectionism–general pre-competition emotions relationship)

	Anxiety	Dejection	Excitement	Anger	Happiness
<b>Within person</b>					
SOP → PCI	* ✓		* ✓	✓	
SPP → PCI		* †		* †	
<b>Between person</b>					
SOP → PCI	* ✓	✓	* ✓	✓	✓
SPP → PCI	✓	* ✓	✓	* ✓	✓

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* hypothesised, ✓ significant effect, †= non-significant.

**Table 6.8** Model 2 hypotheses (PCI as mediator of perfectionism–multidimensional pre-competition emotions relationship)

	Cognitive anxiety	Somatic anxiety	Feel anger	Verbal anger	Physical anger
<b>Within person</b>					
SOP → PCI	* ✓	* ✓	✓	✓	✓
SPP → PCI			* †	* †	* †
<b>Between person</b>					
SOP → PCI	* ✓	* ✓	✓	✓	✓
SPP → PCI	✓	✓	* ✓	* ✓	* ✓

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, PCI = perfectionistic cognitions, \* hypothesised, ✓ significant effect, † non-significant.

Providing the first investigation of full longitudinal mediation using a three-wave design, the study found that perfectionistic cognitions mediated the perfectionism–emotions relationship, but different patterns of relationships were found at the between- and within-person levels of analysis and for both models.

For general pre-competition emotions (model 1), at the between-person level, the positive relationships between SOP and all pre-competition emotions were mediated by perfectionistic cognitions and, the positive relationships between SPP and all pre-competition emotions were mediated by perfectionistic cognitions. At the within-person level, only the positive relationships between SOP and anxiety, excitement and anger were mediated by perfectionistic cognitions, suggesting that increases in SOP led to increases in these emotions via increases in perfectionistic cognitions (See Table 6.7).

For multidimensional anxiety and anger (model 2), the positive relationship between SOP and all dimensions of anxiety and anger was mediated by perfectionistic cognitions, and also, the positive relationship between SPP and all dimensions of anxiety and anger was mediated by perfectionistic cognitions. At within-person level, only the positive relationships between SOP and all dimensions of anxiety and anger were mediated by perfectionistic cognitions (See Table 6.8).

### **6.10.1 Self-oriented perfectionism and pre-competition emotions via perfectionistic cognitions**

#### **6.10.1.1 General pre-competition emotions (model 1)**

At between-person level, SOP was related to PCI, which in turn was also related to all pre-competition emotions (anxiety, excitement, dejection, anger, and happiness). At the within-person level, in addition to PCI mediating the relationship between SOP and anxiety and excitement, PCI also mediated the relationship between SOP and anger. That is, an individual who experiences higher levels of SOP, relative to their own average, is likely to experience higher levels of PCI, which in turn increases anxiety, anger, and excitement before competition, relative to their own average. As SOP is comprised of two key components—high personal standards and self-criticism—it is likely that SOP gives rise to perfectionistic cognitions (e.g., “I should be better”) which leads to the rise of both positive and negative emotions. When those higher in SOP make progress towards unrealistic goals, positive emotions may occur particularly if an opportunity arises (e.g., competition) for them to make further progress towards their goals. When it is likely that goals will not be reached, the self-critical component of SOP is likely to be activated, and therefore, those higher in SOP may experience more perfectionistic

cognitions (e.g., “I should be perfect”), which consequently fuels more anxiety and anger. During the time of feeling anxious, those higher in SOP may not be able to exert themselves as they desire, fuelling guilt-driven energising behaviours, particularly if perfectionistic thinking increases. Accordingly, when presented with an opportunity to compete, they feel excited to redeem themselves and see competition as an opportunity to demonstrate their competence.

#### **6.10.1.2 Multidimensional anxiety (model 2)**

With regard to multidimensional anxiety, it was hypothesised, based on findings from study one, that PCI would mediate the relationship between SOP and all dimensions of anxiety at both within- and between-person level. Results supported this hypothesis. At both within- and between-person level, PCI mediated the relationship between SOP and both cognitive and somatic anxiety which means that when an individual experiences higher SOP, relative to the average SOP scores of the group and relative to their own average level, their PCI will also be higher, which in turn leads to higher multidimensional anxiety (i.e., cognitive and somatic anxiety) and anger (i.e., feeling anger, feel like expressing verbal anger and feel like expressing physical anger). The relationship between SOP and cognitive and somatic anxiety via perfectionistic cognitions could be explained by the underpinning belief associated with SOP that self-acceptance is contingent on achieving perfectionistic standards (e.g., Flett, Besser, Davis, & Hewitt, 2003). As perfectionistic cognitions draw awareness to imperfections and the discrepancy between actual standards and ideal standards, when higher SOP gives rise to more frequent perfectionistic cognitions it is likely to place individuals under considerable strain prior to important competitions. Therefore, feeling compelled to achieve personally meaningful goals may lead to being cognitively aware of one’s imperfections which is likely to render athletes vulnerable to experiencing both physical symptoms of anxiety and worrying thoughts in anticipation of competition.

#### **6.10.1.3 Multidimensional anger (model 2)**

The relationship between SOP and all dimensions of anger (feeling anger, feel like expressing anger verbally and physically) was mediated by PCI. The appraisal process in which anger occurs could explain this finding. Anger stems from goal blockage and feelings of “could and should do better” (Rudolph et al., 2007). As SOP increases, PCI also increases which in turn leads to increases anger. Perfectionistic cognitions include statements like “I should do better” and therefore, it is likely that when goals are blocked, that those higher in SOP are likely to feel angry and feel like expressing their anger. In consideration of perfectionistic

reactivity, this relationship is perhaps a result of contextual factors (e.g., being a substitute). SOP is deemed a vulnerability factor in that it is generally related to more adaptive consequences compared to SPP; however, when faced with adversity or failure, SOP is related to debilitating outcomes (e.g., anger; Besser, Flett, & Hewitt, 2004). It may be that those higher in SOP who do not have the opportunity to achieve their goals (e.g., a substitute), will experience higher perfectionistic cognitions like “I should do better” and, consequently, are likely to experience higher levels of feeling angry prior to competition.

These findings could also be explained by perfectionism being related to emotional dysregulation. Emotional dysregulation, also termed as “emotional hyper-reactivity”, is the inability to control or regulate emotions. Perfectionistic individuals have been described as harshly self-critical, emotional and temperamental (Gustafsson & Lundqvist, 2016). Therefore, those higher in SOP may be vulnerable to poorly modulated emotions (i.e., mood swings/emotional dysregulation) particularly when accompanied by thoughts that draw attention to the discrepancy between the ideal self and actual self. Strong fluctuations are indicative of emotional instability and may manifest as angry outbursts or heightened anxiety (e.g., Beauchaine, Gatzke-Kopp, & Mead, 2007; Kuppens, Oravecz, & Tuerlinckx, 2010). The nature of SOP—holding perfectionistic standards and being harshly self-critical—may lend itself to emotional instability particularly when perfectionistic cognitions are more frequent. That is, when the strivings and critical aspects are working in tandem, those higher in SOP may experience more perfectionistic cognitions and, in turn, experience both positive and negative emotions concurrently or both emotions in short fluctuations.

## **6.10.2 Socially-prescribed perfectionism and pre-competition emotions**

### **6.10.2.1 General pre-competition emotions (model 1)**

At between-person level (on average), SPP was related to PCI which in turn was related to anxiety, dejection, anger, excitement, and happiness. Contrary to the hypothesis, at within-person level, PCI did not mediate the relationship between SPP and any pre-competition emotions. This finding suggests that the relationship between SPP and pre-competition emotions via perfectionistic cognitions was evident relative to a normative standard (i.e., mean of the sample) rather than relative to an individual’s average scores (i.e., individual’s own mean). In other words, individuals with higher SPP are more likely to experience more frequent perfectionistic cognitions compared to those lower in SPP, and then those experiencing more frequent perfectionistic cognitions are more likely to experience

both positive and negative emotions prior to competition, compared to those experiencing less frequent perfectionistic cognitions. Therefore, it is likely that for those higher in SPP, the situations (i.e., competition) were fairly similar and therefore have less of an influence on cognitions and emotions, and the relationships between SPP, PCI and emotions were relatively stable (i.e., less fluctuation in an individual, relative to their own mean), and therefore not much variance was to be explained. This finding suggests that those higher in SPP may have a consistent experience of the situation of competition and pre-competition emotions via the experience of perfectionistic cognitions.

#### **6.10.2.2 Multidimensional anxiety (model 2)**

The null hypothesis that PCI would not mediate the relationship between SPP and multidimensional anxiety at both within-person and between-person level was rejected. At between-person level, SPP was related to PCI, which in turn was related to multidimensional anxiety. That is, relative to the group average, SPP is related to PCI, which relates to cognitive and somatic anxiety. The relationship between SPP and multidimensional anxiety via PCI was evident when all variables were modelled at population level (between-person level) rather than the intra-individual differences. Individuals with higher SPP are more likely to experience more frequent perfectionistic cognitions compared to those lower in SPP and in turn, those experiencing more frequent perfectionistic cognitions are more likely to experience both cognitive and somatic anxiety prior to competition compared to those with less frequent perfectionistic cognitions.

#### **6.10.2.3 Multidimensional anger (model 2)**

In partial support of the hypothesis, PCI mediated the relationship between SPP and multidimensional anger at between-person level but not within-person level. That is, individuals with higher SPP are more likely to experience more frequent perfectionistic cognitions compared to those lower in SPP and, in turn, those experiencing more frequent perfectionistic cognitions are more likely to feel angry and feel like expressing anger verbally and physically compared to those with less frequent perfectionistic cognitions. Consistent with previous research outside sport (e.g., Hewitt et al., 2002), direct relationships were found between SPP and dimensions of anger at between-person-level. Anger arises from the feeling of “what ought to be” and, as SPP is related to an external reference criteria in assessment of performance, it is likely that the anger arises from being treated unfairly by others (Averill, 1983). When being higher in SPP gives rise to more frequent perfectionistic cognitions (e.g., “people expect me to be perfect”), it is likely



that the experience of such cognitions heightens the feeling of being treated unfairly by others and/or being unable to meet the demands of others, and consequently, it is likely to fuel anger. Further, SPP is related to ego-orientation (i.e., the tendency to judge success on winning and beating others) rather than task orientation (i.e., the tendency to judge success as per personal improvement and mastery through effort). Therefore, when SPP gives rise to thoughts such as “I have to be the best”, anger is likely (e.g., Dunn et al., 2002; Hall et al. 1998; Lemyre, Hall, & Roberts, 2008).

## **6.11 Conclusion**

This study is the first investigation using a three-wave design and multilevel structural equation modelling to examine whether perfectionistic cognitions act as a potential mediator between multidimensional perfectionism and pre-competition emotions at between- and within-person level. Results showed that perfectionistic cognitions mediated both the perfectionism–pre-competition emotions relationship and the perfectionism–multidimensional anxiety and anger relationships. However, different patterns of relationships were found at the between- and within-person levels, and for both models. At between-person level, perfectionistic cognitions mediated the relationships between SOP and all general pre-competition emotions and multidimensional anxiety and anger. Also at between-person level, perfectionistic cognitions mediated the relationships between SPP and all pre-competition emotions and multidimensional anxiety and anger. At within-person level, perfectionistic cognitions mediated the relationship between SOP and general pre-competition anxiety, excitement, and anger, and all dimensions of multidimensional anxiety and anger. Therefore, it can be concluded that frequent perfectionistic cognitions are likely to have implications for those higher in SOP and SPP with regard to the emotions they feel prior to competition.

## **Chapter 7 Perfectionism, overthinking, and psychological responses to setbacks in football: A mixed-methods approach**

“For the whole of the next week, I had the error in front of my eyes. I couldn’t get it out my head. I couldn’t forgive myself a mistake”

*Robert Enke (Reng, 2015)*

The findings of study one and two of this thesis suggest that the thoughts experienced by perfectionistic footballers are important. Common to other research examining perfectionistic cognitions, the first two studies relied on a quantitative approach to examine the effects of perfectionism and perfectionistic cognitions. However, to gain a deeper understanding of thoughts related to perfectionism (e.g., overthinking, perfectionistic cognitions), the current study draws on qualitative research methods. It does so by adopting a mixed-methods approach to first quantitatively identify perfectionistic footballers and then interview them about their psychological experiences pre-, during-, and post-performance. This includes consideration of how they think adverse experiences in football affect their psychological responses. In the current chapter, the definition of overthinking is revisited, followed by a description of the situations related to perfectionistic reactivity (perfectionistic individuals’ psychological and physiological responses to setbacks). Next, the benefits and the drawbacks of quantitative research methods are discussed, along with the importance of using qualitative enquiry to explore perfectionism. Perfectionism literature using qualitative enquiry (outside and inside of sport) is reviewed with a reference to what is already known about overthinking. The chapter concludes with a mixed methods study that explores the psychological processes that perfectionistic footballers experience during the course of performance (pre-, during-, and post-performance) and how adverse experiences in football impact their psychological responses.

### **7.1 Overthinking recap**

To “overthink” is to think too much or too long about something (Nolen-Hoeksema, 2003). Overthinking has been described elsewhere as cognitive perseveration so to capture different types of ruminative thoughts (e.g., rumination, worry, perfectionistic cognitions). Cognitive perseveration is defined as “the repeated or chronic activation of the cognitive representation of one or more psychological stressors” (Brosschot et al., 2006, p. 113), and mainly refers to a self-deprecating style where an individual berates themselves over and over again (Nolen-Hoeksema, 2003). Although some types of overthinking are not always

harmful (e.g., self-reflection), much of the research in overthinking has been concerned with maladaptive forms of self-focused thoughts (e.g., rumination) in people at risk of depression, anxiety, or other forms of psychopathology (Nolen-Hoeksema et al., 2008). The repetitive thinking that occurs in reaction to wide-ranging stressors prolongs stress and leads to heightened psychological distress, which holds true for the overthinking related to individuals higher in perfectionism.

People who are higher in trait perfectionism are said to be chronic overthinkers (Flett et al., 2016). Perfectionism Cognition Theory (PCT) provides a framework to explain and explore the cognitive processes, mechanisms and consequences that accompany perfectionism (Flett et al., 2016). Central to this theory is that perfectionism entails a ruminative cognitive style that is likely to manifest recurrently to impact and intrude on many aspects of a perfectionist's life. When stressed, perfectionistic individuals are prone to different forms of overthinking such as perfectionistic thinking, rumination, and worry (Flett et al., 2016). Consequently, perfectionists are often referred to as “perseverating perfectionists”, due to their tendency to engage in repetitive and maladaptive thinking patterns (Flett et al., 2016). One key principle of PCT is that perfectionism is related to a type of overthinking that is unique to perfectionism known as perfectionistic cognitions.

Perfectionistic cognitions are thoughts about the need to attain perfection (Flett et al., 1998). In addition, perfectionistic individuals may also be plagued by thoughts about making mistakes, worry about not attaining performance standards, and have fears about receiving negative feedback from significant others. As goals are set that may not be feasible, harsh self-deprecation is likely to occur when these goals are not reached. In turn, perfectionistic individuals may be preoccupied with past failures, have difficulty disengaging from these thoughts, and worry about attaining goals in the future. Thus, perfectionistic athletes may be prone to various forms of overthinking. The term “overthinking” will be used in this study as the overarching term for the different types of maladaptive perseveration cognitive patterns related to perfectionism (e.g., rumination, perfectionistic cognitions).

## **7.2 Perfectionistic reactivity**

A case was made in the introduction to this thesis for perfectionism being underpinned by a strong cognitive component and related to overthinking (e.g., rumination, perfectionistic cognitions). Further, study one and two provided evidence that overthinking, in the form of perfectionistic cognitions, is important to

the emotions that footballers experience prior to competition. Yet, there is limited research that elucidates which components of competition are likely to activate overthinking. Flett and Hewitt's (2016) recent chapter on perfectionistic reactivity outlines the situations that may make perfectionistic individuals vulnerable to different forms of overthinking and, in turn, psychological distress. Perfectionistic reactivity is a perfectionistic individual's style of responding to adversity, which includes both psychological reactivity and physiological responses. Perfectionistic individuals are susceptible to the pressures of wanting to be perfect and therefore, when difficult situations occur that threaten a perfectionist's sense of self (e.g., not achieving high standards), they are likely to react intensely to the situation. This reaction may appear outwardly adaptive and positive (e.g., increased effort). However, these behaviours are likely to be underpinned by the need to conceal incompetence and irrational thoughts about the importance of success. Often their way of responding is not conducive to success and potentially harmful to well-being.

As perfectionists often feel the need to present as perfect, it is important to find ways to tap into the cognitive reactions to such events. Flett et al. (2016) have emphasised that perfectionists, including children and adolescents, go to great lengths to hide their rumination and worry to appear "perfect on the outside". Many perfectionists will wear a mask of being highly motivated and able to adapt perfectly to stressful situations. Moreover, they are likely to dismiss their emotions in order to self-present as the "perfect person". This perfectionistic self-presentation may be particularly likely of perfectionist athletes who, feeling the pressure to perform, generate rigid thoughts about the need to be perfect. These thoughts may be corrosive to psychological well-being in the long-term.

Based on clinical experience and theoretical grounding, Flett and Hewitt (2016) described the different situations that are likely to activate the cognitive vulnerability of perfectionistic reactivity. Table 7.1 provides the situations most pertinent to sport. The different situations can be used as prompts to help with understanding how individuals higher in perfectionism respond to adversity and to ascertain whether their reactions include overthinking. It is known, mainly through the main researcher gaining anecdotal evidence in applied psychology work, that perfectionistic athletes are likely to find the situations outlined more difficult than non-perfectionistic athletes do, yet empirical evidence for the same is limited. Each situation/circumstance is described below and the proposed cognitive response will be unpacked in terms of research.

**Table 7.1** Situations/circumstances relevant to perfectionistic reactivity (Hewitt & Flett, 2016)

---

Situation/Circumstances
Learning a new sport or a new skill within the sport
Failure, losses, being outperformed by competitor
Making a key mistake: high pressure situations that elicit mistakes
Nonattainment of goals (personal goals or team goals)
Having imperfections, inadequacies, vulnerabilities exposed in public
Being criticised publicly or privately
Experiencing an injury or illness
Uncontrollable situations
Adapting to a new, unfamiliar situation or role transition
Feelings of burnout and exhaustion

---

## **7.2.1 Situations/circumstances eliciting perfectionistic reactivity**

### **7.2.1.1 Learning a new sport or a new skill within the sport**

When it comes to learning new things, those exhibiting perfectionistic reactivity are likely to respond adversely, especially when others observe first attempts. When unable to master something new, a perfectionist may respond by feeling helpless and may attempt to conceal any imperfections (Flett & Hewitt, 2016). For example, a perfectionist blogger explains that, for her, as a child, “the thrilling burn of perfection invaded every aspect of my life to the point that I became paralyzed by fear. If I couldn’t do it right, I didn’t want to do it at all” (Coggshall, 2015; My Tiny Buddha). Perfectionistic athletes may be inclined to avoid situations in which they cannot demonstrate their competence (e.g., Kaye, Conroy, & Fifer, 2008) and consequently may progress at a slower rate if they only take on suitable challenges. Nevertheless, if they cannot avoid these situations, they are likely to react negatively with heightened emotionality when they cannot master the skill (e.g., crying, tantrums). The understanding of how a perfectionist reacts to learning something new appears unexplored in the literature. Research has mainly focused on gifted students, and elite athletes, and therefore, the lack of enquiry may be due to limited research examining perfectionism in novice learners (Flett & Hewitt, 2016). Gifted students in Speirs Neumeister’s study (2004) described how the lack of challenge in early academic experiences fuelled their perfectionism, but not how they reacted to new and challenging tasks.

### **7.2.1.2 Failure, losses, being outperformed by competitor**

The most revealing situation of perfectionistic reactivity is when a perfectionist encounters failure or repeated failures (Flett & Hewitt, 2016). A recent meta-analytical review of research examining multidimensional perfectionism in sport (Hill et al., 2018) provides support that perfectionism, both SOP and SPP, are related to fear of failure and ego-orientation; therefore, individuals higher in perfectionism are likely to be hypersensitive to failure and being outperformed by others. This notion is supported by previous studies that found that perfectionistic individuals respond to failure and imperfections in a maladaptive way. For example, Stoeber et al. (2007) found that striving for perfection and negative reactions to imperfection were positively related to cognitive and somatic anxiety during competition. Additionally, based on research by Stoeber, Schneider, Hussain, and Mathews (2014), both SOP and SPP appear to be vulnerability factors that influence individuals to react with increased negative affect after repeated failure. That is, SPP predicted increases in anxiety, depression, and anger after initial

failure and further increases in anger after repeated failure. In contrast, SOP predicted increases in anxiety, but only after repeated failure. Perfectionistic individuals are often excessively preoccupied with avoiding failure and even perceived failure causes internal turmoil. Flett et al. (2016) found that SOP displayed a significant positive relationship with stress reactivity to failure and therefore, SOP represents a vulnerability factor in the face of failure. When faced with declines in performance, those higher in perfectionism are also prone to negative affect, withdrawing effort and experiencing distress (e.g., Anshel & Mansouri, 2005; Hewitt, Mittelstaedt, & Wollert, 1989; Hill et al., 2011).

#### **7.2.1.3 Making a key mistake; high pressure situations that elicits mistakes**

Even more subtle than complete failure, individuals higher in perfectionism are often fearful and intolerant of making mistakes (e.g., Frost et al., 1990). Hewitt et al. (2008) found that those higher in perfectionism had prolonged physiological activation when asked to reveal the biggest mistake they had made. Further, mistakes seem to haunt perfectionistic individuals and it subsequently follows that they engage in mistake rumination (i.e., the inability to stop thinking about mistakes made). A significant positive relationship appears to exist between trait perfectionism and rumination about mistakes (e.g., Besser, Flett, & Hewitt, 2004). This relationship is supported by Flett and Hewitt (2016) who found that a significant positive relationship exists between both SOP and SPP and rumination and several manifestations of distress. Similarly, Frost and colleagues (1995) conducted a laboratory-based study to find that perfectionistic athletes reacted to mistakes with more negative affect, lower self-confidence and a greater feeling of “I should have done better”. Participants also completed a “mistakes journal” for several days revealing that those higher in perfectionism reacted negatively about mistakes, were more bothered by their mistake and responded with more negative affect and rumination. Their mistakes were seen as more catastrophic and were accompanied by should statements (e.g., “should have done better”).

#### **7.2.1.4 Nonattainment of goals**

Hall (2006) contended that when faced with goal blockage, those higher in perfectionism experience maladaptive cognitions, negative affect, and self-defeating behaviours. This notion is aligned with Hewitt and Flett’s (1993) vulnerability hypothesis that higher levels of perfectionism put individuals at risk of psychological distress. The content of goals set by those higher in SOP and SPP are likely to be different due to the differences in underpinning motivation. For example, Stoeber et al. (2009) conducted a study examining goals associated with

perfectionism in a sample of youth elite ice hockey players from Finland. They found that PS (similar to SOP) were related to mastery-approach and performance-approach goals while CM (similar to SPP) were related to performance-avoidance and mastery-avoidance goals. Performance goals that are focused on the need to outperform others rely on social comparative information. As externally sourced comparison may be difficult for individuals to measure and achieve, it is likely that there will be a sense of goal blockage for both those higher in CM and SPP. In line with Goal Progress Theory (Martin et al., 1993), overthinking occurs in response to a discrepancy between actual position and desired goal and so is likely to result in negative emotions for those high in perfectionism until the goal is achieved or until the desire for this goal is managed (Martin et al., 1993).

#### **7.2.1.5 Having imperfections, inadequacies, vulnerabilities exposed in public**

Having imperfections, inadequacies, and vulnerabilities exposed in public, is likely to contribute to post-event rumination. When mistakes are made, a perfectionist is filled with shame and guilt, especially if the mistakes are exposed publicly (e.g., Sagar & Stoeber, 2009). Brown and Kocovski (2014) found that rumination occurred after participating in performance situations where perfectionistic individuals were negatively evaluated. Following an anxiety-inducing speech task, both trait perfectionism and state perfectionism were related to trait rumination in students. Their thinking was assessed two days after the task and rumination was predicted by trait and state perfectionism after controlling for social anxiety, state anxiety, and depression. This study was a lab-based assessment, which ensures high validity; however, it can only be presumed that those higher in perfectionism are likely to respond either similarly or even more detrimentally in situations of significance.

#### **7.2.1.6 Being criticised in public or private**

Perfectionistic individuals are particularly sensitive to criticism. When criticised by a coach or teammate for making mistakes, those higher in perfectionism are likely to feel they are being punished and humiliated. This idea is indirectly supported by Nordin-Bates and colleagues (2014) who found that athletes higher in perfectionism are likely to colour perceptions of training/performance environments in a way that mistakes are deemed unacceptable and only superior performances are valued. As their self-worth is contingent on achievement in areas of significance (e.g., sport competition for athletes), perfectionists view negative feedback as them failing and they then become preoccupied with their shortcomings. Dunkley, Zuroff, and Blankstein (2003) examined the relationship



between perfectionism and daily reactions to criticism in a longitudinal study and found that SPP was significantly related to perceived daily exposure to criticism from significant others, while SOP was not significantly related to perceived criticism. Nevertheless, as SOP is related to the importance of performance and goal attainment, if being criticized by others draws attention to the discrepancy between actual self and ideal self, then it is likely to fuel self-criticism, self-blame, and self-disappointment (Hewitt & Flett, 1991). Therefore, it is likely that post-event rumination will occur after important situations where those higher in perfectionism are (or feel they are) evaluated harshly in a way that draws attention to imperfections.

#### **7.2.1.7 Experiencing an injury or illness**

According to the stress-injury model (Williams & Andersen, 1998), personality factors (e.g., perfectionism) predispose athletes to elevated levels of stress that, in turn, increase the risk of injury. Research supports that athletes higher in perfectionism may be at higher risk of injury (Krasnow, Mainwaring, & Kerr, 1991; Madigan, Stoeber, & Passfield, 2017). Injury has a number of cognitive, affective, behavioural, and financial implications for athletes (e.g., Hagger, Chatzisarantis, Griffin, & Thatcher, 2005). Perfectionistic athletes are particularly likely to find difficulties in coping with injury. Recent findings indicate that athletes higher in SOP are more likely to cope with injury in a problem-focused and an emotion-focused manner (Jowett, Hill, Forsdyke, & Gledhill, 2018). As emotion-focused coping includes a mix of relatively adaptive (seeking emotional support) and maladaptive (self-blame) coping strategies, those higher in SOP may be proactive in dealing with injury but may also be prone to greater emotional difficulties following injury. In addition, athletes higher in SPP are less likely to use problem-focused coping and more likely to avoid dealing with injury. Avoidance-coping is considered to exacerbate the stress of being injured, because it undermines the behaviours required for better rehabilitation and recovery. Jowett et al. (2018) suggest their findings are consistent with Flett and Hewitt's (2016) notion of perfectionistic reactivity whereby perfectionistic athletes are more prone to react with intense emotions when faced with stressful events such as injury.

#### **7.2.1.8 Uncontrollable situations**

Intolerance of uncertainty is conceptualised as a dispositional characteristic that arises from a set of negative beliefs about uncertainty and its connotations and consequences (Koerner & Dugas, 2008). Individuals who have higher intolerance of uncertainty tend to react negatively to situations that are uncertain. Previous

studies have shown that a positive relationship exists between perfectionism and intolerance of uncertainty (Buhr & Dugas, 2006; Reuther et al., 2013). As those higher in perfectionism may feel that they need to make perfect decisions in order to achieve perfect outcomes, they have difficulty tolerating a lack of information (Buhr & Dugas, 2006; Reuther et al., 2013). Considering that competition is fraught with uncertain and uncontrollable situations (i.e., playing time, opposition's performance), individuals who are intolerant of uncertainty may perceive several "unacceptable and disturbing" events in the course of a competition. Furthermore, many aspects of daily life are uncontrollable and therefore, the anguish of uncertainty may extend to daily life, which is likely to result in anxiety and worry (Freeston et al., 1994).

#### **7.2.1.9 Adapting to a new, unfamiliar situation or role transition**

Transitions can be threatening for perfectionistic athletes. In general, those higher in perfectionism have a need to feel confident, in control and certain about circumstances. Subsequently, they have difficulty adjusting to situations that are new and perhaps ambiguous (Flett & Hewitt, 2016). Similar to the resistance to learn new things, individuals higher in perfectionism may struggle if their level of competence in the new situation is unknown to them. For younger players, it may be difficult to transition to new and better teams or to an older age group where they have not and may not be able to demonstrate full competence. Furthermore, for older players, the difficulties may manifest around retiring and coping at the end of their careers. As striving in their sport and demonstrating competence is likely to be central to their identity, when they no longer have sport in their life, they are likely to be particularly vulnerable to feelings of worthlessness (Lavalley & Robinson, 2007). Psychological difficulties are more likely to occur when the choice to retire is not theirs (e.g., injury, illness, or released from the team).

#### **7.2.1.10 Feelings of burnout and exhaustion**

Numerous studies exist that have investigated the relationship between perfectionism and burnout in sport, resulting in a meta-analytic study (see Hill & Curran, 2016). The findings of Hill and Curran (2016) demonstrated that PS (similar to SOP) was negatively related to overall burnout, reduced personal accomplishment, and depersonalization, whereas the relationship between PS and exhaustion was non-significant. PC (similar to SPP) was positively related to relationship with overall burnout and all symptoms of burnout. Further, the study raised awareness of the physical, emotional, and mental costs of perfectionism. As those higher in perfectionism lack the capacity to engage in restorative self-care,

take time off or relax when needed, burnout and exhaustion is likely. In addition to feeling exhausted, those higher in perfectionism are likely to respond poorly to exhaustion. Despite knowing that those higher in perfectionism are likely to experience burnout and exhaustion, it is unknown what cognitive patterns are associated with the process of burning out.

### **7.3 Critique of research methods**

Many gaps remain in understanding the full extent of the role cognitive processes play in perfectionism and its relationships with psychological distress. One such gap is the limited research that has examined overthinking processes, more broadly, but also specifically in relation to perfectionistic reactivity. Of the research that has been conducted, perfectionism and overthinking has been examined quantitatively; whereby data was collected across one-, two- or three-time points and tended to be captured at a state-like (e.g., “in the last week”) or trait level (e.g., “how do you usually”). While such research has provided us with useful insights into the correlates of perfectionistic cognitions, it arguably fails to capture broader experiences and what occurs between time-points. This gap may be addressed by employing suitable research methods. The following section will outline the benefits and drawbacks of quantitative research methods, and then address the need for a qualitative approach to understand overthinking processes in perfectionistic footballers.

#### **7.3.1 Benefits and drawbacks of quantitative research methods**

##### **7.3.1.1 Benefits of quantitative research**

The quantitative research approach follows the confirmatory scientific method. Quantitative research is a hypothetico-deductive approach in which data can be used to test hypotheses or support or dispute theoretical assumptions (Haig, 2012). With this method, a problem is identified, a question is asked, hypotheses are formulated, data is collected and analysed, a theory or empirical framework may be developed and findings feed back to the theoretical and empirical framework (Flick, 2012). Moreover, through the collection of large amounts of numerical data on a given phenomenon, at given points in time and the aforementioned process, quantitative research allows researchers to quantify the variation in the phenomenon, examine the relationship between variables and make predictions (Gays, Mills, & Airasian, 2009). Consequently, this approach is useful for solving problems and creating new knowledge (Giles, 2002).

There are several other characteristics that are important to quantitative research that enable us to explain phenomena, draw valid and reliable conclusions, and generalise findings (Creswell, 2009). Those characteristics are that it is systematic, logical, empirical, reductive, replicable, controlled, and rigorous. That is, the procedures adopted in quantitative research follow a logical sequence and conclusions are drawn from hard evidence gathered from real life experiences or observations (Kumar, 2005). Further, quantitative studies can be devised in a way that minimises the effects of different factors affecting the relationships, or when it is not possible to control outside factors, quantitative methods can be used to quantify them. In addition, findings through quantitative studies can be replicated and retested (Polit & Beck, 2010).

Perfectionism research has predominately used quantitative methods. Quantitative methods have allowed for the development of perfectionism measures, some of which have been created for use in sport. Using such measures, a strong evidence base concerning perfectionism in sport now exists (Hall, 2016). These methods have so far enabled us to understand, with some accuracy, the correlates and consequences of perfectionism and perfectionistic cognitions at a particular time point (cross-sectional) or several time points (longitudinal). For example, study one of this thesis used multiple regression analysis to establish that frequent perfectionistic cognitions predict negative pre-competition emotions in youth footballers. Also, study two of this thesis used multilevel structural equation modelling to establish that frequent perfectionistic cognitions mediate the relationship between SOP and SPP and pre-competition emotions and that different patterns of relationships exist at between- and within- person level. By drawing on quantitative methods, a clearer picture exists of the consequences of perfectionism in sport.

### **7.3.1.2 Drawbacks of quantitative research**

Although there are a number of benefits to using a quantitative approach, there are also a number of drawbacks to consider. By relying purely on quantitative methods, aspects of the wider cognitive process and experience of perfectionistic athletes may be missed. Quantitative approaches may restrict the ability to fully explore the processes and mechanisms by which perfectionism and overthinking contribute to psychological distress; nor do they capture the full experience of overthinking in individuals. Quantitative research tends to over-simplify the data and, therefore, the complexity of a person's experience may be lost in the way concepts are measured (e.g., O'Dwyer & Bernauer, 2014). That is, quantitative

methods may restrict the ability to gain an individuals' unique perspective of the "why" and the "how" (e.g., Blackman, Wistow, & Byrne, 2013).

Quantitative methods strive to determine the extent of a phenomenon or problem in a systematic and logical way. However, as human behaviour is complex, quantitative methods may not be flexible enough to provide a comprehensive and rich picture (Barker, Pistrang, & Elliott, 2015). Instead of focusing on the individual, quantitative studies are often preoccupied with the measurement strategy employed to ensure validity and reliability (Marks & Yardley, 2004). Therefore, quantitative research methods can be too reductive in that the data produced is often constrained by the measure used (Cohen, Manion, & Morrison, 2007). The narrow data gained by quantitative methods may miss other important information such as the social context and underlying reasons for thoughts, feelings and behaviours (Sutton & Austin, 2015). That is, quantitative methods may be restricted to capturing the "what" rather than the why.

By adopting mainly quantitative methods, our understanding of perfectionism and its consequences has arguably developed in a rather uneven way. An abundance of valid and reliable measures have been developed and used to quantify and measure perfectionism (see Stoeber & Madigan, 2016). However, the data produced using such measures are constrained by the instrument and/or the analysis employed (Cohen et al., 2007). Similarly, a number of rumination measures exist which are useful to quantify the frequency of ruminative thoughts. For example, the PCI helps to understand the experience of rumination in athletes; however, as quantitative research is overly reductive, it may not gain an understanding of all the types of rumination that those higher in perfectionism are likely to experience or what it means for athletes to experience rumination. Flett and Hewitt (2016) suggest that there are many types of overthinking that perfectionistic athletes may engage in. Thus, by relying on only quantitative methods, a limited perspective of individuals' experiences of overthinking may have been produced.

### **7.3.2 Benefits of qualitative research methods**

The qualitative research approach follows an exploratory method. This approach is non-hypothetico-inductive in which data can provide a deeper understanding of the phenomenon within context and address questions that do not easily lend themselves to quantification (e.g., Barker et al., 2015; Guba & Lincoln, 1994). With this method, a phenomenon is identified, data are collected, and then analysed by identifying patterns and themes so to derive an understanding and

explanation for specific phenomena (Kumar, 2005). Quantitative and qualitative research methods differ in their aims and designs. In quantitative research, the aim is to be as specific as possible in an attempt to answer specific questions using appropriate statistical analysis. By contrast, in qualitative research, the focus is to understand, explain, discover and clarify situations, perceptions, beliefs, or feelings with less significance placed on measurement and variables (Peat, Mellis, Williams, & Xuan, 2002). Qualitative research methods permit a more flexible approach and can provide insights into participants' understanding of how and why phenomena might occur and allows for the unexpected (e.g., Barker et al., 2015; Sparkes & Smith, 2014).

With regard to study design, qualitative research typically uses open frames of enquiry to gather and explore information from selective participants. In addition, data collection strategies are often reformulated either to acquire the "totality" of a phenomenon or to select certain aspects for greater in-depth study (Kumar, 2005). The data from qualitative research methods are also often unconstrained by theory and take into account the social context and individuals' unique perspectives (e.g., Josselson, 2014). In comparison, quantitative research is more structured, rigid, and predetermined to ensure accuracy in measurement and classification. Quantitative study designs are specific, have been tested for their validity and reliability, and can be explicitly defined and recognised. Qualitative study designs are "more flexible and emergent in nature, and are often non-linear and non-sequential in their operationalisation" (Kumar, 2005, p. 103).

Qualitative research methods allow researchers to understand the "lived experience" of an individual in a natural setting. They can also provide a more meaningful perspective than is likely to be captured through a quantitative approach such as questionnaires (Guest, Namey, & Mitchell, 2012). Thus, qualitative research methods are one alternative means to gain a broader picture of perfectionists' cognitive experiences in sport (and in other contexts). These methods allow for some of the under-the-surface cognitive, affective and behavioural responses to be elicited. Qualitative research methods emphasise the discovery of personal meaning and can be used to uncover individuals' perceptions, feelings and reflections on their experiences (Biggerstaff, 2012; Johnson & Christensen, 2004). Furthermore, the accounts of participants gained through qualitative methods are often more compelling and easier to interpret particularly for non-academic audiences such as sport coaches (Anderson, 2010).

## **7.4 Qualitative perfectionism studies review**

Despite their benefits and calls for qualitative methods to be used when trying to understand perfectionists (e.g., Hill et al., 2015), there is only a handful of qualitative studies exploring perfectionism in the field of sport psychology. Outside of sport, the number of qualitative studies is low in comparison to the number of quantitative studies. Of the small number of perfectionism studies outside of sport that have employed qualitative research methods, the majority have focused on the experience of perfectionistic students. Therefore, the following section will provide a review of the qualitative perfectionism research in educational settings first, and then in sports. The aim of discussing these studies is to give an overview of the qualitative research that has been conducted and to demonstrate how many emphasise the thought patterns of perfectionists that may contribute to distress. The qualitative studies conducted in sport provide a direct basis for the current study in that they provide indirect accounts of overthinking.

### **7.4.1 Qualitative studies in educational settings**

The qualitative studies in educational settings captured the essence that perfectionism entails a strong motivational component that is accompanied by psychological strain. Through interviewing self-identified perfectionists, Slaney and Ashby (1996) and Slaney, Chadha, Mobley and Kennedy (2000) aimed to gain an understanding of what perfectionism is and participants in both studies noted high standards and the need for order as central to perfectionism. Similar to other qualitative studies (e.g., Rice, Bair, Castro, Cohen, & Hood, 2003, Merrell et al., 2011), distress featured heavily in the experience of perfectionism. Stress for perfectionistic college students, in Merrell et al (2011), occurred due to academic concerns, personal expectations, and parental expectations, and contributed to never being satisfied or able to enjoy achievements. In addition, Schuler (2000) found that concern over mistakes was also a key feature of perfectionism, which was accompanied with a seemingly endless state of anxiety. From participants' accounts, being organised and having order, in addition to being central to perfectionism, were ways in which perfectionistic individuals tried to manage their anxiety (Schuler, 2000). Slaney and Ashby (1996) noted that the tendency to procrastinate was a key feature of perfectionism, whereas, other studies did not find this.

Speirs Neumeister et al. (2009) explored how perfectionism develops in gifted students by interviewing those higher in SOP, SPP, and/or OOP. Accounts by

participants supported the social expectations model (e.g., contingent parental approval), social reactions model (e.g., harsh consequences associated with imperfection), social learning model (e.g., mimicking parents' perfectionistic behaviours), and other influences (e.g., early academic success and lack of challenge). That is, parents played a role in the development of perfectionism when individuals' self-worth was based on parental improvement, and individuals were driven to achieve perfection as a way of avoiding parental punishment or through the modelling of perfectionistic parenting. Furthermore, early academic success led participants to believe that others expected perfection from them and that the lack of challenge in school made them more perfectionistic.

The findings of qualitative studies also provided support for the notion that perfectionism may be a "double-edged sword". That is, perfectionism was deemed to have both positive and negative aspects. Although associated with adaptive qualities (e.g., high achievement), almost all self-identified perfectionists in Slaney and Ashby (1996) and Slaney et al (2000) indicated that perfectionism was associated with considerable levels of distress and impacted professional or academic work and relationships. Schuler (2000) used cluster analysis to group gifted middle school students into non-perfectionists, normal perfectionists (moderate PS *and* low PC ) and neurotic perfectionists (high PS *and* high PC), and found that most of the "normal" perfectionists believed that their perfectionism had detrimental effects on their life (e.g., burnout, hypercritical of others, and lack of enjoyment). In Slaney et al (2000), participants described a strong intolerance to failure and how distress occurred due to the discrepancy between high standards and the perceived inability to meet such standards resulting in the frequent experience of grief, guilt, tension and worry. From the accounts of individuals and the themes identified across the different studies, perfectionistic individuals are vulnerable to distress and the experience negative emotions.

Academically gifted individuals higher in SOP and SPP seem to differ in their responses to academic success and failure (Speirs Neumeister, 2004a, 2004b, 2004c). That is, those higher in SOP responded to success by being highly critical and discontent and responded to failure by feeling anger and frustration. Individuals higher in SPP responded to success by being driven by the need to please others, but likely to doubt themselves and engage in rumination (e.g., overgeneralization and catastrophizing) in times of failure. This mirrors findings in Speirs Neumeister, Williams and Cross (2007) who described those higher in SOP, SPP, and OOP responding to imperfections by all-or-none thinking and giving up



entirely if perfection was not achievable. Individuals higher in SOP responded with anger, which stemmed from feeling of “should” have performed better, whereas, individuals higher in SPP experienced negative emotional reactions (e.g., guilt, anger, and anxiety) when failing to achieve perfection. In contrast, those higher in OOP did not indicate a strong emotional reaction to imperfection.

With regards to overthinking, distorted thought processes emerged as a theme in Rice et al (2003). Using cluster analysis, Rice et al (2003) grouped individuals as non-perfectionists (moderate PS and PC scores), adaptive perfectionists (high PS and low PC), and maladaptive perfectionists (high PS and PC). Both adaptive and maladaptive perfectionists described engaging in rigid thoughts about the need to have everything perfect (e.g., “must do”, being cognitively preoccupied with perfection, and all-or-nothing thinking). Also, in Schuler (2000), neurotic perfectionists responded to mistakes by engaging in unhealthy cognitive patterns (e.g., wishful thinking, replaying events in their minds, and dwelling on minute details) and negative emotions (e.g., anger, frustration, and embarrassment). Merrell et al. (2011) adopted a different approach to qualitative enquiry to understand the thoughts and emotions related to perfectionism. Using emotional writing sessions, perfectionistic college students were encouraged to write about their thoughts and feelings about stress, perfectionism, performance expectations, and coping. Participants described how the pressure to be perfect was accompanied by responding to mistakes with harsh self-criticism, becoming depressed, moody and upset, and isolating oneself. In addition, overthinking work, revising work, and overworking were described as ways to cope with the feeling of academic inadequacy.

#### **7.4.2 Qualitative perfectionism studies in sport**

Given the rich information that qualitative enquiry has afforded in perfectionism research outside sport, it is surprising that only four studies have used qualitative research methods (interviews and/or focus groups) in sport (Gotwals & Spencer-Cavaliere, 2014; Hill, Witcher, Gotwals, & Leyland, 2015; Sellars, Evans, & Thomas, 2016; Mallinson-Howard, Knight, Hill, & Hall, 2018). Of these studies, three have exemplified that perfectionists engage in overthinking in the form of rumination. In the first study, Gotwals and Spencer-Cavaliere (2014) explored perfectionistic athletes’ perspectives on achievement in sport by using a two-phase mixed methods design. From a sample of male and female intercollegiate athletes (competing in volleyball, basketball, wrestling, track and field, and hockey;  $N = 117$ ), “healthy perfectionists” (high PS and low PC;  $n = 7$ )

and “unhealthy perfectionists” (high on PS *and* PC;  $n = 11$ ) were interviewed. The accounts of participants provided insight into the difficulties that perfectionists faced when losing and making mistakes, and although not explicitly discussed, how perfectionists respond to adversity (Flett & Hewitt, 2016). Unhealthy perfectionists reported difficulty in recovering from mistakes and responded to mistakes by being self-critical, overthinking, and worrying about making more mistakes. They described being easily discouraged, dwelling on mistakes, and experiencing a host of negative emotions (e.g., frustration, depression). Healthy perfectionists did not experience the same negative effects of making mistakes; they appeared to recover quicker by using positive coping strategies (e.g., reappraisal).

The second study by Hill et al. (2015) aimed to explore the opinions and perceptions of what the main features of perfectionism are and how perfectionism influences the lives of high-level performers. Using a purposeful sampling approach, self-identified perfectionistic, international/professional athletes (competing in hockey, volleyball, cycling, fell running, and track and field events), dancers, and musicians were interviewed ( $N = 15$ ). Thematic analysis revealed two themes pertinent to rumination: engaging in rigid and dichotomous thinking and recurring dissatisfaction with performances. Several participants made notable reference to “overthinking” (e.g., “thinking and rethinking too much”). Performers described how they would ruminate post-performance (i.e., repetitive thinking about how to improve and constantly seeking ways to get better). This pattern of thinking, for one participant, felt mentally exhausting. Performers articulated that they rarely experienced a sense of satisfaction.

In the third study, Sellars et al. (2016) aimed to qualitatively explore perfectionistic elite athletes’ experiences of perfectionism in sport and its effects on their sporting experience. From sixty-seven elite athletes (track and field athletics, canoe slalom, sailing, dressage, rugby league, rugby union, flat water kayaking, and taekwondo), “unhealthy perfectionists” (high on both PS *and* PC) were interviewed ( $N = 10$ ; 5 males, 5 females). Under a sub-theme of doubts about action, participants described catastrophic thinking and pre-competition anxiety. In addition, a sub-theme of concern over mistakes indicated that overthinking mistakes interfered with performance and resulted in concentration disruption. Participants also described the experience of post-performance rumination whereby performances were evaluated harshly and mistakes were dwelled on.

In the final study in this area, overthinking was less prominent. The study by Mallinson-Howard et al. (2018) used a mixed-methods approach to provide the first

exploration of the experiences of youth sport participants exhibiting different subtypes of perfectionism (based on the 2 x 2 model; Gaudreau & Thompson, 2010). Female sport participants ( $N = 192$ ) were categorised into four subtypes of perfectionism and one focus group per subtype of perfectionism was conducted ( $n = 4$  to 5 per group) followed by individual semi-structured interviews with a participant most prototypical of each subtype of perfectionism ( $n = 4$  in total) were conducted. Young people's experiences of sport differ across subtypes of perfectionism and these differences were reflected in both the meaning given to sports participation (i.e., goals, values, and purposes) and aspects of the social environment considered most important. For those higher in mixed perfectionism (high PS *and* high PC), sport was viewed as a time to shine, affirm self-worth, and feel competent. Participants placed value on being recognised by peers as capable, and they described engaging in self-criticism and experiencing negative emotions (e.g., frustration, disappointment in self) when they did not perform their best. Beyond this, the findings revealed perceptions of the sport environment rather than further insights into the cognitive and emotional responses of the participants.

## **7.5 Purpose of study three**

The current study has two purposes: to explore and describe (i) the experiences of perfectionistic footballers with regard to psychological responses during the course of their performances (pre-, during-, and post-performance) and (ii) how adverse experiences in football impact their psychological responses.

## **7.6 Method**

### **7.6.1 Methodology**

A mixed-methods approach was adopted. First, quantitative measures were used to identify perfectionistic footballers. Second, a qualitative research method—individual semi-structured interviews—was used to elicit perfectionistic footballers' experiences of overthinking and their cognitive and emotional responses to setbacks. In this way, qualitative methods formed the focus of the study and were selected to allow for rich descriptions of phenomena and gain accounts of individual's experiences (Creswell, 2009; DiCicco-Bloom & Crabtree, 2006). Kumar (2005) recommends interviews as the most suitable approach to providing rich and in-depth data. Interviews provide an opportunity for a "conversation" to take place between the researcher and the participant and allow the participant to tell their

unique experience of being a perfectionist and their cognitions in sport (Kvale & Brinkmann, 2009).

This thesis is mainly underpinned by a positivist approach to research (Cresswell, 2009). That is, the first two studies were designed based on the need to identify and assess the causes that influence outcomes (e.g., determinism), and reduce ideas into small, discrete sets of testable entities (e.g., reductionism). Research underpinned by positivism is guided by the idea of developing theory and testing hypotheses to understand phenomena (Cresswell, 2009). Knowledge is based on careful observation and measurement of an objective reality. Although we cannot be completely positive about claims of knowledge when studying human behaviour, specific procedures are followed to ensure that observations are verifiable, accurate, and consistent (Cresswell, 2012). Adopting a positivist approach, the first two studies used a scientific method of investigation to test hypotheses and examine the relationships between variables.

The current study deviated from a positivist approach and was approached from an interpretivist perspective. Epistemological social constructivism (knowledge is believed to be socially constructed) and ontological relativism (reality is multifaceted and subjective) underpinned this perspective (Sparkes & Smith, 2014). The rationale for adopting this paradigm shift was to allow, through interviews, the exploration of the participants' experiences. This approach encouraged the emphasis of qualitative over quantitative data. The quantitative data was collected to identify and purposefully select participants and to ensure the experiences of individuals who scored highly in perfectionism and perfectionistic cognitions were accounted for. Consistent with the interpretivist paradigm, the qualitative data (interviews) enabled us to gain detailed insights into the individual experiences of participants, while understanding how these experiences are similar and different to each other, and influenced by social expectations and experiences (Sutton & Austin, 2015).

Football is a particularly complex setting (see Chapter 1) and the experiences of footballers may change over time and context. In this regard, qualitative research methods are well suited to understanding such complexity (Sparkes & Smith, 2014). With regard to perfectionism, qualitative methods offer an alternative way of exploring the experience of perfectionism and perfectionistic cognitions in a football setting. Overall, the two-stage, mixed-methods approach has a greater focus on qualitative over quantitative data, which allows for a detailed description of the

experiences of those higher in perfectionism and their perfectionistic cognitions (Sparkes & Smith, 2014).

### **7.6.2 Participants**

Criterion sampling, a sub-strategy of purposeful sampling, was used to identify relevant participants and yield information-rich cases to explore the research question (Patton, 2002). The criteria were: (a) self-identified perfectionists with a perfectionistic cognitions score and one trait dimension of perfectionism (SOP or SPP) score of a minimum of one standard deviation above the mean of the samples from study one and two of the thesis; (b) male or females, aged between 11 and 25 years; and (c) have played at the highest standard of league available (or above) for their age group.

To recruit participants who self-identify as perfectionists is consistent with the sampling strategy adopted by Hill et al. (2015). Nevertheless, they identified a weakness in this approach. That is, without completing a measure of perfectionism, the extent to which participants were perfectionistic was unclear. To address this limitation here, footballers were also required to complete valid and reliable measures of trait perfectionism and perfectionistic cognitions (see Measures). In a similar manner to Gotwals and Spencer-Cavaliere (2014), participants who scored highly on PCI *and* one dimension of perfectionism (+1 SD) were considered perfectionistic.

Participants were also required to have played at the highest standard of league available (or above) for their age group, male or female, and aged between 11 and 25 years. High-level footballers were chosen because previous research has found high-level footballers compete in a context that is conducive to perfectionism (Donachie, Hill, & Hall, 2018; Hill, 2013). Further, perfectionism has been shown to affect both male and female footballers (e.g., Stoeber & Becker, 2008). Childhood (11 to 12 years), adolescence (12 to 18 years), and young adulthood (18 to 25 years) are also key periods for the emergence and manifestation of perfectionism (Flett, Hewitt, Oliver, & Macdonald, 2002). In addition, it is at 11 years old that footballers are starting to invest more time in the sport, can attend academies further away from their house (90 minutes travel time compared to 60 minutes for under 11-year olds), may begin to identify football as a viable career prospect, and are more frequently being scouted and contracted to play for professional clubs (Conn, 2017). It is about age 9 or 10 years (during middle childhood) when worries turn to performance and social concerns (e.g., performance on the sports field; Last, 2006), and although children 6 years of age

and older have the cognitive and language capabilities to be interviewed (see Docherty & Sandelowski, 1999), older children from 11 years old are more likely to be able to articulate their thoughts and feelings more easily (Visagie, Loxton, Stallard, & Silverman, 2017). By 25 years old, footballers are generally at the peak of their career. Thus, across this developmental period, participants would be sufficiently engaged in football and aware of their thoughts and feelings to be able to articulate their experiences of overthinking and responses to setbacks (Carter, 2014).

Based on the above criteria, 25 footballers were recruited ( $N = 25$ ; 12 males and 13 females aged 11 to 25 years;  $M$  age = 16.92 years,  $SD = 4.50$ , Range = 11 to 25 years). They had played football for an average of 10.17 years ( $SD = 3.43$ , Range = 5 to 20 years). Twenty-four were currently competing at a high-level (e.g., academy, performance school or national squad) and one had recently stopped playing at national level to take up competitive long-distance running. Pilot interviews were conducted with four participants (see Procedure). Three participants scored highly in perfectionism but not perfectionistic cognitions and were therefore removed from the sample. The remaining 18 self-identified perfectionists (8 males, 10 females,  $M$  age = 15.72 years,  $SD = 3.21$ , Range = 11 to 25 years old;  $M$  years played football = 9.44 years,  $SD = 3.04$ , Range = 5 to 17 years) met the criteria of scoring highly in PCI *and* one trait dimension of perfectionism ( $+1SD$ ). The participants' mean scores for perfectionism are shown in Table 7.3. All participants scored highly on PCI. Ten participants scored highly on both SOP and PCI, seven participants scored highly on all dimensions (SOP, SPP, and PCI), and one participant scored highly on SPP and PCI.

### **7.6.3 Procedure**

Institutional ethics approval was obtained from York St John University (see Appendix A.2). Following approval, participants were recruited via gatekeepers (e.g., head coaches/managers of clubs, coaches of performance schools and academies, secondary school PE teachers) in football clubs/academies/schools or directly from the lead researchers' applied sport psychology workshops. Gatekeepers were informed of the study and its requirements (i.e., completion of questionnaires and interview) and were asked to invite the footballers meeting the specified criteria to take part. For those participants interested in being involved, informed consent or parental/guardian consent and child assent (if under 18 years old) was gained. Once the consent was obtained, times and dates for data

collection were scheduled based on participants' training schedule, preferred location, and participant availability.

## **7.6.4 Measures**

### **7.6.4.1 Multidimensional Perfectionism Scale (HF-MPS; Hewitt & Flett, 1991)**

In the current study, only participants over 18 years old completed this measure because this measure was developed for use in adults (see Hewitt et al., 1991). The HF-MPS (see Appendix C.1) is a 45-item measure of trait perfectionism that consists of the following subscales: SOP (e.g., "One of my goals is to be perfect in everything I do"), SPP (e.g., "The better I do, the better I am expected to do"), and OOP (e.g., "If I ask someone to do something, I expect it to be done flawlessly"). Each dimension of perfectionism is represented by 15 items. Certain items in this scale were modified slightly to focus the participants on perfectionism in relation to their sport. For example, the items that included the word "work" were amended to "sport" (e.g., "I never aim for perfection in my work" was amended to "I never aim for perfection in my sport"). Each item was rated using a 7-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*). Responses were reverse-scored as required and averaged to calculate separate scores for each sub-dimension of perfectionism, with higher scores reflecting higher levels of perfectionism.

Hewitt and Flett demonstrated the internal consistency of each subscale with Cronbach's alphas ranging from  $\alpha = .82$  (OOP),  $\alpha = .86$  (SOP) and  $\alpha = .87$  (SPP). Three-month test-re-test reliability was also established ( $r = .88$  for SOP,  $r = .85$  for OOP, and  $r = .75$  for SPP) which has been supported by other studies (e.g., Flett et al., 2007). Considerable research has shown that the HF-MPS is a multidimensional scale with high reliability and validity in student and clinical samples (Enns & Cox, 2002; Hewitt & Flett, 2004). In addition, Hewitt and Flett (1991) who examined the relationship between perfectionism and a range of psychological consequences established the convergent, discriminant, and concurrent validity. Results indicated that SPP was consistently and strongly related to debilitating psychological outcomes (e.g., schizoid, avoidance and passive-aggression). In contrast, SOP displayed significant positive relationships with a host of self-focused psychological consequences such as self-criticism, self-blame, guilt, anger, hypomania, and alcohol abuse. In regard to OOP, this dimension of perfectionism was positively related to the tendency to blame others, histrionic personality disorder, and narcissistic personality.

In support of concurrent validity, the HF-MPS was considered in relation to BPS (Burns, 1980). Hewitt and Flett (1991) found that all three dimensions of perfectionism displayed positive significant relationships with perfectionism as measured by the BPS. This finding was partially supported by Hewitt, Flett, Turnbull-Donavan, and Mikail (1991) who found SOP and SPP to be positively correlated with BPS (but not OOP). The HF-MPS has been used to examine a wide range of outcomes in a range of samples. The HF-MPS has also been successfully adapted and employed with athletic samples (e.g., Appleton et al., 2009; Hill et al., 2008; Ho et al., 2015). In sport, support exists for the internal consistency of the scale ( $\alpha > .82$  for SOP,  $\alpha > .73$  for SPP, and  $\alpha > .76$  for OOP).

#### **7.6.4.2 The Child and Adolescent Perfectionism Scale**

The Child and Adolescent Perfectionism Scale (CAPS; Flett et al., 1997) also measured self-oriented perfectionism (SOP) and socially prescribed perfectionism (SPP). See Chapter 5 for a discussion of this measure and Appendix C.2 for the measure. All participants completed this measure because of its suitability for the use in children and adolescents.

#### **7.6.4.3 Perfectionistic Cognitions Inventory**

The Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998) measured the frequency of perfectionistic cognitions for all participants. See Chapter 5 for a discussion of this measure and Appendix C.3 for the measure. All participants completed this measure because of its suitability for capturing frequent perfectionistic cognitions.

#### **7.6.4.4 Semi-structured Interviews**

Second, those participants who self-identified as perfectionists and met the criteria of scoring highly ( $+1SD$  in relation to previous samples) on one measured trait dimension of perfectionism (SOP or SPP) and PCI were then interviewed about their experiences of overthinking and cognitive and emotional responses to setbacks. The interviews were organised to take place at a location suitable and comfortable for the participant (Amis, 2005). Some barriers between children and adults may be bridged when interviewing children in a natural setting, and therefore, interviews were held at the footballer's training venue or school (Kvale & Brinkmann, 2009). To minimize any additional travel time, most interviews were completed before a participant's training at their own training ground. For those players who were part of performance schools, interviews were conducted in a



meeting room at their school which was organized by their teacher/football coach. All interviews were carried out in private rooms free from distractions (Amis, 2005).

The semi-structured interview schedule was developed to include open-ended questions, probes and follow-up questions. This design gives participants flexibility to elaborate on their answers and allows the interviewer the freedom to probe and explore responses with additional questions (Rubin & Rubin, 2011). The schedule was divided into introductory questions (e.g., “can you tell me about your experience within football?”), main questions (e.g., “can you describe in what way(s) your perfectionism shows itself?”) and concluding questions (e.g., “I wanted to better understand your experience of thoughts and feelings related to perfectionism, have we missed anything?”) (Rubin & Rubin, 2011). The main questions were designed to build on previous qualitative studies adopting interview methods to understand perfectionism in sport (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015) and to capture Flett and Hewitt’s (2016) concept of perfectionistic reactivity and the notion that perfectionists are likely to overthink when faced with adversity.

The semi-structured interview schedule was redrafted on several occasions prior to conducting the pilot interviews. Through discussions with and feedback from colleagues, who had conducted qualitative studies regarding perfectionism in sport, four changes were made (see Table 7.2): 1) the content was amended to better reflect the research question(s); 2) the structure was re-organised to ensure the interview flowed; 3) the length of the schedule was amended to help maintain the attention of young participants who can become restless after 45 minutes of interviewing (Kvale & Brinkmann, 2009); and 4) the questions were reworded to be age appropriate.

To select participants to pilot the interviews, self-identified perfectionists under 18 years old completed the CAPS and PCI ( $n = 3$ ) and those over 18 years old completed the HF-MPS along with the CAPS and the PCI ( $n = 1$ ). The interview schedule was piloted with four footballers who self-identified as perfectionists ( $n = 2$  male,  $n = 2$  female; see Table 7.3). The purpose of the pilot interviews was to establish the appropriateness of the schedule and to provide the researcher with the experience of interviewing and using the schedule. Piloting the interview helps to examine the way in which questions are phrased and the flow of the interview (Gillham, 2005). The pilot interviews allowed the interviewer to practise and become acquainted with the probing and follow-up questions. Following the pilot interviews, the interviewer worked with a “critical friend” (a researcher who has

previously conducted qualitative research with young people) to examine and discuss the appropriateness and effectiveness of the structure. The questions were scrutinized through reflective discussion about the pilot interviews, which resulted in further refinement of the interview schedule. These changes are outlined in Table 7.2. The layout of the interview schedule was refined. Initially, the main headings were key interview questions and subheadings were specific probing questions (see Appendix D.1), however this was changed to placing key interview questions in one column and the probing questions in another, allowing for easier reading (see Appendix D.2). Two additional clarity questions were added (e.g., “before we draw this interview to an end, I will just try to summarise our discussion and you can tell me if the summary is a fair reflection of what you have told me” and “Is there anything that you came here wanting to say that you didn’t get a chance to say?”).

Following the changes, the semi-structured interviews were then conducted with 18 perfectionistic footballers in total who met the aforementioned criteria (see Table 7.3). The average interview time was 63 minutes ( $SD = 29.72$ , Range = 33 to 154 minutes). At the start of the interview, permission and written consent were sought. Participants were reminded of the nature of the study and informed that they had the freedom to refuse to answer any questions and that the interview could be terminated at any point. The interviewer explained confidentiality and asked permission to audio-record the interview. All interviews were audio recorded. Players were thanked for agreeing to participate and asked if they had any questions before starting the interview. Following the interview, the participants were thanked for their participation and given a debrief letter, which included a list of support services that they could consult if they were experiencing difficulties associated with their sport (e.g., club chaplains, Support Line).

**Table 7.2** Alterations made to interview schedule as a result of piloting

Before piloting	After piloting
One rapport-building question about football background	Extended rapport-building phase by adding two more questions about demographic information and football history (e.g., “can you tell me how you started playing football?”).
“What are the advantages of being a perfectionist?” and “What are the disadvantages of being a perfectionist?”	“What, if any, are the advantages of being a perfectionist?” and “What, if any, are the disadvantages of being a perfectionist?” Framing these questions as more open questions aimed to achieve a more genuine response.
“When you have done well in a match, what type of things do you say to yourself?”	“Think about the last time you did well in a match, can you describe that to me?” The questions were more openly framed in order to achieve a more genuine, detailed and specific recollection which could then be followed up. Participants were asked to describe actual events/situations to ensure that they were talking about their own experience and to help with recall accuracy (Rubin & Rubin, 2011).
There were no steps taken to ensure that the interviewers’ interpretation mirrored that of the participant.	The interviewer signalled the close of the interview and provided a summary of the interview. The interviewer then asked the participant if the summary was an accurate reflection of what they had said.

**Table 7.3** Participants' demographic Information, CAPS, PCI and HF-MPS scores (*N* = 22)

	Gender	Years old	Years played	High in Perfectionism +1SD CAPS	SOP <i>M</i>	SPP <i>M</i>	PCI <i>M</i>	High MPS +1SD	HF- MPS	SOP HF- MPS <i>M</i>	SPP HF-MPS <i>M</i>	OOP HF- MPS <i>M</i>
<b>Pilots</b>												
Jack	Male	14	11	SOP/PCI	4.00	2.80	2.48					
Alisdair	Male	14	7	SOP	4.00	2.10	1.20					
Donna	Female	28	20	SOP/SPP	4.67	3.40	2.28	SOP		5.40	4.20	3.27
Alison	Female	15	7	SOP	3.83	1.60	1.72					
<b>High in SOP and PCI</b>												
Oscar	Male	11	8	SOP/PCI	4.17	2.60	2.56					
Wendy	Female	22	17	SOP/PCI	4.75	1.70	3.04	SOP		6.60	4.00	3.80
Laura	Female	20	10	SOP/PCI	4.50	1.30	2.40	SOP		6.93	1.93	2.60
Hayley	Female	13	7	SOP/PCI	4.33	1.20	2.56					
Molly	Female	14	5	SOP/PCI	4.67	1.90	3.28					
Greg	Male	14	10	SOP/PCI	4.83	2.60	3.28					
Michelle	Female	14	9	SOP/PCI	4.17	2.00	2.64					
Sandra	Female	15	7	SOP/PCI	4.83	2.20	3.16					
Lynsey	Female	18	10	SOP/PCI	4.66	1.70	3.24	SOP		6.27	4.27	4.13
Billy	Male	16	10	SOP/PCI	3.91	2.60	3.24					

**High in SOP, SPP and PCI**

Karen	Female	13	7	All	4.92	3.80	3.48				
Ben	Male	16	10	All	4.50	3.40	3.56				
James	Male	16	7	All	4.41	3.40	3.04	All	6.33	4.87	4.60
Jade	Female	17	13	All	5.00	4.10	3.56	All	6.93	5.80	4.60
Britney	Female	25	17	All	4.83	3.60	3.44	SOP/SPP	6.40	5.67	4.27
Bryan	Male	17	12	All	4.50	3.40	3.00	All	6.47	4.73	4.73
Kyle	Male	13	10	All	4.25	3.50	3.28				

**High SPP and PCI**

Peter	Male	17	10	SPP/PCI	3.66	3.20	2.96				
-------	------	----	----	---------	------	------	------	--	--	--	--

---

*Note.* CAPS = Child and Adolescent Perfectionism Scale (Flett et al., 1997), PCI = perfectionistic cognitions measured by Perfectionistic Cognitions Inventory (Flett et al., 1998), HF-MPS = Multidimensional Perfectionism Scale (Hewitt & Flett, 1991), SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, SOP MPS = self-oriented perfectionism measured by HF-MPS, SPP MPS = socially prescribed perfectionism measured by HF-MPS, OOP MPS = other-oriented perfectionism measured by HF-MPS.

### **7.6.5 Data analysis**

Audio-recordings of the players' interviews were transcribed verbatim and checked for accuracy before coding. Transcribing was completed as soon as possible after the interview (within five days) which allowed for easier interpretation of the recording (Gillham, 2005). All transcripts were given an identification code to ensure confidentiality and all identifying information was removed to ensure anonymity. The transcriptions produced 636 double-spaced pages of text. The transcription process represented an opportunity to be immersed in the data, and thus, assisted with the first stage of thematic analysis, which is data immersion (Braun & Clarke, 2006). The remainder of the analysis also followed the steps of thematic analysis (as outlined by Braun & Clarke, 2006). Thematic analysis can help identify, analyse, and report patterns in data, which was necessary to meet the aims of the study here (Braun & Clarke, 2006). The stages of data analysis were as follows:

#### **(a) Immersion**

Alongside immersion through transcription, the lead researcher familiarised herself with the data by reading and re-reading transcripts. The repeated and active reading of transcripts helped ensure a higher level of immersion (Braun & Clarke, 2006). It also enabled the researcher to note down initial ideas and make analytical notes. The data were analysed through applying abductive logic to the thematic analysis (Denzin, 1978; Patton, 2015). Abductive logic encourages a creative way of knowledge construction by using both inductive and deductive approaches interchangeably.

#### **(b) Generating initial codes**

Data analysis began with primarily inductive coding of the interviews. Firstly, interesting findings were attended to by coding in a systematic fashion across the data set. That is, the researcher coded the data with words and phrases that marked regularities and emerging patterns, as well as topics covered in the data (Bogdan & Biklen, 2003). Independently, two researchers read and re-read one transcript while identifying individual meaning units using "line-by-line" inductive analysis rather than imposing a framework on the data. Important units of meaning were identified, for example, phrases, sentences, or paragraphs.

The second part of code generation was to identify and produce a long list of different codes across the data set. The lead researcher produced a list of codes, their description and then related key quotes. This method of coding reduced the

data by allowing the researcher to organize, manage, and retrieve meaningful components (Coffey & Atkinson, 1996). However, it also “opened up the data” which helped with conceptualizing and allowed for the generation of ideas regarding the relationships among the data (Strauss, 1987). The process of coding and “checking in” with a critical friend continued for every three to four transcripts. After coding the data, the researcher moved to a process of interpretation and searching for themes.

### **(c) Searching and identifying themes**

This stage involved sorting codes into potential themes. All the relevant coded data were gathered, reviewed for similarities and differences to produce a set of candidate themes. These themes were then explored by refocusing the analysis at broader level of themes, rather than codes. Themes are features of participants’ accounts characterising particular perceptions or experiences that the researcher sees relevant to the research questions. As the researchers’ preconceptions create interplay between induction and deduction when creating the themes, a kind of deduction also comes into play when themes match what is already known from previous research. Thus, there was an iterative process between inductive and deductive analysis at this stage.

### **(d) Reviewing themes**

Level one involved checking if the themes worked in relation to coded extracts by reading all the collated extracts for each theme and considering whether these seemed to create a clear pattern. Where they did not fit, it is considered whether the theme itself is problematic or whether the data extract does not fit there. Following that, the theme was re-worked, a new theme was created or a home was found for the data extract that did not fit. When all the extracts seemed to fit with the coded themes, a thematic map of analysis was generated. Level two involved checking across the data set for any additional extracts that had been missed in earlier coding and adding them to existing themes. Following that, the thematic map of analysis was reviewed until the overall story emerged.

### **(e) Defining and naming the themes**

This stage involved ongoing analysis to refine the details of each theme to identify and write the story of each individual theme. How each theme fitted with the broader overall narrative was considered and themes were refined to identify any sub-themes.

### **(f) Producing a report**

This stage provided the final opportunity for the analysis of extracts from the data. To prepare for producing the report, the relation of final themes and sub-themes to the research question was considered. The themes and sub-themes were then used as headings for sections of the report. It was helpful to insert the themes and then extract relevant quotes to capture the essence of the theme. Due to the large amount of data, a number of quotes were provided under each theme and sub-theme. Nevertheless, through a rigorous process with multiple drafts, these quotes were minimised and the best fitting quote was chosen for each section. Hannah and Lautsch (2011) argue that quantification (i.e., counting) is not an appropriate strategy when combined with an interpretivist approach as it may result in an inconsistency between the assumptions of that approach and the methods used to answer its research question (Suddaby, 2006). Therefore, a “non-quantification” approach to reporting the findings (i.e., general themes).

#### **7.6.6 Methodological rigor**

All of Tracy’s (2010) “big eight” criteria (in italics throughout) were considered to help ensure qualitative quality. Smith and McGannon (2018) argued that applying a criteria universally to all forms of qualitative research is inherently problematic because “it calls on a researcher to judge any piece of qualitative research, regardless of its intents and purposes, in preordained and set ways” (p.114). As such, universal criteria can produce a closed system of judgment of what constitutes good research (Sparkes & Smith, 2009). Smith and McGannon (2018) advocate that, in order to utilize Tracy’s (2010) universal criteria, all of the criteria that Tracy (2010) highlight must be met. That is, the entire eight criteria are of equal importance as markers of quality, and therefore, qualitative work should meet all eight criteria. Consequently, all eight criteria were considered and met.

First, to our knowledge, there are no extant studies using qualitative methods to explore perfectionistic athletes’ experiences of overthinking. Given that extensive research outside sport illustrates overthinking can impact emotions and psychological well-being, it appears of significance to understand the psychological processes that perfectionistic footballers experience during the course of performances (pre-, during- and post-performance). Therefore, the study is deemed to concern a *worthy topic*. Second, as the study aims to extend knowledge of perfectionistic reactivity (Flett & Hewitt, 2016) by understanding how adverse experiences in football affect perfectionistic footballers’ psychological responses, it is likely to make a *significant contribution* to perfectionism research. Third, with regard to satisfying *rich rigor* (i.e., marker of excellence sought through the



methods; Smith & McGannon, 2018), a number of Tracy's (2010) recommendations were followed. Primarily, methods were properly applied. Extensive attention was given to reading and refining the interview guide to ensure the appropriateness of content and length (e.g., pilot interviews, consulting a critical friend). To ensure the sample was suitable for answering the research questions (Richards & Morse, 2002), criterion sampling was used whereby participants were chosen based on being "perfectionistic" (e.g., self-identified, high levels of perfectionism based on quantitative measures).

Also, the lead researcher engaged with a critical friend throughout the process (e.g., independent data coding and comparison of coding, discussion, reflection and questioning each other's interpretations). Working with a critical friend sits in line with "investigator triangulation" or inter-rater reliability (Smith & McGannon, 2018). Triangulation is often used to describe when two or more sources are used or types of data are collected. However, it can also be used to describe when two or more capable researchers operate in isolation from each other to independently code data without negotiation. For this form of triangulation, when researchers converge on the same conclusion (i.e., when a high level of agreement/consensus is demonstrated at the end of this process), the coding is deemed reliable (Lincoln & Guba, 1985). That is, it is reliable in the sense of being reproducible, credible, and consistent through intercoder agreement/(re)interpretation (Campbell, Quincy, Osserman, & Pedersen, 2013; Denzin, 1978). It is acknowledged that, however, based on Smith and Gannon's (2018) argument, investigator triangulation is influenced by people's theoretical understanding and the methods (and results) are tied to people's experiences and beliefs.

Fourth, to satisfy *credibility*, two sources of data were collected (questionnaires and interviews), which Ellingson (2008) refers to as crystallization (when researchers gather multiple types of data and employ various methods). Using multiple types of data was not to provide researchers with a more valid singular truth but to open up a more complex, in-depth, but still thoroughly practical, understanding of the issue (Tracy, 2010). Also, to increase the *credibility* of the study, *member reflection* was done at the end of the interview. On closing the interview, the researcher summarised the information and asked the participant to determine the accuracy through a co-participatory process and dialogue. This was a practical opportunity to acknowledge with the participant the existence of contradictions and differences in knowing (see Smith & McGannon, 2018). In contrast to full member checking (i.e., participant checks the truth of the results and/or to control for the subjective bias from the researcher; Birt et al., 2016;

Lincoln & Guba, 1985), member reflections is not about verifying the results of the study or gaining the ultimate truth, but to verify the researcher has heard correctly and/or to generate additional insight. Full member checking has a number of problems according to Smith and McGannon (2018). Mainly, as the researcher and participant are the member checkers, they will influence the knowledge by infusing with their subjectivities, and therefore, it is not possible to produce theory-free knowledge (Denzin, 2017; McGannon & Smith, 2015; Smith & Deemer, 2000). In light of the problems presented in Smith and McGannon (2018), full member checking was not used.

Fifth, the study should *resonate* with perfectionistic footballers who experience frequent perfectionistic cognitions, and depending on the results, the study will potentially *resonate* with coaches and in turn, could influence their coaching practice. Sixth, *ethically*, the study gained institutional ethical approval for working with human subjects. Seven, *meaningful coherence* is demonstrated by exploring the experience of perfectionism, overthinking and pre-competition emotions in an innovative manner to provide insight into the psychological processes that perfectionistic footballers experience over the course of performance. Using quantitative, and in particular, qualitative research methods and analysis, the overall aim of the study is achieved and an understanding of the adverse situations that give rise to different psychological responses gained. Lastly, to satisfy *sincerity*, transparency was managed by keeping an audit trail of data and data analysis (audio recorded interviews, interview transcripts, e-mail correspondence, and researcher notes) which assists in monitoring researcher bias (Mayan, 2016).

### **7.6.7 Ethical considerations and procedures**

Consistent with Appendix B.8, the participants signed a consent form that they understood that their participation in the study was voluntary and they could leave the study at any point without prejudice. As it was possible that some participants may find some questions sensitive, the information sheet indicates that this is the case, and that participants could skip questions they not wish to answer. Based on the researcher's experience as a mental health counsellor and performance psychology consultant, they felt able to build rapport, use prompts and paraphrasing, and be mindful of clients becoming uncomfortable when discussing sensitive issues. However, because the researcher is not a clinical psychologist and as their role was a researcher and not a psychologist, they were aware that if any issues of concern were to arise then they would be obligated to provide the individual with other options of support (e.g., help-line, resources). Therefore, in

consideration of the ethical implications of the study, participants were provided with resources for additional support (e.g., directed to club chaplain, sport psychology support, coach) and a help line (e.g., Support Line) in a debrief letter (see Appendix B.6).

In the case of ethical issues, one participant articulated that they were suffering from symptoms of depression as a result of a severe injury and did not feel supported by the coaching staff and nor did they feel able to access the services provided by the organisation. The participant explained that access to psychological support relied on measures of clinical depression and when the participant completed measures at the beginning of the season, they did not meet the requisite level of clinical depression to receive support, and therefore felt unworthy of the services. At the time of the interview, they described experiencing distress because of an injury (e.g., impacting quality of sleep, crying spells) and felt unsupported by coaching staff. The athlete was expected (along with other athletes in the organisation) to complete daily well-being logs as a way of informing the coaches of their well-being (e.g., sleep quality and mood). The athlete, however, felt that their low well-being scores (e.g., poor sleep quality, lack of sleep, and low mood) were overlooked and the coach did not have the necessary skills to provide support and understanding. The participant also felt like the coach would avoid her on the days that she reported low well-being.

At the end of the interview, the researcher discussed the feasibility of the individual accessing the available services. When the individual expressed that they would like further support, the researcher asked for the individual's consent to discuss their experience with the coach and support team. The individual consented to the researcher feeding back to the organisation and asked the researcher to help to organise support. Subsequently, the researcher contacted the head coach and senior physiotherapist of the organisation via email regarding the individual's request for support and to provide information on the individual's experience of the monitoring of well-being scores. The researcher was informed via email by the head physiotherapist that:

“...As part of their screening programme, all players complete a mental health questionnaire annually, including the Patient Health Questionnaire-9 (PHQ-9), and Generalised Anxiety Disorder Assessment (GAD-7). Any players scoring highly on questions, on discussion with them, are put forward for psychology/mental health input from [an organisation that provides mental health/psychology input]. They can also self-refer, or with their agreement, be put forward for a range of other reasons.”

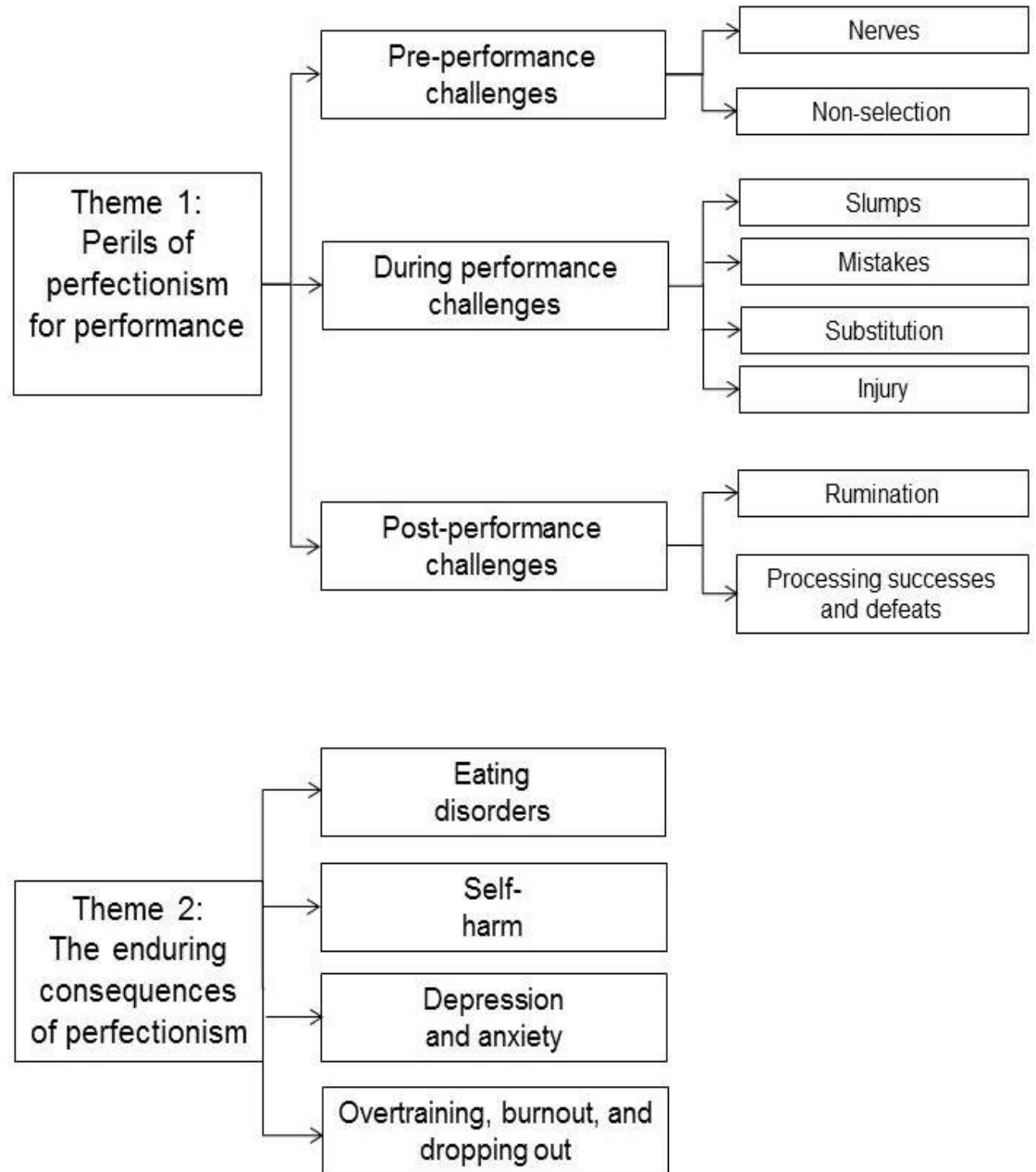
The physiotherapist also welcomed feedback for ways the players could be supported. The physiotherapist asked the researcher if they felt the individual would benefit from ongoing support and that, with the individual's consent, psychological support could be arranged. Furthermore, the researcher advocated that the well-being scores were more closely monitored and used as a way to gauge athletes' psychological well-being. Subsequently, the group of athletes in the organisation were reminded to complete well-being scores and encouraged by the coach that they could access psychological services when needed. The said athlete was referred to [an organisation that provides mental health/psychology input] for additional support.

## **7.7 Results**

From the thematic analysis<sup>1</sup>, two major themes were identified: (a) the perils of perfectionism for performance and (b) the enduring consequences of perfectionism (see Figure 7.1). To contextualise the participants' voices in the themes, it is important to understand their position on football. First and foremost, all participants identified as being a "footballer" and football was, at one time, the most significant feature of their life. They desired success in football, mainly due to the career potential it held, and were prepared to make sacrifices from a young age to attain their goals. Football was so important to the participants that they frequently measured their self-worth in terms of their success in football. With this background in mind, rich, descriptive accounts of the two themes will be presented. A discussion of what the findings mean in terms of cognitions, perfectionistic reactivity, and the perfectionism literature more broadly will follow.

---

<sup>1</sup> To note, as the main aim of the study was to capture the experiences of those higher in perfectionism (whether that be SOP or SPP) and higher perfectionistic cognitions, the data was not analysed by distinguishing between those higher in SOP and SPP.



**Figure 7.1** Themes from data analysis.

### **7.7.1 The perils of perfectionism for performance**

Participants recounted how their cognitions and emotions evolved and changed pre, during-, and post-performance. First, participants' experience of cognitions and emotions in the lead-up to performance and their reactions to challenges faced pre-performance (i.e., non-selection) are explored. Second, the challenges faced during-performance, including poor performance, mistakes, substitution, and injury, are considered. Finally, cognitions and emotions post-performance, with a focus on rumination and coping with success and defeat are described. Each phase of performance, as experienced by participants, is described with perfectionistic reactivity in mind.

#### **7.7.1.1 Pre-performance challenges**

##### **7.7.1.1.1 Nerves**

One prominent emotion that participants felt in the lead up to performance was nerves/anxiousness, as Britney said, "The most nervous I would get would be before the game...doesn't matter what game." Their anxiety appeared to manifest regardless of the standard of teams that they were facing or the level that they were playing at, as Sandra described: "I am usually nervous before every game whether that is club or country because it still feels the same that I want to do well because ...it's not the pressure of everyone else, it's the pressure I put on myself." Factors that seemed to exacerbate their anxiety were the quality of their training prior to the competition and their personal performance in the previous competition. That is, if participants played poorly during training in the lead up to the competition, or the previous competition, then they were more likely to experience more negative cognitions and emotions. James exemplified this when he said:

The anger from the mistakes I have made or the disappointment from the mistakes I made at training. If you have had a bad training session on the Friday, then you think to yourself 'oh you better shape up for tomorrow' so I would say the mistakes that you have made lead to the nerves. So yeah, the previous performance is the trigger.

There was also a sense that as the match drew closer, participants' nerves and tension increased, as Britney said, "I would be looking forward to it the night before but when the morning came I would just panic and just want it over with". Lynsey also said, "Before it even started, I was dreading it. I didn't feel anxious or that, I was just dreading it".

For some participants, the negative emotions experienced prior to performance were associated with cognitions concerning a fear of not meeting

other people's expectations and disappointing others, as Hayley described, "I am obviously really nervous before the game...I get really nervous before that and I'm like 'argh'. But then all the coaches come to watch and I'm like 'oh no, I'm not good enough' then I get really nervous." For other participants, the nerves not only stemmed from others but from needing to prove to themselves that they are the best, as James explained: "I obviously want to win, I want to play well, I want to be the best player on the pitch and for the team and not just for my sake but for the team's sake." Additionally, James said, "I want to do it for the coaches as well and recognise I have been trying hard. I get nervous before games, not just because of the coach but because of the occasion for myself, I get nervous."

Beyond a general feeling of anxiety and dread, participants recounted doubting their own abilities and worrying in the lead up to performance, as Hayley said, "It makes me feel obviously quite worried before it and then I just kind of doubt myself but then...I doubt myself and then it makes me get wound up." The self-doubt and worries that participants experienced were related to not feeling competent enough when compared to other players on the team. Laura said, "everyone else in the team were so much better so like I just felt like everyone else would get annoyed and you were more of a burden to playing especially on the [club] team." She continued to describe players shouting at her and she would think about "not wanting to play at all." Further, participants were fixated on achieving unrealistic aims, as Oscar said, "Like a few weeks ago, I said to myself. 'I'm not going to make a mistake today' but then I made a mistake and it felt...then I didn't feel very good." Their obsessive thoughts over what might happen in the match often started the night before, as Lynsey said, "I would overthink things in my head. I would overthink things in head of how the game is going to pan out "What if we lose? What if it's a draw? Just everything that goes through your head."

#### 7.7.1.1.2 Non-selection

The prospect of starting games as a substitute was another source of concern for participants in the lead-up to competition. When not selected to start a match or not playing a full match, a range of other negative emotions emerged, as Molly said, "It is horrible, I don't like the feeling. I hate being on the bench. I know it is good to be on the bench for your country and you are still part of the team but I hate it." Oscar similarly had negative feelings when he was a substitute for one important game as he said he felt, "stressed, I had a really bad run of form in the middle of the season half a year ago. I got left out of the team and I felt really bad about myself. I thought I had failed at everything." Such negative feelings were

often directed at both the self and others, as stated by Bryan, “I was annoyed at myself for not being good enough to start but I was annoyed at them for not picking me, ‘if you get me?’” Similarly, James described, “It was really gutting. Upset, you feel like a bit of a let-down, you feel angry, you want to blame other people, you want to blame yourself and you don’t want to play football as much as you can.” He reasoned, “When the team is doing well and you are not involved, it’s not very nice feeling because you just want to be involved, you just want to be part of the team. I would say it was upsetting, yeh very.” One of the main reasons given for the range of negative emotions experienced by participants was frustration at not being provided with the opportunity to demonstrate their ability. James expressed, “I would get annoyed and I would say to my Dad that I am not happy...I would only get on at half time so only played like half a game and I wasn’t happy.”

### **7.7.2.2 During-performance challenges**

#### **7.7.2.2.1 Slumps**

Performing poorly during a match elicited a range of negative cognitive, emotional and behavioural reactions. When participants started the game off poorly, they felt helpless and started to engage in catastrophic thinking, as Hayley said: “If I started off bad, it got me in that mood where I just made so many mistakes I keep on making them...it just puts me in a mood where I feel like ‘I can’t do better anymore.’” When performing poorly during a game, participants would harshly criticise themselves, as Karen said, “I just give myself lots of criticism for it [poor performance]”. Likewise, Oscar said, “I wasn’t concentrating enough in the game and then I thought I just gave myself nasty thoughts like ‘I am a loser’ and everything like that.” Further, they engaged in relentless questioning during a performance when they were not meeting the high standards that they expected of themselves. For example, Wendy recounted thinking, “I am playing so badly. Why am I not playing well?” and Hayley stated, “I was like ‘why am I not playing well?’ ‘What am I doing wrong?’ ‘Am I not working hard enough?’ ‘Am I not trying hard enough?’” Such self-criticism and questioning subsequently appeared to disrupt the participants’ concentration during a game, as Oscar explained, “you have lost your focus...you lost your focus and it doesn’t feel very good.” Ultimately, participants wanted to escape from the match and drop out of football when they thought they were performing badly, as Britney said, “I want to quit football.’ I wouldn’t want to be playing anymore”.

Accompanying the various cognitive distortions experienced when underperforming, participants felt a lack of enjoyment and satisfaction, as Jade



said: "I demanded too much of myself and felt like I was failing every time at training because I wasn't being perfect, I guess. I wasn't meeting my expectations of myself so I never go..." She continued: "I never felt satisfied with my performance and if I am not satisfied with how I am training and how I am playing, I stop enjoying what I am doing and then I didn't want to go to training." Feelings of frustration and anger were also apparent amongst participants, as Greg said, "Annoyed...if I am making mistakes all the time or I am not doing as well I can be then I will get annoyed with myself and I will start to shout out in games." This was heightened when others (coaches and scouts) were watching, as Greg continued, "Frustration, frustration, I know that I am better than what I am showing so if someone is coming to watch me for first time and I have had a bad game then they will not think much of me."

The behavioural consequences of feeling frustrated and angry at not performing well sometimes manifested in physical aggression towards others, as Peter described:

He always kept winning the ball off me, I was getting frustrated and that and you could tell because my performance wasn't so good. I ended up just kicking out...I ran up behind him and took him clean out completely...I got red carded and that was me sent off but it was because I couldn't find a way just to better him. He was just always better than me and that was frustrating me...that is why I lashed out. I was so annoyed. It was just 'I need to be better than him.' It was just annoying and it has happened a few times.

#### 7.7.2.2.2 Mistakes

Making mistakes during performance had a range of different connotations, beyond equating to poor performance. Participants were particularly sensitive to making mistakes and responded disproportionately harshly, as Wendy described, "Just getting so frustrated if I do something wrong. If I make I mistake, I am just too hard on myself. Everyone makes mistakes...I just take it worse than anyone else." Ben added, "I made a bad pass, I would really moan at myself for it. I would shout at myself during the game or if I made a mistake then I would start going mental and would hate myself the whole game." One reason for such harsh self-criticism appeared to be because making a mistake meant they had failed to be the best or were incapable of being the best. Alasdair articulated this idea when he said, "it [the mistake] is a bad thing to do and if you keep doing it, you are not learning because if you keep making the same mistake over and over, the coach can't keep teaching

you the same thing.” No matter how small, making a mistake during a game was viewed as catastrophic. Britney stated, “I can’t just make an ordinary human mistake without it being a big deal...any little mistake was like the end of the world.” Jade also said, “My idea of a key mistake could be literally be messing up one kick...if I make one mistake in the game then I would think about that.”

When participants made mistakes during performance, they would experience a range of negative emotions and cognitions. Wendy explained:

.... if I think I am doing something wrong then I go in a bad mood then it just gets worse because I just keep thinking and thinking about it and then I just get too hard on myself so I find it quite hard to get it out of it once I am in it so probably it affects it negatively more than positively.

Participants were often anxious, nervous, and worried about impending mistakes both during performance and training, as Britney said, “I would just panic. I would just panic that I was going to make mistakes and I would want to be really good but I would want to play perfectly.” Lynsey also described:

It takes me a while to settle into the training session because to start with I am stressing about, not even about the mistakes I have made, but stressing about the mistakes before it has even happened. It is almost like anxiety before I start because I am so worried that I don’t know how the session is going to go well or if it not, what are we going to be doing, things like that.

Participants would worry to such an extent that their thoughts appeared to be dominated by mistakes and their consequences, as Sandra said, “I will make myself feel quite bad and put myself under pressure and I get really nervous as well. I also think I waste too much of my time bothering about mistakes and stuff.”

The nerves and anxiety participants experienced about making mistakes during performance seemed to occur in a cyclical manner. Participants would worry about mistakes happening and then following a mistake they would dwell on the mistake and worry about future errors. Greg explained that when he made mistakes, he thinks, “I am having a bad game here and I need to step it up”. He explained, “You are nervous because you don’t want to make that mistake again so you might not do the things you should have done.” Hayley also illustrated this point when she said:

I keep thinking about that one mistake, I think about it too much and then I end up making it again which makes me get angrier at myself and like inside of my head, I just get angrier because I knew that I already made that mistake once and if I make that mistake again then I know that I shouldn’t have done it.

Feelings of anger, frustration, and annoyance frequently emerged as a consequence of experiencing the “cycle of mistakes” during performance. Ben said, “Just anger, it is like anger and disappointment that you have just done a mistake and your team could possibly lose from it, lose a goal from it, stuff like that, just anger and disappointment.” Wendy also said, “[a mistake] just makes me frustrated and gets to me and I don’t really want to feel like that.”

Fuelled by their anger and frustration, participants would spend disproportionate amounts of time reflecting during performance on how they could rectify their own mistakes, as Billy said, “It was just a lot of anger inside. I just felt like I am not doing as good as I can do. ‘Why am I not doing as good as I can do?’ ‘Why did I make the decision to make that pass?’” Likewise, Molly described her response to mistakes, “I just get so angry. Like ‘Come on, [name], why are you playing so bad?’ I will just say ‘What was that?’ or I will think... ‘You need to be better’ and just say ‘you need to do this better.’” Karen also said, “I would feel like if I didn’t get perfect, I would feel angry, I would feel upset and I would think ‘why have I not got this done right?’ and then I would feel down as well.” Lynsey added, “I am focusing too much on that one mistake... ‘why did it happen?’, ‘why did I do it?’, ‘What could I have done?’, ‘How did it happen?’, ‘What could I have done to prevent it from happening?’” Jade said she would think, “I should have done this better, that better” and about “different things that I’ve messed up in the game. I will go through them all and how I would have done it differently or done it correct and that it isn’t good enough that I’m not getting the things correct.”

Participants wanted to rectify and erase the mistakes that they had made, as Karen said, “I feel like when I do make a mistake, I feel like there is something in me that is like ‘I need to fix it or need not do that mistake again.’” Some participants, however, would focus less on self-correction and direct their anger and frustration towards opponents and teammates, as Ben explained:

It [perfectionism] can also be bad because if I do something wrong I will get on at people...I could get myself a booking for swearing loud, getting on at somebody, mouthing off to one of the opposition players or something like that all because I have made a bad pass or because I have done something wrong.

The emotions that the participants experienced around making mistakes during performance were not always hostile but at times self-conscious in nature, as Lynsey said, “Just embarrassed about [making mistakes] so I wasn’t really annoyed, I was just embarrassed because nobody else seemed to make the same mistakes as me, I was more nervous than annoyed ‘I can’t believe I have done

that.” Oscar also said, “You’ve made lots and lots of mistakes and you have cost your team...then you might...you just don’t feel good and you feel super, super guilty”. Instead of engaging in self-criticism or aggressing against others, participants would simply feel upset when performance errors were made. Jade said:

I will physically be upset and there will be tears at points but I try not to, and try not frustrated because I feel if I mask it then people won’t see my failure but then again, I want them to know that I am not happy with the way I am performing so they don’t think I think it’s acceptable to be the way I am.

Being upset with mistakes was noted to negatively affect performance through lapses in concentration, as Lynsey said, “Upset and then I am too upset to think about what I am doing which means I am losing concentration.” Further, participants felt less confident, as Karen expressed, “I feel down and that’s when I think about it and I am like, ‘I shouldn’t have done that’ I will feel more upset than angry. Upset seems to put you down and then your head drops.” Ben also said, “It is just annoying when you have those high expectations of yourself because when you make a pass and it goes wrong, you think to yourself ‘why did you choose there?’ ‘Why did you not choose elsewhere?’” Such reflection and questioning was considered detrimental by Ben, as he said, “It will put your confidence down during the game...you start thinking to yourself ‘what if I get the ball next and I mess up again?’”

#### 7.7.2.2.3 Substitution

When participants were substituted during a game, they expressed extreme disappointment, as Sandra described, “The game that I got a half, I was really disappointed because I thought I did quite well... you think ‘do I know when I am playing well or not?’ it seems like they don’t want me playing.” The disappointment participants felt arose from not being able to demonstrate greater ability in a reduced time-frame compared to others, as Jack stated, “you wouldn’t be happy because you can’t impress in 20 or 30 minutes, so it is not really good.” Further, being substituted was often taken as confirmation that they were not good enough, as Molly said, “I would cry. I would cry. I wouldn’t cry in front of her. I would cry in my bed. I would be so disappointed. I am so bad. I am so bad.” Overall, there was a sense of a lack of worth and loneliness felt by participants when they were substituted. James articulated: “I felt isolated a bit. I felt like there is no way forward now. You felt everyone is looking at you thinking he is not good enough to get into the team.”

One immediate consequence of being substituted was that participants would will their teammates to fail. Alasdair explained: “you want the person in your position to slip up for yourself...you feel left out, you feel not part of the team it just like, it feels like you aren’t involved, feels like you aren’t part of the team.” Participants would will their teammates to fail, especially when the player had taken their position, as Bryan said, “I wanted him to do really bad. I still do. I always do.” In the longer term, the negative effects of being substituted would transfer into training, as Peter expressed that he would feel frustrated and think, “‘Why am I not getting my chance?’, ‘how can I prove myself if I am not getting on the pitch?’ even if I did well at training, I didn’t feel it was enough to prove I can be starting.”

Rest, recovery, and general well-being were also adversely implicated when participants had been substituted. Participants described not being able to sleep after games in which they were substitutes and this resulted in staying up into the early hours of the morning crying and feeling angry. Lynsey described, “When you didn’t get played, you didn’t sleep because you were thinking about not getting played and you are just angry... all of the time.” She added, “After every Sunday when you don’t get played, you couldn’t sleep the whole night and then you would go for training at 7 and you are like “I got one hour of sleep!” because you would just be crying.”

The negative effects of being substituted would endure until participants were selected to play again and played well, as James said, “I feel down and then I eventually get over it when I get on and play well so I can start the next again week.”

For players who started as a substitute and did not get the chance to play, they also experienced negative feelings. Specifically, they were angry and disappointed, as Lynsey articulated: “I didn’t get on and I was fuming. I have never been so angry. I was annoyed. I spoke to him after it, that week. He was explaining his decisions and stuff and I was so angry.” In some instances, the dissatisfaction was so keenly felt that participants threatened to, or did, leave the club. Peter said, “I didn’t feel like I could prove myself and stuff like that. I felt like I was stuck. The only option was for me was to just to move to [club].”

At times, the participants employed tactics such as offering to play in a secondary position to avoid being a substitute or substituted; however, adopting this tactic did not appear to alleviate the dissatisfaction that participants felt, as James described, “From centre half to right back even though it is my strongest position and right back isn’t as strong. I have had to put up with all sort of stick and pressure playing in a new position.” The reasons for this dissatisfaction appeared to

be tied up with feeling that they could not perform to their best in their secondary position. Bryan said, "It doesn't help me as a player. It makes me look worse."

Further, they felt they would let others down, as Hayley said:

Getting moved position, I think 'oh no', what if people are thinking 'she is a rubbish centre mid' and I am like 'I don't play centre mid' and what are people going to think of me if I don't play well in this position?

Ultimately, participants did not understand why they would need to play out of position but felt unable to discuss their concerns with coaching staff, as Bryan said, "... [Players] don't feel comfortable asking about [feedback]. Well I don't, some people might but I don't feel like I have a good enough relationship with the people to ask, 'why am I not playing?' or 'why am I not doing this?'"

#### 7.7.2.2.4 Injury

Sustaining an injury was an extremely difficult situation for participants, as Wendy stated: "Injury probably gets to me the most... it gets really frustrating watching and seeing people doing well in your position and obviously it's going to be harder for me to get back so that gets to me the most...". Injuries were sustained and maintained for a variety of reasons, including playing and training through injury and fatigue. Wendy also described training through injury, "I am probably going to get injured which will make me feel worse because maybe if I did do recovery that I needed to then I wouldn't get injured or I wouldn't feel so drained." Lack of restorative care transferred to everyday life for Wendy. She said, "Thinking like in my day to day life, then if I am tired then I am going to be a lot more grumpier so it just affects my whole life if I am shattered." Despite repeated warnings from health professionals, participants would continue to play and train through injuries. The reasons given by participants for playing and training through injury pertained to trying to avoid inevitable negative consequences, such as losing their starting position in the team and being dropped from the team, and diminishing their capacity to perform skills well as Billy said:

It was quite sore for three weeks and I just sort of played through it...I went to the physio after those three weeks because it was really...it got knocked in the game and it was really sore and he told me 'you are going to need to rest for two weeks' and that really affected me because I didn't want to lose my place in the team.

Oscar also stated:

If I did go to training then I wouldn't be able to give everything because I was injured. I did play some matches but I couldn't give it absolutely

everything because in case I hurt it even more so there was a little a bit of worry that I could get dropped.

Karen described, "If I don't play then I am going to lose my touch and then I won't get into the starting team and I was like I need to play to show them I can play football even though I am unwell." Playing through illness was common for Karen, she said, "I have done it loads of times when I am unwell... I will just play no matter what happens..." Injured athletes seemed concerned about becoming reinjured, as Peter said, "I came back from injury, I felt quite fragile. I felt 'what if that happens again?'"

At the onset of sustaining an injury, participants responded emotionally, as Oscar said, "I was crying and everything, and I was upset, I was really upset". Emotions soon turned to disproportionate thoughts about the possibility of never being able to play football again, as Sandra described, "Genuine worry...I was really upset because it hurt so much and at that time I felt like 'oh I am not going to play again'...in the end, it wasn't that bad. At the time, it felt like the worst thing." When injured, even only for a short space of time, participants described intense negative emotional reactions throughout. Molly said, "I don't normally get ill so normally it was just a one day thing but I have been injured for like a week at the most...I was so angry." She continued, "The worst. I hated it. I hated it. I hate life. I hate this. I hate this. It was so annoying. Upset, angry, annoyed, eh...frustrated." Hayley further said, "even if I was only out for a couple of days, it was miserable and I missed it." Where the recovery process took a prolonged time, an even greater negative emotional response occurred, as participants described frequent episodes of crying, feeling depressed, and it being the worst time of their lives. Lynsey described, "I would cry on alternate days for about a month. It was pretty severe and then I couldn't sleep at night because I was like "oh my god, life!"

Numerous other thoughts and feelings accompanied the negative emotional responses that athletes had about being injured. For instance, some participants felt isolated, as Lynsey said, "Just feeling devastated and then left out was the main thing." Whereas others wanted to isolate themselves and withdraw from the football environment, as Bryan stated, "I just didn't want to be there. I just wanted to go home but obviously I had to be there." Participants also felt they lacked purpose and identity when injured, as Laura said, "I feel almost purposeless...Like I don't have a purpose when I am injured". She explained, "I put so much into running and then I define that as 'I am a runner' when that is gone and you aren't able to fulfil that then you are like 'what am I doing here again?'" Bryan added, "It was so annoying, so frustrating, just pointless really because I couldn't do anything. I

wasn't allowed to lift weights, I couldn't run or anything, I just had to wait out the three weeks basically." Furthermore, they were overly concerned that other players would progress ahead of them during times of injury. Greg expressed, "I am out for two weeks, and everybody else is training and I am not. Folk are getting extra hours on me at practice...annoyed; they are getting their extra hours on me..."

Participants felt that being injured was preventing them from achieving their goals, as Oscar said, "I was upset again and I didn't feel very good about myself and I didn't think I could achieve what I wanted to achieve if I was injured all the time." They were unsure about the best course of action to take, as Laura said, "when you become injured and you aren't training as much then it's like there is a lot more debating going on in your head in terms of like 'is this what I need?' or whatever..." At the extremes, participants felt completely helpless, angry, annoyed and questioned "why? Why me?" Participants would even resort to blaming themselves for injury, as Karen described, "I was thinking 'why did I?' I went in for a challenge. I was thinking 'I should have not went in for that challenge. If I had waited then it probably wouldn't have happened'." She continued, "And then I thought 'oh if I didn't make that challenge then they might have scored.' I was quite annoyed at myself and I was thinking 'why did I even play in that tournament?'"

As a reaction to the negative thoughts and emotions that injuries brought about for participants, they seemed to rush recovery to return to play. Hayley explained:

I kept on thinking about it and I was like 'it better be okay for tomorrow' and I was kind of forcing myself to go up on it, to run on it which I shouldn't have done as it probably made it worse but I just kind of like 'I need to play tomorrow.' 'I am definitely playing tomorrow.'

Where players returned to play too soon after being injured, they would over-train and want to compete at all upcoming events. Participants articulated that juggling training, competition and exams resulted in complete fatigue. Participants described ruminating about returning too early and being hard on themselves for making the mistake of continuing to play through injury. Britney said that she would think, "I messed up this time, this time and this time and this time trying to get back too early" and like "if only I didn't do this then". She continued, "I was hard on self for making the mistakes I did."

The penalty for returning to play too soon was that participants made mistakes in performance and would subsequently evaluate themselves harshly. For some participants the harsh response to mistakes was tied up in social comparison rumination. Lynsey described, "Frustration...feeling like you aren't improving



because you are comparing yourself to everyone else...suddenly you can't keep up with everybody and then every mistake you make seems like a failure because you aren't actually up to that level." Participants described finding it difficult when their level of performance was not as high as before the injury. Lynsey said, "You lose creativity which is probably why you don't get excited for games because you are like "what if?" It's more about making sure you don't disappoint your team rather than improve, you're worried you're going to mess up." Their expectations of themselves continued to be high and they would not accept injury as an excuse for not performing at previous levels. For example, Jade said, "I expected myself to be at a level but I think that level was as good as before but I wouldn't let myself think that was the same level as before as I was failing." She also said, "I would get annoyed and although I know I am coming back from injury...I wouldn't be doing good enough in relation to the injury..." Participants would then dwell on not being able to perform at the same standard as before. Jade said, "I would still have the same thoughts but it would just be 'you are not good enough' because it's just be the same as before and you should be good enough..."

Being injured had wider implications for participants. Although injury emerged as a "during-performance" theme (i.e., occurred during performance and impacted performance), the reactions of players who were injured filtered into other components of performance (e.g., post-performance) and for some, injury had implications for players off-the-pitch. Participants described losing motivation for schoolwork, which led them to procrastinate. Participants were concerned about what their coach thought about them and so did not want to court their support or attention. Oscar simply stated, "I would think mainly that the coach would think I was injury-prone and I always have an injury." Further, as aforementioned, for some, players experienced depressive symptoms when injured.

### **7.7.3.3 Post-performance challenges**

#### **7.7.3.3.1 Rumination**

How participants experienced a competitive match would have significant repercussions for their well-being post-performance. Specifically, participants' mood and emotions post-competition appeared to be contingent on the quality of their competition performance. Sandra clearly illustrated this point when she said, "probably after games, I will probably be a bit frustrated or be a bit down if I haven't done so well." Even when they performed well, participants described not feeling that they had done well enough. Kirsty added, "The few times I have thought I done

well, I didn't think about the positives or negatives. I just think of the game as a whole...I still feel like it's not good enough... It's almost like undeserving in a way."

Immediately after a perceived poor performance, participants were consumed by negative thoughts about the game and their own play. The thoughts started as early as in the changing rooms or in the car on the way home. When ruminating, participants would withdraw from socially interacting with others, as Greg said, "It was quite bad, my team actually won this game but I wasn't happy with the way I played...After the game, I didn't speak in the car and in the changing room and I was just thinking about the game." They would also blame themselves for poor performance of the team. Consequently, they thought about dropping out, as Kyle said, "I am happy whenever [I am] playing good at football. I am always like 'oh I want to go' but whenever I am not good or feel like I have not been playing well then 'I just want to stop'. Similarly, Britney said, "If I play bad, it just really bothers me then my automatic feeling is 'I don't want to play anymore, I want to quit'.

As their journey home progressed, thoughts would turn to assuming the worst possible consequences for them and their sport involvement. Oscar explained, "I was quite quiet in the car going back...back home and then I didn't really speak to anyone. I was just into myself and thinking I might get left out of the team and I didn't enjoy it that day." During the evening after the game, participants would still be replaying every mistake they perceived they had made. This pattern of thinking would disturb sleep and recovery. Participants would ruminate about the "why?" of mistakes: why they made the mistake or why they played poorly. They replayed aspects of performance, which stopped them from sleeping. In relation to doing something wrong in training, Wendy said, "...[If] I keep thinking about it and the rest of the night, it will just get me down and annoyed at what I have done in the session. I find it hard to get out of that mood after I'm in it."

Across the week following perceived poor personal performances, participants had difficulty letting go of the accompanying negative emotions, as Kyle said, "I just keep getting annoyed and annoyed and then something happy happens and I just refer back to the sad thing and that chucks the happy thing away". He continued, "It is like a circle. I feel bad and then thinking about feeling bad just makes me feel even worse and it just keeps going. It just keeps going round and round." Anger and annoyance were other emotions that participants would find hard to let go of, but would eventually subside, as James said, "I was really angry for the next week and over it and eventually just move on from it and I did eventually." Bryan further stated, "Until the next week, until the next game. It is sort of like a

reset point on a Saturday... my mood for the next week goes off how I perform on that Saturday." He elaborated, "...if I do well then I am alright and then if I don't, then I am annoyed at myself."

Participants said they were angry and annoyed because they felt that they should and must do better, as Karen described, "I feel down, and I feel like everything is against me when I have done it. I just feel angry like I said. 'I should have done better, I should have did this'. There were feelings of regret amongst participants when they felt they should have performed better, as Greg explained:

If I am having a bad game, then I will probably go into my shell a bit more...I know I shouldn't do it. Then after the game, I regret it. If I have had a bad game, then it just comes to my head all the things I have done badly...I am regretting not showing for the ball or thinking 'I should have done more'.

To avoid rehashing the match, participants would spend extensive periods of time alone, as Kyle stated. "I keep to myself if I felt like it was a bad game...that is quite a big thing like in school if something has went bad the day before then I will just keep to myself..." He continued, "I don't want to talk to anybody in case they bring it up or in case they say any something and then I refer it back to the game and then it just makes me in a worse mood."

Approaching training after perceived poor performances, participants would lack confidence in their ability and their confidence would be low in the next training session. They would also reduce the amount of effort that they would put into training, as Karen said, "I would feel down then the next day I probably wouldn't train as hard as I would the week before...I will probably be thinking about what happened, then I will feel down and then I won't train as hard..." Effort in training appeared to reduce because participants perceived that training held little value if it did not transfer into an outstanding performance. For example, Bryan said:

'I can't be arsed training today' or 'why am I doing this?' or 'I would rather be still in bed'...Just don't want to do it [training]. I would rather be somewhere else or doing something else. Sometimes it makes you feel like it is not worth doing or trying for if I have had a bad game.

Alongside training, participants would reduce effort and lose focus in other contexts, such as education. Wendy said, "It just affects my motivation to do stuff, so trying to do uni work but if I am in a bad mood, I won't really do it because I won't be concentrating enough so it stops me doing stuff I should be doing." Oscar stated, "Sometimes, I lose my focus in school a little bit because that's what I am thinking about."

In the lead up to the next competition, participants would experience fear and dread. They did not want to perform poorly again or experience the range of negative emotions they had previously incurred, as Sandra expressed, "When you are playing football, it comes back to that game. On the lead-up to that game and the week after, I was still annoyed because I played bad and remembered it every time I kicked a ball." It was often not until participants had been consoled by others that they would be able to focus on performance again, as Britney said: "... until I was reassured by someone that it was alright or I was convinced by someone to go...It was just always reassurance I needed. I would feel hopeless, unliked and shitty. Like I was just a shitty person." Unfortunately, for some participants, their negative emotions were not as easily abated. Ben explained, "it proper puts a downer on your week, it puts a downer on your sometimes two weeks, sometimes three weeks and every game you play in, you are scared of making a mistake again."

#### 7.7.3.3.2 Processing successes and defeats

There was a common basis to how participants processed their successes and defeats after a football match. Where participants experienced performance success (e.g., won a game), they tended to discount the positives and fixate upon negative aspects of performance. Jade said, "If I have one job to do on the pitch and I don't do it, I feel useless. Especially if it's a game we win comfortably. I've failed because I've let two goals in...those opponents shouldn't have scored." In particular, if participants had made a mistake, feelings of anger, shame, and embarrassment would outweigh any pleasure they could have taken from winning. Participants described anger, mistakes or losing to be the catalyst for forgetting all the good things and focusing on the negatives.

Making mistakes meant, for participants, that they were not good enough to be a part of the winning team, as Lynsey said, "When you make mistakes you feel like you shouldn't be there and you always question why you are there." Kyle further supported this idea when he said, "[When] I make a mistake it makes you feel like you aren't good enough to be there." If they had made mistakes, they also felt undeserving of the praise that accompanies winning. Karen described, "If I do something that I have failed at and I do get the praise, I am like 'I shouldn't be getting this. I don't deserve it; I shouldn't have got that'."

Beyond making a mistake when winning, the greatest failure that participants could experience was losing. There was a sense of intolerance of losing, as Greg said, "I hate losing. That is what it is. I am really really competitive.

Like too much competitive.” Alasdair also said, “[Perfectionists] always want to do their best, doesn’t like failure, doesn’t like not doing things right, and doesn’t like defeat in a way. They can take defeat but not gracefully.” The only way that participants appeared able to reconcile losing was if they had played well, as Greg went on to say, “Even if my team won and I played well, I still wouldn’t be happy. I would rather play well than the team winning...” Where defeat was directly related to an individual’s poor performance then losing proved especially difficult to deal with. Sandra simply stated, “If we lost then it was due to me then I would feel really bad.”

Because the criteria for success in football are more subjective than other sports, participants found it difficult to reconcile success and failure. Laura explained, “With football...it was quite hard to measure... to have clear... ‘have I done well?’ or ‘have I not done well?’.... Running is a lot more ‘you did well’ or ‘you didn’t do well’” She continued to explain the differences:

When I’ve not done well in running it’s because I haven’t fuelled myself properly so I am more objective about it whereas with football, it’s not as clear to whether you didn’t fuel yourself, it’s not as cause and effect as running is. It could be because you had a bad touch but a lot of the time, it was down to that but I think because it wasn’t as clear.

Alongside perceptions of their own performance, the standard of the opponent appeared to have important implications for how participants processed defeats. Greg supported this idea when he said, “Frustration in the wee games but then annoyed that we are getting beat this amount by a bigger team. We should be able to compete with the bigger team. I should be playing better....” He said that he would think, “I should be playing better”, if he had a bad game regardless of whether the team was “big” or “wee”. Where participants experienced defeat at the hands of a perceived lesser opponent, this appeared especially problematic. Participants described beating themselves up, categorising their performance as “shit” or “really bad”, and experiencing negative emotions. Greg said, “If it is smaller clubs then and we do get a loss then I am usually quite down and just stick to myself.” In addition, losing against rivals brought about a range of different negative emotions, as Alasdair described, “Devastated because it is [club] and we are [club], you just don’t want to be getting beat off your biggest rivals and they have now got the bragging rights.” Ben added, “Still just now I don’t want to speak about it because it is such a bad defeat and especially to [club] who are your biggest rivals, you just...it is not a great feeling at all.”

Being beaten by another team, whether rivals or not, brought about frustration and extreme sadness, as Peter described, "I would say upset, well I don't cry or that but I just feel 'argh, we had them the whole game and it is annoying'. The one that annoyed me the most. I was frustrated. I was like 'augh'" Ben explained:

It was just gutting like I have never felt as much devastation as that...it was heart-breaking. It was just devastating...It was just devastating especially after the whistle went and their parents and fans ran on the pitch and started celebrating with them and that. It was just devastating to walk off and just receive your loser medal. It was probably the worst feeling I have ever had. The negative emotions felt when participants lost would last from a couple of days until the next game. Ben said, "well until we next played a game in [country] like that is when it [feeling gutted] went away."

When participants had experienced a loss, they described wanting to avoid training. Kyle said, "If we lose, I don't want to come in for the week so then everybody can forget about it." This reaction appeared to stem from not wanting to be perceived poorly by peers, as Alasdair described, "Because they will slag, well they will have a laugh with you and I wasn't really up for a laugh at that time because of the defeat. I just stayed out of the way of people." Further, participants were aware that a loss would most likely result in losing a starting place in the team.

The blame for losses was often shouldered by the participants, as Ben said, "On the bus journey home, I was just imagining if I could have saved a shot. I was just being very self-critical and I was thinking "maybe should have done this, maybe should have done that." Britney echoed, "I feel like I should have done better. I did do well but I feel like I should have shot more which means I maybe would have scored for the team and then we wouldn't have lost." Lynsey described the consequences, "It makes me less confident if it is a bad result or we are losing and I feel like that loss was because of me." Other people (coach, teammates, and official) could also be the subject of blame for losses. Alasdair stated:

I do moan quite a lot at teammates but it is because I want to get the best out of everything and I don't want to be losing games but I guess sometimes I do moan a bit too much and they will get annoyed at me for that but it is only because I want to do the best I can do...

Ben described how he responded to what he felt was poor refereeing, "Emotions were high and I said a few things that I shouldn't have said. I just flipped...I just saw red and I just started giving him abuse which I shouldn't have done." Overall, losing

and performing poorly left participants feeling less motivated and engaging in undesirable behaviours, as Britney articulated, “I would not want to be there. It would start ‘I don’t want to be there’, ‘I want to quit football’ ‘I want to stop playing’ that sort of thing. Then I would do unhealthy stuff [self-harm, drinking alcohol and smoking] in that cycle.” Laura described the purpose of engaging in unhealthy behaviours when she said, “...I would go to something that would make me feel better like controlling food so that would be the obvious thing to make me feel better.” Turning to others for help when overcoming a failure was not considered an option, as Alasdair said, “Me and my dad didn’t speak the whole way back...I just didn’t want to speak about it at all to anyone and it was just horrible. It was just a really really bad feeling.”

### **7.7.2 The enduring consequences of perfectionism**

The adverse psychological and emotional consequences of perfectionism extended beyond setbacks and performance in football. Perfectionism was related to severe long-term negative psychological outcomes when, for some, perfectionistic standards were not met or for others, when they were unable to strive towards their perfectionistic standards (e.g., injury, non-selection). Under such circumstances, symptoms of depression and anxiety worsened, but also some participants then felt the need to control their eating behaviours, whereas others felt the need to punish themselves through self-harm.

#### **7.7.2.1 Eating disorders**

Perfectionism had implications for participants’ eating habits when not able to manage their perfectionism. Laura detailed, “I have probably been a very good example of not being able to manage it [perfectionism]. It made me hospitalised quite a few times and yeh that is really it. Now I am able to manage it better. I would have probably died.” It was a need to be perfect at football, in particular, that Laura indicated was the catalyst for her control of her dietary intake. She would use it as a means to cope with the lack of control she said she felt over elements of her sport performance:

That [controlling eating] was a measurable way of being a perfectionist but with football...it was quite hard to measure...like...to have clear...’ Have I done well?’ or ‘Have I not done well?’ I couldn’t really control my speed as much so the food was the most obvious controllable factor. I just became obsessed with controlling that and then it kind of veered away.

Similarly, Britney said:

They [family] always thought it was something more...something from my childhood. I thought its nothing to with my childhood. It's because I wanted to perfect at football. I was overthinking too much over those three months that I was out [off-season] and that when I was back at training I needed to look good, I needed to be back feeling good and I thought stopping eating would make me feel good.

Controlling eating was a way of feeling success and Laura said, "I wasn't being as successful as I wanted to be [in football] so that [not eating] was something I could be successful in but it was holding me from successful as well..." Britney also said:

I wouldn't eat anything during the day – that was kinda my goal, that was my goal, that was my goal– not to eat anything. I was striving to be the best and if I couldn't have that label of being a footballer, I would have the label of being the best of 'couldn't eat'.

Specifically, for both Laura and Britney controlling their food intake appeared to offer a shift in goal focus. Laura said, "The more of a perfectionist about the food aspect, then the less perfectionist I was about the footballing one". Britney added, "I felt in fact that if I couldn't have football then I would have something else and I would be the best at this. And I was and I basically nearly fucking killed myself." Participants described overthinking, engaging in rigid thoughts, and accompanying emotions (e.g., guilt). Laura described, "It [eating disorder] just got more and more intense and I couldn't be flexible around it."

Participants articulated that the goal of being the best at "not eating" had implications for their relationships. Britney described:

The goals I set each day, as long as I achieved them I really didn't care about anybody else so it's quite selfish. It's massively selfish. I hate looking back on it because I think, I know even though I have set those goals for myself, the effect I have had on other people is horrendous.

She continued, "I would lie to my mum and my partner and be like "I ate this, I ate that" and they knew, they must have known I was lying." Laura said, "Just that withdrawing and not...I would say I am not the best at forming close relationships with people...maybe it's a fear of that coming in priority or maybe it's just I didn't feel comfortable about not being the best." Laura also said, "I describe [perfectionism and eating disorder symptoms] as getting louder and quieter and when its louder I would prefer to withdraw...it's easier to cope on your own than coming to tell people how you are feeling."

### **7.7.2.2 Self-harm**



Another harmful outcome that participants indicated was tied up with their perfectionism in sport was self-harm, as Jade said:

For me self-harm is linked to my mind-set of trying to be perfect and overthinking because I overthink everything and its always negative...always negative overthinking. It just leaves me to believe that I should have done things...everything...completely different and that I am not good enough. It just leaves me to believe I am not good enough. I am not good enough. That's not good enough. I have got to be right. I have got to do things right. It's going to make other people feel better. It's going to make me feel better but in the end it never does because I never reach that satisfaction but it's a mind-set that I can't get out of...

Jade went on to explain that she self-harmed as a way of punishing herself for not achieving perfection:

Because I will, I guess in a way I will punish myself for doing something wrong. In that sense, it's like a punishment. I mean it's just one of [the] reasons that I will do self-harm. I know that sounds stupid saying it but I just can't get out of that cycle in my head like you've done something wrong, you've got to be punished, you need to do it better next time. It is the same recurrent thoughts that happen of being worthless, not good enough.

Britney described using self-harm to cope with the frustration of not meeting her perfectionistic standards in football, for example, when she felt "shit about football", that lead her to "wanting to quit and then doing unhealthy things..." She elaborated, "Football can make me hurt myself. I just felt really angry and agitated and the only way it worked for me to get the frustration out was to hurt myself." When participants did not meet the expectations of significant others or significant others did not meet their own expectations, they appeared more likely to self-harm. Britney said:

I had let somebody that I thought had loved me down by not doing something the way they thought I had the potential to do or should have done. I would have let them down, so I would be mad at myself so I would just take it out on myself. I would just take it out on myself...I would deal with the feeling by hurting myself and telling myself it was all my fault.

### **7.7.2.3 Depression and anxiety**

Alongside self-harm, psychological and emotional difficulties, such as depression and anxiety, were also implicated with perfectionism. Jade captured this notion when she said:

It doesn't help with the way I feel about things. It just makes everything worse...With depression and anxiety; it [perfectionism] makes everything seem ten times worse. It will get me more anxious or more stressed about things but it also it makes me feel worse in the way of my depression. It's like I can't do it, I can't do anything. It's like it just builds up and it becomes a big mess in my head...It [perfectionism] stresses me out and makes me feel pretty bad.

For Wendy, not achieving her perfectionistic standards heightened her already existing depression, saying it affected, "my mood quite a bit so I will feel more down than usual and I will keep myself to myself". Britney further described how hopeless she felt when she did not achieve other people's standards or other people did not meet her own perfectionistic standards:

I wasn't worthy and life was always going to be shit. There was nothing to look forward to. I was always going to feel shitey. That there wasn't any point in being around, really. It would just be easier if I wasn't here.

For other participants, depressive symptoms were likely to manifest when injured (see section 7.7.2.2.4).

#### **7.7.2.4 Overtraining, burnout, and dropping out**

Finally, the non-attainment of unrealistic standards appeared to be intertwined with overtraining, burnout, and dropping out of sport. For example, Britney said:

I got bored at football but don't know if it is overtired but I guess a year ago when I stopped playing so I think then I was because I had had enough of it. I wasn't getting any enjoyment out of it. It felt like hard work...football was making me feel unhappy and frustrated.

Britney further explained:

Maybe because I would know I hate training, it would leave me feeling shitty the whole day. I used to hate waking up in the morning knowing I had training that night. I would feel shit and be anxious about it the entire day at work. But when I stopped I felt more relaxed because I know I didn't have to go.

Laura said that when she did attend training she felt:

...drained because I am thinking what other people think but then I am thinking about myself and how tired I am then...I just get frustrated because I think I shouldn't be here because I need to rest because I am really tired so then I am just going through the motions and not getting much out of it.

## **7.8 Discussion**

The current study had two purposes: to explore and describe (i) the experiences of perfectionistic footballers with regard to psychological responses during the course of their performances (pre-, during-, and post-performance) and (ii) how adverse experiences in football impact their psychological responses.

Perfectionistic footballers reported experiencing a range of cognitions and emotions during the course of performances (e.g., anxiety prior to performance, mistake rumination during performance, post-event rumination). Furthermore, different adverse experiences (substitution, injury, poor performance, burnout) were described as important with regard to the psychological responses of individuals. With regard to cognitive processes, participants reported engaging in rumination in the form of rigid thoughts (e.g., the need to be perfect), catastrophic thinking (e.g., if I am a substitute, I am a failure), and self-criticism (e.g., I am a loser). Furthermore, participants described engaging in should statements and “why?” rumination as a consequence of the most prominent situations of perfectionistic reactivity (e.g., mistakes and poor performance). The thought patterns were intertwined with a range of negative emotions for the participants including dejection, anger, frustration, annoyance, and being upset. Furthermore, long-term psychological consequences (e.g., depression, anxiety, self-harm, eating disorders) stood out in some participants’ accounts as indicators of perfectionism. The following discussion frames the findings in context of cognitions and perfectionistic reactivity and qualitative perfectionism literature in sport.

### **7.8.1 Cognitions and perfectionistic reactivity**

#### **7.8.1.1 Pre-competition anxiety**

In support of the findings of studies one and two, anxiety was a prominent emotion that participants described feeling in the lead-up to competition. The previous studies used quantitative methods to establish a relationship between perfectionism, perfectionistic cognitions and pre-competition anxiety and showed that PCI predicted anxiety, anger, and dejection beyond SOP and SPP. Quantitative research also demonstrated that PCI mediated the relationship between perfectionism and pre-competition anxiety (both cognitive and somatic). Other quantitative research, however, has provided mixed evidence regarding the perfectionism–pre-competition anxiety relationship (e.g., Frost & Henderson, 1991, Stoeber et al., 2007). The current study, in contrast, used qualitative methods to explore the nature of this relationship. For some participants, nerves occurred in

reaction to performance regardless of the situation (e.g., opposition). For others, the quality of their training prior to the competition and their personal performance in the previous competition influenced pre-competition emotions and participants described feeling more negative emotions such as anxiety, dread, and anger. In line with Hall et al. (1998), participants' nerves and tension increased closer to the time of competition.

In the lead up to competition, beyond a general feeling of anxiety and dread, participants described experiencing a number of cognitions but mainly rigid thoughts (e.g., need) that create a self-imposed pressure. Firstly, participants were fixated on achieving unrealistic goals such as having a flawless performance. Having the goal of a perfect performance was accompanied by obsessively worrying about what might happen if they did not achieve such a goal. As competition is an evaluated performance, those higher in perfectionism often see competition as an opportunity to fail rather than to succeed (Hamachek, 1978). Consistent with Frost and Henderson (1991) who found that athletes higher perfectionism were lower in confidence in competitive situations, several participants recounted their pre-competition rumination as thoughts of self-doubt and not being good enough, indicative of an obsessional feeling of uncertainty regarding actions (Reed, 1985). The accounts by participants in the current study reflect previous research by Frost and Marten (1990) who found that those higher in perfectionism assigned greater importance to upcoming evaluated tasks and reported higher levels of negative affect when the evaluative component of the task was emphasised.

#### **7.8.1.2 Non-selection and substitution**

There was a sense of heightened self-doubt and anxiety when participants were not selected for competition. This is a novel finding as no other qualitative studies in sport have provided accounts of the detrimental effects of non-selection. One participant in Sellars et al. (2016) mentioned the use of pre-competition routines as a way to eradicate the chance of non-selection; however, explicit accounts of the impact of non-selection on participants were not provided. In the current study, participants—who displayed a sense of intolerance to being a substitute—articulated the psychological effect of non-selection. Competition offers an opportunity to progress towards goals, and in line with Goal Progress Theory (Martin et al., 1993), when participants in the current study did not have the opportunity to demonstrate ability and make progress towards goals (i.e., non-selection); they described responding to non-selection with rumination in the form of

catastrophic thinking and overgeneralisation. The accounts of participants reinforce the findings of Watkins and Nolen-Hoeksema (2014) whereby the discrepancy from goals sets the stage for perfectionistic individuals to engage in rumination. For the athletes in the current study, non-selection signified not being good enough and appeared to contribute to diminished self-competence and self-regard.

### **7.8.1.3 Mistakes**

The anxiety around mistakes, as described by participants, was due to the range of different connotations of mistakes beyond equating to poor performance. Along with an extreme sensitivity to making mistakes, participants responded disproportionately harshly; a number of participants described mistakes equating to failure, not being good enough or unable to be the best (see Greenspon, 2014). No matter how small, mistakes were seen as catastrophic. The accounts of participants reflect research by Frost, Trepanier, Brown, and Heimberg (1997) who found, by a diary study, that the perceived importance of a mistake was a catalyst for rumination. Further, mistake rumination experienced by participants in the current study was characterised by “should, must, need” and “why?” rumination which are described in the next section.

#### **7.8.1.3.1 Mistake rumination**

The majority of participants noted that a key feature of their perfectionism is the way that they handle mistakes. That is, participants described engaging in mistake rumination—the inability to stop thinking about mistakes—stemming from intolerance of making mistakes and the difficulty coping with mistakes. The tendency for those higher in perfectionism to ruminate about mistakes is consistent with the rumination subscale of the Perfectionism Inventory (Hill et al., 2014) and the intolerance of making mistakes is consistent with items of the PCI (e.g., “I can’t stand to make mistakes”). Although research examining perfectionism and mistake rumination is limited, Frost and Henderson (1991) found that when perfectionistic athletes made a mistake, they experienced recurring images of mistakes that were difficult to forget, and such images controlled their mind for the remainder of competition. This mirrors the experience of participants in the current study. That is, participants would not only focus on the mistakes, but also let mistakes dictate the rest of their performance. Participants described difficulty concentrating, worrying about teammates’ and coaches’ opinions, and their confidence dropping following mistakes. Fuelled by self-directed anger and frustration about mistakes, participants would spend vast amounts of time during performance reflecting on how they could rectify and erase their mistakes.

#### 7.8.1.3.2 Should, must, need statements

Participants described engaging in mistake rumination in the form of “should, must, need” statements. Ellis (1997) referred to this thinking as “musterbation” which he argued lies at the core of emotional disturbance. Although participants described this rigidity of thoughts as a central feature of perfectionism, the thoughts mainly occurred in response to adverse situations (e.g., mistakes). Similar to quantitative studies (e.g., Besser et al., 2004; Flett and Hewitt, 2016; Frost et al., 1995), participants engaged in “I should do better” and “you need to do better” thinking in response to mistakes. Such thinking is also reflected in the items of the PCI (e.g., “I should be perfect” and “I should never make the same mistake twice”) and participants’ cognitive response to mistakes mirrored the “tyranny of should” (Horney, 1950, p. 65). Although should, must, need statements are a way to reconcile and reduce the disparate actual self from the ideal self, such thoughts create a self-imposed pressure and consequently, are likely to contribute to negative emotions (Flett et al, 2018).

#### 7.8.1.3.3 Why? rumination

A novel finding was that perfectionistic individuals reported a tendency to engage in “why?” and “what?” rumination following mistakes. That is, participants questioned why mistakes happened, what they could have done differently and why they were not doing as well as they should be. Although Watkins (2008) demonstrated the content of rumination to be characterised by “why?” aspects of a particular situation or action, research examining this component of rumination, in relation to perfectionism, is limited. To address this limitation, Flett and Hewitt (2016) noted that they are in the process of developing a measure that captures mistake rumination and one of the items is “why can’t I stop making mistakes like this?” Using this measure, they found that SOP and SPP were positively related to mistake rumination and mistake rumination was positively related to distress, higher PCI scores, and thoughts of procrastination. Furthermore, mistake rumination predicted unique variance in psychological distress beyond PCI. Thus, those higher in perfectionism are likely to ruminate about mistakes, which in turn may lead to distress. The current study is the first study to provide qualitative evidence of participants responding to adversity by questioning the “why?” and “what?”.

#### 7.8.1.3.4 Mistake cycle

Mistakes and the consequences appeared cyclic in nature for participants. Consistent with previous quantitative studies (e.g., Blankstein & Lumley, 2008; Flett et al., 2016; Nolen-Hoeksema et al., 2008), participants described their

preoccupation with previous mistakes, thereby magnifying and prolonging negative emotions (e.g., feeling down). In line with Response Styles Theory (Nolen-Hoeksema, 1987), there was a sense that participants had difficulty in dissolving negative emotions. In contrast to those participants who would obsess over how to rectify their mistakes, others would focus less on self-correction and direct their anger and frustration toward opponents and teammates (e.g., swearing) which falls in line with the findings of study two of this thesis whereby the experience of perfectionism via perfectionistic cognitions was related to expression of verbal and physical anger. Sometimes, the emotions that the participants experienced about making mistakes during performance were not always hostile but at times self-conscious in nature (e.g., embarrassment, guilt). Additionally, some participants described feeling upset when mistakes were made, crying on the pitch and, in turn, worrying about imminent errors, which would further influence their concentration and confidence. Unsurprisingly, anxiety and nerves accompanied mistakes. Subsequently, athletes who reacted badly to mistakes experienced interference with their enjoyment and performance (Bunker & Williams, 1986).

#### **7.8.1.4 Failure, losses, being outperformed by competitors**

Flett and Hewitt (2016) advocated that the most revealing situation of perfectionistic reactivity is when a perfectionist encounters failure or repeated failures. This notion is supported by Flett, Nepon, Hewitt, and Fitzgerald (2016) who found that SOP, SPP, and PCI were positively related to failure reactivity. Those higher in perfectionism are likely to be hypersensitive to failure and being outperformed by others (see Hill, Mallinson-Howard, & Jowett, 2018). As found in other quantitative studies (e.g., Stoeber et al., 2007, Stoeber et al., 2014), and in the current study, participants described failure leading to negative emotions, withdrawing effort, and the preoccupation with avoiding further failure (e.g., imperfection). Perfectionistic individuals tend to have exaggerated responses to setbacks, develop deep-seated fears of failure and view anything short of a perfect performance as a failure (Anshel & Mansouri, 2005; Burns, 1980; Hamachek, 1978). Failure for participants in the current study was poor performance (i.e., anything below their standard of perfection). Consequently, participants reacted to success and failure by engaging in failure rumination and withdrawing effort (indicative of behavioural inhibition).

##### **7.8.1.4.1 Failure rumination**

When participants started the competition poorly, there was a sense of helplessness and they quickly resigned themselves to having a bad game. Previous

research (Rice et al., 2003) has found, in its quantitative and qualitative results, evidence for problematic thinking whereby “maladaptive perfectionists” appeared to be at greater risk for cognitive distortions such as self-criticality, and “all-or-nothing” thinking (e.g., “if it is not perfect, you failed”). Also, under the theme of distress, the participants in Rice et al. (2003) described being “preoccupied with perfection” and held themselves to rigid self-expectations (“must” perform well, “must” not make a mistake), yet they also lacked confidence and doubted their ability to reach expectations. Consistent with previous findings, participants in the current study described a preoccupation with failure, catastrophic thinking, and self-critical thoughts (Arpin-Cribbie & Cribbie, 2007). Similar to their cognitive responses to mistakes, a large proportion of participants focused relentlessly on questioning why they were not meeting the expected high standards. This finding is consistent with Hill et al. (2011) who found that perfectionistic individuals who performed poorly in a series of cycling trials experienced an increase in threat and a reduction in effort.

#### 7.8.1.4.2 Behavioural inhibition

In response to failure, participants felt bad about themselves, had thoughts of escape and, on some occasions, deliberated dropping out of football. The responses are perhaps indicative of behavioural inhibition, which involves the tendency to withdraw from situations involving actual or implied negative responses from others (Flett & Hewitt, 2006). Behavioural inhibition is associated with physiological responses to stress and fear stimuli (e.g., Kagan, Reznick, & Snidman, 1990; Muris, Merckelbach, Schmidt, Gadet, & Bogie, 2001). According to Flett and Hewitt (2006), behaviourally inhibited individuals are likely to respond to possibilities of failure or criticism by withdrawing and becoming anxious. Participants articulated that underperforming led to a range of emotions, from anxiety, lack of enjoyment and dissatisfaction to feelings of frustration and anger. On some occasions when participants could not redeem themselves from the poor performance, they lashed out and were physically (and verbally aggressive) towards others. Consistent with findings of study two and a longitudinal study by Macedo et al. (2017), perfectionistic individuals may be more inclined to feel anger, feel like expressing anger verbally and physically, and be hostile when experiencing more perfectionistic cognitions.

#### 7.8.1.5 Post-event rumination

Previous research has found that following a task, those higher in perfectionism are more likely to report that they “should have done better” (Frost & Marten, 1990). Correspondingly, participants in the current study described being



consumed by counterfactual thoughts (e.g., how they “should have done better”), perfectionistic thoughts (e.g., how they fell short of their perfectionistic standards), and wishful thinking (e.g., how they wished they could rectify their mistakes; see Sirois et al., 2010) post-performance. If their team had performed poorly, multiple participants described blaming themselves, which is consistent with previous findings whereby SOP, SPP and PCI were positively related to self-blame (e.g., Hewitt & Flett, 1991). Similar to participants’ cognitive response to mistakes, participants described “why?” rumination about aspects of performance. There is a paucity of research in sport examining perfectionism and rumination; however, participants in the current study provide accounts of a number of facets of ruminative thought that occur post-performance.

The aforementioned types of thinking would disturb participants’ sleep and recovery. The relationship between perfectionism, overthinking and sleep quality has not been examined. However, research outside sport evidenced that perfectionism was related to sleep disturbance in undergraduate students, and that those with higher levels of perfectionism were approximately twice more likely to report sleep disturbances than those with lower levels of perfectionism (e.g., De Azevedo et al., 2009). Also, research has demonstrated that overthinking (i.e., perseverative cognition) was negatively related to sleep quality, and that, overthinking fully mediated the relationship between work-based stress and sleep quality (Van Laethem et al., 2015). Participants in the current study reported having difficulty sleeping in response to poor performances, non-selection, and injury.

Uphill and Dray (2009) argued that it is not just the content of individuals’ thoughts that are important in understanding athletes’ post-defeat rumination but the manner in which these thoughts occur (frequency, persistence etc.). Unique to the current study, the accounts by participants provided context to when the post-event rumination starts (immediately, in the changing rooms, or on the way home). The use of qualitative methods in the current study has allowed for the understanding of how long post-event rumination lasts in sport and what stops post-event rumination. The length of post-event rumination varied among participants. The accounts of participants suggest that rumination is likely to last until participants have good performance (e.g., training or competition), which could be the next day or as long as three weeks. Experimental and longitudinal studies have found that those higher in perfectionism are likely to engage in post-event rumination from 24 hours (Cox & Chen, 2015) to two days (Brown & Kocovski, 2014).

#### 7.8.1.5.1 Success and defeat rumination

Successes and defeats had implications for post-event rumination whereby cognitive and emotional responses were, for some, dependent on the result of the game. Previous research has found that SOP (as measured by PS) is related to positive affect after success and negative affect after failure (Sagar & Stoeber, 2009). Yet the participants in the current study, in general, described feelings of anger, shame and embarrassment that outweighed any pleasure they could have taken from success. Similarly to findings in previous studies (e.g., Sagar & Stoeber, 2009; Stoeber et al., 2014), participants described responding to failure (i.e., defeat) with negative affect (e.g., anger, dejection). The negative emotions were tied up in the appraisal of defeat whereby defeat was perceived as the greatest failure for participants, and there was an overall sense of intolerance to losing, especially when the defeat was directly related to an individual's poor performance.

Consistent with Flett et al. (1991) who found that perfectionism was related to self-blame, the blame for losses was often shouldered by the participants. Consequently, post-competition, participants described re-living the game, imagining where they could rectify mistakes and improve performance. In line with Horney (1950), the rumination experienced by participants was related to self-critical thoughts and should statements. The descriptions of participants in the current study reflected results of the quantitative research that found that perfectionism was related to reduced confidence, motivation, and effort following a poor performance (e.g., Hill et al., 2011; Stoeber, Hutchfield, & Wood, 2008). In addition, participants described engaging in undesirable behaviours and unhealthy coping (e.g., self-harm, disordered eating, social avoidance), which was also found by Claes, Soenens, Vansteenkiste, and Vandereycken (2011).

The role of others had implications for how the participants processed defeat. Another novel finding was that, alongside perceptions of their own performance, the standard of the opponent appeared to have important implications for how participants processed defeats (e.g., a stronger opponent as opposed to a weaker opponent). The experience of defeat at the hands of a perceived weaker opponent appeared especially problematic due to the expectation to win, and resulted in post-event rumination coloured by self-criticism. This finding reaffirms results of Flett et al. (2011) where SOP, SPP, and PCI were related to self-criticism, but also provides support that perfectionistic individuals are likely to engage in rumination and also experience negative emotions following defeat, and especially when competing against their rivals. Although quantitative research has provided

evidence that perfectionism is related to rumination (e.g., Flett et al., 2016), the accounts of participants in the current study provide us with contextual understanding to when rumination is longer lasting (e.g., one participant said he was still thinking about a match against rivals at the time of interview). Processing defeat was related to the fear of others' criticism and mockery. Participants described experiences similar to findings in Besser, Hewitt, and Flett (2004) whereby perfectionistic individuals responded to negative feedback with rumination, performance dissatisfaction, and irrational task importance.

#### **7.8.1.6 Overtraining, burnout and dropping out of sport**

In addition, the failure to attain unrealistic standards appeared to be intertwined with overtraining, burnout, and dropping out of sport for participants. Despite research supporting that perfectionism is related to burnout and exhaustion and that those higher in perfectionism are likely to have a poorer response to burnout and exhaustion (see Flett & Hewitt, 2016; Hill & Curran, 2016; Jowett et al., 2016), the cognitive patterns that are associated with the process of burning out are unknown. Although participants described feeling exhausted, they would not take time off from their sport. Indicative of introjected regulation (see Gillison, Osborn, Standage, & Skevington, 2009), participants described attending training with little enthusiasm and out of guilt, and although attending training reduced the guilt, it subsequently fuelled further exhaustion. In addition to physical exhaustion, when a participant was no longer the best player, they contemplated dropping out. For some players, playing poorly in just one competition led to thoughts of escape during performance (e.g., "I want to quit football") and the contemplation of quitting the sport completely suggestive of avoidance-coping (e.g., Dunkley et al., 2000). The avoidance-coping described by participants could be a function of being higher in SOP. Comparing thoughts of escape scores in previous studies (Hill et al., 2011; Lane, Harwood, & Nevill, 2005), student-athletes higher in SOP reported more frequent thoughts of escape than national standard youth athletes who were not higher in SOP.

#### **7.8.1.7 Injury**

Sustaining an injury was extremely difficult for participants. This finding is novel, as previous qualitative studies exploring perfectionism in sport have not captured a perfectionistic athletes' experience of injury. Unique to the current study, even when injured for a short space of time, participants described intense negative emotional reactions. Where the recovery process took prolonged time, an even greater negative emotional response occurred such as depressive symptoms (e.g.,

low mood, recurring crying spells). When injured, participants described engaging in catastrophic thinking and thoughts reflecting worries about the future (e.g., “if.... and then .... and then....” thinking). Participants feared losing their starting position in the team, being dropped from the team, and performing at a low standard.

The accounts by participants in the current study align with findings of quantitative research (e.g., Jowett et al., 2018) whereby some individuals were proactive in dealing with injury (e.g., bike sessions) but were prone to greater emotional difficulties following injury (e.g., depressive symptoms), while others were more likely to avoid coping with injury (e.g., playing through injury, avoiding training). Avoidance-coping is considered to exacerbate the stress of being injured, as it undermines the behaviours required for better rehabilitation and recovery (see Jowett et al., 2018). The participants who had experienced injury and illness described “need” thinking, and consequently returned from injury too soon. This finding supports Hewitt and Flett’s (2016) notion that perfectionists are vulnerable to lack of restorative self-care (being unable or unwilling to rest and recover from exhaustion and injury). Similar to making mistakes, injury and re-injury appeared to be cyclic in nature for participants.

### **7.8.2 Non-attainment of perfection: Longer term consequences**

Previous qualitative research has mainly provided descriptions of the positive aspects of having high perfectionistic standards, whereas, participants in this study described the far-reaching and enduring positive and negative consequences related to their high perfectionistic standards. For some participants, the need to be perfect manifested itself in severe psychological outcomes such as eating disorders, self-harm, depression, and anxiety. This study is a unique contribution to the literature, as other qualitative studies have only broadly examined how perfectionism is conceptualised and although Hill et al (2015) provided accounts of performers experiencing distress, no other studies have provided accounts of the enduring long-term psychological consequences related to perfectionism in sport.

The current study reaffirms that athletes higher in perfectionism may be vulnerable to negative eating habits and eating disorder symptoms (e.g., Haase, Prapavassis, & Owens, 1999; Nordin-Bates, Schwarz, Quested, Cumming, Aujla, & Redding, 2016; Stirling & Kerr, 2012). The previous research, however, does not provide rich detail on the experience and consequences of eating disorders in perfectionistic individuals and the experience of eating disorders are not observed in the qualitative studies in sport. In contrast, the current study provided descriptions of the consequences of perfectionism and eating disorders for two

participants (e.g., hospitalised). For these participants, restricted eating was seen as both a mechanism for aiding "being the best" at football and coping with not being the best. Participants described overthinking and rigidity of thoughts occurring alongside eating disorder symptoms. In support, Short, Mushquash, and Sherry (2013) found that perfectionistic self-doubt combined with overthinking contributed to eating disorder symptoms. Furthermore, other research found that the relationship between cognitive rigidity and eating disorder symptoms was mediated by perfectionism (Buzzichelli, Marzola, Amianto, Fassino, & Abbate-Daga, 2017).

Further, another two participants described using self-harm as a way of coping and/or punishment with not achieving perfectionistic standards in football. For one participant, self-harm was a means of punishment for letting others down or punishing the self when others did not meet their high expectations. This experience is supported by empirical evidence that found that SPP displayed a significant positive relationship with self-harm (O'Connor et al., 2009). According to one participant, self-harm was linked to overthinking in the form of perfectionistic thinking. Overthinking for the participants was deemed as negative and characterised by thoughts of falling short of perfection; should, must, need statements; and harsh self-criticism. Participants reasoned that self-harm occurred in response to such thinking as a means of coping with not being perfect.

There is substantial evidence within the literature to demonstrate the association between perfectionism and depression and anxiety (see Smith et al., 2016, Smith et al., 2018; meta-analyses). This was evident in the accounts of the participants where not achieving perfectionistic standards heightened already existing depression and contributed to feelings of hopelessness. Also, where participants failed to reach unrealistic standards set by others or where other people did not meet the participant's perfectionistic standards, they were more likely to experience feeling "down" and "depressed". The current study reaffirms findings by Stoeber et al. (2014) who found that SPP predicted anxiety, depression and anger after initial failure and further increased anger after repeated failure. SPP predicted increased anxiety, but only after repeated failure. As the participants in the current study described, perfectionism appears to be a vulnerability factor for heightening pre-existing depression and anxiety.

### **7.8.3 Links to qualitative perfectionism studies in sport**

The accounts by athletes in Gotwals and Spencer-Cavaliere (2014) with regard to reactions to mistakes were similar to the current study whereby

participants were easily discouraged, felt nervous and worried about making more mistakes, and used words such as “overwhelmed,” “frustrated,” and, “depression” to describe their feelings. Also, athletes in Gotwals and Spencer-Cavaliere (2014) highlighted the tendency to respond to mistakes and failure by overthinking and then becoming apprehensive. One participant said, “Like a snowball...the more you worry about not making a mistake the more it happens.” (p. 285). In the current study, one participant described this as “a circle” because they would feel down when their performance was not perfect and then worry about the next performance. Subsequently, if they did not perform to standard, they could continue to feel down until they performed well and the feeling would reset. Also, in support, Mallinson-Howard et al. (2018) found that when perfectionistic athletes did not perform at their best, they engaged in self-criticism and experienced negative emotions (e.g., frustration, disappointment in self).

The findings with regard to overthinking reflect previous qualitative research in sport (Hill et al., 2015). That is, some participants described rumination (“thinking and rethinking too much” and constantly looking for how to improve) as mentally exhausting. Sellars et al. (2016) also provided accounts of rumination during performance, when, already playing poorly, their overthinking disrupted concentration and impacted performance. Furthermore, this study provided accounts of post-event rumination whereby participants would evaluate their performances harshly. Although both Hill et al. (2015) and Sellars et al (2016) captured that perfectionism involves ruminative thoughts and that perfectionism was considered for most participants as a source of distress (mentally, emotionally and physically), the accounts did not provide insight into potential longer-term implications of psychological distress. The current study, however, is the first qualitative study to provide accounts of participants in sport who reported experiencing longer-term negative psychological consequences (e.g., eating disorders, self-harm, depression, and anxiety). Not all, but some, participants described that not achieving perfection or not achieving other people’s standards of perfection had implications for psychological well-being whereby they described depressive symptoms and anxiety and used restrictive eating or self-harming as a means of coping.

## **7.9 Conclusion**

This study is the first in sport to use a mixed methods approach to explore and describe the psychological processes that perfectionistic footballers (self-

identified and higher in perfectionistic cognitions) experience during the course of performances and how adverse experiences (e.g., non-selection/substitution, poor performance, success/failure, mistakes, and injury) impact their psychological responses. The perfectionistic footballers in the study provided accounts of experiencing a range of cognitions and emotions during the course of performances (e.g., anxiety prior to competition, mistake rumination during performance, post-event rumination). Although previous quantitative studies have shown that perfectionism is related to pre-competition emotions, this study provides an understanding of why anxiety and other negative emotions (e.g., anger, frustration) are likely to occur (e.g., fixation on achieving unrealistic aims, self-doubt, non-selection). In response to a poor performance and/or making mistakes, participants ruminated in the form of catastrophic thinking, self-critical thoughts, and should, must, need statements. Novel findings of the study were that participants tended to engage in why? and what? rumination in response to adverse situations, that injury and non-selection were particularly problematic, and that for some individuals, the non-attainment of perfectionistic standards led to longer-term psychological consequences in sport (e.g., eating disorders, self-harm, depression, anxiety). In sum, the current study is the first in sport to broaden the understanding of perfectionistic cognitions and provide accounts of how perfectionistic individuals respond psychologically to setbacks.

## **Chapter 8 Helping perfectionistic athletes help themselves: A randomised control trial of the effectiveness of a psychoeducational book**

“Making sure I am on top of that takes the bottom off those thoughts and enables me to get through those periods a lot quicker. In previous times, I would just ruminate and descend into something much deeper. Now it’s about being self-aware and managing my mental health journey.”

*Clarke Carlisle* (Smith, 2016; the Guardian)

Athletes may experience negative emotional and psychological consequences if perfectionism and perfectionistic cognitions are not managed effectively. Study one and two in this thesis evidenced that perfectionistic cognitions predict negative emotions beyond SOP and SPP, and that perfectionistic cognitions are a mechanism by which SOP and SPP are related to negative emotional consequences. The first two studies were complemented by study three that included the accounts of perfectionistic football players who described their experiences of a range of other negative emotional experiences (e.g., eating disorders, self-harm, depression, and eating disorders). Therefore, it is important to find ways to protect athletes from the harmful consequences of perfectionism and perfectionistic cognitions. Previous intervention studies outside sport have used psychoeducational books as a way to intervene with those higher in perfectionism. The current study is the first in sport to employ a randomised control design to assess the effectiveness of a self-help book intervention in reducing perfectionism and perfectionistic cognitions. This chapter starts with a review of the intervention studies in sport that have included measures of perfectionism which is followed by a review of the intervention studies aimed at managing perfectionism and perfectionistic cognitions outside sport with a focus on the studies that employed self-help as a means of intervening. Finally, the rationale behind why self-help intervention may be effective for the use with perfectionistic athletes is provided. The current study concludes by evaluating the effectiveness of a self-help book intervention in reducing perfectionism and perfectionistic cognitions in footballers.

### **8.1 Managing perfectionism**

#### **8.1.1 Interventions in sport**



To date, no studies have been published that are specifically aimed at managing perfectionism in sport. A limited number of intervention studies have, however, included measures of perfectionism. These studies are reviewed below.

Two studies (De Petrillo, Kaufman, Glass, & Arnkoff, 2009; Kaufman, Glass, & Arnkoff, 2009) used a 4-week program that consisted of weekly 2 1/2–3 hour sessions of Mindful Sport Performance Enhancement (MSPE). The first session of MSPE included a walking meditation, a 45-min body scan meditation, and mindfulness breathing. The three subsequent sessions were extended to include breathing and mindful yoga. In the first study, a sample of 25 recreational long-distance runners were assigned to either the 4-week intervention ( $n = 13$ ) or to a waitlist control group ( $n = 12$ ) who later received the intervention. Participants completed measures of state anxiety, cognitive interference during competitions, perfectionism (F-MPS; Frost et al., 1990), creditability and expectations, mindfulness and performance at pre-intervention and post-intervention. With regard to perfectionism, no significant interaction was reported, but results indicated that the intervention group showed significant decreases in organisation compared to the control group. The intervention and control group scores were combined to examine changes over time. They found that the PS (similar to SOP) and parental criticism scores significantly reduced from pre- to post-intervention.

In the second study, Kaufman and colleagues (2009) used the same 4-week intervention (MSPE) with archers ( $n = 11$ ) and golfers ( $n = 21$ ). Participants completed measures of trait anxiety, perfectionism (F-MPS), thought disruption, confidence, mindfulness, and flow. Participants completed these measures at pre- and post-intervention, but they also completed measures of mindfulness, flow and performance throughout the course of the intervention. No control group was used in this study. Results indicated that perfectionism did not significantly reduce for the athletes. In fact, the archers showed a significant increase in parental expectations from pre- to post-intervention. The studies (De Petrillo et al., 2009; Kaufman et al., 2009) were followed up one year later by Thompson, Kaufman, De Petrillo, Glass, and Arnkoff (2011) with the sample of archers, golfers, and long-distance runners ( $N = 25$ ) but perfectionism was not included in the pre- to follow-up analysis.

Lastly, a study examining the effectiveness of a self-compassion intervention included a measure of perfectionism (Mosewich, Crocker, Kowalski, & DeLongis, 2013). The self-compassion intervention consisted of a psychoeducation session and writing components completed over a 7-day period. A sample of university athletes ( $N = 51$  female) competing in basketball, cross-country, field hockey, golf,

ice hockey, rowing, rugby, skiing, soccer, swimming, track and field, and volleyball who self-identified as self-critical were randomly assigned to the self-compassion intervention ( $n = 29$ ) or a control group ( $n = 22$ ). Participants completed measures of CM, self-compassion, state self-criticism, and state rumination at pre-intervention, at 1-week post-intervention, and at a 4-week follow-up. A significant interaction effect was found for perfectionism. There was a significant difference between the intervention group and control group on CM scores (and rumination) at post-intervention and follow-up. This study improved on the previous studies conducted in sport by using randomisation, a control group, and data collection at follow-up.

Despite the evidence that perfectionism can be problematic in sport, it is evident that studies of interventions for perfectionistic athletes are scarce. Interventions that are specifically designed to provide athletes with tools to help manage the destructive nature of perfectionism are required. The aforementioned studies were not designed specifically for managing perfectionism in sport, and only included perfectionism measures as supplementary. It is also evident that these existing interventions have limitations (e.g., sample size, lack of randomisation, and no control group). To our knowledge, there are no studies in sport designed specifically for helping athletes manage perfectionism. Fortunately, outside sport, intervention studies are on the rise.

### **8.1.2 Perfectionism interventions outside of sport**

Interventions to treat or reduce perfectionism have received attention outside sport. Various therapeutic methods, utilising long and short-term models, have been proposed as perfectionism interventions. For the long-term models, psychodynamic approaches have been used to treat perfectionism but limited evidence to support efficacy exists (Egan, Wade, Shafran, & Antony, 2014). For example, Fredtoft, Poulsen, Bauer, and Malm (1996) delivered 15-sessions of psychodynamic group therapy for managing perfectionism in university students ( $N = 6-8$  females). The paper described the counsellors' experience of delivering a group therapy that focused on perfectionism, procrastination and fear of graduation. Participants provided accounts of having difficulties with studies and their families and how these difficulties seemed to become more manageable over the course of the intervention; however, no data were presented on efficacy.

Hewitt et al. (2015) have conducted the only study to examine the efficacy of psychodynamic/interpersonal group psychotherapy. A sample of 71 community-recruited perfectionistic individuals were non-randomly assigned to a treatment

group ( $n = 53$ ) who attended 11 sessions of psychodynamic/interpersonal group psychotherapy or a waitlist control condition ( $n = 18$ ). Participants completed measures of perfectionism, perfectionistic self-presentation and automatic perfectionistic thoughts, as well as measures of depression, anxiety, and interpersonal problems at pre-treatment, post-treatment, and at 4-month follow-up. Multilevel Modelling (MLM) was used to determine whether the perfectionism scores were different for treatment condition compared to the control group at post-intervention, while controlling for pre-treatment scores. Results showed that SOP, SPP, PCI and perfectionistic self-presentation significantly reduced at post-treatment and at 4-month follow-up for those receiving treatment compared to the waitlist control condition. These findings were supported with ANCOVA analyses (large effect sizes). It is notable that a large proportion of participants had previously received treatment for depression or anxiety outside the study. Therefore, the reduction in perfectionism may be a consequence of previous treatment.

Burns (1980) advocated for the use of cognitive techniques to manage perfectionism. He described these techniques as identifying the advantages and disadvantages of perfectionistic tendencies, recognising cognitive distortions and finding other sources of pleasure and worth. Early studies tested the benefits of cognitive therapy methods in reducing perfectionism. For example, one study used a pre-test/post-test preexperimental design with a sample of religious student adults ( $N = 15$ ) who attended eight sessions in a structured, educational group which relied heavily on cognitive therapy methods (Beck, Rush, Shaw, & Emery, 1979; Burns, 1980). The aim of the intervention was to help participants overcome their perfectionism, and results showed that the participants scored significantly lower on perfectionism scales from pre- to post-intervention (Richards, Owen, & Stein, 1993).

#### **8.1.2.1 Cognitive-behavioural therapy interventions for perfectionism**

Cognitive-behavioural therapy (CBT) is a well-researched, evidence-based approach to intervention with established efficacy and effectiveness in treating perfectionism and a range of psychological disorders (Gustafsson & Lundqvist, 2017). CBT has been described as a “family of interventions” that integrates different forms of therapeutic techniques, including strategies focusing on cognitive, behavioural, and emotional components (Hofmann et al., 2012). The aim of CBT is to help participants manage their irrational thoughts by helping them identify how their thoughts and behaviours influence each other and how to use strategies to

manage their thoughts, feelings and behaviours. Given that perfectionism is underpinned by inaccurate thought patterns, cognitive-based approaches are likely to be effective in reducing perfectionistic thoughts and behaviours. That is, CBT provides a means by which the rigid cognitive patterns associated with perfectionism can be tackled. Some sport psychologists adopt a more behavioural approach within CBT to manage perfectionism (e.g., Gustafsson et al., 2016) and use behavioral analysis, psychoeducation, and exposure as a way of targeting the behaviours related to perfectionism. It is therefore unsurprising that CBT has been the most commonly used method to treat perfectionism.

A meta-analysis by Lloyd, Schmidt, Khondoker and Tchanturia (2015) summarises the research of cognitive-behavioural treatments of perfectionism. It was evident from studies ( $N = 8$ ) included in the meta-analysis that CBT interventions appeared to be useful in reducing perfectionism. Four of these studies ( $n = 55$ ) measured SOP and showed a large pooled standardised mean difference between pre and post-intervention for SOP (Hedges'  $g = 0.81$ , CIs = 0.41 to 1.20). Furthermore, for PS (similar to SOP), reductions with large effect sizes were also found (Hedges'  $g = 0.79$ , CIs = 0.44 to 1.12). Four of the studies ( $n = 55$ ) also included a measure of SPP and showed a medium pooled standardized mean difference pre- to post-intervention (Hedges'  $g = 0.52$ ; CIs = 0.13 to 0.90). For CM (dimension similar to SPP), reductions with large effect sizes were also found (e.g., Egan et al., 2014; Handley, Egan, Kane, & Rees, 2015; Steele & Wade, 2008; Steele et al., 2013). The results of the meta-analysis are promising, suggesting that CBT can be successful in treating SOP and SPP and reducing symptoms of related conditions such as depression and anxiety.

OOP was not included in Lloyd et al.'s meta-analysis (2015) which may be because only a limited number of studies include a measure of OOP. Less is known, therefore, about the influence of interventions on this dimension of perfectionism. Of the studies that included a measure of OOP, some evidence exists for interventions reducing OOP (e.g., Arpin-Cribbie, Irvine, & Ritvo, 2012; Riley, Lee, Cooper, Fairburn & Shafran, 2007), whereas other interventions did not reduce it (e.g., Radhu, Daskalakis, Arpin-Cribbie, Irvine, & Ritvo, 2012). Glover, Brown, Fairburn, & Shafran (2007) included a measure of OOP, but the study did not calculate whether there was a significant reduction in OOP scores or not. In contrast, Hewitt et al. (2015) found that psychodynamic/interpersonal group therapy was effective in reducing OOP. But as the number of studies that have included measures of OOP are limited, examining further whether interventions are able to reduce OOP would be a useful addition to the literature.

Initial interventions studies mainly adopted a case series methodology for examining the effectiveness of individual CBT in reducing perfectionism with individuals suffering from eating disorders (e.g., Shafran, Lee & Fairburn, 2004,  $N = 1$ ), anxiety disorder or depression (e.g., Egan & Hine, 2008,  $N = 4$ ), or eating disorders combined with high perfectionism (Glover et al., 2007,  $N = 9$ ). These studies showed 8–10 sessions of individual CBT to be effective in reducing individuals' perfectionism. Specifically, Glover et al. (2007) found that following a 10-session intervention, five participants (out of nine) experienced a significant reduction in SOP from pre- to post-intervention and at follow-up, and one participant experienced a significant reduction in SPP from pre- to post-intervention and at follow-up. It is notable that case study design does not use control groups to account for the passage of time or other variables that may influence outcome (e.g., history, testing effects, and maturation).

Amster and Klein (2008) examined the influence of a 6-week CBT stuttering-modification program (six one-hour individual sessions and six 90-minute group sessions) with adult participants who scored highly in both perfectionism and who had a stutter ( $N = 8$ ). All participants fully adhered to the program by attending all 12 sessions during the 6-week period. This open trial design (i.e., no blinding as all participants received the treatment) used pairwise comparisons between pre-treatment, mid-treatment, post-treatment and follow-up to indicate changes in perfectionism (as measured by the BPS; Burns, 1980), and stuttering severity over time. Results indicated a significant decline in perfectionism from pre- to post-treatment. The most significant decrease in perfectionism occurred during the first 3-weeks of the study. Participants decreased an average of 13 points in perfectionism (on a 40-point scale). Perfectionism scores from pre-treatment to mid-treatment significantly decreased. This change was maintained 15-weeks after treatment ended. Despite promising results for perfectionism and stuttering severity, this open trial had a number of limitations including a small number of participants and lack of a control group.

Addressing the limitations of no control group in case study design, Riley et al. (2007) conducted a randomised controlled trial (RCT) using a 10-session (8-week) CBT treatment for clinical perfectionism. Participants from a clinical setting with a diagnosis of anxiety or depression who met the criteria for clinical perfectionism were randomly allocated to either a CBT treatment group ( $n = 10$ ) or a waitlist group ( $n = 10$ ). The waitlist control group received the treatment after waiting 8 weeks. Participants completed four measures of perfectionism (F-MPS; HF-MPS; Clinical Perfectionism Examination; Riley et al., 2007; Clinical Perfectionism

Questionnaire, CPQ; Fairburn, Cooper, & Shafran, 2003) and measures of anxiety and depression at pre-treatment, post-treatment, 8-week follow-up, and 16-week follow-up. Interaction effects were not reported but the results showed significant reductions on both F-MPS and the HF-MPS for the treatment group, but no statistically significant differences between treatment and waitlist control group. With regard to the HF-MPS, SOP scores were significantly reduced from pre- to post-treatment, and these changes were maintained at 8-week and 16-week follow-up. For OOP and SPP scores, there was only a significant difference from pre- to post-treatment and at 8-week follow-up. Results also indicated significant reductions in clinical perfectionism, anxiety and depression, which were maintained at 8-week follow-up. In addition, the number of participants who met the criteria for anxiety or depression halved after treatment, compared to no changes in the waitlist control group.

Instead of using a waitlist control group, Kutlesa and Arthur (2008) used two active control groups to test the effectiveness of an 8-week group CBT intervention. A sample of university students ( $N = 90$ ) were randomly allocated to either an 8-week CBT group counselling treatment that focused on shifting “negative perfectionism” to “positive perfectionism” by changing attitudes, feelings, beliefs, and interpersonal interactions ( $n = 30$ ), a career planning group ( $n = 30$ ), or a group attending psychology classes ( $n = 30$ ). Participants completed measures of perfectionism (HF-MPS), depression, and anxiety at pre- and post-intervention. Significant interaction effects were found for SOP and OOP but interaction effects for SPP were non-significant. Overall, results showed that students participating in the CBT treatment group significantly reduced their levels of SOP and SPP post-treatment compared to non-treatment groups.

Handley et al. (2015) also examined the effectiveness of an 8-week group CBT intervention. The treatment adapted from Shafran, Egan, and Wade (2010) included sessions on understanding perfectionism, the motivation to change, and challenging perfectionist beliefs through behavioural experiments and thought diaries. A clinical sample of individuals diagnosed with anxiety disorders, depression, or eating disorders ( $N = 42$ ) were randomly allocated to the CBT group ( $n = 21$ ) or a waitlist control group ( $n = 21$ ). Participants completed measures of perfectionism (F-MPS, CPQ, and the Dysfunctional Attitude Scale; DAS, Weissman & Beck, 1978) and psychological distress (e.g., general distress, depression, eating disorders, anxiety, anxiety sensitivity, rumination, self-esteem and quality of life) at pre- and post-intervention. Significant interaction effects were found for all measures of perfectionism (CM, PS, DA, CPQ, and DAS). The intervention group

significant reduced in all measures of perfectionism from pre- to post-intervention, and the intervention group reported significantly lower CM scores at post-intervention compared to the control group. Furthermore, significant interaction effects were found for all measures of psychological distress with the intervention group reporting significant reductions in anxiety, depression and rumination. The findings of this study support the efficacy of CBT for treating perfectionism.

### **8.1.2.2 Interventions for children and young people**

Perfectionism interventions have also proven useful for children and adolescents. The majority of studies have been school-based interventions and a large proportion of these studies have administered the CAPS as a way of determining the effectiveness of the intervention. Across the studies, the type and length of intervention has varied.

Nobel, Manassis, and Wilansky-Traynor (2012) examined the effectiveness of a school-based 12-week CBT intervention. The CBT intervention utilised a manualised program, which focused on identifying and managing negative thoughts and developing coping skills. A sample of students aged 8 to 11 years old ( $N = 78$ ) were randomly assigned to the CBT group program ( $n = 42$ ) or a control group who participated in a structured activity called the “feelings club” ( $n = 36$ ). Participants completed measures of perfectionism (CAPS), anxiety, and depression at pre-intervention and post-intervention. No significant interaction effects were found. Participants in both groups showed significant reductions in SOP, anxiety, and depressive symptoms but SPP did not significantly reduce from pre- to post-intervention. Because no effects of experimental condition were found, subsequent analyses combined the two conditions. These analyses indicated that pre-intervention levels of SOP influenced post-intervention depression scores, suggesting that perfectionism interferes with treatment outcomes. These findings partially supported the use of CBT to reduce perfectionism in young students.

Fairweather-Schmidt and Wade (2015) evaluated the two-lesson school-based CBT intervention called “Minding Young Minds”. The intervention was based on Shafran, Cooper, and Fairburn’s (2002) model of clinical perfectionism within a CBT framework. A sample of pre-adolescent (9 to 14 years old) children ( $N = 125$ ) were randomly allocated to the intervention group ( $n = 57$ ) or a control group ( $n = 68$ ). All participants completed measures of perfectionism (CAPS), psychological adjustment, and over-concern with weight and shape at pre-intervention, post-intervention and at 4-week follow-up. A 14-item short version of the CAPS was used (O’Connor, Dixon, Rasmussen, 2009) which measures three dimensions of

perfectionism: SPP, SOP-critical, and SOP-striving. No significant interaction effects were found for dimensions of perfectionism. However, a significant group effect was found for SOP-striving. The intervention group had lower SOP-striving at post-intervention and at 4-week follow-up compared to the control group and the effect sizes were medium. The group effect for SOP-critical and SPP were non-significant indicating no differences between groups. Significant interaction effects were found for hyperactivity and emotional problems and the intervention group reported a greater reduction in hyperactivity and emotional problems compared to the control group. This study provided preliminary support for the effectiveness of an intervention focused on reducing the level of the striving component of perfectionism in children but not the components of perfectionism that are more critical (SOP-critical and SPP).

Vekas and Wade (2017) also examined the “Minding Young Minds” program and utilised similar lesson content for the first two lessons (Fairweather-Schmidt & Wade, 2015) but added a third lesson focusing on self-compassion. The three lessons were each delivered a week apart. The intervention and control groups were not randomly allocated, but rather decided by convenience factors at the school level. Students (aged 10 to 13 years old) were allocated to the intervention ( $n = 107$ ) or control condition ( $n = 105$ ). Participants completed measures of perfectionism (SOP-striving as measured by CAPS), self-criticism and well-being at pre-intervention, post-intervention, and 3-month follow-up. No significant interaction effect was found for perfectionism. However, there was a significant group effect for perfectionism and the intervention group reported significantly lower levels of perfectionism at post-intervention than the control group. Nevertheless, this study only examined SOP but not SPP. A significant interaction effect was found for well-being. At the 3-month follow-up, the intervention group had significantly higher levels of well-being compared to the control group.

Other school-based intervention studies have adopted 8-session programs. For example, Nehmy and Wade (2015) examined the efficacy of an eight-session classroom-based program called “Healthy Minds”. Similar to the “Minding Young Minds”, the intervention was based on Shafran et al’s (2002) model of clinical perfectionism and principles of CBT. A sample of female adolescents ( $N = 688$ ) aged 11 to 18 years old were allocated (non-randomly) to the intervention group ( $n = 321$ ) or control group ( $n = 367$ ). Participants completed measures of perfectionism (DAS), self-criticism and negative affect at baseline, post-, 6- and 12-month follow-up. No significant interaction effect was found for perfectionism. However, the intervention group reported significantly lower perfectionism scores



compared to control group at 6- and 12-month follow-up but there was no difference between groups at post-intervention. There was a significant interaction effect for negative affect and the intervention group reported significantly lower scores compared to the control group in negative affect and self-criticism at 6-month follow-up but not at post-treatment and 12-month follow-up.

Similarly, Wilksch, Durbridge, and Wade (2008) implemented an eight-session classroom-based perfectionism prevention program based on the self-help book "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" (Antony & Swinson, 2009). A sample of female adolescents (14 to 15 years old;  $N = 127$ ) from two schools were randomly allocated to the perfectionism intervention ( $n = 51$ ), a media literacy program ( $n = 43$ ), or a control group ( $n = 44$ ). All participants completed measures of perfectionism (F-MPS), dieting, shape and weight concern, self-esteem, media internalization, and perceived sociocultural pressure at pre-intervention, post-intervention, and at 3-month follow-up. A significant interaction effect was found for CM with the perfectionism intervention group reporting significantly lower levels of CM than the other groups at 3-month follow-up. Although there was no significant interaction effect found for PS, the perfectionism intervention group displayed significantly lower PS scores than the other groups at 3-month follow-up.

With regard to school-based perfectionism interventions, only one study (Wilksch et al., 2008) found significant interaction effects for measures of perfectionism. However, there was some evidence to suggest that school-based programs are able to help students reduce their perfectionism, including, surprisingly, a short-term intervention of two lessons. It has been more frequently the case that school-based programs help to reduce SOP and not SPP (e.g., Fairweather-Schmidt & Wade, 2015; Nobel et al., 2012; Vekas & Wade, 2017). The exception was in the study by Wilksch et al. (2008) who found significant reductions in CM (similar to SPP). Their intervention program was based on the self-help book "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" (Antony & Swinson, 2009), whereas the other studies used a "Healthy Minds" program (e.g., Vekas & Wade, 2017). As the majority of studies adopted the use of the CAPS (e.g., Vekas & Wade, 2017) or F-MPS (e.g., Wilksch et al., 2008), limited evidence exists for the impact of school-based perfectionism interventions on managing OOP.

## **8.2 CBT interventions for perfectionistic cognitions**

Despite the evidence that frequent perfectionistic cognitions are related to negative psychological consequences, only a limited number of intervention studies have included the PCI measure. It is surprising that few studies have included the PCI measure considering that reducing perfectionistic cognitions is perhaps more realistic and attainable (than reducing trait perfectionism) due to the state-like nature of such thoughts. The intervention studies that included the PCI found interventions to be effective in reducing such cognitions (e.g., Kearns, Forbes, & Gardiner, 2007; Arpin-Cribbie et al., 2012; Radhu et al., 2012). However, the designs and intervention types of the studies are different.

Kearns et al. (2007) examined the effectiveness of a 6-week workshop-based cognitive behavioural coaching intervention (a modified form of CBT). Research degree students ( $N = 28$ ) completed measures of perfectionism (F-MPS), PCI, satisfaction with progress and self-handicapping at pre-intervention, post-intervention and at 1-month follow-up. Similar to other studies, a major limitation of this study was that there was no control group and therefore interaction effects were not calculated. Results showed that participants' PCI significantly reduced from pre- to post-intervention and this change was maintained at follow-up. As there was no control group, it is difficult to distinguish intervention outcomes from outcomes related to other factors such as effects of prior treatments (Kinser & Robins, 2013).

Building on previous studies, Radhu et al. (2012) and Arpin-Cribbie et al. (2012) also included the PCI as a measure of intervention effectiveness. In Radhu et al. (2012) a sample of undergraduate students ( $N = 47$ ) were randomly assigned to a 12-week web-based CBT group which aimed to help participants modify their perfectionistic beliefs and their associated effects on mood ( $n = 29$ ) or a waitlist control group ( $n = 25$ ). The interaction effect for PCI was non-significant. However, both the CBT group and the control group reported significant reductions in PCI scores from pre- to post-intervention. Also, for the CBT group, PCI changes were significantly and positively related to changes in perceived stress and negative automatic thoughts.

In contrast to Radhu et al. (2012) who used only a waitlist control group, Arpin-Cribbie et al. (2012) used both a waitlist control group and an active-control group. A sample of undergraduate students ( $N = 77$ ) were randomly assigned to a 10-week web-based CBT intervention aimed at modifying perfectionistic beliefs ( $n = 29$ ), a 10-week web-based general stress management ( $n = 29$ ), or a no treatment group ( $n = 25$ ). A significant interaction effect was found for PCI. Both the CBT and

the stress management group significantly reduced in PCI from pre- to post-intervention. The CBT group decreased significantly more in PCI than the non-treatment group, and the CBT group decreased significantly more in PCI than the stress-management group. Despite both Radhu et al. (2012) and Arpin-Cribbie et al. (2012) supporting that CBT interventions may be a useful way to reduce the frequency of perfectionistic cognitions, a minimal number of CBT intervention studies have included measures of perfectionistic cognitions.

Mindfulness interventions have also been used to help reduce perfectionistic cognitions. Doss and Bloom (2017) conducted a mixed methods study to explore the usefulness of a mindfulness intervention in a group of middle-school gifted students ( $N = 29$ ). The intervention was comprised of a 30-day unit of study on mindfulness techniques (e.g., meditation, mind and body understanding and appreciating the here and now). Participants completed measures of perfectionistic cognitions and stress. With no control group, interaction effects could not be calculated. The results showed that PCI scores did not change from pre- to post-intervention. Doss and Bloom (2017) collected qualitative data and thematic analysis that provided mixed opinions of the intervention (i.e., some students found it useful and others did not).

### **8.3 Complications**

Those higher in perfectionism may be reluctant to reach out for psychological support due to their attitudes towards seeking help. Perfectionism is related to lower likelihood of seeking help for psychological distress (Ey, Henning, & Shaw, 2000). In some studies, perfectionism (SPP) was negatively related to help-seeking attitudes (e.g., Abdollahi, Hosseinian, Beh-Pajooh, & Carlbring, 2017). Shannon, Goldberg, Flett, and Hewitt (2018) found that perfectionistic self-presentation was also negatively related to help-seeking attitudes, but found the relationships between SOP, SPP, OOP and help-seeking attitudes to be non-significant. Other findings suggest that perfectionistic adolescents hold self-stigma in relation to seeking help (Zeifman et al., 2015).

Perfectionism has been shown to interfere with the effects of psychological treatment. For example, in a sample of 239 patients with major depression, perfectionism was related to poorer response to 16-week interpersonal psychotherapy, 16-week CBT, and medication (Blatt, Quinlan, Pilknois, & Shea, 1995; Blatt, Zuroff, Bondi, Sanislow, & Pilkonis, 1998). The higher the level of pre-treatment perfectionism, the lower the treatment gain and the less satisfied the

participants were with all treatments. It has been argued that the poorer treatment response is due to the rigidity of thought patterns associated with perfectionism (e.g., Shafran & Manswell, 2001). Perfectionists' internal dialogue and preoccupation with the need to be perfect results in self-recriminations and subsequently perfectionists are likely to feel dissatisfied and frustrated with themselves and therapy (Blatt & Zuroff, 2002).

In addition to being reluctant to seek help and usually responding poorly to treatment, those higher in perfectionism are also likely to terminate treatment early. Those higher in OOP, compared to those higher in SOP and SPP, are likely to withdraw from treatment early. For example, in a sample of narcissistic cocaine users, OOP was a significant positive predictor of self-termination from abstinence-based treatment (McCown & Carlson, 2004). Poorer response to treatment and termination of treatment can perhaps be explained by a failure to develop a strong therapeutic relationship. A strong therapeutic relationship was found to be a significant mediator between perfectionism and poorer treatment response (Zuroff et al., 2000). Thus, those higher in perfectionism are more likely to prefer intervention where there is no need to build a therapeutic relationship. As such, self-help for perfectionism gives participants an opportunity to be in control of how much they absorb and not have to rely on others.

#### **8.4 Self-help interventions**

Due to the high demand for clinical services, there is a need to find evidence-based alternatives to face-to-face psychology interventions. Self-help—a psychological treatment that enables self-improvement using either a book or technology (i.e., the Internet)—is a way to gain psychological help without reliance on the presence of other people. Self-help does not require attendance at treatment sessions or therapist input as the individual works through the treatment independently. For individuals who have difficulty attending psychology or counselling sessions, self-help may be a more accessible intervention. Psychoeducational books are a form of self-help that is relatively common in counselling and have a strong theoretical and evidence base (e.g., Sysko & Walsh, 2008).

There are numerous self-help books available that target anxiety, depression, stress and other psychological symptoms. Self-help presents a low cost, flexible, and non-intrusive means of providing psychological support, with the advantage that individuals are able to access help as and when required. Self-help provides

individuals with the privacy to help themselves without attending counselling or therapy sessions. The unobtrusive nature of self-help is of particular benefit in regard to perfectionism as perfectionism is related to poorer attitudes towards the use of support services (Oliver, Hart, Ross, & Katz, 2001). Therefore, self-help is a particularly appropriate strategy for individuals who may benefit from managing perfectionism but are likely to shy away from traditional forms of therapy (e.g., group therapy), or when traditional forms of treatment are impractical or unrealistic to implement.

Self-help can be divided into three modes of delivery: pure self-help (e.g., no contact with therapist/practitioner throughout), minimal contact (e.g., irregular contact with therapist), or guided self-help (e.g., regular contact with therapist) (Farrand & Woodford, 2013). Pure self-help is self-administered and there is no input from professionals. Similarly, minimal contact is self-administered but contact is available from the professional albeit not regularly. With guided self-help, individuals are provided with guidance and are encouraged to draw on support from a professional, coach or sport psychologist. Interaction can take place face-to-face, by telephone, by email, or text message.

To determine the efficacy, cost-effectiveness and acceptability of self-help interventions for anxiety disorders, a review of the randomised controlled trials of self-help interventions for anxiety disorders was conducted by Lewis, Pearce and Bisson (2012). This meta-analysis yielded 31 studies and compared the effectiveness of pure self-help, waiting-list and therapist-administered treatment for anxiety disorders. Overall, the comparison of self-help interventions with waiting-list groups showed a significant difference in favour of self-help with an effect size of 0.84. The comparison of self-help interventions with therapist-administered treatments revealed a significant difference in favour of the therapist-administered treatments with an effect size of 0.34. It was concluded that pure self-help interventions were effective and may have a place in the treatment of anxiety given their lower cost and greater accessibility.

Similarly, a meta-analysis by Farrand and Woodford (2013) reviewed RCTs that examined the efficacy of written (i.e., books) CBT self-help in treating affective or common emotional disorders. This meta-analysis yielded 38 studies and examined the effectiveness of different types of support: self-administered, minimal contact and guided. In comparison to the control conditions, written self-help showed an overall medium effect size (Hedges'  $g = -0.49$ , CIs =  $-0.60$  to  $-0.37$ ). Results showed that there was no significant difference in the effect size across the

three categories of self-help delivery (pure self-help Hedges'  $g = 0.42$ , minimal contact self-help Hedges'  $g = 0.55$  and guided self-help Hedges'  $g = 0.53$ ). However, when controlling for baseline levels of depression severity, the effect size was larger for minimal contact self-help than for guided self-help. The results support the contention that minimal contact self-help may be the most useful in treating adults with a range of emotional disorders.

In summary, self-help interventions show promise as effective interventions for treating psychological distress. Research provides support for self-help interventions being useful for reducing anxiety disorders and mental health conditions. It appears that self-help is more effective than a waitlist control group, but not as effective as therapist-administered treatment. When examining what type of self-help is best, the results are mixed. For example, when treating depression, research demonstrates that minimal contact self-help is more effective than guided self-help, but across a range of emotional disorders, there was no significant difference between minimal contact and guided self-help (e.g., Farrand & Woodford, 2013). As those higher in perfectionism may be vulnerable to psychological distress, self-help interventions may also be effective in reducing perfectionism.

#### **8.4.1 Self-help interventions for perfectionism**

Self-help interventions for managing perfectionism have been delivered by using books or via the Internet. The majority of Internet-based interventions have been devised based on CBT books (e.g., Arpin-Cribbie et al., 2012; Musiat et al., 2014; Radhu et al., 2012).

##### **8.4.1.1 Online self-help for perfectionism**

In a sample of adults with elevated perfectionism scores ( $N = 52$ ), Egan et al. (2014) conducted a RCT comparing face-to-face CBT ( $n = 18$ ), pure online self-help CBT for perfectionism ( $n = 16$ ), and a waitlist control ( $n = 18$ ). The online self-help was based on "Overcoming Perfectionism" (Shafran et al., 2010). Participants completed measures of perfectionism (F-MPS), depression, anxiety, eating disorders, self-criticism, self-esteem and life satisfaction. Significant interaction effects were found for PS and CM. The face-to-face group showed significant moderate-to-large reductions in PS and CM from pre- to post- intervention. There was no evidence to support the superiority of face-to-face over pure self-help at post-intervention. At 6-month follow-up, however, the face-to-face group showed significant large reductions in PS and CM and the self-help group showed

significant moderate reductions in PS and CM. Consequently, face-to-face was deemed superior in maintaining changes in perfectionism.

Arpin-Cribbie et al. (2012) examined the effectiveness of a 10-week web-based CBT intervention in reducing perfectionism and psychological distress. The intervention was designed to target cognitive distortions and perfectionistic thinking patterns. A sample of post-secondary students high in perfectionism ( $N = 77$ ) were randomly assigned to either the web-based CBT intervention ( $n = 29$ ), a general stress management intervention (GSM;  $n = 29$ ), or no treatment ( $n = 25$ ). Participants completed measures of perfectionism (HF-MPS, F-MPS, and Almost Perfect Scale-Revised; APS-R), PCI, depression, anxiety and cognitive vulnerability to negative affect at pre- and post-intervention. Results indicated the CBT condition was effective in reducing perfectionism (SOP, SPP, CM, and discrepancy), PCI, and depression. Those in the CBT group showed significantly greater reductions in perfectionism than the other two conditions. The GSM group also showed significant improvements in perfectionism (SOP, CM) and PCI. For the CBT group, the reductions in perfectionism were significantly correlated with changes in depression and anxiety.

Musiat et al. (2014) examined the effectiveness of an online CBT intervention for common mental health disorders in reducing perfectionism. The intervention "PLUS" (Personality and Living of University Students) was based on CBT and aimed to educate students about perfectionism, self-esteem, anxiety, and emotional problems. A sample of university students ( $N = 1047$ ) were randomly allocated to a CBT intervention ( $n = 519$ ) or a control intervention ( $n = 528$ ). Participants completed measures of perfectionism (F-MPS), neuroticism, hopelessness, depression, anxiety, and alcohol use at pre- and post-intervention. Significant interaction effects were observed for measures of perfectionism (PS and CM). Both PS and CM were significantly reduced in the intervention group, whereas scores in the control group increased. In addition, significant interaction effects were found for depression and anxiety. That is, depression and anxiety significantly reduced from pre- to post-intervention in the intervention group, but not the control group.

Finally, Rozental et al. (2017) conducted a randomised controlled trial comparing two types of Internet-Based Cognitive Behaviour Therapy (ICBT). The intervention was based on a protocol for clinical perfectionism developed by Egan et al. (2014). Self-referred participants ( $N = 156$ ) were randomly assigned to either an ICBT with support ( $n = 78$ ) or ICBT with support on request ( $n = 78$ ) as an 8-week treatment of perfectionism. Participants completed two subscales from F-

MPS, the Clinical Perfectionism Questionnaire (CPQ) and measures of depression, anxiety and quality of life at pre- and post-intervention. The results showed no significant interaction effects, but significant pre-post reductions on all measures for both groups were reported. The online guided self-help interventions helped to reduce perfectionism (dimensions of CM and PS) with large effect sizes. Neither significant differences nor considerable effects were detected between groups.

#### **8.4.1.2 Self-help using psychoeducational books**

Another way of managing perfectionism through self-help is by using psychoeducational books. As long as the resources are available, self-help through psychoeducational books can be used for a larger number of participants compared to individual psychology or group psychology sessions. The number of self-help interventions that have used psychoeducational books to manage perfectionism is limited; however, those that do exist provide evidence to support this type of intervention. The following section outlines the studies ( $N = 4$ ) that have examined the effectiveness of self-help, in the form of psychoeducational books, for managing perfectionism. Of the four studies that use psychoeducational books for managing perfectionism, two studies used Antony and Swinson's (1998) self-help book, "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism". This book for managing perfectionism includes a wide range of cognitive and behavioural strategies (e.g., keeping a perfectionism diary, identifying triggers, examining standards and rigid perfectionistic beliefs and developing goals and plans for change). Outside sport, research has demonstrated the use of this book to reduce perfectionism (e.g., Pleva & Wade, 2007; Steele & Wade, 2008).

Pleva and Wade (2007) conducted the first examination of a CBT self-help intervention using "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" to treat perfectionism, OCD and depressive symptoms in a non-clinical group. Participants were those who responded to newspaper and radio advertisements calling for people to participate in a trial of a new self-help treatment. Individuals higher in perfectionism (overall perfectionism score of 84 or higher as measured by the F-MPS) were randomly assigned to either a guided self-help group ( $n = 24$ ) or a pure self-help group ( $n = 25$ ). Participants completed measures of perfectionism (F-MPS), OCD, depression and anxiety at pre-, post-intervention, 4-month follow-up, and 7-month follow-up. Using intention-to-treat analysis, no significant interaction effects were found for perfectionism. As there were significant main effects for time, the authors deemed both forms of self-help (guided and pure) effective in reducing dimensions of perfectionism. The guided



self-help group showed significant reductions in levels of PS across time points. In comparison, pure self-help did not significantly reduce levels of PS. Both the guided and pure self-help significantly reduced CM and DA across time points. Also, both groups showed reductions in OCD, anxiety and depression.

An important finding of Pleva and Wade's study was that, out of the two treatment conditions, the guided self-help group experienced greater symptom improvement but this reduction was due to the amount of reading and exercises participants in this group completed. The guided self-help group completed more of the self-help therapy than the pure self-help group (97% compared to 66%) and once this was taken into account, differences between the two groups no longer existed. This result suggests that engagement with the book brought about the reduction in perfectionism (Pleva & Wade, 2007). However, despite the fact that those in the guided self-help group experienced greater symptom reduction than the pure self-help group on some of the outcome measures, there were no significant differences between groups in their subjective ratings of how useful they found the book, their rating of the book readability, and how easy the exercises were to understand.

Steele and Wade (2008) also examined guided self-help to reduce perfectionism as a treatment for individuals meeting the criteria for bulimia nervosa. Participants ( $N = 48$ ) were randomly assigned to either a 6-weeks of guided self-help perfectionism intervention using the CBT based book for perfectionism "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" (Antony & Swinson, 1998) ( $n = 17$ ), a traditional intervention for bulimia nervosa ( $n = 15$ ) or a placebo intervention ( $n = 16$ ). The placebo intervention involved adapting various techniques from the book "Mindfulness- Based Cognitive Therapy for Depression" (Segal, Williams, & Teasdale, 2002). In comparison to other studies that have used mindfulness techniques as an intervention (e.g., Doss & Bloom, 2017), Steele and Wade argued that the "dismantled nature" of the intervention meant it could not be classified as a "mindfulness" treatment" and was consequently considered a placebo intervention (p.1317). Participants completed measures of perfectionism (F-MPS), eating disorders, self-esteem, depression, and anxiety at pre-, post-intervention, and 6-month follow-up. No significant interaction effects were found for perfectionism. In addition, no significant main effects of group were observed. However, the perfectionism group showed significant improvements in symptoms of perfectionism (PS and CM), bulimia and depression at post-test. At 6-month follow-up, significant differences were maintained in CM and bulimia. Results illustrate that, although no significant interaction effects were found, the self-help book may

be an effective way of reducing perfectionism over time. As evidenced in the two aforementioned studies, both guided and pure self-help interventions using Antony and Swinson's (1998) book resulted in the reduction of perfectionism with predominantly large effects.

In another example, Wimberley, Mintz, and Suh (2016) illustrated that a mindfulness-based self-help book, "Present Perfect" (Somov, 2010) may be helpful for reducing perfectionism. A sample of adults experiencing distress ( $N = 63$ ) were randomly assigned to either a self-help intervention ( $n = 30$ ) or a waitlist control group ( $n = 33$ ). Participants completed measures of perfectionism (APS-R), perceived stress, affect and mindfulness at pre-, post-intervention, and 6-week follow-up. There were significant interaction effects for the two dimensions of perfectionism (high standards and discrepancy). The between-group post-test effect size was large for high standards and medium for discrepancy. Compared to a waitlist group, participants allocated to reading the self-help book over a 6-week period showed greater reductions in perfectionism (high standards and discrepancy) pre- to post-intervention. These reductions were maintained at 6-week follow-up.

More recently, James and Rimes (2018) also conducted a randomised controlled trial examining the effectiveness of mindfulness cognitive therapy intervention compared to a CBT self-help intervention. In this study, the CBT self-help intervention was the control group. University students ( $N = 60$ ) were randomised to either the intervention ( $n = 28$ ) or the self-help group ( $n = 32$ ). Participants completed measures of perfectionism, depression, anxiety, stress, self-compassion, rumination, unhelpful beliefs about emotions, mindfulness and decentering at pre-, post-intervention, and at 10-week follow-up. The interaction effects were not reported. Post-intervention analyses identified that participants in the intervention group had significantly lower levels of perfectionism (PS, CM and CPQ) and rumination than the self-help participants did. These reductions were maintained at 10-week follow-up. The self-help intervention, however, was a 50-page self-help booklet written by the authors for the study, as resources were not available to provide participants with a previously evaluated self-help. Furthermore, only 13 of the 33 self-help participants reported that they had read at least 80% of the self-help guide.

In summary, the quality of the studies examining self-help books is mixed. However, overall, it appears that self-help books (e.g., Antony & Swinson, 1998, 2009) are useful for managing perfectionism when used as the main intervention in

studies. There are no self-help studies, to our knowledge, that exist in sport that use self-help to target perfectionism.

#### **8.4.2 Self-help in sport**

Despite the evidence outside of sport supporting the use of self-help books for reducing perfectionism and researchers in sport advocating the use of self-help strategies for managing perfectionism (see Stoeber, 2011, 2012), to our knowledge, there are no studies conducted in sport that have employed self-help strategies for managing perfectionism. Psychoeducational books have been used in sport mainly to teach psychological skills to athletes or to teach athletes about sport psychology or sports injuries, as opposed to managing perfectionism (e.g., Grisogono, 1989; McCarthy, Jones, Harwood, & Olivier, 2010; R othlin, Birrer, Horvath, & Grosse Holtforth, 2016). Self-help strategies have proven effective in teaching mental skills techniques. For example, Bakker and Kayser (1994) examined the effectiveness of a self-help mental training programme on field hockey performance for high-level athletes ( $N = 25$ ), and found that participants receiving the self-help programme performed significantly better than both a placebo-control and a control group. Those in the intervention group reported feeling more relaxed, more confident, and more able to concentrate, suggesting that self-help can be useful for athletes.

Athletes, in particular, are likely to be accustomed to learning on the move and working in ways similar to self-help strategies. High-level athletes often use workbooks and diaries (e.g., each player in the Scottish national football team completes a daily diary), and therefore, as diaries have been used in sport (e.g., Nicholls & Polman, 2007), reading and completing exercises in a self-help book is likely to feel familiar to athletes. Self-help is low-maintenance and flexible to allow athletes to read at their own pace and balance learning around their sporting commitments. Reading can seamlessly be integrated into their daily lives. Also, in a real world setting, self-help strategies (e.g., homework) are also easily adopted by coaches for their athletes, as minimal input is required. Therefore, self-help books may offer a practical way of helping to reduce perfectionism in athletes and consequently safeguard them from its potential detrimental psychological effects.

#### **8.5 Current study**

The current study builds on the aforementioned limitations of prior studies and adopts a randomised control trial design to test whether a self-help book based on CBT is effective in reducing perfectionism in athletes. To our knowledge, there are no intervention studies in sport that have used self-help to intervene with athletes to

manage their perfectionism. Despite the previously mentioned limitations of studies outside sport, CBT appears to be an adaptable therapy for use with different populations. Therefore, CBT may be useful for managing or reducing perfectionism in athletes. Whilst research outside sport has demonstrated the use of CBT through facilitated interventions, such as individual therapy, group treatment or web-based interventions, the possibility of using CBT through a self-help strategy may be useful for intervening for athletes higher in perfectionism. Since there appears to be no self-help guides specific to sport that would assist athletes in managing perfectionism, it was deemed reasonable to use a self-help guide which has been used to manage perfectionism outside sport. Also, as perfectionism is related to lower likelihood of seeking help and poorer attitudes towards seeking psychological support, the current study measures whether attitudes towards help-seeking improve as a result of being part of an intervention.

## **8.6 Purpose of study four**

The purpose of study four was: (i) to evaluate the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions, and increasing help-seeking attitudes in footballers by employing a randomised control design.

It was hypothesised that:

(1) Footballers in the intervention group, relative to the control group, would experience a reduction in levels of perfectionism (SOP, SPP, OOP), perfectionistic cognitions and negative emotions (anxiety, anger, and dejection), and an increase in help-seeking attitudes.

## **8.7 Method**

### **8.7.1 Participants**

Footballers interested in "managing their perfectionism" were recruited from sports academies, clubs, and national teams across the UK. Participants were informed that they would receive a book about perfectionism. *A priori* power calculations were conducted using G. Power (Faul, Erdfelder, Buchner, & Lang, 2009) to determine sample size needed to detect the smallest significant effect size – the expected proportion of variance explained by the interaction effect above the main effect (Albers & Lakens, 2018). The effect size (*partial*  $\eta^2 = 0.04$ ) was chosen based on the smallest effect size found in ANOVA results in Steele and Wade's

(2008) randomised control trial investigating guided self-help to reduce perfectionism and bulimia nervosa. With power of 0.80, alpha level set at 0.05, and a small effect size of partial  $\eta^2 = 0.04$ , a sample size of 54 ( $n = 27$  per group) was required. An additional six people ( $n = 3$  per group) were to be recruited to allow for drop out (10%), and therefore, the aim was to recruit a sample of 60 participants.

Although the first two studies of this thesis included youth footballers (10 to 19 years old), the third study sample included both youth footballers and adult footballers. The readability of the “When Perfect Isn’t Good Enough: Strategies for Coping with Perfectionism” was tested. This book has previously been used both for a self-help intervention and as the basis of interventions. Several sections of the book were tested and the Flesch-Kincaid Grade Level ranged from 11.1 to 12.6 ( $M = 11.6$ ). The Flesch-Kincaid Reading Ease scores ranged from 45.2 to 51.4 ( $M = 49.2$ ). These scores indicated that the book was suitable for senior secondary school level (A-level; 50 to 59) to college level (30 to 49). Therefore, the decision was made to include participants over 18 years old and exclude adolescents and children.

Participants were 115 high-level male and female footballers (male = 44, female = 71,  $M$  age = 21.62 years,  $SD = 5.03$ , Range = 18 to 34 years) recruited from sports clubs, sports academies, and national teams across the UK. Footballers in the UK are considered youth up until Under-23 level (Premier League, 2017), which aligns with the average age of participants in this study. The mean number of years sport participation was 13.30 years ( $SD = 4.95$ , Range = 3 to 27 years). All participants were given information about the study along with consent forms. Once participants were recruited, all participants completed T1 (pre-intervention) questionnaires within a 2-week period prior to the beginning of the intervention. There were 55 participants randomly allocated to the intervention group and 60 participants allocated to the no-intervention control group.

## **8.7.2 Design**

### **8.7.2.1 Intervention**

The intervention group were given the self-help book “When Perfect Isn’t Good Enough: Strategies for Coping with Perfectionism” (Antony & Swinson, 2009). This book consists of 16 chapters, 53 exercises and is 280 pages in length. The book is split up into four sections addressing the following topics: identifying perfectionism and the way it manifests; changing perfectionistic thoughts; changing perfectionistic behaviours and strategies to manage perfectionism in the future. The first part consists of four chapters that focus on understanding perfectionism, its

impact and the relationship between thoughts and behaviours. The second part is comprised of five chapters outlining strategies for overcoming perfectionism and how to accept imperfection. The third part addresses specific problems related to perfectionism—depression, anger, social anxiety, worry, obsessive-compulsive behaviour, dieting and body image—and how to work with them. Finally, the last chapter describes how to prevent perfectionism from returning, along with suggested further reading. In each chapter, there are exercises to complete which included “identifying your perfectionism triggers”, “your perfectionism diary”, and “writing your epitaph”. This book has been used in two previous studies investigating the efficacy of self-help strategies to reduce perfectionism (Pleva & Wade, 2007; Steele & Wade, 2008).

### **8.7.2.2 Control group**

Participants in the second group were the no-intervention control group. The control group were given another information sheet to inform them that they could access the intervention when the books became available (see Appendix B.8). Upon completion of the intervention, participants were informed that the books were available.

### **8.7.2.3 Intention-to-treat versus per protocol analysis**

Intention-to-treat is a method of analysis where all participants in the groups they were randomly allocated to are analysed together, regardless of whether they completed the treatment or not (Fisher, 1990). Everyone who begins the intervention is considered part of the study, regardless of whether they have dropped out, or fully adhered to the protocol or not. For those who dropped out or did not fully adhere with the protocol, their missing data is dealt with by carrying forward the scores of the last available measurement (Streiner & Geddes, 2001). Intention-to-treat analyses are often used to assess clinical effectiveness because they mirror actual practice where not everyone will adhere fully to the protocol (e.g., Sabin, Lepri, & Phillips, 2000). “Per protocol” is the alternative analysis where only data from participants who fully adhered to the programme are analysed (Ranganathan, Pramesh, & Aggarwal, 2016). Participants who drop out or do not adhere to the intervention fully are not included in the analysis. This type of analysis is often used to assess the efficacy of an intervention or treatment, whereas intention-to-treat analysis answers a research question regarding the effectiveness of an intervention or treatment.

Numerous studies in this area have implemented an intention-to-treat approach to analyse their data (e.g., Fergusson, Aaron, Guyatt & Hébert, 2002;

Pleva & Wade, 2007; Riley et al., 2007; Steele & Wade, 2008). Pleva and Wade (2007) rationalised that including dropouts in analysis is a better representation of the reality of treatment as people who drop out of therapy will presumably not benefit from the treatment, and therefore if there is a high dropout rate for a particular treatment, that treatment is assumed to be less effective. As such, the principles of intention-to-treat analysis will be used in this study and the last data points are carried forward to all subsequent time points for participants who drop out from T1 onwards. This analysis will also include participants who read none or very little of the books.

### **8.7.3 Measures**

All measures were completed pre-intervention (T1), post-intervention (T2), and at follow-up (T3).

#### **8.7.3.1 Multidimensional Perfectionism Scale**

Self-oriented perfectionism (SOP), socially prescribed perfectionism (SPP) and other-oriented perfectionism (OOP) were assessed using Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (HF-MPS). See Chapter 7 for a discussion of this measure and Appendix C.1 for the measure.

#### **8.7.3.2 Perfectionistic Cognitions Inventory**

The Perfectionistic Cognitions Inventory (PCI; Flett et al., 1998) measured perfectionistic cognitions. See Chapter 5 for a discussion of this measure and Appendix C.3 for the measure.

#### **8.7.3.3 Sport Emotion Questionnaire**

The Sport Emotion Questionnaire (SEQ; Jones et al., 2005) was used to measure pre-competition anxiety, dejection, anger, excitement, and happiness. See Chapter 5 for a discussion of this measure and Appendix C.4 for the measure.

#### **8.7.3.4 The Attitudes Towards Seeking Professional Psychological Help-Short Form**

The Attitudes Towards Seeking Professional Psychological Help-Short Form (ATSPPH-SF; Fischer & Farina, 1995) was included to measure any potential changes in athletes' attitude towards seeking psychological support (see Appendix C.7). The ATSPPH-SF is a 10-item shortened version of Fischer and Turner's (1970) 29-item scale consisting of items such as "If I believed I was having a mental breakdown, my first inclination would be to get professional attention." Each item is rated on a 4-point Likert-type scale (0 = *disagree*, 3 = *agree*) where items 2, 4, 8, 9,

and 10 are reverse scored. Scores are summed together and higher scores reflect more positive attitudes toward seeking professional psychological help.

The ATSPPH-SF has documented psychometric support (Elhai, Schweinle, & Anderson, 2008; Fischer & Farina, 1995; Komiya, Good, & Sherrod, 2000) whereby this measure demonstrated internal consistency ranging from  $\alpha = .82$  to  $\alpha = .84$  (Constantine, 2002; Fischer & Farina, 1995; Komiya et al., 2000). In a sample of college students, the ATSPPH-SF evidenced adequate internal consistency ( $\alpha = .77$ ), and inter-item correlations were primarily  $r = .30$  or less, with rare instances approaching  $r = .50$ . Most item-total correlations were higher than  $r = .40$ , with only one below  $r = .30$ . In a sample of medical patients, the scale also evidenced adequate internal consistency ( $\alpha = .78$ ). Inter-item correlations were generally  $r = .30$  or less, with a few instances around  $r = .40$ . Most item-total correlations were higher than  $r = .40$ , with none below  $r = .30$  (Elhai et al., 2008). Furthermore, 1-month test-retest reliability of  $r = .80$ , and the correlation between the 10-item short form and the original 29-item scale was  $r = .87$  in a sample of college students (Fischer & Farina, 1995).

Fischer and Farina (1995) presented evidence of construct validity for the Short Form's correlation of  $r = 0.89$  with the original 29-item ATSPPH. Further examining the construct validity, Elhai et al. (2008) found that the ATSPPH-SF displayed a significant negative and medium correlation with the Stigma Scale for Receiving Psychological Help. As expected, this analysis revealed that higher ATSPPH-SF scores (indicating more favourable treatment attitudes) were related to less stigma-related treatment concerns. The relationship between ATSPPH-SF and physical and mental health functional impairment or depression was non-significant, but ATSPPH-SF scores were positively related to greater intentions to seek mental healthcare in the next month, and at 6 months. Evidence was found in support for the criterion validity in a sample of college students whereby recent service users scored significantly higher in ATSPPH-SF than non-users. Similar results were found for use with recent mental healthcare users and medical patients (e.g., Elhai et al., 2008).

#### **8.7.3.5 Adherence**

Participants in the intervention group were asked to complete questions about adherence to the readings based on the questions used in Pleva and Wade's (2007) study (see Appendix C.8). The questions included: how much of the book they read; how many of the exercises they completed; how much time was spent on reading the book; how much time was spent on the exercises; how useful they



found the book and exercises; how easy they found the book to read and how able they were to understand the book.

#### **8.7.4 Procedure**

Institutional ethics approval was obtained from York St John University (see Appendix A.3). Following approval, gatekeepers (e.g., head coaches/managers of clubs, performance schools and academies) were contacted to inform them of the study and its requirements (intervention) and were asked to invite footballers interested in managing perfectionism to take part. When gatekeepers agreed, player information sheets and consent forms (see Appendix B.6) were sent. The gatekeeper was asked to distribute the information to players at group level to reduce the likelihood that players feel obligated to take part and to ensure that all players in the team received the information about the study. The information sheet asked the players to complete the consent form if they were interested and return it directly to the lead researcher via post or email.

As the researcher had access to various football teams due to working with clubs in sport psychology, participants were also recruited when the researcher was working with teams. These footballers were sent emails detailing the study. The players were offered the opportunity to take part in the study and were provided with an Information Sheet and Consent Form (see Appendix B.7). Informing the players of the study through email allowed players sufficient time to think about participation; additionally, responding via email may have been an easier way for players to decline participation. The players were informed of the potential start date of the study and when there was no response, it was assumed that the player was not interested in taking part.

Due to the nature of the study (i.e., self-help), and because the study aimed to examine the effectiveness rather than efficacy of a self-help strategy, no incentive was offered to take part in the study and all participants were volunteers. It was made clear throughout the process that participation was voluntary and participants were able to withdraw at any point. Participants were informed that they would complete a questionnaire at three time points and could skip questions that they did not wish to answer. Initially, participants were informed they would be given a book to read for a 7-week period but to allow for enough time for reading, this was changed to an 8-week period in line with Pleva and Wade (2007). Care was taken not to give the sense that perfectionism was something negative and no information was provided on perfectionism in any of the information sheets and consent forms. Pre-intervention questionnaires were completed at the participants'

training/match location as arranged by the researcher or the questionnaire was posted to participants with a stamped and addressed return envelope.

A randomised pre-test, post-test design was used (Figure 8.1). Participants were randomised to receive the self-help book or to be in the control group. The random allocation sequence was generated using “block randomisation” which involved using a computer generated random number sequence in blocks of 2 (i.e., 2 groups). There were 55 participants randomly allocated to the intervention group and 60 participants randomly allocated to control group. The intervention group were given a copy of the book “When Perfect Isn’t Good Enough” (Antony & Swinson, 2009) and asked to read the book within the 8-week period. Participants were encouraged to read the first two sections of the books and to read chapters in the third section if they felt they were relevant to them. Specifically, the correspondence to participants said, “the first section gives you an understanding of perfectionism. The second section I believe is the most important (chapter 3-10). This section gives you many exercises to work through and help you manage perfectionism. I would recommend getting a journal and completing the tasks outlined in the book. The third section will perhaps be the least relevant but you will find some important information about the potential negative outcomes of perfectionism.”

Furthermore, they were also encouraged to ask for help if needed. For example, “some of the words and activities in the book may be quite challenging, feel free to email me with any questions or not read any parts that you cannot understand.” Participants in the intervention group were contacted via email or text message during week 2, 4 and 6 to check their progress with the book and to allow them to ask any questions. The emails/texts were standardized (e.g., I was hoping you could provide me with some feedback on your progress with the book by answering a few questions. Please contact me if you have any questions). A very small number of participants provided information on the progress and one question was asked about book (e.g., how long do we have left to read the book?). The individuals on control group were informed that they were on the waiting list for the intervention and the book would be made available to them in approximately twelve weeks if they still wished to receive it (see Appendix B.8).

Post-intervention measures were mailed to participants and were asked to complete the questionnaire when returning the book. Post-intervention (T2) questionnaires were given to all participants to complete at the end of the 8-week period. As part of the T2 assessment, participants in the intervention group were

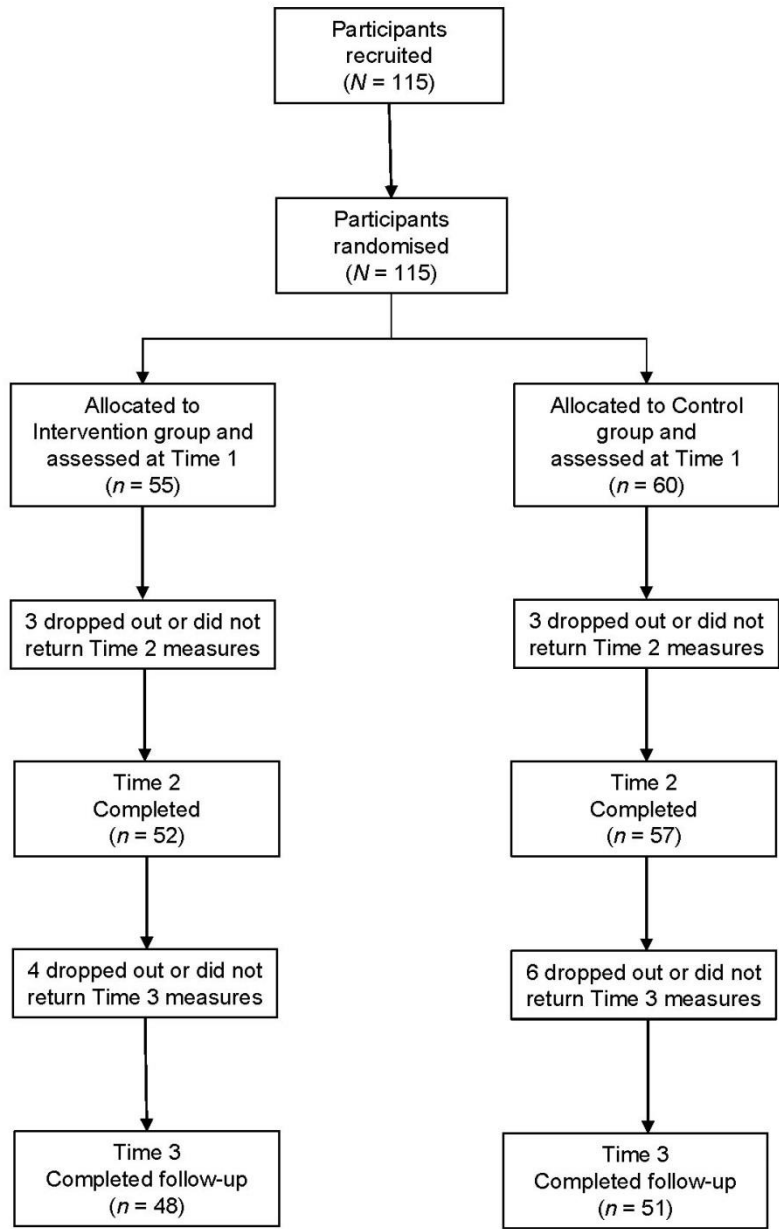
asked to complete questions about adherence to the readings. This measure was based on the questions used in Pleva and Wade's (2007) study (see Measures). Furthermore, participants were asked what they learned, if anything, what they found helpful, if anything, and if they had any comments or questions.

#### **8.7.4.1 Ethical considerations**

Following the procedures agreed by the institutional ethics committee, participants were given an information sheet prior to the study to ensure they had full understanding of what was required of them. Participants signed a consent form (see Appendix B.8 and B.9) agreeing that they understood that their participation in the study was voluntary and they could leave the study at any point without prejudice. As it was possible that some participants may find some questions sensitive, the information sheet indicated that this was the case, and that participants could skip questions they not wish to answer. This information was reiterated by the researcher upon distribution of the information sheets and consent forms before the questionnaire are distributed.

The book focuses on relatively non-sensitive content, and participation was considered to entail minimal risks for the participants. The demand on participants was considered light to moderate (completion of a short questionnaire and completing reading/exercises in a book). As there may have been potential for some discomfort and/or inconvenience due to the nature of the study, the researcher contacted the participants fortnightly to allow them to ask any questions about the book. Participants were provided with resources of support (e.g., help-line, psychological services at their organisation) on the information sheet and were encouraged to seek support if reading the book caused them to be upset or distressed.

Participants were asked to respond to the questions in an open and honest way. Throughout the course of the intervention, no issues were raised by participants to cause concerns for their safety. Mainly, participants contacted the researcher to ask practical questions (e.g., when they had to return the book by). At the end of the study, participants were thanked for their involvement, debriefed, and provided resources in case participants experienced any psychological distress. When responding to the open-ended questions, three participants said that reading the book made them aware that they required more help and subsequently were seeking one-to-one psychological help. Two of the three participants sought further sport psychology support which was available at their organisation.



**Figure 8.1** CONSORT diagram showing the flow of participants through each stage of the study.

### 8.7.5 Statistical analyses

All statistical analyses were performed with SPSS version 23.0 (Statistical Package for Social Sciences; IBM, USA). Demographic characteristics were compared between the control group and the intervention group, as presented in Table 8.2. Chi-square analyses were used to test for group differences. Baseline differences on outcome measures for both groups were investigated using independent *t*-tests. Using intention-to-treat analyses, the last available data for each dropout were carried forward to all subsequent points in time to include all 115 participants in the statistical analyses. Demographic characteristics and scores on outcome measures were compared between the completers and dropouts using Independent *t*-tests (see Table 8.3). Pearson's product moment correlation were used to investigate the relationships between levels of perfectionism, perfectionistic cognitions, help seeking attitudes, pre-competition emotions from T1, T2, and T3 (see Table 8.4 and Table 8.5).

A 2 x 3 mixed factorial analysis of variance (ANOVA) was the main analysis. The between-subjects variable was group (intervention or control) and the within-subject variable was time (T1, T2, and T3). When there was a statistical difference between intervention and control at T1, data were analysed using an analysis of covariance (ANCOVA) with T2 and T3 measures and using the pre-test (T1) measurement as a covariate. When there were no significant differences between intervention and control group at T1, data were analysed using an analysis of variance (ANOVA) to examine the differences between intervention and the control groups regarding changes across time points.

Within-group differences were calculated using dependent samples *t*-tests. Between-group effects were calculated using Cohen's *d* within-group. Post-hoc tests (Bonferroni) were used to investigate significant main effects. A full range of simple effects (using paired sample *t*-tests) were also conducted in order to examine changes within the two groups across each time point. This analysis provides a full decomposition of effects (see Table 8.7 and 8.8). The effect size

(Cohen's *d*) for within-group effects was calculated using the formula 
$$\left[ \frac{(Mean_1 - Mean_2)}{\sqrt{((SD_1^2 + SD_2^2)/2)}} \right] / [1 - (\sqrt{r_{1,2}})]$$
, where *Mean*<sub>1</sub> is the pre-test mean, *Mean*<sub>2</sub> is the post-test mean, *SD* 1 is the pre-test standard deviation, *SD* 2 is the post-test standard deviation and *r*<sub>1,2</sub> is the correlation between the outcome measure at pre-test and post-test (Cohen, 1988). For effect sizes, 0.20 denotes a

small effect, 0.50 a moderate effect and 0.80 a large effect (Cohen, 1988). Partial  $\eta^2$  statistics were calculated to determine the effect size of the interaction effects (Richardson, 2011). A partial  $\eta^2 = .01$  signifies a small effect, a partial  $\eta^2 = .06$  signifies a moderate effect and a partial  $\eta^2 = .15$  signifies a large effect.

## 8.8 Results

### 8.8.1 Participant flow and sample characteristics

Participants were 115 high level male and female footballers (male = 44, female = 71) with a mean age of 21.62 years ( $SD = 5.03$ , Range = 18 to 34 years). The mean number of years sport participation was 13.30 years ( $SD = 4.95$ , Range = 3 to 27 years). Figure 8.1 presents a summary of the flow of participants through each stage of the study. Of the 115 participants, 55 participants were allocated to the intervention group (male = 22, female = 33;  $M$  age = 21.16 years,  $SD = 4.65$ ) and 60 were allocated to the control group (male = 22, female = 38;  $M$  age = 22.05 years,  $SD = 5.39$ ). The mean number of years playing football was 12.66 years ( $SD = 4.59$ ) for the intervention group and 13.90 years ( $SD = 5.25$ ) for the control group.

### 8.8.2 Contextual information

Participants were asked about the importance of their next competition on a 7-point scale (1 = *not important*, 7 = *very important*). At pre-intervention, the average rating of importance was 6.13 ( $SD = 1.31$ , Range = 1 to 7). The average time until their next game was 144.60 hours ( $SD = 162.90$ , Range = 2 to 720 hours). Participants expected they would perform on average 7.63 out of 10 ( $SD = 2.00$ , Range = 1 to 10). At post-intervention, the average rating of importance was 5.62 ( $SD = 1.77$ , Range = 1 to 7) and the average time until the next game was 50.69 hours ( $SD = 106.81$ , Range = 0 to 960 hours). Participants expected they would perform on average 7.38 out of 10 ( $SD = 1.67$ ). At follow-up, the average rating of importance was 5.42 ( $SD = 1.89$ , Range = 1 to 7) and the mean time until the next game was 58.66 hours ( $SD = 90.46$ , Range = 0 to 720 hours). Participants expected they would perform on average 7.60 out of 10 ( $SD = 1.72$ ).

### 8.8.3 Internal reliability

In order to assess the internal consistency of the scales used in this study, Cronbach's alpha was calculated for all scales at each of the three time points. Internal consistencies for all scales at each time point in the study are presented in Table 8.1. The overall consistency for the subscales are considered good to excellent ( $\alpha > .80$ ) apart from OOP, which is considered acceptable ( $\alpha > .75$ ).

**Table 8.1** Internal reliability coefficients for all scales

	Cronbach's Alpha ( $\alpha$ )		
	T1	T2	T3
Self-oriented perfectionism	.85	.85	.88
Socially prescribed perfectionism	.82	.83	.83
Other-oriented perfectionism	.78	.77	.77
PCI	.92	.93	.93
Help seeking	.80	.78	.79
Anxiety	.89	.92	.89
Anger	.90	.87	.88
Dejection	.92	.88	.93
Happiness	.97	.89	.87
Excitement	.84	.87	.88

#### **8.8.4 Comparison of groups at baseline**

Independent samples *t*-tests demonstrated that there were no significant differences between the intervention group and the control group on demographic variables at baseline (see Table 8.2). The distribution of gender between groups was not significantly different,  $\chi^2(1) = .98, p > .05$ . There were also no significant differences in age between the intervention group ( $M = 21.16, SD = 4.65$ ) and the control group ( $M = 22.05, SD = 5.39$ ),  $t(113) = -0.95, p = >.05$ . Additionally, there were no significant differences between years played football between intervention ( $M = 12.66, SD = 4.59$ ) and control ( $M = 13.89, SD = 5.24$ ),  $t(113) = -1.34, p = >.05$ . In order to look for any significant differences on outcome measures between the two groups at T1, independent *t*-tests were carried out and indicated that there was a statistically significant difference for SOP between the control group ( $M = 5.17, SD = 0.73$ ) and the intervention group at T1 ( $M = 5.60, SD = 0.74$ ),  $t(113) = 3.08, p < .01$ . There were no other significant differences between the two groups at T1.



**Table 8.2** Differences between intervention and control group on age, years played and outcome variables at T1

Variable	Intervention <i>M</i> ( <i>SD</i> )	Control <i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>p</i> )	Cohen's <i>d</i>
Age	21.16 (4.65)	22.05 (5.39)	-0.95 (.35)	-0.18
Years playing football	12.66 (4.59)	13.90 (5.25)	-1.34 (.18)	-0.25
Self-oriented perfectionism	5.60 (0.74)	5.17 (0.73)	3.08 (.00)	0.58
Socially prescribed perfectionism	4.05 (0.94)	3.94 (0.72)	0.72 (.48)	0.14
Other-oriented perfectionism	4.09 (0.68)	4.31 (0.81)	-1.51 (.13)	-0.28
Perfectionistic cognitions	2.36 (0.74)	2.21 (0.71)	1.09 (.28)	0.21
Help	2.12 (0.60)	2.18 (0.56)	-0.55 (.58)	-0.10
Anxiety	1.97 (1.17)	1.72 (1.07)	1.19 (.24)	0.22
Dejection	0.91 (1.16)	0.69 (0.89)	1.14 (.28)	0.21
Excitement	2.05 (1.04)	2.32 (1.07)	-1.37 (.72)	-0.26
Anger	0.98 (1.15)	0.80 (0.90)	0.97 (.34)	0.18
Happiness	1.63 (1.04)	1.94 (1.05)	-1.59 (.94)	-0.30

### **8.8.5 Dropout**

Three participants in the intervention group dropped out at T2 (2.61%). Participants dropped out because the intervention time fell at the same time as training for the police ( $n = 1$ ), due to a heavy playing schedule ( $n = 1$ ), and because they were released from the academy and returned home ( $n = 1$ ). Three participants in the control group also dropped out at T2 (2.61%). Two players were released from their club and were trying to secure other contracts. The other participant was injured and she felt that she would no longer benefit from the intervention. Six participants (5.22%) in the control group did not return their T3 measures, despite numerous reminder emails. Another four participants in the intervention group (3.48%) failed to return their questionnaire at T3: one moved jobs and re-located, indicating it was a busy time, two participants did not return the questionnaire within the timeframe and one participant did not respond to email correspondence.

### **8.8.6 Comparison of dropouts versus completers in the intervention group**

A series of independent  $t$ -tests were carried out to investigate any differences between dropouts and completers of the intervention group only. This analysis was used in order to examine any differences that might have contributed to dropout specifically from the intervention group, rather than dropout from the study as a whole, regardless of group. Table 8.3 shows the differences between the dropouts and completers in the intervention group at T1. There were no significant differences in the variables between the dropouts and completers in this group apart from excitement. The dropout group reported higher excitement ( $M = 2.58$ ,  $SD = 0.68$ ) than the completers ( $M = 2.12$ ,  $SD = 1.10$ ),  $t(113) = -1.60$ ,  $p = .03$ , Cohen's  $d = -0.30$ . The effect size was small.

**Table 8.3** Differences between dropouts and completers on age, years played and outcome variables at T1

Variable	Dropout <i>M</i> ( <i>SD</i> )	Completer <i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>p</i> )	Cohen's <i>d</i>
Age	20.06 (2.84)	21.87 (5.28)	1.33 (.18)	0.25
Years playing football	14.00 (2.85)	13.18 (5.22)	-0.61 (.54)	-0.11
Self-oriented perfectionism	5.28 (0.75)	5.40 (0.77)	0.58 (.56)	0.11
Socially prescribed perfectionism	4.04 (0.86)	3.99 (0.83)	-0.21 (.83)	0.04
Other-oriented perfectionism	4.40 (0.81)	4.17 (0.74)	-1.12 (.27)	-0.21
Perfectionistic cognitions	2.40 (0.77)	2.27 (0.72)	-0.66 (.51)	-0.12
Help	2.01 (0.60)	2.18 (0.58)	1.05 (.30)	0.20
Anxiety	1.88 (1.03)	1.84 (1.15)	-0.12 (.91)	-0.02
Dejection	0.73 (0.87)	0.81 (1.06)	0.31 (.47)	0.06
Excitement	2.58 (0.68)	2.12 (1.10)	-1.60 (.03)	-0.30
Anger	0.83 (0.85)	0.90 (1.06)	0.25 (.81)	0.05
Happiness	2.09 (0.72)	1.73 (1.09)	-1.27 (.06)	-0.24

**Table 8.4** Bivariate correlations for perfectionism, perfectionistic cognitions, help-seeking attitudes and pre-competition emotions at T1 ( $N = 115$ )

	1	2	3	4	5	6	7	8	9
1. SOP									
2. SPP	.41**								
3. OOP	.31**	.26**							
4. PCI	.49**	.54**	.25**						
5. Help	-.10	-.04	-.34**	.02					
6. Anxiety	.27**	.43**	.16	.46**	.10				
7. Dejection	.08	.33**	-.25**	.21*	.25**	.33**			
8. Excitement	.02	-.10	.23*	.03	-.08	.07	-.45**		
9. Anger	.06	.31**	-.20*	.15	.23*	.29**	.90**	-.44**	
10. Happiness	-.07	-.15	.13	-.07	.01	-.08	-.36**	.74**	-.36**

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, Help = help-seeking attitudes, \* $p < .05$ , \*\* $p < .01$ , two-tailed.

**Table 8.5** Bivariate correlations for dimensions of perfectionism, perfectionistic cognitions, help seeking attitudes and pre-competition emotions at T2 and T3 (*N* = 115)

	Time 2									Time 3								
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
1. SOP																		
2. SPP	.29**									.18								
3. OOP	.48**	.23*								.45**	.16							
4. PCI	.47**	.44**	.35**							.49**	.39**	.35**						
5. Help	-.07	-.07	-.14	.07						-.13	-.11	-.25**	-.02					
6. Anxiety	.17	.23*	.14	.41**	.10					.20*	.17	.18*	.45**	-.12				
7. Dejection	.02	.30**	.09	.28**	.08	.51**				.07	.28**	.02	.26**	-.03	.48**			
8. Excitement	.22*	.00	.21*	.12	-.10	.08	-.25**			.02	-.18	.30**	.11	-.20**	.14	-.32**		
9. Anger	-.09	.23*	.05	.14	-.01	.44**	.84**	-.14		.09	.26**	.12	.20*	-.07	.42**	.90**	-.25**	
10. Happiness	.22*	.01	.17	.17	-.06	-.03	-.17	.78**	-.10	.03	-.12	.23*	.06	-.15	-.02	-.34**	.78**	-.27**

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, Help = help-seeking attitudes, \**p* < .05, \*\**p* < .01, two-tailed.

### **8.8.7 Difference between and within groups over time**

Differences between the two groups in terms of scores across time were examined using a 2 (group) x 3 (time) repeated measures analysis of variance using intention-to-treat analysis. As described below, statistically significant main effects for time emerged for SOP, anxiety, anger, dejection, and happiness before competition. Statistically significant main effects for group emerged for SOP, OOP, PCI, and anxiety. Finally, statistically significant interaction effects emerged for SPP, PCI, anxiety, anger, and dejection.

#### **8.8.7.1 Self-oriented perfectionism**

To examine changes within SOP between the groups across time, a 2 (group) x 3 (time) repeated measures ANOVA was conducted. Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 12.34, p = .002$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied and degrees of freedom were corrected. The main effect for group on SOP was non-significant. The main effect for time on SOP was significant (moderate effect size). There was a significant interaction effect (moderate effect size). The interaction effect is plotted in Figure 8.2.

When examining the simple effects for the interaction, there was a significant difference between the intervention group and control at T1 but no other time points. For the intervention group, there was a significant decrease in SOP between T1 and T2 ( $M$  difference = 0.68,  $t(52) = 6.98, p = .000$ ) and between T1 and T3 ( $M$  difference = 0.63,  $t(48) = 5.68, p = .000$ ). There were no significant differences for control group across time points.

Since there was a significant difference between intervention group and control group at T1 for SOP, an ANCOVA was conducted with T1 SOP as the covariate. This analysis showed a significant main effect for group (moderate effect size). There was a significant main effect for time (small effect size). There interaction effect was non-significant.



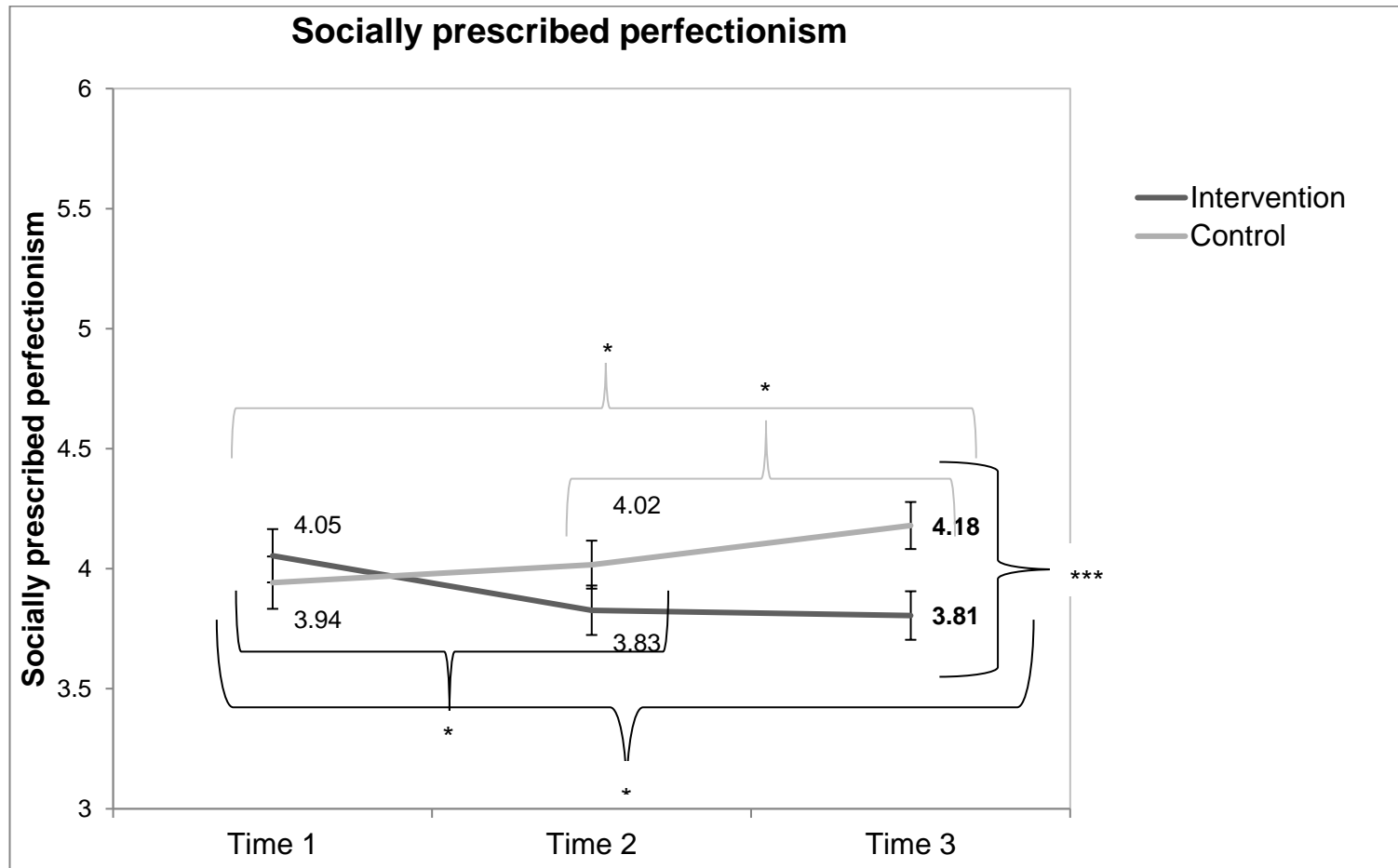
**Figure 8.2** Graph showing the interaction effect on self-oriented perfectionism. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### 8.8.7.2 Socially prescribed perfectionism

A 2 (group) x 3 (time) repeated measures ANOVA examined whether the two groups differed in SPP across time. Mauchly's test indicated that the assumption of sphericity has been violated,  $\chi^2(2,112) = 27.71, p = .000$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied and degrees of freedom were corrected. The main effect for group was non-significant. The main effect for time was also non-significant. There was a significant interaction effect (small effect size). The interaction effect is plotted in Figure 8.3.

When examining the simple effects for the interaction, there were no significant differences between the two groups at T1:  $F(1,113) = 0.51, p = .476, d = 0.20$  or at T2:  $F(1,113) = 1.75, p = .188, d = 0.29$ . There was a significant difference between groups at T3:  $F(1,113) = 7.06, p = .009, d = 0.51$  whereby SPP scores were significantly lower for the intervention group ( $M = 3.81, SD = 0.77$ ) compared to the control group ( $M = 4.18, SD = 0.64; M \text{ difference} = -0.38, p = .01$ ). The effect was moderate. The intervention group showed a significant decrease in SPP from T1 to T2:  $M \text{ difference} = 0.24, t(55) = 2.01, p = .049, d = 0.28$ , no significant change from T2 to T3:  $M \text{ difference} = .02, t(48) = 0.365, p = .717, d = 0.05$ , and a significant decrease in SPP from T1 to T3:  $M \text{ difference} = 0.20, t(48) = 2.32, p = .024, d = 0.34$ . The control group showed no significant change between T1 and T2:  $t(58) = 1.08, p = .282, d = -0.14$ . There was a significant increase in SPP in the control group between T2 and T3:  $M \text{ difference} = .16, t(58) = -2.44, p = .018, d = -0.32$ , and a significant increase in SPP between T1 and T3:  $M \text{ difference} = 0.24, t(58) = -2.52, p = .015, d = -0.33$ .

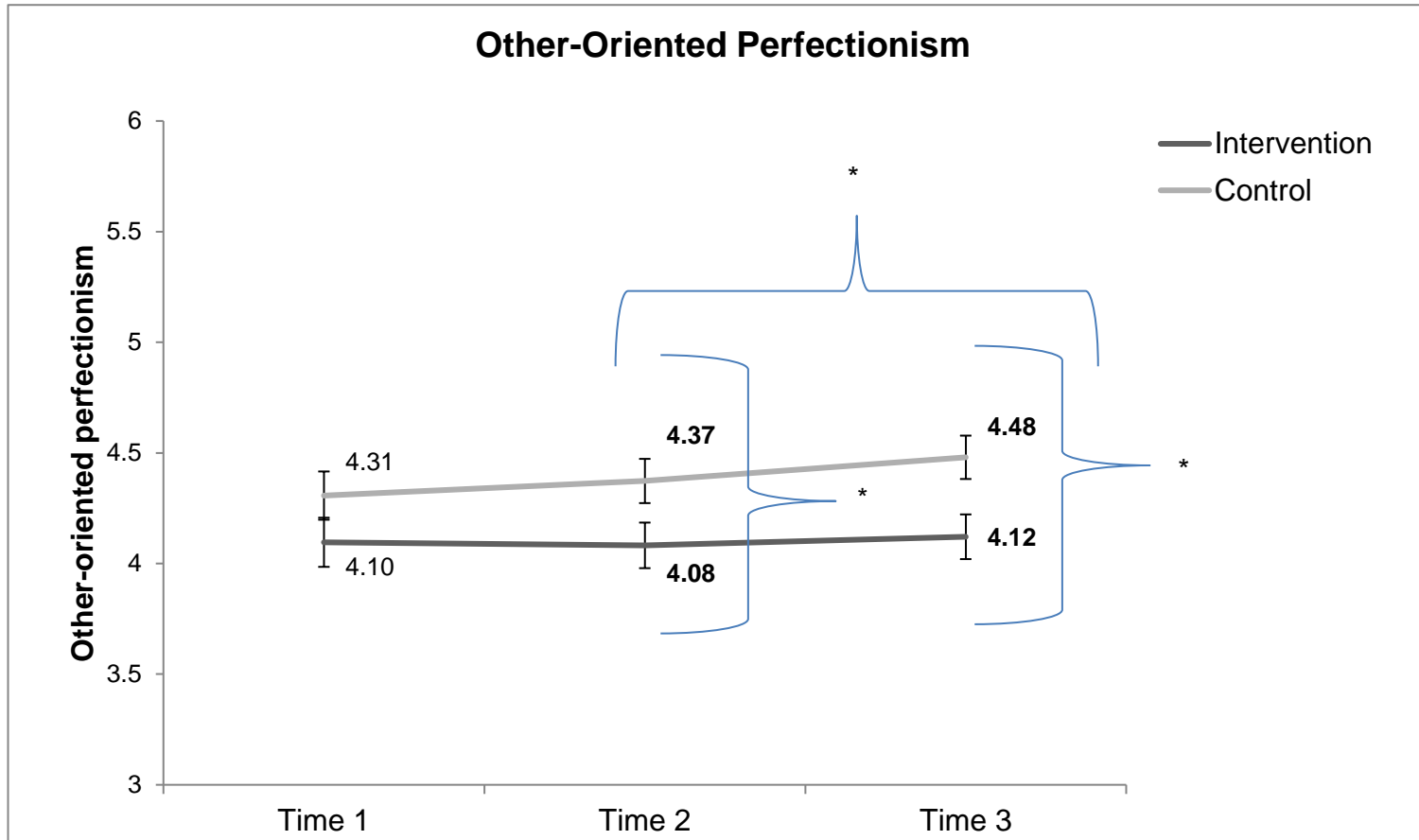




**Figure 8.3** Graph showing the interaction effect on socially prescribed perfectionism. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### 8.8.7.3 Other-oriented perfectionism

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 6.20, p = .045$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. The main effect for group was significant (small effect size). The main effect for time was non-significant. The interaction effect was non-significant (see Figure 8.4). When examining the simple effects, there was no difference between the intervention group and the control group at T1 but there was a significant difference between intervention group and control group at T2 ( $F(1,113) = 4.91, p = .03, d = 0.41$ ) and at T3 ( $F(1,113) = 8.07, p = .005, d = 0.55$ ). At T2, the intervention group was significantly lower on OOP ( $M = 4.08, SD = 0.71$ ), than the control group ( $M = 4.37, SD = 0.70$ ), and at T3, the intervention group ( $M = 4.12, SD = 0.69$ ) was significantly lower than the control group ( $M = 4.48, SD = 0.67$ ). There were no significant changes across time for the intervention group. There was a significant increase in OOP from T1 to T3 for the control group:  $M$  difference =  $-0.17, t(58) = -2.51, p = .02$ .



**Figure 8.4** Graph showing the interaction effect on other-oriented perfectionism. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

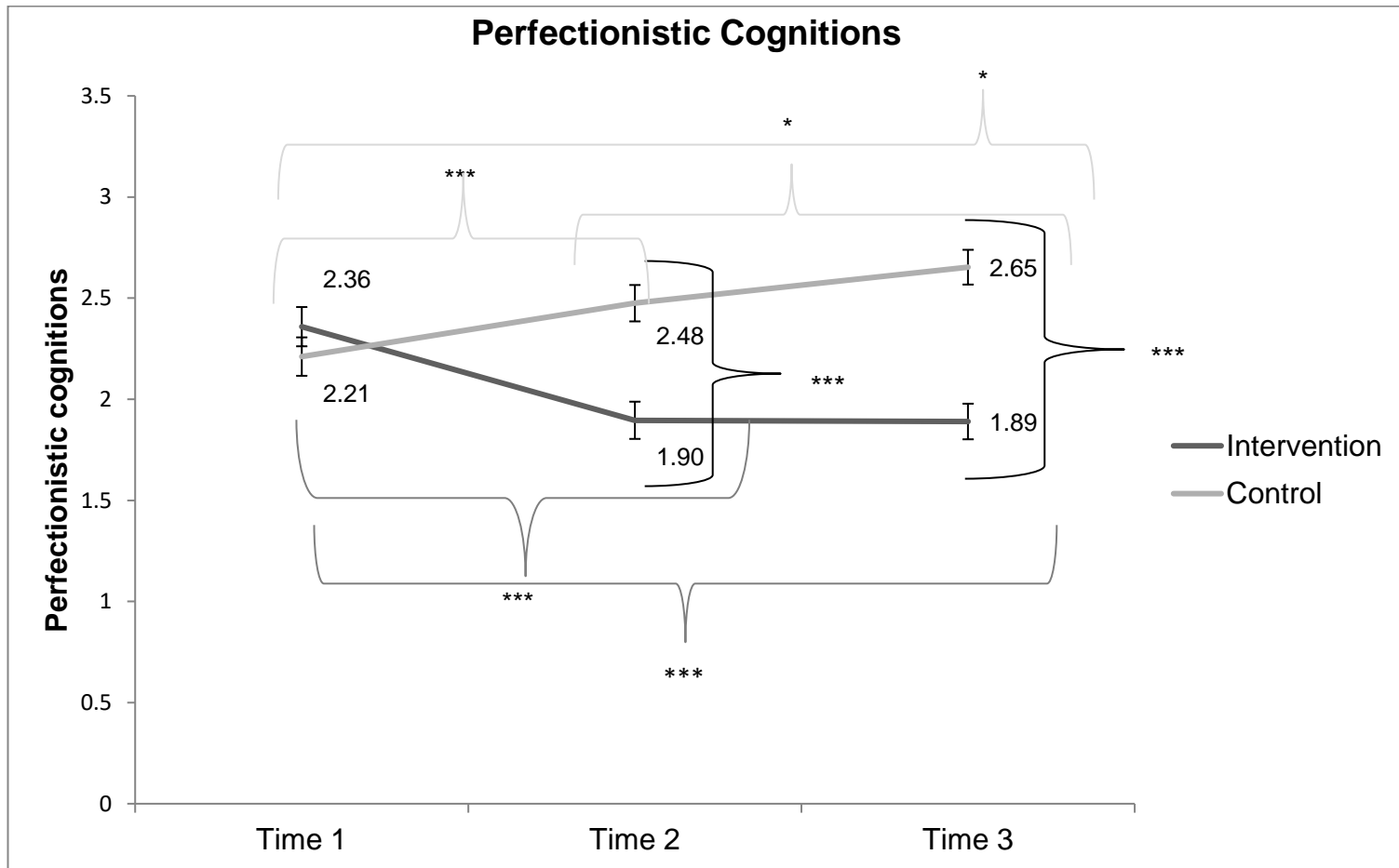
#### 8.8.7.4 Perfectionistic cognitions

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 9.64, p = .008$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. There was a significant main effect for group (small effect size). The main effect for time was significant (small effect size). There was a significant interaction effect (moderate effect size). The interaction effect is plotted in Figure 8.5.

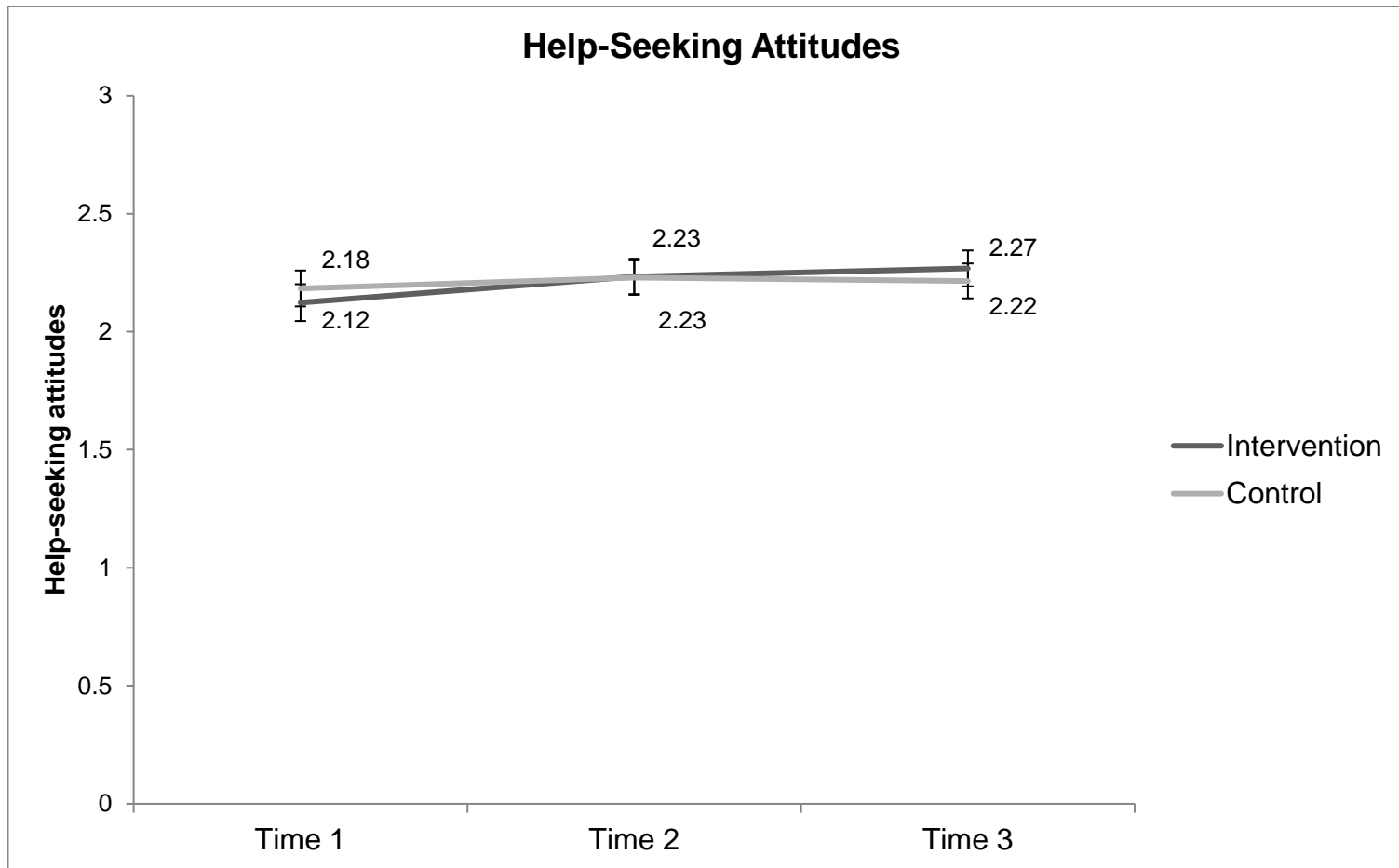
When comparing contrasts, there was no significant difference between intervention and control group at T1: ( $F(1,113) = 2.29, p = .13, d = 0.20$ ). There was a significant difference between groups at T2 ( $F(1,113) = 4.91, p = .029, d = 0.84$ ), and at T3 ( $F(1,113) = 8.07, p = .005, d = 1.19$ ). At T2, the intervention group was significantly lower on PCI ( $M = 1.90, SD = 0.69$ ) than the control group ( $M = 2.48, SD = 0.69$ ),  $M$  difference = 0.58,  $p = .003$  and at T3, the intervention group ( $M = 1.89, SD = 0.70$ ) was significantly lower than the control group ( $M = 2.65, SD = 0.62$ ),  $M$  difference = 0.76,  $p = .000$ . The intervention group showed a significant decrease from T1 to T2:  $M$  difference = 0.46,  $t(52) = 6.03, p = .000$ , no significant change from T2 to T3:  $t(48) = 0.10, p = .920$ , and a significant decrease from T1 to T3:  $M$  difference = 0.47,  $t(48) = 6.49, p = .000$ . The control group showed an increase in PCI between T1 and T2:  $M$  difference = 0.26,  $t(58) = -3.75, p = .000$ , a significant increase between T2 and T3:  $M$  difference = 0.18,  $t(58) = -2.30, p = .025$ , and a significant increase between T1 and T3:  $M$  difference = 0.44,  $t(58) = -5.48, p = .000$ .

#### 8.8.7.5 Help-seeking attitudes

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 23.25, p = .000$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. There was no significant main effect for group. There was no significant main effect for time. The interaction effect was also non-significant (see Figure 8.6). The effect sizes were very small.



**Figure 8.5** Graph showing the interaction effect on perfectionistic cognitions. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

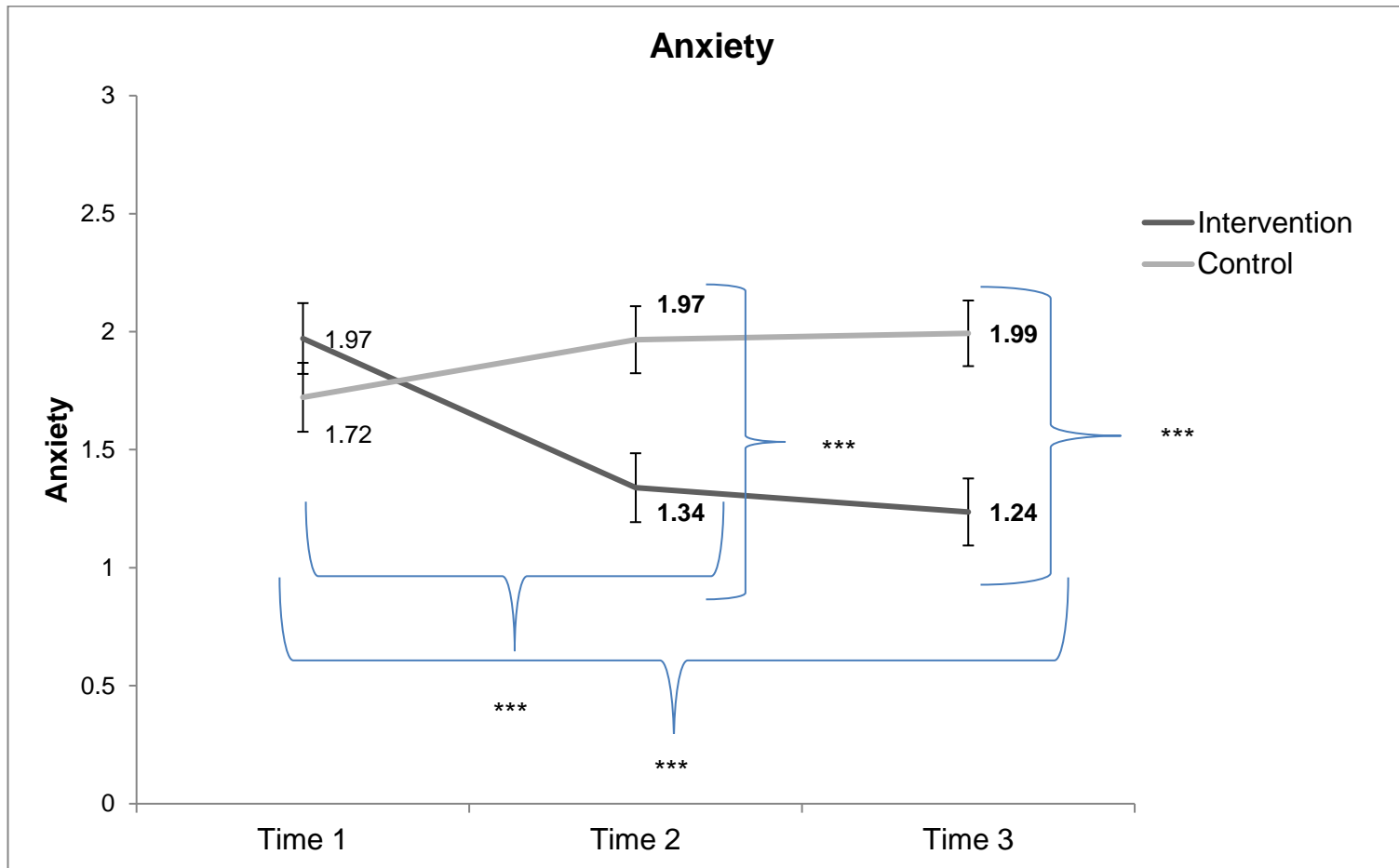


**Figure 8.6** Graph showing the interaction effect on help-seeking attitudes.

## ***Pre-competition emotions***

### **8.8.7.6 Pre-competition anxiety**

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 9.64, p = .008$ . As the Greenhouse-Geisser was  $> 0.75$  the Huynh-Feldt correction was applied. There was a significant main effect for group (small effect size). The main effect for time was significant (small effect size). There was a significant interaction effect (moderate effect size). The interaction effect is plotted in Figure 8.7. When comparing contrasts, there were no significant differences between the intervention and control group at T1, but there were significant differences between intervention and control groups at T2 ( $F(1,113) = 9.45, p = .003, d = 0.59$ ) and at T3 ( $F = 14.53, p = .000, d = 0.70$ ). At T2, the intervention group was significantly lower on anxiety ( $M = 1.34, SD = 1.05$ ), than the control group ( $M = 1.97, SD = 1.13$ ), and at T3, the intervention group ( $M = 1.24, SD = 1.03$ ) was significantly lower than the control group ( $M = 1.99, SD = 1.10$ ). The intervention group showed a significant decrease in anxiety from T1 to T2:  $M$  difference = 0.67,  $t(52) = 4.54, p = .000$ , no significant change between T2 and T3:  $t(48) = 0.77, p = .446$ , and a significant decrease from T1 to T3:  $M$  difference = 0.76,  $t(48) = 4.16, p = .000$ . The control group showed a significant increase in anxiety between T1 and T2:  $M$  difference = -0.24,  $t(58) = -2.14, p = .037$ , no significant changes between T2 and T3:  $M$  difference = -0.03,  $t(58) = -0.29, p = .770$ , and a significant increase in anxiety between T1 and T3:  $M$  difference = -0.27,  $t(58) = -2.19, p = .032$ .



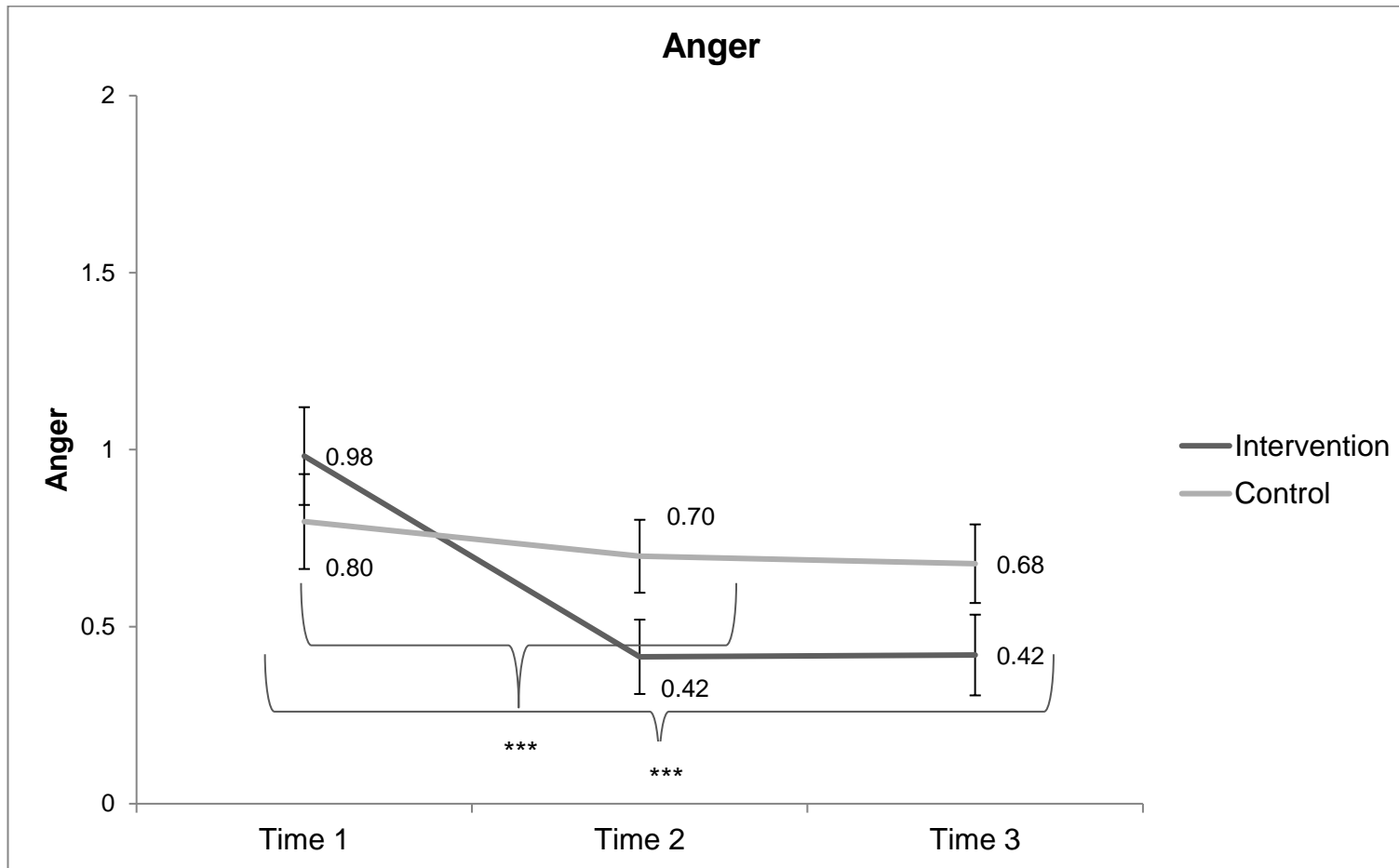
**Figure 8.7** Graph showing the interaction effect on pre-competition anxiety. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



#### 8.8.7.7 Pre-competition anger

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 29.01, p = .000$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. The main effect for group was non-significant. The main effect for time was significant (moderate effect size). The interaction effect was significant (small effect size). The interaction effect is plotted in Figure 8.8.

Examination of the simple effects showed no significant differences in anger scores between intervention and control group at each time point. At T2, the difference in anger scores between the intervention and control was close to significance ( $F(1,113) = 3.73, p = 0.56, d = 0.35$ ). There was a significant decrease in anger between T1 and T2 for the intervention group:  $M$  difference = 0.60,  $t(52) = 3.99, p = .000$ , no significant difference between T2 and T3:  $t(48) = -0.05, p = .964$ , and a significant decrease in anger between T1 and T3:  $M$  difference = 0.59,  $t(48) = 3.46, p = .001$ . The control group showed no significant differences between time points: T1 and T2:  $M$  difference = -0.28,  $t(58) = 0.77, p = .443$ , no significant difference between T2 and T3:  $M$  difference = -0.29,  $t(58) = 0.25, p = .801$ ; and no significant difference between T1 and T3:  $M$  difference = -0.29,  $t(58) = 0.90, p = .372$ .



**Figure 8.8** Graph showing the interaction effect on pre-competition anger. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

#### **8.8.7.8 Pre-competition dejection**

Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 23.87, p = .000$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. The main effect for group was non-significant. The main effect for time was significant (small effect size). The interaction effect was significant (small effect size). The interaction effect is plotted in Figure 8.9.

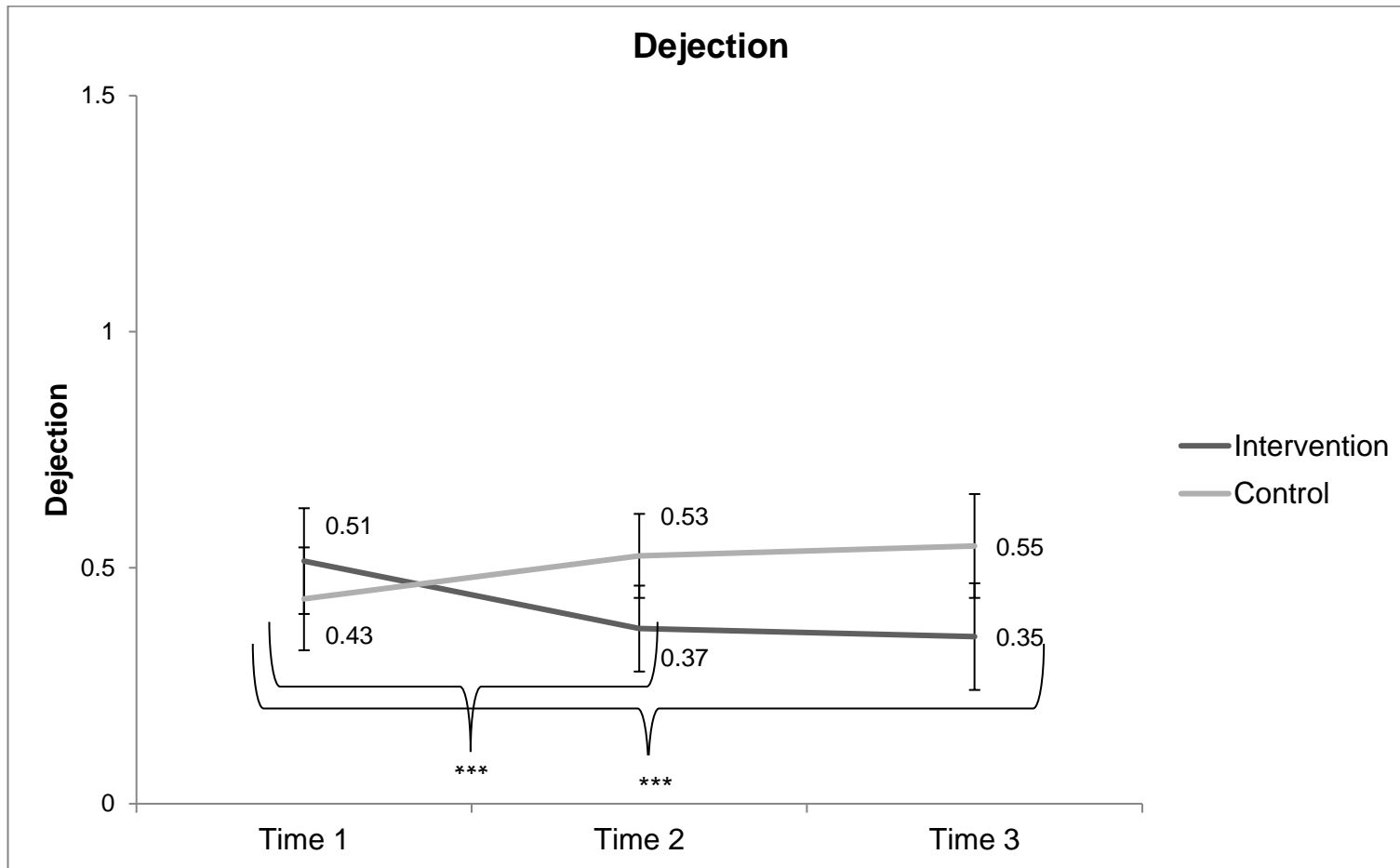
Examination of the simple effects showed that there were no significant differences between intervention and control group in dejection scores at each time point. At T2, the difference in dejection scores between the intervention and control was close to significance ( $F(1,113) = 3.78, p = 0.54, d = 0.35$ ). The intervention group showed a significant decrease in dejection between T1 and T2:  $M$  difference = 0.55,  $t(52) = 3.84, p = .000$ , no significant change from T2 to T3:  $t(48) = -0.39, p = .700$ , and a significant decrease in dejection from T1 and T3:  $M$  difference = 0.47,  $t(48) = 2.94, p = .005$ . The control group showed no significant differences between time points: T1 and T2:  $t(58) = 0.31, p = .757$ , T2 and T3:  $t(58) = -0.47, p = .641$ , T1 and T3:  $t(58) = -0.05, p = .961$ .

#### **8.8.7.9 Pre-competition happiness**

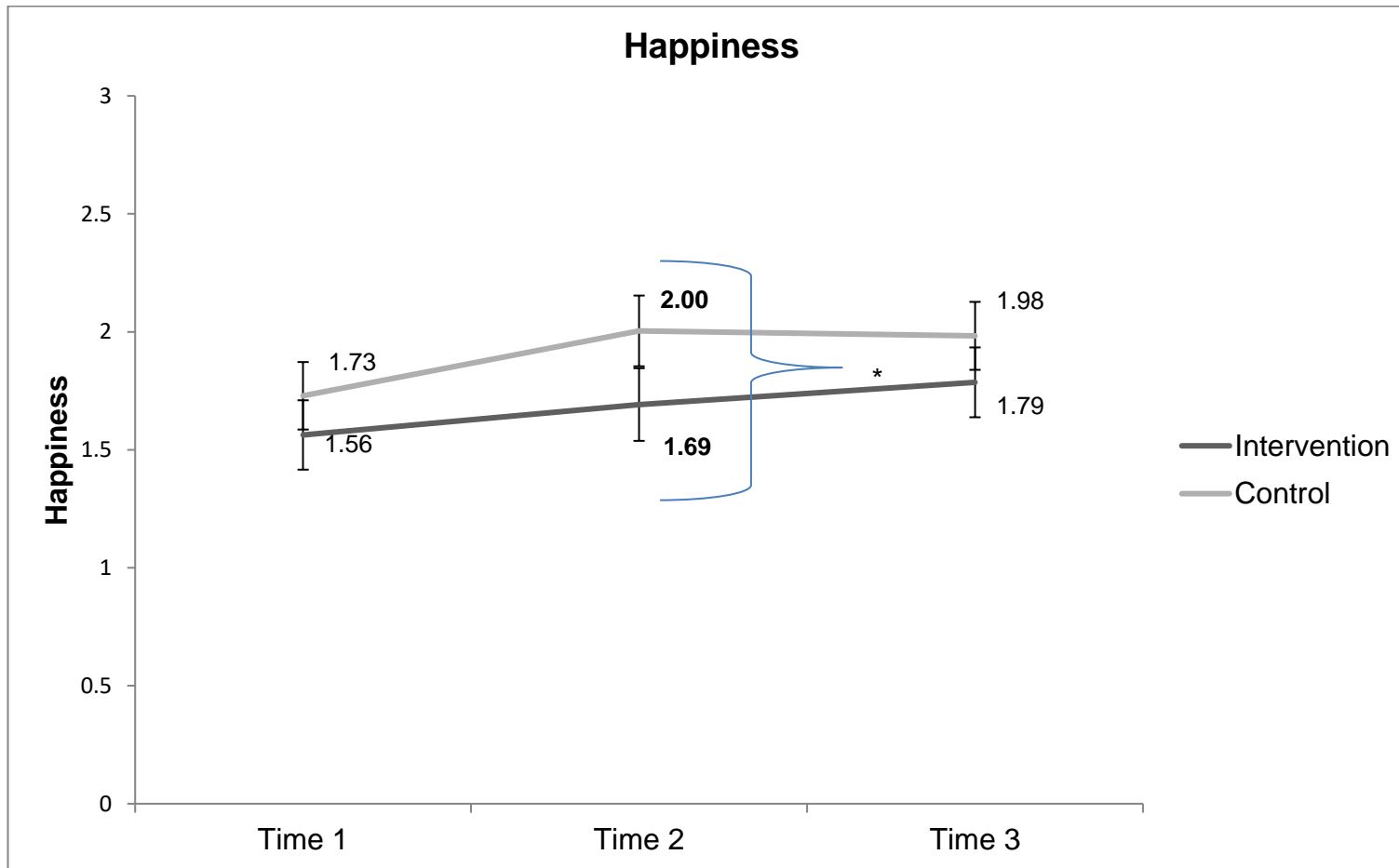
Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 11.63, p = .003$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. The main effect for group was non-significant. The main effect for time was significant (small effect size). The main interaction effect was non-significant (see Figure 7.10).

#### **8.8.7.10 Pre-competition excitement**

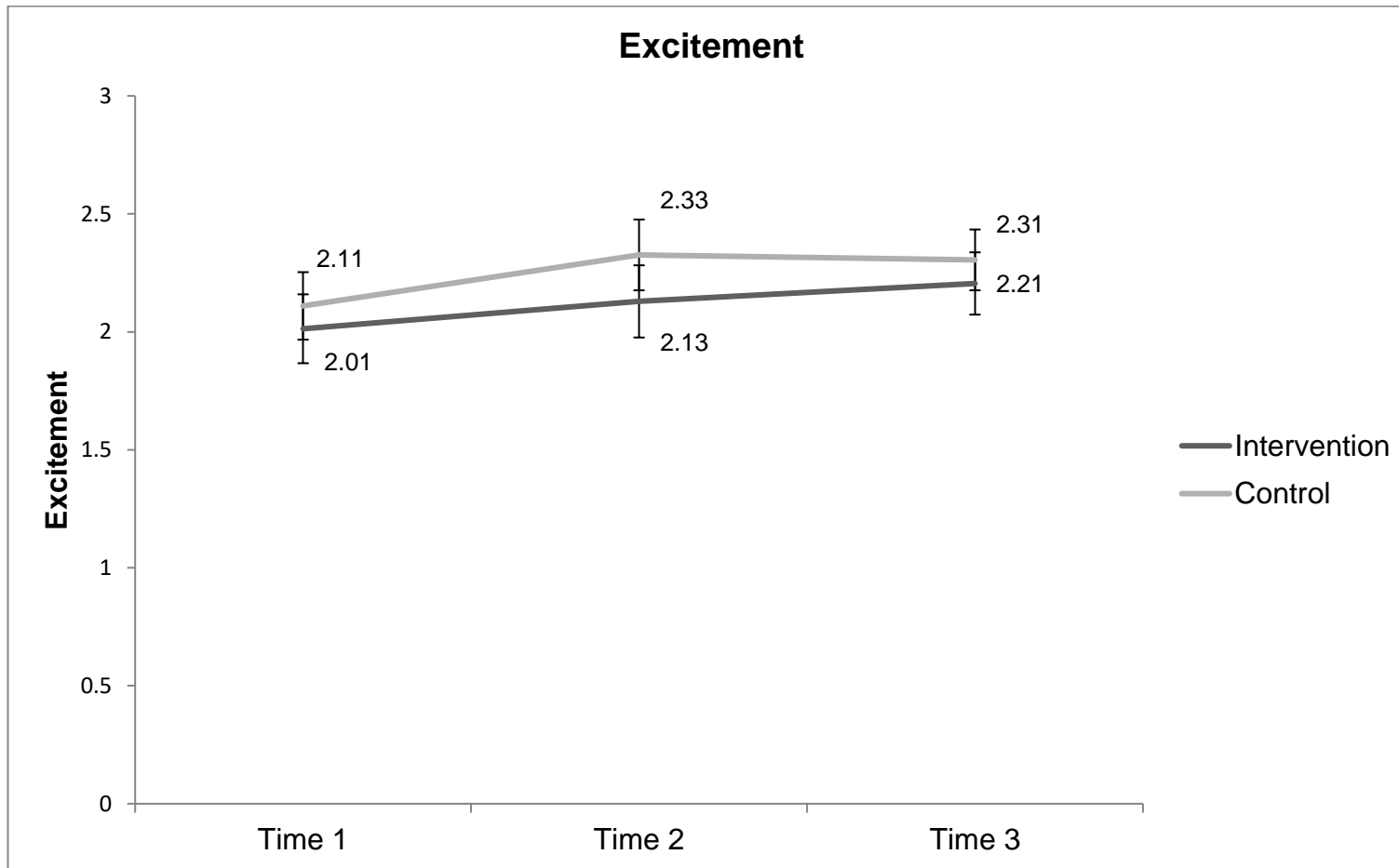
Mauchly's Test of Sphericity was significant indicating that the assumption of sphericity had been violated,  $\chi^2(2) = 8.66, p = .013$ . As the Greenhouse-Geisser was  $> 0.75$ , the Huynh-Feldt correction was applied. The main effect for group was non-significant. The main effect for time was significant (small effect size). The main interaction effect was non-significant (see Figure 7.11).



**Figure 8.9** Graph showing the interaction effect on pre-competition dejection. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



**Figure 8.10** Graph showing the interaction effect on pre-competition happiness. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



**Figure 8.11** Graph showing the interaction effect on pre-competition excitement.

**8.8.7.11 Intervention effects on perfectionism, perfectionistic cognitions, help-seeking attitudes, emotions**

There were significant Group x Time interactions for SOP, SPP, PCI, anxiety, anger, and dejection at the conventional alpha level of .05. Effect sizes for these interactions were small to large. There was a large significant Group x Time interaction for PCI, a moderate significant Group x Time interaction for SOP and anxiety, and a small significant Group x Time interaction for SPP, anger, and dejection. Findings indicated that the intervention group showed decreases in SPP (T1–T2 and T1–T3), PCI (T1–T2 and T1–T3), anxiety (T1–T2 and T1–T3), anger (T1–T2 and T1–T3) and dejection (T1–T2 and T1–T3).

**8.8.7.12 Control effects on perfectionism, perfectionistic cognitions, help-seeking attitudes, emotions**

There were significant Group x Time interactions for SOP, SPP, PCI, anxiety, anger, and dejection at the conventional alpha level of .05. Contrary to the hypothesis that the control groups perfectionism scores would stay the same, the control group displayed increases in SPP (T1–T3 and T2–T3), PCI (T1–T2, T2–T3, and T1–T3), and anxiety (T1–T2 and T1–T3).

**Table 8.6** Main group, time and interaction effects (group x time) ( $N = 115$ )

Measure	Group effect	Partial		Partial		
		$\eta^2$	Time effect	$\eta^2$	Group*Time effect	
SOP	$F(1,112) = 15.79, p < .001^*$	.12	$F(1,112) = 18.83, p < .05^*$	.03	$F(1,112) = 0.17, p = .68$	.00
SPP	$F(1,113) = 1.36, p = .24$	.01	$F(1,113) = 0.94, p = .38$	.01	$F(1.68,189) = 7.91, p < .001^*$	.05
OOP	$F(1,113) = 5.59, p = .02^*$	.05	$F(1.95,220) = 2.47, p = .08$	.02	$F(1.95,220) = 1.29, p = .28$	.01
PCI	$F(1,113) = 12.25, p < .001^{***}$	.10	$F(2,226) = 2.07, p = .13$	.02	$F(2,226) = 41.51, p < .001^{***}$	.27
HELP	$F(1,113) = 0.00, p = .99$	.00	$F(1.72,195) = 2.97, p = .06$	.03	$F(1.72,195) = 1.01, p = .36$	.01
ANX	$F(1,113) = 4.71, p < .05^*$	.04	$F(1.90,214) = 3.66, p < .05^*$	.03	$F(1.89,214) = 17.68, p < .001^{***}$	.14
ANG	$F(1,113) = 0.80, p = .37$	.01	$F(1.66,188) = 9.76, p < .001^{***}$	.08	$F(1.66,188) = 4.50, p < .05^*$	.04
DEJ	$F(1,113) = 0.64, p = .43$	.01	$F(1.72,194) = 6.22, p < .01^{**}$	.08	$F(1.94,219) = 5.50, p < .01^{**}$	.05
HAP	$F(1,113) = 3.45, p = .07$	.03	$F(1.87,211) = 4.97, p < .01^{**}$	.04	$F(1.94,219) = 0.58, p = .55$	.01
EXC	$F(1,113) = 2.87, p = .09$	.03	$F(1.91,216) = 2.05, p = .13$	.02	$F(1.91,216) = 0.11, p = .89$	.00

Note. SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, ANX = anxiety, ANG = anger, DEJ = dejection, HAP = happiness, EXC = excitement, \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ , two-tailed.



**Table 8.7** Analysis of changes on all measures over time and effect sizes (*d*) for intervention group (intention-to-treat analyses; *n* = 55)

Variable	Intervention group								
	T1 <i>M</i> ( <i>SD</i> )	T2 <i>M</i> ( <i>SD</i> )	T3 <i>M</i> ( <i>SD</i> )	T1–T2		T2–T3		T1–T3	
				<i>d</i>	T1–T2 <i>t</i> ( <i>p</i> )	<i>d</i>	T2–T3 <i>t</i> ( <i>p</i> )	<i>d</i>	T1–T3 <i>t</i> ( <i>p</i> )
SOP	5.60 (0.74)	4.19 (0.83)	4.98 (0.89)	0.96	6.98 (.00)***	-0.13	-0.93 (.36)	0.81	5.69 (.00)***
SPP	4.05 (0.94)	3.83 (0.81)	3.80 (0.77)	0.28	2.01 (.05)*	0.05	0.37 (.72)	0.34	2.36 (.02)*
OOP	4.10 (0.68)	4.08 (0.71)	4.12 (0.69)	0.03	0.22 (.82)	-0.10	-0.71 (.48)	-0.03	-0.22 (.83)
PCI	2.36 (0.74)	1.90 (0.69)	1.89 (0.70)	0.83	6.03 (.00)***	0.01	0.10 (.92)	0.93	6.49 (.00)***
HELP	2.12 (0.60)	2.23 (0.56)	2.27 (0.56)	-0.25	-1.84 (.07)	-0.11	-0.80 (.43)	-0.29	-2.00 (.05)
Anxiety	1.97 (1.17)	1.34 (1.05)	1.24 (1.03)	0.62	4.54 (.00)***	0.11	0.77 (.45)	0.59	4.16 (.00)***
Anger	0.98 (1.15)	0.42 (0.67)	0.42 (0.75)	0.55	3.99 (.00)***	-0.01	-0.05 (.96)	0.49	3.46 (.00)**
Dejection	0.91 (1.16)	0.39 (0.68)	0.43 (0.85)	0.53	3.84 (.00)***	-0.06	-0.39 (.70)	0.42	2.94 (.01)**
Happiness	1.63 (1.04)	1.73 (0.97)	1.98 (1.04)	-0.11	-0.82 (.42)	-0.26	-1.81 (.08)	-0.26	-1.83 (.07)
Excitement	2.05 (1.04)	2.09 (1.09)	2.20 (1.14)	-0.05	-0.34 (.74)	-0.10	-0.67 (.50)	-0.14	-1.00 (.32)

Note. T1 = pre-intervention, T2 = post-intervention, T3 = 5-week follow-up, SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, HELP = help-seeking attitudes, *d* = Cohen's *d* (effect size). \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Table 8.8** Analysis of changes on all measures over time and effect sizes (*d*) for control group (intention-to-treat analyses; *n* = 60)

Measure	Control Group								
	T1 <i>M</i> ( <i>SD</i> )	T2 <i>M</i> ( <i>SD</i> )	T3 <i>M</i> ( <i>SD</i> )	T1–T2		T2–T3		T1–T3	
				<i>d</i>	T1–T2 <i>t</i> ( <i>p</i> )	<i>d</i>	T2–T3 <i>t</i> ( <i>p</i> )	<i>d</i>	T1–T3 <i>t</i> ( <i>p</i> )
SOP	5.17 (0.73)	5.13 (0.75)	5.08 (0.85)	0.05	0.41 (.69)	-0.08	-0.62 (.54)	-0.01	-0.09 (.93)
SPP	3.94 (0.72)	4.02 (0.73)	4.18 (0.74)	-0.14	-1.08 (.29)	-0.32	-2.44 (.02)*	-0.33	-2.52 (.02)*
OOP	4.31 (0.81)	4.37 (0.70)	4.48 (0.67)	-0.12	-0.89 (.38)	-0.24	-1.82 (.07)	-0.33	-1.73 (.04)*
PCI	2.21 (0.71)	2.48 (0.69)	2.65 (0.62)	-0.49	-3.75 (.00)***	-0.30	-2.30 (.03)*	-0.71	-5.48 (.00)***
HELP	2.18 (0.56)	2.23 (0.56)	2.22 (0.59)	-0.11	-0.86 (.39)	0.04	0.30 (.77)	-0.07	-0.52 (.61)
Anxiety	1.72 (1.07)	1.97 (1.13)	1.99 (1.10)	-0.28	-2.14 (.04)*	-0.04	-0.29 (.77)	-0.29	-2.19 (.03)*
Anger	0.80 (0.90)	0.70 (0.88)	0.68 (0.94)	0.10	0.77 (.44)	0.03	0.25 (.80)	0.12	0.90 (.37)
Dejection	0.39 (0.68)	0.66 (0.81)	0.70 (0.99)	0.04	0.31 (.76)	-0.06	-0.47 (.64)	-0.01	-0.05 (.96)
Happiness	1.94 (1.05)	2.13 (1.08)	2.17 (1.11)	-0.19	-1.46 (.15)	-0.07	-0.54 (.59)	-0.22	-1.70 (.09)
Excitement	2.32 (1.07)	2.33 (0.98)	2.52 (0.98)	-0.02	-0.16 (.88)	-0.28	-2.12 (.04)*	-0.20	-1.57 (.12)

*Note.* T1 = pre-intervention, T2 = post-intervention, T3 = 5-week follow-up, SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, HELP = help-seeking attitudes, *d* = Cohen's *d* (effect size). \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Table 8.9** Analysis of simple effects on all measures between intervention and control group at each time point ( $N = 115$ )

	T1				T2				T3			
	Intervention <i>M (SD)</i>	T1 Control <i>M (SD)</i>	<i>M dif</i>	Cohen's <i>d</i>	Intervention <i>M (SD)</i>	T2 Control <i>M (SD)</i>	<i>M dif</i>	Cohen's <i>d</i>	Intervention <i>M (SD)</i>	T3 Control <i>M (SD)</i>	<i>M dif</i>	Cohen's <i>d</i>
SOP	5.60 (0.74)	5.17 (0.73)	0.42**	0.59	4.91 (0.83)	5.13 (0.75)	-0.22	0.29	4.98 (0.89)	5.18 (0.81)	-0.20	0.20
SPP	4.05 (0.94)	3.94 (0.72)	0.11	0.20	3.83 (0.81)	4.02 (0.73)	-0.19	0.29	3.81 (0.77)	4.18 (0.74)	-0.38**	0.51
OOP	4.10 (0.68)	4.31 (0.81)	-0.21	0.29	4.08 (0.71)	4.37 (0.70)	-0.29*	0.41	4.12 (0.69)	4.48 (0.67)	-0.36**	0.55
PCI	2.36 (0.74)	2.21 (0.71)	0.15	0.20	1.90 (0.69)	2.48 (0.69)	-0.58***	0.84	1.89 (0.70)	2.65 (0.62)	-0.76***	1.19
HELP	2.12 (0.60)	2.18 (0.56)	-0.06	0.00	2.23 (0.56)	2.23 (0.56)	-0.05	0.00	2.27 (0.56)	2.22 (0.59)	0.05	0.00
ANX	1.97 (1.17)	1.72 (1.07)	0.25	0.20	1.34 (1.05)	1.97 (1.13)	-0.63**	0.59	1.24 (1.03)	1.99 (1.10)	-0.76**	0.70
ANG	0.98 (1.15)	0.80 (0.90)	0.19	0.20	0.42 (0.67)	0.70 (0.88)	-0.28	0.35	0.42 (0.75)	0.68 (0.94)	-0.26	0.29
DEJ	0.91 (0.92)	0.69 (0.89)	0.22	0.20	0.39 (0.68)	0.66 (0.81)	-0.27	0.35	0.43 (0.85)	0.70 (0.99)	-0.27	0.20
HAP	1.63 (1.04)	1.94 (1.05)	-0.31	0.29	1.73 (0.97)	2.13 (1.08)	-0.40*	0.41	1.98 (1.04)	2.18 (1.11)	-0.20	0.20
EXC	2.05 (1.04)	2.32 (1.07)	-0.27	0.29	2.09 (1.13)	2.34 (0.98)	-0.24	0.20	2.20 (1.14)	2.52 (0.98)	-0.33	0.29

*Note.* SOP = self-oriented perfectionism, SPP = socially prescribed perfectionism, OOP = other-oriented perfectionism, PCI = perfectionistic cognitions, ANX = anxiety, ANG = anger, DEJ = dejection, HAP = happiness, EXC = excitement, dif = difference, \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ , two-tailed.

### **8.8.8 Intervention engagement**

Participant engagement with the intervention is outlined in Table 8.10. Participants completed on average 7.88 chapters out of 16 chapters. The mean number of exercises completed was 17.21 out of 53 exercises. The average time spent reading was 14.83 hours. The mean time spent completing exercises was 4.26 hours.

### **8.8.9 Satisfaction**

After completing the program, participants in the intervention group rated the book on a 10-point Likert-type scale. The mean rating of usefulness was 6.55 ( $SD = 2.49$ ), readability was 7.27 ( $SD = 2.41$ ), and ease of reading was 7.36 ( $SD = 1.98$ ).

#### **8.8.9.1 Helpfulness**

When asked how the book had helped them either on the pitch or off the pitch, there were 13 key categories for answers. The largest proportion of participants described how the book helped them gain a better understanding of what perfectionism is and raised their awareness of their own perfectionism. In addition, participants reported the book helping with emotional and cognitive awareness, and it taught them with ways to manage both emotions and thought patterns.

#### **8.8.9.2 What participants learned from the book**

When participants were asked what they learned from the book (if anything), there were 13 key categories for answers. Mainly, it was evident from the accounts that participants learned more about what perfectionism is, its different types, and how it develops. Furthermore, a large proportion of the sample indicated that they learned ways of how to manage their perfectionism and expectations.

**Table 8.10** Completion of book chapters, exercises and book ratings

	<i>n</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
Number of chapters completed	51	0	16	7.69	6.15
Number of Exercises completed	47	0	53	17.59	21.20
Hours Reading	49	0	336	14.90	48.16
Hours Exercises	49	0	30	4.09	7.09
Useful	47	1	10	6.55	2.49
Readable	49	1	10	7.27	2.41
Ease	48	3	10	7.36	1.98

**Table 8.11** Categories of responses from “helpfulness question”

Helpfulness	<i>n</i>
Understanding of perfectionism	19
Awareness of cognitions/managing cognitions	16
Raising their awareness of their perfectionistic standards and unrealistic expectations	16
Emotional awareness and management	15
Managing perfectionism and high standards	11
Anxiety control/relaxation	9
Self-awareness	7
Change of cognitions	7
Improved confidence	6
Not helpful	4
Performance outcomes	3
Awareness of need for more help (one-to-one support)	1

**Table 8.12** Categories of responses “learned from book question”

Learning	<i>n</i>
Manage perfectionism and expectations	24
Understanding of perfectionism	22
Awareness of own perfectionism	14
Manage emotions	13
Manage cognitions better	12
Deal with stress/relax	6
Ways to improve confidence	5
Awareness of cognitions	4
Dealing with mistakes better	4
Need for more help	3
Performance impacts	2
Emotional awareness	2
Nothing as did not read	1

## 8.9 Discussion

The current study had one purpose: (i) to evaluate the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions, and increasing help-seeking attitudes in footballers by employing a randomised control design.

It was hypothesised that:

(1) Footballers in the intervention group, relative to the control group, would experience a reduction in levels of perfectionism (SOP, SPP, OOP), perfectionistic cognitions and negative emotions (anxiety, anger, and dejection), and an increase in help-seeking attitudes.

The hypothesis was supported for SPP, PCI, anxiety, anger, and dejection. As indicated by the decomposed effects (see Table 8.7), there was a statistically significant decrease in SPP, PCI, anxiety, anger, and dejection from T1 to T2 and T1 to T3. At post-intervention, small-to-large between-group effect size differences were evident for PCI and anxiety ( $d = 0.35$  to  $0.84$ ). At T3, moderate-to-large between-group effect size differences were evident for SPP, PCI and anxiety ( $d = 0.51$  to  $1.19$ ) (see Table 8.9). No other effects were observed.

The hypothesis was rejected for SOP, OOP, help-seeking attitudes, happiness and excitement. However, as indicated by the decomposed effects, there was a statistically significant decrease in SOP from T1 to T2 and T1 to T3 (see Table 8.7). At T2, small between-group effect size differences were evident for OOP and happiness ( $d = 0.41$ ). At T3, medium between-group effect size differences were evident for OOP ( $d = 0.55$ ) (see Table 8.9). No other effects were observed.

### 8.9.1 Socially prescribed perfectionism

The self-help intervention was effective in reducing SPP. The intervention group reduced in SPP across time points (T1 to T2, T1 to T3). There was also a significant difference in SPP scores between the intervention group and control group at T3. These results are similar to other studies that used the same self-help book (Pleva & Wade, 2007; Steele & Wade, 2008). That is, Steele and Wade (2008) found that the guided self-help group reported significant reductions in SPP (as measured by CM) from T1 to T2 and from T1 to T3. Similarly, Pleva and Wade (2007) found that the pure self-help group showed significant reductions in SPP (as measured by CM) from T1 to T3. Also, guided self-help significantly reduced SPP from T1 to T2 and from T2 to T3. Other interventions (e.g., CBT) may also be



effective in reducing SPP, since individuals in CBT interventions showed significant decreases in SPP from T1 to T2 (e.g., Arpin et al., 2008, Arpin et al., 2012; Glover et al., 2007; Riley et al., 2007).

There are a few possible explanations for the reduction in SPP. First, the book is based on CBT and acceptance-based strategies, and includes a number of exercises to challenge unrealistic expectations, identify specific areas where perfectionism is a problem, and address the implications of trying to meet other people's expectations. Practically, the book provides the reader with exercises that help to challenge the irrational thoughts around the need to please others by meeting perceived perfectionistic standards. Consequently, challenging the irrational thoughts underpinning SPP is likely to reduce perfectionistic behaviour. Second, a self-help intervention allows athletes to develop skills so that they can help themselves rather than relying on help from others. For those higher in SPP, self-help is likely to be effective due to the non-reliance on feedback from other people. Subsequently, it is likely that participants felt empowered following learning of ways to manage and cope. Self-help provides participants with autonomy but also a sense of belonging from being part of an intervention group (see Ryan & Deci, 2000).

Some differences were evident compared to other intervention studies. For example, several studies found that CBT interventions were not successful in reducing SPP from pre- to post-intervention in school-based programs (e.g., Nobel et al., 2012) and Internet programs (Radhu et al., 2012). In the current study, however, the reductions in SPP were endured at follow-up, whereas in the studies that included a follow-up time point, the reductions in SPP did not endure (e.g., Riley et al., 2007). Individuals higher in SPP lack autonomy and have limited capacity to self-soothe which compels them to seek reassurance from others and rely on the external world to validate their self-worth (see Hewitt et al., 2017). Self-help interventions can help to develop a sense of autonomy and self-efficacy that fosters individuation, rather than maintaining a dependency on others (Hewitt et al., 2017). Therefore, individuals are likely to feel empowered when engaging in self-help intervention strategies, and consequently, reduce their SPP tendencies.

### **8.9.2 Perfectionistic cognitions**

Perfectionistic cognitions significantly reduced across time points for the intervention group. Moreover, the intervention group scored lower in PCI at both T2 and T3 than the control group. In respect to previous research, neither of the studies that have examined the effectiveness of this specific CBT self-help book for

managing perfectionism have included a measure of perfectionistic cognitions (e.g., Pleva & Wade, 2007, Steele & Wade, 2008). Consequently, it is difficult to compare the current study with previous studies. However, the intervention studies that have included the PCI found CBT interventions (in the form of CBT coaching and web-based CBT) to be effective in reducing such cognitions (e.g., Kearns et al. 2007; Arpin-Cribbie et al., 2012; Radhu et al., 2012). Kearns et al (2007) examined the effectiveness of a cognitive-behavioural coaching intervention and found that it was successful in reducing levels of PCI in a group of students at post-intervention and at follow-up. This current study replicates the findings of Kearns et al. (2007), but demonstrates that CBT in the form of self-help was successful in reducing levels of PCI post-intervention and at follow-up. These findings are important as they add to the research evidencing that participants' perfectionistic cognitions may reduce because of CBT interventions targeting perfectionism.

Levels of PCI reduced across time points for intervention participants. When examining why PCI reduced, it is relevant that the book is grounded on principles of CBT. CBT aims to bring awareness to the link between cognitions, behaviours and emotions. The book includes education and exercises that explain how perfectionistic cognitions relate to emotions and behaviours. As one of the main strategies of the book is to identify the perfectionistic thoughts that individuals hold, and to change them by exploring other possible thoughts and beliefs, the significant reduction can be explained by the effect of reading the book. That is, the reduction in PCI scores may be a function of the way the information and exercises in the book teaches individuals how to identify and challenge the thought patterns associated with perfectionism. Furthermore, when asked how the book helped them, a number of participants indicated that they were more aware of their thoughts and the book provided them with ways to manage their thoughts. Therefore, self-help strategies appear to be useful in helping athletes help themselves to lessen the rigidity of perfectionistic thoughts.

### **8.9.3 Pre-competition emotions**

In line with the hypotheses, the intervention helped reduce negative pre-competition emotions. Anxiety scores in the intervention group reduced from pre- to post-intervention and pre- to follow-up. Additionally, the intervention group scored significantly lower in anxiety at T2 and T3 than the control group. The control group showed an increase in anxiety between pre- and post- intervention. It was also found that the intervention group showed a significant decrease in pre-competition anger and dejection from pre- to post-intervention. Furthermore, anger and

dejection reduced from pre- to follow-up suggesting maintenance of change. There were no differences between the intervention and control group at either time point for anger and anxiety.

These findings suggest that CBT self-help may be useful for reducing pre-competition anxiety, anger, and dejection. To our knowledge, there are currently no intervention studies that demonstrate helping athletes manage their perfectionism will help them to experience fewer negative pre-competition emotions. The studies that examined interventions in sport (e.g., Mindful Sport Performance Enhancement) and included measures of perfectionism have found mixed results in relation to the effectiveness of the intervention on pre-competition emotions (anxiety). Some studies support that interventions may reduce sport-related anxiety (e.g., De Petrillo et al. 2009; Thompson et al., 2011), whereas others do not (e.g., Kaufman et al., 2009). The previous studies did not include measures that capture dejection or anger, which therefore restricts how the current study compares in relation to these emotions. The current study provides strong support that intervention for perfectionism, in the form of self-help, is effective in reducing sport-related anxiety, anger, and dejection.

The findings from the current study are different to the findings of studies outside sport that used the same self-help book and included measures of anxiety and dejection (as measured by depression). In previous self-help studies (Pleva & Wade, 2007; Steele & Wade, 2008), no reductions in anxiety were found for self-help groups compared to the control group. In contrast, Pleva and Wade found evidence that, as a result of a perfectionism self-help intervention, depression significantly decreased across time points (T2 to T3, and T3 to T4). Steele and Wade (2008) found no evidence of the intervention reducing depression. A novel finding of the current study is that the self-help intervention was effective in reducing anger. Previous intervention studies have not included a measure of anger.

#### **8.9.4 Self-oriented perfectionism, other-oriented perfectionism and help-seeking attitudes**

The absence of significant change in SOP in the intervention group may be due to the intervention being purely self-help rather than a guided self-help. It was found in Pleva and Wade's (2007) study that, although no significant interaction effect was reported, SOP (as measured by PS) reduced between T1 and T2 and between T2 and T3 for those in the guided self-help group. In contrast, those in the pure self-help group did not show any significant reductions in SOP (as measured

by PS). Athletes higher in SOP would perhaps benefit from a guided self-help intervention as opposed to a pure self-help intervention. Alternatively, individuals higher in SOP may benefit from receiving the intervention via the Internet (Arpin-Cribbie et al., 2008) or in group treatment (Kutlesa & Arthur, 2008), rather than a book, as these studies found that levels of SOP reduced significantly post-intervention when delivered via the Internet or group treatment.

It may be more difficult for individuals higher in SOP to help themselves. As SOP is underpinned by a harsh self-critical component, those higher in SOP have a tendency to focus on the negatives and discount the positives. It is therefore likely that when engaging in self-help strategies, those individuals pay more attention to their flaws and areas of themselves they are yet to change, rather than focusing on self-discovery, acceptance and progress in the book (see Hewitt et al., 2017). Their immediate response to discovered elements of the self is to evaluate, usually negatively, which in turn triggers feelings of shame or hostility. As the intervention may not be viewed as an opportunity to improve the self, but as a marker of being a failure, it is likely to increase self-criticality and decrease the likelihood of engaging in the process for individuals higher in SOP (Hewitt et al., 2017). Athletes higher in SOP would perhaps benefit from guided interventions in which they are taught ways to promote self-acceptance and self-compassion (e.g., Hewitt et al., 2018).

The intervention was not effective in reducing levels of OOP. The content of the self-help book is based on principles of CBT, which aims to address the intrapersonal, cognitive and behavioural components of perfectionism, rather than addressing the interpersonal problems. However, when participants were asked about how the book helped them, one participant identified that it raised awareness of perfectionism being problematic for relationships, but they did not indicate whether the book helped them with relationships. It may be that to change levels of OOP, both longer and face-to-face interventions may be more effective. The previous studies that showed significant reductions in OOP used 8–10 sessions of CBT (e.g., Kutlesa & Arthur, 2008; Riley et al., 2007). Also, in order to help individuals reduce levels of OOP, other types of intervention where intrapersonal relationships are the focus may be more effective than self-help (e.g., Flett et al., 2015).

Those higher in OOP may be more resistant to change via self-help interventions. Other-oriented perfectionism involves managing personal feelings of tension through distracting oneself by focusing on other people's flaws and shortcomings (Hewitt et al., 2017, p. 60). As individuals higher in OOP are

accustomed to unconsciously diverting attention away from themselves, addressing issues regarding the self may be more difficult for those higher in OOP (Hewitt et al., 2017). Interventions, especially self-help, cannot yield meaningful and sustained changes without honest self-reflection (e.g., Hewitt et al., 2017). Also, the tendency for those higher in OOP to be judgemental, harshly critical, and impatient is likely to interfere with intervention compliance (e.g., Stoeber et al., 2018). As OOP is related to relationship difficulties, Hewitt et al. (2017) recommend that interventions employ a dynamical-relational and a strategic family systems framework to address relational issues associated with higher levels of OOP.

It must be noted that there was no significant change in attitudes towards seeking help. Previous research advocates that perfectionism is associated with poorer attitudes (e.g., Oliver et al., 2001); however, the participants in the current study reported moderate levels of help-seeking attitudes throughout the course of the study. The lack of change may reflect their already higher scores. Participants signed up for the intervention on their own, which may be indicative that they have more positive attitudes towards seeking help than those who are referred to interventions. Longer interventions that focus on changing attitudes towards seeking help might be necessary in order to gain more meaningful and lasting change of levels of SOP and OOP in perfectionistic footballers.

## **8.10 Conclusion**

Given that perfectionism and perfectionistic cognitions have been related to negative psychological consequences both in and outside sport, techniques to help manage perfectionism and thereby to protect athletes from the potentially harmful consequences of perfectionism are required. This study was the first to examine the effectiveness of a self-help intervention for managing perfectionism in footballers. Self-help in the form of a psychoeducational book shows promise as an intervention for footballers seeking to manage their perfectionism. It was found that this intervention helped to reduce SPP, PCI and negative pre-competition emotions. Consequently, self-help may be a useful approach to managing perfectionism and perfectionistic cognitions in footballers.

## Chapter 9 General discussion

“There was no final whistle for Enke. Scenes from each match swam around repeatedly in his head...Every goal, Robert brooded on how he could have stopped it”

*Robert Enke's coach (Reng, 2015)*

### 9.1 Purpose of the thesis

This thesis provided a systematic line of research to understand the experience of perfectionism, overthinking (e.g., perfectionistic cognitions) and emotions in the context of football. Perfectionism involves a salient cognitive component characterised by a ruminative response to imperfection, and thoughts with themes of perfection (perfectionistic cognitions). Although research outside sport has demonstrated that frequent perfectionistic cognitions predicted psychological distress (e.g., anxiety, anger, and depression) beyond trait perfectionism (Flett et al., 1998), research examining perfectionistic cognitions in sport is limited. Therefore, the overarching aim of this thesis was to extend previous research by examining the relationships between perfectionism, overthinking (e.g., perfectionistic cognitions) and emotions in the context of football. The aim was achieved by conducting four studies. The first study examined the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers and whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP. The second study examined whether perfectionistic cognitions mediate the relationship between SOP and SPP and positive and negative pre-competition emotions, achieved by examining the within- and between-person effects. It also examined whether perfectionistic cognitions mediate the relationship between SOP and SPP and multidimensional anxiety and anger, achieved by examining the within- and between-person effects. The third study explored and described the experiences of perfectionistic footballers with regard to psychological responses during the course of their performances (pre-, during-, and post-performance) and how adverse experiences in football impacted their psychological responses. The fourth study evaluated the effectiveness of a self-help book intervention in reducing perfectionism, perfectionistic cognitions, and negative pre-competition emotions and increasing help-seeking attitudes in footballers. The purpose of this present chapter is to discuss the major findings of the thesis in context of existing research. This chapter also provides suggestions for future directions and limitations of the studies in the thesis.

## 9.2 Summary of findings

The first study adopted a cross-sectional, survey-based design to examine the relationships between SOP and SPP (as manifested in sport) and pre-competition emotions in youth footballers and whether perfectionistic cognitions predict pre-competition emotions after controlling for SOP and SPP. This study provided the first study in sport to evidence that perfectionism and perfectionistic cognitions have a relationship with pre-competition emotions. It revealed that SOP was a unique significant positive predictor of pre-competition anxiety and excitement and that SPP was a unique significant and positive predictor of pre-competition anger and dejection. Moreover, perfectionistic cognitions predicted negative pre-competition emotions (anxiety, anger, and dejection) beyond SOP and SPP. Whether athletes expect perfection of themselves, believe others expect it of them, or experience thoughts centred on perfection, perfectionism appears important with regard to pre-competition emotions.

To build on study one, the second study employed a longitudinal design to test whether perfectionistic cognitions mediate the relationship between SOP and SPP and positive and negative pre-competition emotions, and whether perfectionistic cognitions mediate the relationship between SOP and SPP and multidimensional anxiety and anger, by examining the within- and between-person effects. Perfectionistic cognitions were a mechanism by which SOP led to anxiety, excitement, and anger at between-person level, and all pre-competition emotions at within-person level. Furthermore, perfectionistic cognitions mediated the relationship between SOP and all dimensions of anger and anxiety at both between-person and within-person level. Whereas perfectionistic cognitions were a mechanism by which SPP led to all emotions and all dimensions of anxiety and anger at between-person level, but not at within-person level. Overall, the first two studies suggested that perfectionistic cognitions are useful for understanding the emotional experiences of youth footballers.

Having established that frequent perfectionistic cognitions were one mechanism by which perfectionism was related to negative pre-competition emotions, the third study adopted qualitative methods to explore and describe the psychological processes that perfectionistic footballers experienced during the course of performances (pre-, during-, and post-performance) and how adverse experiences in football impacted their psychological responses. Perfectionistic footballers described experiencing a range of cognitions and emotions during the course of performances (e.g., anxiety prior to competition, mistake rumination

during performance, post-event rumination). Although previous quantitative studies have shown that perfectionism is related to pre-competition emotions, this study provided an understanding of why anxiety and other negative emotions (e.g., frustration) are likely to occur (e.g., fixation on achieving unrealistic aims, self-doubt, non-selection). In response to a poor performance and/or making mistakes, participants engaged in mistake rumination, catastrophic thinking, self-critical thoughts (e.g., "I am a loser"), all-or-nothing thinking, and should statements. Novel findings of the study were that participants had a tendency to engage in "why?" and "what?" rumination in response to adverse situations, and that injury and non-selection were particularly problematic for participants. In addition, for the first time, to our knowledge, qualitative methods were used to explore participants' accounts of how and why the non-attainment of perfectionistic standards led to longer-term psychological consequences (e.g., eating disorders, self-harm, depression, and anxiety).

Having identified that perfectionism and perfectionistic cognitions can be problematic for youth footballers, the fourth and final study examined the effectiveness of a self-help intervention on reducing perfectionism, perfectionistic cognitions, and pre-competition emotions. The randomised control trial found that the self-help book was effective in reducing SPP, perfectionistic cognitions, and pre-competition anxiety, anger, and dejection in footballers. Therefore, the self-help book used in the study should be considered as an option for reducing or managing perfectionism in athletes, particularly for those experiencing frequent perfectionistic cognitions. Furthermore, as the intervention group reported reductions in negative pre-competition emotions, the self-help book may also be useful for athletes experiencing heightened negative pre-competition emotions. As this study found statistically significant reductions in SPP, PCI, anxiety, anger, and dejection after the perfectionism intervention, it is reasonable to suggest that management of perfectionism, perfectionistic cognitions and negative pre-competition emotions may help athletes enhance their performance and improve their overall well-being.

### **9.2.1 Perfectionism in football**

Research evidences that a high proportion of academy footballers, professional footballers and retired footballers - are experiencing symptoms of psychological distress (e.g., Smith et al., 2018; Gouttebarga, Aoki, Ekstrand, Verhagen, & Kerkhoffs, 2016; Van Ramele et al., 2017). The football environment can be harsh, wherein players are evaluated, scrutinised, and rejected. Consequently, players are likely to strive for flawless performances to avoid



criticism and harsh evaluation, which in turn leads to psychological distress. Academy footballers higher in perfectionism may be vulnerable to experiencing symptoms of burnout and depression (Smith et al., 2018). This is similar to what was voiced by the participants of study three. In support of perfectionistic reactivity, some participants described experiencing emotional turmoil if they did not achieve perfectionistic standards. For a small number of participants, this turmoil was associated with longer-term psychological consequences (e.g., eating disorders, self-harm, anxiety, and depression). A unique finding of study three, compared to other perfectionism studies in sport using qualitative methods, is that athletes higher in perfectionism and perfectionistic cognitions may be vulnerable to experiencing psychological distress, especially when confronted with adverse situations in sport (e.g., non-selection, injury, losing to rivals).

Study three, the qualitative study, in this thesis provided an understanding of the adverse situations that are likely to impact the psychological processes of perfectionistic footballers. Participants described non-selection (pre-competition) and being substituted mid-competition as challenging aspects of sport. These findings corroborate assertions by Reeves et al. (2011) that deselection is a significant stressor for youth footballers, and also support previous research that shows deselection can play a role in psychological processes of academy players (Blakelock et al., 2016). For participants in study three, non-selection appeared to contribute to pre-competition anxiety and other negative pre-competition emotions (e.g., anger, frustration). In line with the stress-enhancement component of the diathesis-stress model of perfectionism (Hewitt & Flett, 2002), stress was magnified via the self-defeating style of cognitive appraisal (e.g., interpreting non-selection and substitution as being of great importance). Participants overgeneralised negative outcomes to aspects of self (e.g., “not being good enough”) and, in line with Goal Progress Theory (Martin et al., 1993), participants engaged in “why?” rumination, catastrophic thinking and overgeneralisation due to not having the opportunity to make sufficient progress towards goals when not selected for competition or substituted during competition (Martin et al., 1993).

Injury and losing against rivals are aspects of football that may be difficult to cope with for perfectionistic footballers. Reflecting key situations for perfectionistic reactivity, findings of Prinz et al. (2016) suggest that a significant stressor in football is injury. Similarly, study three provided anecdotal evidence that footballers higher in perfectionism and perfectionistic cognitions have difficulty dealing with injury. However, a situation unique to football, not captured by perfectionistic reactivity situations by Flett and Hewitt (2016), was failure against rival teams. Study three

also provided an understanding of the implications of rivalry between teams, and how competing against a rival team interferes with processing success and failure. This finding is perhaps unique to the football environment whereby long-standing rivalry exists among teams (e.g., Rangers versus Celtic in Scottish football). Some participants (mainly male footballers) described how losing against rivals caused a longer experience of negative emotions and rumination. Inter-team rivalry and its relation to perfectionism in sport are yet to be examined.

### **9.2.2 Perfectionism and pre-competition emotions**

Perfectionism has implications for the emotions that athletes experience before competition. Similar to other research in sport where SOP is related to both positive and negative outcomes, individuals higher in SOP are likely to experience both positive (e.g., excitement) and negative (e.g., anxiety) emotions before competition. In contrast, individuals with higher levels of SPP are likely to experience negative emotions (e.g., anger and dejection), than those lower in SPP. The second study provided evidence that, indirectly via perfectionistic cognitions, both SOP and SPP are related to multidimensional anxiety and anger. In addition, SOP predicted higher within-person variance, which suggests that SOP is characterised by a heightened sensitivity to competitions and therefore emotional responses are likely to fluctuate as a function of the cognitions experienced in relation to competition. In line with the notion that SOP reflects a vulnerability factor, those higher in SOP may be more sensitive to situations of failure (i.e., perfectionistic reactivity; Flett & Hewitt, 2016). SPP, however, appears to be stable and those higher in SPP (compared to those lower in SPP) are more likely to experience higher perfectionistic cognitions and, in turn, will experience negative emotions.

The findings of study three, the qualitative study, shed some light on the broader experience of self-identified perfectionistic (and higher in perfectionistic cognitions) footballers in relation to the psychological processes and experiences during the course of performances. In line with findings from studies one and two, there was a general sense of anxiety in the lead-up to competition among participants. The qualitative study, in comparison to the quantitative studies, provides detail of the cognitive factors that occur alongside the experience of pre-competition anxiety. For some individuals, setting perfectionistic goals (e.g., flawless performance) created a self-imposed pressure, increased expectations of the self and resulted in anxiety (e.g., Ellis, 2002). For others, anxiety was fuelled by “less than perfect” performances in training or games the week before, which

filtered into the next week. Otherwise, some participants described nerves stemming from fear of not meeting other people's perfectionistic standards (i.e., SPP), other emotions (e.g., anger from previous mistakes), and the need to prove to themselves that they are the best (i.e., ego orientation).

The findings of study one and two provide unique contributions to the literature on perfectionism in sport. Studies examining the relationship between dimensions of perfectionism and anger have focused on trait anger or anger during performance (e.g., Dunn et al., 2006), whereas studies one and two of this thesis provide an understanding of the relationships between perfectionism and anger pre-competition. Also, study two examined the relationship (and mediating factors) of perfectionism and multidimensional anger, in the context of pre-competition. Athletes higher in SOP and SPP who experience frequent perfectionistic cognitions may be vulnerable to experiencing all dimensions of anger (e.g., feel anger, feel like expressing anger verbally, and feel like expressing anger physically). That is, indirectly via perfectionistic cognitions, both SOP and SPP were related to multidimensional anger. If individuals who are driven to achieve unattainable personally meaningful goals, also cognitively focus on imperfections, they are likely to experience anger towards self, or others (e.g., Flett et al., 2007).

### **9.2.3 Perfectionistic cognitions**

A number of researchers (e.g., Stoeber, 2010) have advocated the examination of perfectionistic cognitions as a way to complement the assessment of trait perfectionism and to gain a more comprehensive understanding of how perfectionism relates to emotions and psychological distress. Results of studies one and two of this thesis provide evidence that perfectionistic cognitions are uniquely related to negative pre-competition emotions. Perfectionistic cognitions accounted for significant additional variance in negative emotions (anxiety, anger, and dejection) over and above the variance predicted by SOP and SPP. Furthermore, after examining the mediating role of perfectionistic cognitions between perfectionism–pre-competition emotions (general and multidimensional competitive anxiety and anger), it was found that perfectionistic cognitions appear to be one mechanism by which both SOP and SPP are related to negative pre-competition emotions (e.g., multidimensional anxiety and anger). This finding was also reflected in the results of study three whereby perfectionistic individuals experienced cognitions such as “I need to be perfect” or “I shouldn't make a mistake” which in turn were related to feelings of frustration, anxiety, and/or anger, particularly when mistakes were made.

At the product level, Perfectionism Cognition Theory (PCT) proposes that cognitively activated perfectionists will experience perfectionistic cognitions and other forms of overthinking (e.g., mistake rumination; Flett et al., 2018, p. 104). The participants in study three described engaging in different forms of rumination (e.g., mistake rumination, why? rumination, and self-critical thoughts) in response to adverse sport situations. As Burns (1980) contended, those higher in perfectionism also engage in cognitive distortions such as overgeneralisation, all-or-none thinking, and should, must, need statements. These types of thoughts draw attention to the discrepancy between the actual self and the perfect self (both in the past and possibly in the future). Flett et al. (2018) maintain that, although these thoughts can serve the purpose of motivating an individual, perfectionistic cognitions form a sense of internal pressure and serve the purpose of self-punishment, self-belittling, and harsh self-criticism. Thus, as found in this thesis, perfectionistic cognitions are likely to have implications for cognitive capacity and emotional responses (Flett et al., 2002).

As perfectionistic athletes who experience frequent perfectionistic cognitions may be vulnerable to experiencing anxiety and anger, it is likely that these players may have difficulties in performance (e.g., expressing anger physically or verbally in response to mistakes) or if anger and anxiety is experienced consistently over a long period, it may have implications for their psychological well-being. Research outside sport has found that frequent perfectionistic cognitions explain unique variance in psychological distress beyond trait perfectionism (Flett et al., 1998; Flett et al., 2004; Rudolph et al., 2007). The findings of this thesis support Flett et al's., (1998) notion that frequent perfectionistic cognitions may be a mechanism by which perfectionistic individuals experience psychological distress. As described by individuals in the third study, the experience of perfectionism and perfectionistic cognitions can have long-term psychological consequences (e.g., eating disorders, self-harm, depression, and anxiety). These findings have potentially important implications for practitioners (e.g., coaches and sport psychologists) served with the role of enhancing athletic performance but also protecting athletes from the negative effects of perfectionism and perfectionistic cognitions.

To better understand the emotional experiences of athletes, practitioners need to consider not only whether athletes are higher or lower in SOP and SPP, but also if they are experiencing more or less frequent perfectionistic cognitions. Consequently, it would be useful for practitioners to understand the practical ways to reduce athletes' experience of perfectionistic cognitions, which may help them achieve the optimal emotional state prior to competition, and perhaps protect them

from the longer-term psychological consequences related to perfectionism and perfectionistic cognitions. It may also be useful for practitioners to understand the experience of athletes with higher levels of SOP and SPP but lower levels of perfectionistic cognitions. This information serves as potentially useful for informing intervention to protect individuals from the psychological consequences related to perfectionism. It may be that perfectionistic individuals who are better able to manage their cognitions and consequently report less frequent perfectionistic cognitions may benefit from self-compassion/mindfulness interventions rather than CBT based interventions (see Flett & Hewitt, 2014).

#### **9.2.4 Helping athletes help themselves**

The qualitative study in this thesis built upon previous qualitative, sport-related, perfectionism studies by providing an understanding of the psychological processes that occur over the course of performance, with an emphasis on cognitive reactions to adverse situations. To fully capture the process of overthinking, only footballers displaying both higher trait dimensions of perfectionism *and* perfectionistic cognitions (rather than only trait dimensions) were considered perfectionists in the study. Similar to previous qualitative studies, participants described perfectionism as a source of strain (e.g., Hill et al., 2015), however, unique to the qualitative study of this thesis, compared to previous qualitative, sport-related, perfectionism studies, some perfectionistic footballers described experiencing long-term psychological consequences of perfectionism (e.g., eating disorders, self-harm, depression, and anxiety). That is, if not managed, those higher in perfectionism and perfectionistic cognitions may be vulnerable to experiencing psychological distress. Consequently, as proposed by Flett et al. (1998) and Hall (2006), targeting ruminative cognitive components of perfectionism will help individuals manage perfectionism.

The fourth study in this thesis provided one of the first in sport to employ a randomised control design to assess the effectiveness of a self-help book intervention in reducing perfectionism and perfectionistic cognitions. It was also the first self-help intervention study to examine the effectiveness of the book using a measure of perfectionistic cognitions. Previous studies (e.g., Pleva & Wade, 2007, Steele & Wade, 2008) included measures of trait perfectionism only. As perfectionistic cognitions predicted psychological distress beyond SOP and SPP in previous research (e.g., Flett et al., 1998) and were one mechanism by which perfectionism led to negative emotions as evidenced in study two, reducing perfectionistic cognitions is important for the well-being of individuals. Therefore, a

novel and important finding in this thesis was that perfectionistic cognitions significantly reduced because of a self-help book intervention. This finding has practical implications. Coaches and sport psychologists who are aware of the role of perfectionistic cognitions may be able to intervene (e.g., use cognitive strategies to calm the player before competition) and look to employ CBT techniques as a way to target perfectionistic cognitions.

Athletes have busy schedules, usually managing training and competition commitments alongside personal commitments (e.g., family life, education), and therefore, accessible and low intensity interventions are required. As a self-help study is non-invasive, inexpensive, and easy to implement, it may be a good resource for athletes and coaches. It was evident that from participants' anecdotal evidence that the book mainly raised their awareness of their perfectionism. Coaches/sport psychologists could use the book as means for increasing participants' knowledge and understanding of perfectionism and their own standards and expectations. In addition, for those working with athletes who suffer from negative pre-competition emotions, self-help books may be useful in reducing negative emotions. Also, study three provided an understanding of the long-term implications of perfectionism in sport. Therefore, it is encouraged that clubs have access to clinical psychologists to help support players with longer-term psychological issues such as eating disorders, self-harm, depression, and anxiety, and it may be beneficial for clubs to have a referral system to allow ease of access to psychological services. In the meantime, self-help strategies appear to be a useful and empowering tool to help perfectionistic individuals manage their cognitions and emotions.

### **9.3 Remaining questions and future directions**

#### **9.3.1 Perfectionistic reactivity**

Flett and Hewitt's (2016) recent chapter on perfectionistic reactivity outlines the situations that may make perfectionistic individuals vulnerable to different forms of rumination and, in turn, psychological distress. Perfectionistic reactivity is a perfectionistic individual's style of responding to adversity, which includes both psychological reactivity and physiological responses (Flett & Hewitt, 2016). Participants in study three described a number of situations that occur during the process of performance, which are likely to evoke more negative cognitions and emotions. A number of them fall in line with the situations presented by Flett and Hewitt (2016) including failure, making a key mistake, and nonattainment of goals.

However, some of the situations were not fully explored (e.g., learning a new sport). Future research may benefit from further exploring the situations of perfectionistic reactivity using different research methods. For example, Flett and Hewitt (2016) noted that they are in the process of developing a measure that captures mistake rumination and therefore, future studies may benefit from examining perfectionistic reactivity and psychological consequences using their measure.

A key situation of perfectionistic reactivity, which was particularly stressful for participants, was injury (see Chapter 7). The risk of injury is one thousand times greater in football than other high-risk industries in the UK (Hawkins & Fuller, 1999). In general, footballers are likely to experience psychological distress as a consequence of injury and injury-provoked retirement (e.g., Gouttebarga et al., 2015; Guskiewicz et al., 2007). However, footballers consistently reported that they do not feel sufficiently supported to deal with the consequences of injury (e.g., Prinz et al., 2016). One participant in study three of this thesis reflected this notion in an account of injury; she described the lack of support from her coach when injured and explained how difficult this was for her. Some participants described the psychological difficulties of injury, but also how lack of support fuelled their depressive symptoms. Therefore, future studies would benefit from examining ways to provide adequate long-term support for players forced to retire through injury, especially those with higher levels of perfectionism (e.g., educating coaches on how best to support injured perfectionistic athletes).

### **9.3.2 Psychological distress**

The findings of this thesis suggest that perfectionistic cognitions are important to the experience of pre-competition emotions in youth footballers. Research focusing on other consequences of perfectionistic cognitions could enhance the understanding of the experience of perfectionism in sport. For example, research outside sport has examined the predictive ability of perfectionistic cognitions in anxiety and depression (e.g., Flett et al., 1998). As research suggests that the prevalence rate of psychological distress in footballers is on the increase (e.g., Gouttebarga et al. 2015), it may be beneficial for research in sport to explore similar avenues. Participants in study three described experiencing depression and anxiety, along with engaging in self-harm and disordered eating. Future research would therefore benefit from exploring the relationships between perfectionism, perfectionistic cognitions and psychological distress. It is also recommended that longitudinal designs are used to examine whether perfectionistic cognitions mediate the relationship between perfectionism and negative psychological consequences

(e.g., anxiety, depression, self-harm, and eating disorders) in athletes. Such research would help inform the need for clinical psychological support in sport and aid further development of psychological interventions.

In addition, future studies may also benefit from gaining an understanding of the impact of coping strategies on the psychological processes of perfectionistic athletes. Coping is defined as the cognitive and behavioral efforts to manage internal and external demands of psychological stress (Lazarus & Folkman, 1987). For athletes, coping is important for managing the adverse situations of performance (e.g., non-selection, injury), and athletes draw upon a range of coping strategies to deal with challenges and threats (Nicholls & Polman, 2007). Some strategies are deemed more effective (e.g., problem-focused coping), whereas others are deemed more ineffective (e.g., avoidant coping). Research suggests that SPP is positively related to avoidant coping and unrelated to problem-focused coping, whereas SOP is positively related to problem-focused coping and inversely related to avoidant coping (e.g., Hill et al., 2010a). To our knowledge, no studies in sport have investigated relationships between frequent perfectionistic cognitions and coping strategies. However, in study three of this thesis, athletes described using harmful avoidant coping strategies (e.g., disordered eating, self-harm) which appeared to have implications for performance, motivation, and well-being. Future research should therefore empirically test the role of coping in the perfectionism, perfectionistic cognitions, and pre-competition emotions relationship with consideration of perfectionistic reactivity. This information would be valuable for sport psychology practitioners; if coping does play a role then interventions could be crafted to teach coping strategies.

### **9.3.3 Moderating factors**

Based on the accounts of participants in the qualitative study of this thesis, it may be beneficial to conduct research in sport to examine which factors moderate the relationships between perfectionism and pre-competition emotions. As the research in this thesis is conducted in football, it may be beneficial to examine if the football environment plays a role in the relationships between perfectionism, perfectionistic cognitions and pre-competition emotions. It is observable from the description of football in Chapter 1 that it is a unique sport in which many individuals in the UK place high importance. The role of factors that moderate the relationship between perfectionism and negative pre-competition emotions has been underexplored. In other areas of sport, the moderating role of factors such as age, gender, and sport level is well established (e.g., anxiety–performance relationship).



Therefore, it may be beneficial for future research to determine what role, if any, age, gender, sport level, and sport type plays in the perfectionism–emotions relationship and whether football contributes uniquely to the experience of more negative emotions for those higher in perfectionism and perfectionistic cognitions.

It may also be beneficial for future research to examine potential moderating factors of the perfectionism, perfectionistic cognitions, and pre-competition emotions relationship. Drawing on the adverse situations described by participants in study three may be useful for identifying the moderating factors of this relationship. That is, non-selection, inter-team rivalry, and team-mate rivalry may play a role in the psychological experiences of those higher in perfectionism. Therefore, future research may benefit from understanding how these situations impact not only the pre-competition emotions, but also other emotional and psychological experiences of those higher in perfectionism and perfectionistic cognitions. It may be beneficial to adopt the measure of perfectionistic reactivity that is currently being developed by Flett and Hewitt (see Flett & Hewitt, 2016).

#### **9.3.4 Dimensions of perfectionism**

Additionally, research in relation to OOP is on the rise. Studies one and two used the CAPS to capture perfectionism as this scale is designed specifically for the use in children and adolescents. This scale, however, does not measure OOP. This means that the relationships between OOP, PCI, and different pre-competition emotions were not captured. Therefore, future studies may consider examining the relationship between OOP, PCI, and pre-competition emotions (especially dimensions of anger) in adult footballers using the HF-MPS. The field would also benefit from longitudinal studies that capture the relationship between OOP, PCI, and pre-competition emotions (particularly multidimensional anger). Furthermore, another avenue for future research would be to build on Hill et al. (2014) study by examining team-oriented perfectionism and its impact on perfectionistic cognitions and competition-related emotions.

Another component of perfectionism is perfectionistic self-presentation (Hewitt et al., 2003). Perfectionistic self-presentation reflects the individual differences in the ways that people present themselves as perfect or hide imperfections (Hewitt et al., 2008). However, no study has yet investigated perfectionistic self-presentation in relation to pre-competition emotions. Similar to perfectionistic cognitions, perfectionistic self-presentation has been shown to explain individual differences in psychological distress over and beyond dispositional perfectionism (Hewitt et al., 2003; Flett et al., 1998; Stoeber, Madigan, Damian, Esposito, & Lombardo, 2017).

Consequently, future research may benefit from including measures of perfectionistic self-presentation when examining pre-competition emotions. It may be that athletes higher in perfectionistic self-presentation will report emotions that are more positive because of the desire to be portrayed as the “perfect” athlete excited for competition.

### **9.3.5 Perfectionism interventions**

Although the self-help intervention was successful in reducing SPP, PCI, anxiety, dejection, and anger, there is a need for more intervention studies. A number of self-help books (e.g., “Present Perfect”; Somov, 2010) exist that may be effective in helping individuals manage their perfectionism. Thus, future studies may benefit from examining the efficacy of these books. Also, it would be beneficial to athletes to create a self-help book specific to sport. Given that “When Perfect Isn’t Good Enough: Strategies for Coping with Perfectionism” was effective, it may be valuable to create a sport-specific self-help book based on the principles of CBT as outlined in the self-help book. Although self-help is practical for footballers, the importance of sport psychology support should not be discounted. Future studies should aim to examine the effectiveness of self-help combined with psychological support.

The majority of interventions rely on cognitive-behavioural strategies; however, recent intervention studies are drawing upon other methods. For example, interventions based on self-compassion (e.g., acceptance and commitment therapy, mindfulness, and yoga) may be effective for managing perfectionism, related cognitions, and emotions. These interventions are designed to teach individuals to be “in the moment” and cultivate self-acceptance and self-compassion; as a result, they may be useful for those who have unrealistic standards of themselves and are harshly self-critical. Mosewich et al (2013) provided initial evidence that a self-compassion intervention in sport can reduce perfectionism (concerns over mistakes) and rumination. Also, given that Ferrari, Yap, Scott, Einstein, and Ciarrochi (2018) found self-compassion moderated the relationship between perfectionism and depression in a sample of adolescents, and Short and Mazmanian (2013) found that mindfulness mitigated the negative affect related to SPP by removing the mediating effect of rumination, self-compassion interventions that teach mindfulness may complement, or act as an alternative intervention, to traditional CBT interventions. Flett and Hewitt (2014) also advocate that, because perfectionism is related to self-criticism and a lack of self-acceptance, there is a need for perfectionistic individuals to develop a capacity for self-compassion to

protect their well-being. The promotion of self-compassion as a substitute for self-criticism was one of the central themes of a program “Goodbye Little Miss Perfect” used with girls at Oxford High School to address the pressures of perfectionism (see Flett & Hewitt, 2014).

## **9.4 Limitations and future directions**

Although the findings of this thesis provide us with useful insights into the impact of perfectionism and perfectionistic cognitions on pre-competition emotions, the psychological process of footballers higher in perfectionism and perfectionistic cognitions and ways to protect athletes from the negative consequences of perfectionism, the findings must be considered in the context of its limitations.

### **9.4.1 Research design**

A limitation across the first two studies was that these studies were non-experimental. Although non-experimental research allows for examination of the associations between variables and are useful at the early stages of a line of research (e.g., Cook & Cook, 2008), there is also a lack of control. Instead of manipulating or altering the predictor variables, non-experimental research relies on interpretation and observation (Belli, 2009). Therefore, future research should employ experimental designs (e.g., manipulate athletes’ pre-competition emotions and create situations of perfectionistic reactivity). For example, similar to Hill et al. (2011), perfectionistic reactivity could be tested by manipulating success and failure. Also, researchers may wish to extend the third study by using qualitative methods (e.g., diary study) as a way to explore further the thoughts and emotions after success and failure (e.g., Hall, 2016).

### **9.4.2 Contextual factors**

While longitudinal data is collected at multiple points, these observation points were pre-determined, and it is unknown what happens between these points. In academy football, for a period of time players wait to hear if their contracts are being renewed, or if they are being released from their club. Therefore, future studies may benefit from examining the role of players’ unique situations in the perfectionistic cognitions–emotions relationships. Furthermore, seasonal demands are different for female and male footballers. For female footballers in Scotland, their season is from March until November, whereas for males the season is from August until May. Although the data were analysed for gender differences, no significant differences were found. Nevertheless, it is likely that males and females are experiencing different seasonal demands within each time point. Despite the

strengths of a longitudinal design, it does not allow us to capture situational factors that occur in between time points. Thus, it is important that perfectionistic thinking and emotions be explored through qualitative methods (e.g., diary studies) to gain a fuller picture of perfectionistic athletes' experience.

### **9.4.3 Sample**

Study one and two used a sample of adolescent footballers, and it is likely that adolescents may not have the maturity to understand their emotions and have difficulty identifying emotions. Both anxiety and excitement are characterised by high arousal and signalled by increased heart rate (e.g., Smith, Bradley, & Lang, 2005). Thus, perhaps the younger participants were unable to distinguish between these two emotions. As anxiety and excitement are characterised by similar somatic consequences (e.g., sweaty palms), differentiating them may be difficult. Further, adolescence is a key developmental period when individuals' emotions may be very temperamental, showing significant changes from week to week (Silk, Steinberg, & Morris, 2003). Therefore, perhaps the relationships between SOP and both positive and negative emotions (study one) can be explained by the similarities between excitement and anxiety, and the difficulty for youth to differentiate between them. Future research should examine participants' understanding of anxiety and excitement and use other ways to measure these emotions (e.g., heart rate monitors).

Additionally, the generalizability of the findings of the studies is limited to the particular characteristics of participants (e.g., footballers). However, the results might have broader implications regarding perfectionism in sport. In order to make the results more generalizable, the studies should be replicated with other sample groups particularly those with more ethnic diversity. The participants of the studies in this thesis were predominately white. Therefore, future studies would benefit from obtaining a greater balance of ethnicity to gain a more accurate representation of the general population by recruiting participants from more culturally diverse backgrounds to understand whether the findings hold true among other cultures. Furthermore, participants of study three and four were self-selected and self-identified perfectionists and therefore represent a highly motivated cohort of perfectionistic footballers. Subsequently, this cohort may not be representative of all perfectionistic footballers and future studies may seek to recruit individuals more resistant to the idea of change.

### **9.4.4 Self-report**

Across all four studies, the measures were based on self-report data that may be limited due to subjective biases (Althubaiti, 2016). Self-report studies are dependent on the respondent's ability to answer honestly and accurately and may be subject to response bias (Paulhus & Vazire, 2007). The responses to self-report measures of perfectionism may be influenced by social desirability (Podsakoff et al., 2003). Mainly, in study three, the participants self-identified as perfectionists and participants of study four were individuals interested in managing their perfectionism, therefore, it is likely that, particularly if higher in SPP, they may have provided socially desirable responses (see Hewitt & Flett, 1991). To address the limitations of self-report, future studies could consider using additional sources of measurement. For example, in addition to using self-report measures, data could be collected from significant others (e.g., coach or parent reports of perfectionism), or physiological data could be collected (e.g., heart rate as a measure of somatic anxiety). Studies could also adopt observational measurement techniques (e.g., observed reports of perfectionistic reactivity).

Research suggests that those higher in perfectionism may also be higher in perfectionistic self-presentation and therefore, it is likely that certain athletes would underreport their levels of perfectionism, perfectionistic cognitions or negative pre-competition emotions (see Hewitt et al., 2008). Participants may believe that it is more acceptable to experience excitement before competition, rather than anxiety. Future studies may benefit from measuring anxiety and excitement through other means. Furthermore, considering that the interviews of study three were conducted in person, participants may have felt compelled to present themselves in more favourable ways, particularly for questions about the way they have reacted to situations. Although participants were invited to be as open and honest as possible during the interview, biases may have still been present.

#### **9.4.5 Dimensions of perfectionism**

Study one and two focused on SOP and SPP, and did not include OOP. Although research is on the rise in relation to OOP, the research examining OOP in youth sport is limited. Future research is needed to understand the correlates and consequences of OOP, and whether they are different to SOP and SPP. Furthermore, future research may benefit from testing the relationship between OOP and pre-competition emotions (especially anger) via perfectionistic cognitions. Although it is argued that OOP is more often related to interpersonal consequences rather than intrapersonal (Hewitt & Flett, 2002), it may be possible that poor interpersonal functioning may subsequently lead to negative competition-related

emotions (e.g., anger directed at others), and especially if an individual is prone to perfectionistic thinking. Therefore, it seems reasonable to suggest that those higher in OOP may experience negative pre-competition emotions. Furthermore, in study three, some participants higher in SOP/SPP also reported higher levels of OOP. Future studies may benefit from examining the psychological consequences of demonstrating high levels of SOP/SPP and OOP.

#### **9.4.6 Measures**

It is advocated that perfectionistic cognitions are best captured as a unidimensional construct. However, it is acknowledged that the issue of whether PCI is multidimensional or unidimensional is currently being debated. On one side, Stoeber et al. (2014a, 2014b) have argued strongly for a multidimensional approach but, on the other side, Flett and Hewitt (2014) have argued that PCI is unidimensional. The original PCI (unidimensional) is considered to be more appropriate here because (1) the PCI was originally developed as a unidimensional measure by Flett et al. (1998), (2) Hewitt and Flett (2014) have argued that the PCI is unidimensional because it is intended to capture perfectionistic self-rumination (i.e. negative, repetitive and persistent thoughts that pertain to the issue that the self is not perfect but the self must be perfect), (3) the unidimensional model is the most commonly used in research outside and inside of sport, and (4) the original intention (and the theoretical framework presented chapter three) is based on Hewitt, Flett and Mikail (2017) comprehensive model of perfectionistic behaviour (CMPB). It is acknowledged that there is some evidence that the PCI is multidimensional based on factorial validity (e.g., Stoeber et al., 2014a, 2014b), and therefore, future studies may adopt the use of the multidimensional version PCI is an alternative approach as it is quite different from what was tested within this thesis.

#### **9.4.7 Intervention design**

A limitation to the RCT was that it was not double-blind. A double-blinded experiment helps to reduce bias (e.g., Peat et al., 2002). Although the participants in the RCT were randomised to a group, the researcher was aware of the participants' group allocation. When the researcher and/or participants are not blinded then there is an increase in subject-expectancy effect, which is when participants expect a given result, and therefore unconsciously affect the outcome, or report the expected result (Greenhalgh, 2014). Because this effect can bias the results of experiments, it is recommended that future intervention studies are double-blinded and that neither the researcher nor the group know the group

allocations in order to eliminate the effect (Day & Altman, 2000). Another limitation of the fourth study is the use of a no-intervention control group, instead of an active control. This means it is unable to rule out the possibility that the results of the RCT reflect a placebo effect (Boot, Simons, Stothart, & Stutts, 2013). Some would argue that any improvements reported by participants post-intervention are more likely a product of non-specific intervention effects rather than intervention itself (Lambert, 2005). Nonspecific effects are any components of the intervention that are not theory driven e.g., the researcher's compassion and kindness, or giving the participant attention (Messer & Wampold, 2006). Therefore, future studies should adopt an active control group approach to examine if there are any differences in the effectiveness of a self-help intervention (Boot et al., 2013).

As a limitation of the RCT was the lack of an active control group, future studies could benefit from testing the effectiveness of interventions that combine one-to-one support with self-help, as one participant highlighted that one-to-one support would be better for addressing long-term issues of perfectionism. Based on evidence from the third study, which highlights that coaches and parents may contribute to perfectionistic tendencies, future intervention studies should incorporate interventions for both coaches and parents. Additionally, as the book used was designed mainly for perfectionism in general, and although it helped participants on and off the pitch, it is recommended that sport-specific self-help resources are created. Lastly, the RCT could also be improved by adding more points of assessment during and after intervention (Laurenceau, Hayes, & Feldman, 2007). By adding additional assessments during intervention, researchers can examine the trajectory of change and how perfectionism and perfectionistic cognitions can influence pre-competition emotions at different stages (Hayes, Hope, & Hayes, 2007). Likewise, by adding additional assessment after intervention, researchers can examine whether the intervention helps to predict long-term changes in perfectionism and if the changes have not been maintained then it would be beneficial to find ways to maintain the changes (e.g., longer-term interventions; see Flett & Hewitt, 2008).

## **9.5 General conclusion**

The broad aim of this thesis was to extend previous research in perfectionism by examining the relationships between perfectionism, overthinking (e.g., perfectionistic cognitions) and emotions in the context of football. To achieve the aim, two quantitative studies were conducted that, for the first time, demonstrated

that frequent perfectionistic cognitions predicted negative emotions when controlling for SOP and SPP, and mediated the relationship between SOP and SPP and pre-competition emotions. The aim of the thesis was also achieved by adopting qualitative methods to explore and describe the experiences of perfectionistic footballers with regard to psychological responses during the course of their performances (pre-, during-, and post-performance) and how adverse experiences in football impacted their psychological responses. This study showed that footballers higher in perfectionism and perfectionistic cognitions are likely to respond to negative situations related to competition (e.g., mistakes, poor performance, injury) by overthinking, having negative emotions and, for some participants, experiencing more severe negative psychological consequences. The first three studies provide support that perfectionistic cognitions are likely to have implications for the emotions that athletes experience prior to competition, and that if perfectionism and the accompanying cognitions are not managed, then there may be implications for psychological well-being in the long-term (e.g., self-harm, eating disorders, depression, anxiety). The fourth and final study presented a randomised control trial that examined the effectiveness of a self-help book for managing perfectionism. The findings showed that empowering athletes to help themselves by reading a perfectionism self-help book helps to reduce their levels of SPP, perfectionistic cognitions, and negative pre-competition emotions. In conclusion, the findings provide initial evidence that the experience of SOP and SPP, along with frequent perfectionistic cognitions, may hold implications for the well-being of footballers, and self-help interventions are effective in reducing SPP, PCI, and negative pre-competition emotions.



## List of Tables

Table 5.1 Definitions of pre-competition emotions (Jones et al., 2005).....	62 -
Table 5.2 Descriptive statistics, bivariate correlations, and internal reliability coefficients for self-oriented and socially prescribed perfectionism, perfectionistic cognitions, and sports emotions before competition ( <i>N</i> = 196) .....	74 -
Table 5.3 Hierarchical regression analyses with self-oriented and socially prescribed perfectionism and perfectionistic cognitions predicting pre-competition emotions ( <i>N</i> = 196).....	76 -
Table 6.2 Model 2 hypotheses (PCI as mediator of perfectionism-multidimensional pre-competition emotions relationship) .....	101 -
Table 6.3 Means, standard deviations and internal reliability for self-oriented perfectionism, socially prescribed perfectionism, perfectionistic cognitions, general pre-competition emotions and dimensions of anxiety and anger ( <i>N</i> = 337) .....	108 -
Table 6.4 Bivariate correlations for trait perfectionism, perfectionistic cognitions and general pre-competition emotions ( <i>N</i> = 337) .....	109 -
Table 6.5 Bivariate correlations for trait perfectionism, perfectionistic cognitions and multidimensional anxiety ( <i>N</i> = 337).....	110 -
Table 6.6 Bivariate correlations for trait perfectionism, perfectionistic cognitions and multidimensional anger ( <i>N</i> = 337).....	111 -
Table 6.7 Model 1 hypotheses (PCI as mediator of perfectionism-general pre-competition emotions relationship) .....	117 -
Table 6.8 Model 2 hypotheses (PCI as mediator of perfectionism-multidimensional pre-competition emotions relationship) .....	118 -
Table 7.1 Situations/circumstances relevant to perfectionistic reactivity (Hewitt & Flett, 2016) .....	127 -
Table 7.2 Alterations made to interview schedule as a result of piloting .....	149 -
Table 7.3 Participants' demographic Information, CAPS, PCI and HF-MPS scores ( <i>N</i> = 22).....	150 -
Table 8.1 Internal reliability coefficients for all scales.....	225 -
Table 8.2 Differences between intervention and control group on age, years played and outcome variables at T1 .....	227 -
Table 8.4 Bivariate correlations for perfectionism, perfectionistic cognitions, help-seeking attitudes and pre-competition emotions at T1 ( <i>N</i> = 115).....	230 -

<b>Table 8.5 Bivariate correlations for dimensions of perfectionism, perfectionistic cognitions, help seeking attitudes and pre-competition emotions at T2 and T3 (<i>N</i> = 115) .....</b>	<b>- 231 -</b>
<b>Table 8.6 Main group, time and interaction effects (group x time) (<i>N</i> = 115) .....</b>	<b>- 250 -</b>
<b>Table 8.7 Analysis of changes on all measures over time and effect sizes (<i>d</i>) for intervention group (intention-to-treat analyses; <i>n</i> = 55) .....</b>	<b>- 251 -</b>
<b>Table 8.8 Analysis of changes on all measures over time and effect sizes (<i>d</i>) for control group (intention-to-treat analyses; <i>n</i> = 60).....</b>	<b>- 252 -</b>
<b>Table 8.9 Analysis of simple effects on all measures between intervention and control group at each time point (<i>N</i> = 115)....</b>	<b>- 253 -</b>
<b>Table 8.10 Completion of book chapters, exercises and book ratings .....</b>	<b>- 255 -</b>
<b>Table 8.11 Categories of responses from “helpfulness question” .-</b>	<b>256 -</b>
<b>Table 8.12 Categories of responses “learned from book question”-</b>	<b>257 -</b>

## List of Figures

Figure 6.1 Multilevel structural equation model ( $n = 337$ ). Path coefficients are standardized. Dashed paths are non-significant ( $p > .05$ ). * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	114 -
Figure 6.2 Multilevel structural equation model ( $n = 337$ ). Path coefficients are standardized. Dashed paths are non-significant ( $p > .05$ ). * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	115 -
Figure 7.1 Themes from data analysis. ....	159 -
Figure 8.1 CONSORT diagram showing the flow of participants through each stage of the study.....	222 -
Figure 8.2 Graph showing the interaction effect on self-oriented perfectionism. * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	233 -
Figure 8.3 Graph showing the interaction effect on socially prescribed perfectionism. * $p < .05$ . ** $p < .01$ . *** $p < .001$ . ....	235 -
Figure 8.4 Graph showing the interaction effect on other-oriented perfectionism. * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	237 -
Figure 8.5 Graph showing the interaction effect on perfectionistic cognitions. * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	239 -
Figure 8.6 Graph showing the interaction effect on help-seeking attitudes. ....	240 -
Figure 8.7 Graph showing the interaction effect on pre-competition anxiety. * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	242 -
Figure 8.8 Graph showing the interaction effect on pre-competition anger. * $p < .05$ . ** $p < .01$ . *** $p < .001$ .....	244 -
Figure 8.9 Graph showing the interaction effect on pre-competition dejection. * $p < .05$ . ** $p < .01$ . *** $p < .001$ . ....	246 -
Figure 8.10 Graph showing the interaction effect on pre-competition happiness. * $p < .05$ . ** $p < .01$ . *** $p < .001$ . ....	247 -
Figure 8.11 Graph showing the interaction effect on pre-competition excitement. ....	248 -

## List of References

- Abdollahi, A., Hosseinian, S., Beh-Pajoo, A., & Carlbring, P. (2017). Self-concealment mediates the relationship between perfectionism and attitudes toward seeking psychological help among adolescents. *Psychological Reports, 120*(6), 1019–1036.
- Abela, J. R., Payne, A. V., & Moussaly, N. (2003). Cognitive vulnerability to depression in individuals with borderline personality disorder. *Journal of Personality Disorders, 17*(4), 319–329.
- Adler, A. (1927). Individual psychology. *The Journal of Abnormal and Social Psychology, 22*(2), 116–122.
- Akram, U., Ellis, J. G., Myachykov, A., Chapman, A. J., & Barclay, N. L. (2017). Anxiety mediates the relationship between multidimensional perfectionism and insomnia disorder. *Personality and Individual Differences, 104*, 82–86.
- Albers, C., & Lakens, D. (2018). When power analyses based on pilot data are biased: inaccurate effect size estimators and follow-up bias. *Journal of Experimental Social Psychology, 74*, 187–195.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217–237.
- Aldea, M. A., Rice K.G., Gormley, B., & Rojas, A. (2010). Telling perfectionists about their perfectionism: Effects of providing feedback on emotional reactivity and psychological symptoms. *Behaviour Research and Therapy, 48*, 1194–1203.
- Althubaiti, A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. *Journal of Multidisciplinary Healthcare, 9*, 211-217.
- Amis, J. (2005). Interviewing for case study research. In D. Andrews, D. Mason, & M. Silk (Eds.), *Qualitative methods in sport studies* (pp. 104–138). Oxford, UK: Berg.
- Amster, B. J., & Klein, E. R. (2008). Perfectionism in people who stutter: Preliminary findings using a modified cognitive-behavioural treatment approach. *Behavioural and Cognitive Psychotherapy, 36*(1), 35–40.
- Anderson, C., (2010). Presenting and evaluating qualitative research. *American Journal of Pharmaceutical Education, 74*(8), 1-7.
- Anshel, M. H., & Mansouri, H. (2005). Influences of perfectionism on motor performance, affect and causal attributions in response to critical information feedback. *Journal of Sport Behaviour, 28*(2), 99–124.

- Antony, M. M., Purdon, C. L., Huta, V., & Swinson, R. P. (1998). Dimensions of perfectionism across the anxiety disorders. *Behaviour Research and Therapy*, 36(12), 1143–1154.
- Antony, M. M., & Swinson, R. P. (1998). *When perfect isn't good enough: Strategies for coping with perfectionism*. Oakland, CA: New Harbinger Publications.
- Antony, M. M., & Swinson, R. P. (2009). *When perfect isn't good enough: Strategies for coping with perfectionism* (2nd ed.). Oakland, CA: New Harbinger Publications.
- Appleton, P.R., Hall, H. K., & Hill, A.P. (2009). Relations between multidimensional perfectionism and burnout in junior-elite male athletes. *Psychology of Sport and Exercise*, 10(4), 457–465.
- Appleton, P. R., Hall, H. K., & Hill, A. P. (2010). Family patterns of perfectionism: An examination of elite junior athletes and their parents. *Psychology of Sport and Exercise*, 11(5), 363–371.
- Appleton, P. R., Hall, H. K., & Hill, A. P. (2011). Examining the influence of the parent-initiated and coach-created motivational climate upon athletes' perfectionistic cognitions. *Journal of Sports Sciences*, 29(7), 661–671.
- Appleton, P. R., & Hill, A. P. (2012). Perfectionism and athlete burnout in junior elite athletes: The mediating role of motivation regulations. *Journal of Clinical Sport Psychology*, 6(2), 129–145.
- Arnold, R., & Fletcher, D. (2012). A research synthesis and taxonomic classification of the organizational stressors encountered by sport performers. *Journal of Sport and Exercise Psychology*, 34(3), 397–429.
- Arpin-Cribbie, C. A., & Cribbie, R. A. (2007). Psychological correlates of fatigue: Examining depression, perfectionism, and automatic negative thoughts. *Personality and Individual Differences*, 43(6), 1310–1320.
- Arpin-Cribbie, C.A., Irvine, J., & Ritvo, P. (2012). Web-based cognitive-behavioural therapy for perfectionism: A randomized controlled trial. *Psychotherapy Research*, 22(2), 194–207.
- Averill, J. R. (1983). Studies on anger and aggression. *American Psychologist*, 38(11), 1145–1160.
- Axelson, D. A., & Birmaher, B. (2001). Relation between anxiety and depressive disorders in childhood and adolescence. *Depression and Anxiety*, 14(2), 67–78.

- Bailey, M. (2017, May 3). Seeking perfection in front of 50,000 people: why football is a pressure cooker for mental health issues. *The Telegraph*. Retrieved from <https://www.telegraph.co.uk/men/thinking-man/seeking-perfection-front-50000-people-football-pressure-cooker/>
- Bakker, F. C., & Kayser, C. S. (1994). Effect of a self-help mental training programme. *International Journal of Sport Psychology*, 25(2), 158–175.
- Bandura, A. (1997). Editorial. *American Journal of Health Promotion*, 12(1), 8–10.
- Bardone-Cone, A. M., Wonderlich, S. A., Frost, R. O., Bulik, C. M., Mitchell, J. E., Uppala, S., & Simonich, H. (2007). Perfectionism and eating disorders: Current status and future directions. *Clinical Psychology Review*, 27(3), 384–405.
- Barker, C., Pistrang, N., & Elliott, R. (2015). *Research methods in clinical psychology: An introduction for students and practitioners* (3rd ed.) Chichester, UK: John Wiley & Sons.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Barrett, L. F., Mesquita, B., Ochsner, K. N., & Gross, J. J. (2007). The experience of emotion. *Annual Review of Psychology*, 58, 373–403.
- BBC Sport (2017, September 27). Women's Super League: FA approves one-tier, full-time structure for 2018–19. *BBC Sport*. Retrieved from <https://www.bbc.co.uk/sport/football/41406980>
- Beauchaine, T., Gatzke-Kopp, L., & Mead, H. (2007). Polyvagal Theory and developmental psychopathology: Emotion dysregulation and conduct problems from preschool to adolescence. *Biological Psychology*, 74(2), 174–184.
- Beck, A.T., Epstein, N., & Harrison, R. (1983). Cognitions, attitudes and personality dimensions in depression. *British Journal of Cognitive Psychotherapy*, 1(1), 1–16.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression: A treatment manual*. New York, NY: Guildford Press.
- Belli, G. (2009). Nonexperimental quantitative research. In S. D. Lapan & M. T. Quartaroli (Eds.), *Research essentials: An introduction to designs and practices* (pp. 59–77). San Francisco, CA: Jossey-Bass.

- Besser, A., Flett, G. L., & Hewitt, P. L. (2004). Perfectionism, cognition, and affect in response to performance failure versus success. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 22(4), 297–328.
- Besser, A., Flett, G. L., Hewitt, P. L., & Guez, J. (2008). Perfectionism, and cognitions, affect, self-esteem, and physiological reactions in a performance situation (2008). *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 26(3), 206–228.
- Besser, A., & Zeigler-Hill, V. (2010). The influence of pathological narcissism on emotional and motivational responses to negative events: The roles of visibility and concern about humiliation. *Journal of Research in Personality*, 44, 520–534.
- Bieling, P.J., Israeli, A., Smith, J., & Antony, M.M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences*, 36, 1373–1385.
- Biggerstaff, D. (2012). Qualitative research methods in psychology. In G. Rossi (Ed.), *Psychology-selected paper* (pp. 175–206). Rijeka, Croatia: InTech Open Science.
- Blackman, T., Wistow, J., & Byrne, D. (2012). Using qualitative comparative analysis to understand complex policy problems. *Evaluation*, 19(2), 126–140.
- Blakelock, D. J., Chen, M. A., & Prescott, T. (2016). Psychological distress in elite adolescent soccer players following deselection. *Journal of Clinical Sport Psychology*, 10(1), 59–77.
- Blankstein, K.R., & Lumley, C.H. (2008). Multidimensional perfectionism and ruminative brooding in current dysphoria, anxiety, worry, and anger. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy*, 26(3), 168–193.
- Blankstein, K. R., Lumley, C. H., & Crawford, A. (2007). Perfectionism, hopelessness, and suicide ideation: Revisions to diathesis-stress and specific vulnerability models. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 25(4), 279–319.
- Blasberg, J. S., Hewitt, P. L., Flett, G. L., Sherry, S. B., & Chen, C. (2016). The importance of item wording: The distinction between measuring high standards versus measuring perfectionism and why it matters. *Journal of Psychoeducational Assessment*, 34(7), 702–717.

- Blatt, S. J., Quinlan, D. M., Pilkonis, P. A., & Shea, M. T. (1995). Impact of perfectionism and need for approval on the brief treatment of depression: the National Institute of Mental Health Treatment of Depression Collaborative Research Program revisited. *Journal of Consulting and Clinical Psychology, 63*(1), 125–132.
- Blatt, S. J., & Zuroff, D. C. (2002). Perfectionism in the therapeutic process. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 393–406). Washington, DC: American Psychological Association.
- Blatt, S. J., Zuroff, D. C., Bondi, C. M., Sanislow, III, C. A., & Pilkonis, P. A. (1998). When and how perfectionism impedes the brief treatment of depression: Further analyses of the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting and Clinical Psychology, 66*(2), 423–428.
- Bogdan, R. C., & Biklen, S. K. (2003). *Qualitative research for education: An introduction to theories and methods* (4th ed.). Boston, MA: Pearson.
- Bolger, N., Davis, A., & Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology, 54*(1), 579–616.
- Boot, W. R., Simons, D. J., Stothart, C., & Stutts, C. (2013). The pervasive problem with placebos in psychology: Why active control groups are not sufficient to rule out placebo effects. *Perspectives on Psychological Science, 8*(4), 445–454.
- Borkovec, T.D., Alcaine, O., & Behar, E. (2004). Avoidance theory of worry and generalized anxiety. In R.G. Heimberg, C.L. Turk, D.S. Mennin (Eds.), *Generalized anxiety disorder: Advances in research and practice* (pp. 77–108). New York, NY: Guilford.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.
- Bredemeier, B. J., & Shields, D. L. (1986). Game reasoning and interactional morality. *The Journal of Genetic Psychology: Research and Theory on Human Development, 147*(2), 257–275.
- Brooks, A. W., & Schweitzer, M. E. (2011). Can Nervous Nelly negotiate? How anxiety causes negotiators to make low first offers, exit early, and earn less profit. *Organizational Behavior and Human Decision Processes, 115*(1), 43–54.
- Brosschot, J.F., Gerin, W., & Thayer, J.F. (2006) Worry and health: The perseverative cognition hypothesis. *Journal of Psychosomatic Research, 60*(2), 113–124.



- Brown, J.R., & Kocovski, N.L. (2014). Perfectionism as a predictor of post-event rumination in a socially anxious sample. *Journal of Rational-Emotive Therapy, 32*(2), 150–163.
- Buhr, K., & Dugas, M. J. (2006). Investigating the construct validity of intolerance of uncertainty and its unique relationship with worry. *Journal of Anxiety Disorders, 20*(2), 222–236.
- Bunker, B. B., & Williams, H. (1986). *Managing decline in organizational life*. New York, NY: Personnel, American Management Association.
- Buraimo, B., Paramio, J. L., & Campos, C. (2010). The impact of televised football on stadium attendances in English and Spanish league football. *Soccer & Society, 11*(4), 461–474.
- Burns, D. D. (1980). *Feeling good: The new mood therapy*. New York, NY: The New American Library Inc.
- Burns, D. D. (1983). The spouse who is a perfectionist. *Medical Aspects of Human Sexuality, 17*, 219–230.
- Burwell, R.A. (2015). Self-evaluative and emotion processes linked with brooding rumination among adolescents. *Journal of Adolescence, 41*, 162–174.
- Buzzichelli, S., Marzola, E., Amianto, F., Fassino, S., & Abbate-Daga, G. (2018). Perfectionism and cognitive rigidity in anorexia nervosa: Is there an association?. *European Eating Disorders Review, 26*, 360–366.
- Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. London, UK: Routledge.
- Calvin, M. (2017, April 18). Football youth development in England: 'We're shouting and screaming. What have we become?' *The Telegraph*. Retrieved from <https://www.theguardian.com/football/2017/apr/18/football-youth-development-england-shouting-screaming>
- Campo, M., Champely, S., Lane, A.M., Rosnet, E., Ferrand, C., & Louvet, B. (2016). Emotions and performance in rugby. *Journal of Sport and Health Science, 294*, 1–6.
- Carr, S., & Wyon, M. (2003). Motivational climate and goal orientations, trait anxiety and perfectionism in dance students. *Journal of Dance Medicine and Science, 7*(4), 105–114.
- Carter, B. (2014, June 11) When do footballers reach their peak? *BBC News*. Retrieved from <https://www.bbc.co.uk/news/magazine-28254123>
- Carter, M. M., & Weissbrod, C. S. (2011). Gender differences in the relationship between competitiveness and adjustment among athletically identified college students. *Psychology, 2*(2), 85–90.

- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. New York, NY: Cambridge University Press.
- Castro, J., Gila, A., Gual, P., Lahortiga, F., Saura, B., & Toro, J. (2004). Perfectionism dimensions in children and adolescents with anorexia nervosa. *Journal of Adolescent Health, 35*(5), 392–398.
- Chang, E. C. (2000). Perfectionism as a predictor of positive and negative psychological outcomes: Examining a mediation model in younger and older adults. *Journal of Counseling Psychology, 47*(1), 18–26.
- Chang, E. C. (2017). Perfectionism and loneliness as predictors of depressive and anxious symptoms in African American adults: Further evidence for a top-down additive model. *Cognitive Therapy and Research, 41*(5), 720–729.
- Chang, E. C., Ivezaj, V., Downey, C. A., Kashima, Y., & Morady, A. R. (2008). Complexities of measuring perfectionism: Three popular perfectionism measures and their relations with eating disturbances and health behaviors in a female college student sample. *Eating Behaviors, 9*(1), 102–110.
- Chen, L.H., Kee, Y.H., & Tsai, Y-M. (2009). An examination of the dual model of perfectionism and adolescent athlete burnout: A short-term longitudinal research. *Social Indicators Research, 91*, 189–201.
- Christenson, M., & Fenn, C. (2018, February 1). Football transfers: how spending has escalated over the past three windows. *The Guardian*. Retrieved from <https://www.theguardian.com/football/ng-interactive/2018/feb/01/football-transfers-how-spending-has-escalated-over-the-past-three-windows>
- Ciesla, J. A., & Roberts, J. E. (2007). Rumination, negative cognition, and their interactive effects on depressed mood. *Emotion, 7*(3), 555–565.
- Claes, L., Soenens, B., Vansteenkiste, M., & Vandereycken, W. (2012). The scars of the inner critic: Perfectionism and nonsuicidal self-injury in eating disorders. *European Eating Disorders Review, 20*(3), 196–202.
- Clancy, F., Prestwich, A., Caperton, L., & O'Connor, D. (2016). Perseverative cognition and health behaviors: A systematic review and meta-analysis. *Frontiers in Human Neuroscience, 10*, 1–12.
- Cockell, S. J., Hewitt, P. L., Seal, B., Sherry, S., Goldner, E. M., Flett, G. L., & Remick, R. A. (2002). Trait and self-presentational dimensions of perfectionism among women with anorexia nervosa. *Cognitive Therapy and Research, 26*(6), 745–758.
- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: complementary research strategies*. Thousand Oaks, CA: Sage.

- Coggshall, V. (2015, n.d.). Scared to Try: Moving Beyond the Paralysis of Perfectionism. [Web blog post]. Retrieved from <https://tinybuddha.com/blog/scared-to-try-moving-beyond-the-paralysis-of-perfectionism/>
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences*. New York, NY: Academic.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Approaches to qualitative data analysis. Research methods in education* (6<sup>th</sup> ed.). New York, NY: Routledge.
- Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112(4), 558–577.
- Conn, D. (2010, August 18) How can football club capture the social value of the beautiful game. *The Guardian*. Retrieved from <https://www.theguardian.com/society/2010/aug/18/football-social-value-report-supporter-owned>
- Conn, D. (2017, October 6). 'Football's biggest issue': The struggle facing boys rejected by academies. *The Guardian*. Retrieved from <https://www.theguardian.com/football/2017/oct/06/football-biggest-issue-boys-rejected-academies>
- Connolly, S. L., Wagner, C. A., Shapero, B. G., Pendergast, L. L., Abramson, L. Y., & Alloy, L. B. (2014). Rumination prospectively predicts executive functioning impairments in adolescents. *Journal of Behavior Therapy and Experimental Psychiatry*, 45(1), 46–56.
- Constantine, M. G. (2002). Predictors of satisfaction with counseling: Racial and ethnic minority clients' attitudes toward counseling and ratings of their counselors' general and multicultural counseling competence. *Journal of Counseling Psychology*, 49(2), 255–263.
- Cook, B. G., & Cook, L. (2008). Nonexperimental quantitative research and its role in guiding instruction. *Intervention in School and Clinic*, 44(2), 98–104.
- Coulomb-Cabagno, G., & Rasclé, O. (2006). Team sports' players observed aggression as a function of gender, competitive level and sport type. *Journal of Applied Social Psychology*, 36, 1980–2000.
- Cox, S. L., & Chen, J. (2015). Perfectionism: A contributor to social anxiety and its cognitive processes. *Australian Journal of Psychology*, 67(4), 231–240.
- Cox, B. J., & Enns, M. W. (2003). Relative stability of dimensions of perfectionism in

- depression. *Canadian Journal of Behavioral Science*, 35(2), 124–132.
- Cox, B. J., Enns, M. W., & Clara, I. P. (2002). The multidimensional structure of perfectionism in clinically distressed and college student samples. *Psychological Assessment*, 14, 365–373.
- Cox, R. H., Martens, M. P., & Russell, W. D. (2003). Measuring anxiety in athletics: The revised competitive state anxiety inventory–2. *Journal of Sport and Exercise Psychology*, 25(4), 519–533.
- Craft, L. L., Magyar, T. M., Becker, B. J., & Feltz, D. L. (2003). The relationship between the Competitive State Anxiety Inventory-2 and sport performance: A meta-analysis. *Journal of Sport and Exercise Psychology*, 25(1), 44–65.
- Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of Mixed Methods Research*, 3(2), 95–108.
- Creswell, J.W. (2013). *Qualitative inquiry & research design: choosing among the five approaches*. Thousand Oaks, CA: Sage Publications, Inc.
- Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior*, 14(6), 595–606.
- Cummings, C. M., Caporino, N. E., & Kendall, P. C. (2014). Comorbidity of anxiety and depression in children and adolescents: 20 years after. *Psychological Bulletin*, 140(3), 816–845.
- Curci, A., Lanciano, T., Soleti, E., & Rimé, B. (2013). Negative emotional experiences arouse rumination and affect working memory capacity. *Emotion*, 13(5), 867–880.
- Curran, P. J., & Bauer, D. J. (2011). The disaggregation of within-person and between-person effects in longitudinal models of change. *Annual Review of Psychology*, 62, 583–619.
- Curran, T., & Hill, A. P. (2017). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological Bulletin*. Advance online publication.
- Curran, T., Hill, A. P., Jowett, G. E., & Mallinson, S. (2014). The relationship between multidimensional perfectionism and passion in junior athletes. *International Journal of Sport Psychology*, 45(4), 369–384.
- Davidson, K. W., & Mostofsky, E. (2010). Anger expression and risk of coronary heart disease: Evidence from the Nova Scotia Health Survey. *American Heart Journal*, 159(2), 199–206.
- Davies, H. (2006). *Being Gazza: Tackling my demons*. London, UK: Headline Publishing Group.

- Day, S. J., & Altman, D. G. (2000). Blinding in clinical trials and other studies. *BMJ*, 321(7259), 504.
- De Azevedo, M. H. P., Soares, M. J., Carvalho Bos, S., Allen Gomes, A., Maia, B., Marques, M., ... & Macedo, A. (2009). Perfectionism and sleep disturbance. *The World Journal of Biological Psychiatry*, 10(3), 225–233.
- Delaney, M. (2017, August 17). Neymar, an 'out of control' transfer market and why Philippe Coutinho and Virgil van Dijk could still get their moves. *Independent*. Retrieved from <https://www.independent.co.uk/sport/football/transfers/philippe-coutinho-virgil-van-dijk-neymar-liverpool-barcelona-southampton-a7898356.html>
- Deloitte (2018). *Deloitte Football Money League 2018: Rising Stars*. Retrieved from <https://www2.deloitte.com/uk/en/pages/sports-business-group/articles/deloitte-football-money-league.html>
- Denzin, N. K. (1978). *Sociological methods: A sourcebook* (2nd ed.). New York, NY: McGraw Hill.
- Denzin, N. K. (2017). *The research act: A theoretical introduction to sociological methods*. New York, NY: Routledge.
- Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks, CA: Sage publications.
- De Petrillo, L. A., Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). Mindfulness for long-distance runners: An open trial using Mindful Sport Performance Enhancement (MSPE). *Journal of Clinical Sport Psychology*, 3(4), 357–376.
- DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314–321.
- Diener, E. (2000). Subjective well-being: The science of happiness, and a proposal for national index. *American Psychologist*, 55(1), 34–43.
- Doble, A. (2017, July 19). The secret history of women's football. *BBC News*. Retrieved from <http://www.bbc.co.uk/newsbeat/article/40654436/the-secret-history-of-womens-football>
- Docherty, S., & Sandelowski, M. (1999). Focus on qualitative methods: Interviewing children. *Research in Nursing & Health*, 22(2), 177–185.
- Dolton, P., & MacKerron, G. (2018). *Is football a matter of life and death – or is it more important than that?* (Discussion Paper No. 493). National Institute of Economic and Social Research. Retrieved from <https://www.niesr.ac.uk/sites/default/files/publications/DP493.pdf>

- Donachie, T. C., Hill, A. P., & Hall, H. K. (2018). The relationship between multidimensional perfectionism and pre-competition emotions of youth footballers. *Psychology of Sport and Exercise, 37*, 33–42.
- Donaldson, D., Spirito, A., & Farnett, E. (2000). The role of perfectionism and depressive cognitions in understanding the hopelessness experienced by adolescent suicide attempters. *Child Psychiatry and Human Development, 31*(2), 99–111.
- Doss, K. K., & Bloom, L. (2018). Mindfulness in the middle school classroom: Strategies to target social and emotional well-being of gifted students. *Gifted Education International, 34*(2), 181–192.
- Douglas, K., & Carless, D. (2009). Abandoning the performance narrative: Two women's stories of transition from professional sport. *Journal of Applied Sport Psychology, 21*(2), 213–230.
- Downey, C. A., Reinking, K. R., Gibson, J. M., Cloud, J. A., & Chang, E. C. (2014). Perfectionistic cognitions and eating disturbance: Distinct mediational models for males and females. *Eating Behaviors, 15*(3), 419–426.
- Drahota, J.T., & Eitzen, D.S. (1998). The role exit of professional athletes, *Sociology of Sport Journal, 15*(3), 263–278.
- Duda, J. (1998). *Advances in sport and exercise psychology measurement*. Morgantown, WV: Fitness Information Technology.
- Duda, J. L., & Hall, H. (2001). Achievement goal theory in sport: Recent extensions and future directions. In R. N. Singer, H. A. Hausenblas, & C. M. Janelle (Eds.), *Handbook of Sport Psychology* (pp. 417–443). New York, NY: Wiley.
- Dunkley, D. M., Blankstein, K.R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping, perceived social support as mediators and moderators. *Journal of Counselling Psychology, 47*(4), 437–453.
- Dunkley, D. M., Zuroff, D. C., & Blankstein, K. R. (2003). Self-critical perfectionism and daily affect: Dispositional and situational influences on stress and coping. *Journal of Personality and Social Psychology, 84*(1), 234–252.
- Dunn, J. G. H., Gotwals, J. K., Causgrove Dunn, J., & Syrotuik, D. G. (2006). Examining the relationship between perfectionism and trait anger in competitive sport. *International Journal of Sport and Exercise Psychology, 4*(1), 7–24.
- Dunn, J. G. H., Causgrove Dunn, J., & Syrotuik, D. G. (2002). Relationship between multidimensional perfectionism and goal orientations in sport. *Journal of Sport and Exercise Psychology, 24*(4), 376–395.

- Dunn, J. G.H, Craft, J. M., Dunn, J. C., & Gotwals, J. K. (2011). Comparing a domain-specific and global measure of perfectionism in competitive female figure skaters. *Journal of Sport Behavior*, 34(1), 25–46.
- Dunn, J. G., Dunn, J. C., & McDonald, K. (2012). Domain-specific perfectionism in intercollegiate athletes: Relationships with perceived competence and perceived importance in sport and school. *Psychology of Sport and Exercise*, 13(6), 747–755
- Dunn, J. G. H., Gotwals, J. K., & Causgrove Dunn, J. (2005). An examination of the domain specificity of perfectionism among intercollegiate student-athletes. *Personality and Individual Differences*, 38, 1439–1448.
- Dvorak J., Junge, A., Chomiak J., Graf-Baumann, T., Peterson, L., Rosch D., & Hodgson, R. (2000) Risk factor analysis for injuries in football players: Possibilities for a prevention program. *American Journal of Sports Medicine*, 28(5), S69–S74.
- Egan, S. J., & Hine, P. (2008). Cognitive behavioural treatment of perfectionism: A single case experimental design series. *Behaviour Change*, 25(4), 245–258.
- Egan, S. J., Van Noort, E., Chee, A., Kane, R. T., Hoiles, K. J., Shafran, R., & Wade, T. D. (2014). A randomised controlled trial of face to face versus pure online self-help cognitive behavioural treatment for perfectionism. *Behaviour Research and Therapy*, 63, 107–113.
- Egan, S. J., Wade, T. D., Shafran, R., & Antony, M. M. (2014). *Cognitive-behavioral treatment of perfectionism*. New York, NY: Guilford Press.
- Einstein, D. A., Lovibond, P. F., & Gaston, J. E. (2000). Relationship between perfectionism and emotional symptoms in an adolescent sample. *Australian Journal of Psychology*, 52(2), 89–93.
- Ekkekakis, P. (2013). *The measurement of affect, mood, and emotion. A guide for health-behavioural research*. New York, NY: Cambridge University Press.
- Elhai, J. D., Schweinle, W., & Anderson, S. M. (2008). Reliability and validity of the attitudes toward seeking professional psychological help scale-short form. *Psychiatry Research*, 159(3), 320–329.
- Ellingson, L. L. (2008). *Engaging crystallization in qualitative research*. Thousand Oaks, CA: Sage.
- Ellis, A. (1958). Rational psychotherapy. *The Journal of General Psychology*, 59, 35–49.
- Ellis, A. (1997). Must musturbation and demandingness lead to emotional disorders? *Psychotherapy: Theory, Research, Practice, Training*, 34(1), 95–98.

- Ellis, A. (2002). The role of irrational beliefs in perfectionism. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 217–229). Washington, DC: American Psychological Association.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling, 8*(3), 430–457.
- Enns, M. W., & Cox, B. J. (2002). The nature and assessment of perfectionism: A critical analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 33–62). Washington, DC: American Psychological Association.
- Enns, M. W., Cox, B. J., & Inayatulla, M. (2003). Personality predictors of outcome for adolescents hospitalized for suicidal ideation. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(6), 720–727.
- Erez, A., & Isen, A. M. (2002). The influence of positive affect on the components of expectancy motivation. *Journal of Applied psychology, 87*(6), 1055–1067.
- Essau, C. A. (2008). Comorbidity of depressive disorders among adolescents in community and clinical settings. *Psychiatry Research, 158*(1), 35–42.
- Estrada, C. A., Isen, A. M., & Young, M. J. (1994). Positive affect improves creative problem solving and influences reported source of practice satisfaction in physicians. *Motivation and Emotion, 18*(4), 285–299.
- Ey, S., Henning, K. R., & Shaw, D. L. (2000). Attitudes and factors related to seeking mental health treatment among medical and dental students. *Journal of College Student Psychotherapy, 14*(3), 23–39.
- Fairburn, C. G., Cooper, Z., & Shafran, R. (2003). Cognitive behaviour therapy for eating disorders: A “transdiagnostic” theory and treatment. *Behaviour Research and Therapy, 41*(5), 509–528.
- Fairweather-Schmidt, A. K., & Wade, T. D. (2015). Piloting a perfectionism intervention for pre-adolescent children. *Behaviour Research and Therapy, 73*, 67–73.
- Farrand, P., & Woodford, J. (2013). Impact of support on the effectiveness of written cognitive behavioural self-help: A systematic review and meta-analysis of randomised controlled trials. *Clinical Psychology Review, 33*(1), 182–195.
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G\* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149–1160.



- Fergusson, D., Aaron, S. D., Guyatt, G., & Hébert, P. (2002). Post-randomisation exclusions: The intention to treat principle and excluding patients from analysis. *BMJ: British Medical Journal*, *325*(7365), 652–654.
- Ferrand, C., Magnan, C., Rouveix, M., & Filaire, E. (2007). Disordered eating, perfectionism and body-esteem of elite synchronized swimmers. *European Journal of Sport Science*, *7*(4), 223–230.
- Ferrari, J.R. (1995). Perfectionism cognitions with nonclinical and clinical samples. *Journal of Social Behaviour and Personality*, *10*(1), 143–156.
- Ferrari, M., Yap, K., Scott, N., Einstein, D. A., & Ciarrochi, J. (2018). Self-compassion moderates the perfectionism and depression link in both adolescence and adulthood. *PloS one*, *13*(2), e0192022.
- FIFA Communications Division (2007). *FIFA big count 2006: 270 million people active in football*. Zurich, Switzerland: FIFA Communications.
- Findlay, L., & Coplan, R. (2008). Come out and play: Shyness in childhood and the benefits of organized sports participation. *Canadian Journal of Behavioural Science*, *40*(3), 153–161.
- Fisher, L. D. (1990). Intention to treat in clinical trials. In K.E. Peace (Ed.). *Statistical issues in drug research and development* (pp. 331–350). New York, NY: Marcel Dekker.
- Fischer, E. H., & Farina, A. (1995). Attitudes toward seeking professional psychological help: A shortened form and considerations for research. *Journal of College Student Development*, *6*(4), 368–373.
- Fischer, E. H., & Turner, J. L. (1970). Orientations to seeking professional help: Development and research utility of an attitude scale. *Journal of Consulting and Clinical Psychology*, *35*(3), 79–90.
- Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., Mościcki, E.K., Schinke, S., Valentine, J.C., & Ji, P. (2005). Standards of evidence: Criteria for efficacy, effectiveness and dissemination. *Prevention Science*, *6*(3), 151–175.
- Flaxman, P. E., Ménard, J., Bond, F. W., & Kinman, G. (2012). Academics' experiences of a respite from work: Effects of self-critical perfectionism and perseverative cognition on postrespite well-being. *Journal of Applied Psychology*, *97*(4), 854–865.
- Flett, G.L., Besser, A., Davis, R.A., & Hewitt, P.L. (2003). Dimensions of perfectionism, unconditional self-acceptance, and depression. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy*, *21*(2), 119–138.

- Flett, G.L., Coulter, L.M., Hewitt, P.L., & Nepon, T. (2011). Perfectionism, rumination, worry and depressive symptoms in early adolescents. *Canadian Journal of School Psychology, 26*(3), 159–176
- Flett, G.L., Greene, A., & Hewitt, P.L. (2004). Dimensions of perfectionism and anxiety sensitivity. *Journal of Rational-Emotive & Cognitive-Behavioural Therapy, 22*(1), 37–55.
- Flett, G. L., & Hewitt, P. L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science, 14*(1), 14–18.
- Flett, G. L., & Hewitt, P. L. (2006). Positive versus negative perfectionism in psychopathology: A comment on Slade and Owens's dual process model. *Behavior Modification, 30*(4), 472–495.
- Flett, G. L., & Hewitt, P. L. (2008). Treatment interventions for perfectionism—A cognitive perspective: Introduction to the special issue. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 26*(3), 127–133.
- Flett, G. L., & Hewitt, P. L. (2014). A proposed framework for preventing perfectionism and promoting resilience and mental health among vulnerable children and adolescents. *Psychology in the Schools, 51*(9), 899–912.
- Flett, G. L., & Hewitt, P. L. (2014). "The perils of perfectionism in sports" revisited: Toward a broader understanding of the pressure to be perfect and its impact on athletes and dancers, *International Journal of Sport Psychology, 45*(4), 395–407.
- Flett, G. L., & Hewitt, P. L. (2016). Reflections on perfection and the pressure to be perfect in athletes, dancers, and exercisers: A focus on perfectionistic reactivity in key situations and life contexts. In A. P. Hill (Ed.) *The psychology of perfectionism in sport, dance, and exercise* (pp. 296–319). London, UK: Routledge.
- Flett, G. L., Hewitt, P. L., Besser, A., Su, C., Vaillancourt, T., Boucher, D., Munro, Y., Davidson, L.A., & Gale, O. (2016). The Child–Adolescent Perfectionism Scale: Development, psychometric properties, and associations with stress, distress, and psychiatric symptoms. *Journal of Psychoeducational Assessment, 34*(7), 634–652.
- Flett, G.L., Hewitt, P.L., Blankstein, K.R., & Dynin, C.B. (1994). Dimensions of perfectionism and Type A behaviour. *Personality and Individual Differences, 16*(3), 477–485.
- Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology, 75*(5), 1363–1381.

- Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Koledin, S. (1991). Dimensions of perfectionism and irrational thinking. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *9*(3), 185–201.
- Flett, G. L., Hewitt, P. L., Boucher, D. J., Davidson, L. A., & Munro, Y. (1997). *The Child-Adolescent Perfectionism Scale: Development, validation, and association with adjustment*. Unpublished manuscript.
- Flett, G. L., Hewitt, P. L., Boucher, D. J., Davidson, L. A., & Munro, Y. (2000). *The Child-Adolescent Perfectionism Scale: Development, validation, and association with adjustment*. Unpublished manuscript.
- Flett, G. L., Hewitt, P. L., & Cheng, W. M. W. (2008). Perfectionism, distress, and irrational beliefs in high school students: Analyses with an abbreviated Survey of Personal Beliefs for adolescents. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *26*(3), 194–205.
- Flett, G.L., Hewitt, P.L., Demerjian, A., Sturman, E.D., Sherry, S.B., & Cheng, W. (2011). Perfectionistic automatic thoughts and psychological distress in adolescents: An analysis of the Perfectionism Cognitions Inventory. *Journal of Rational-Emotive & Cognitive-Behavioural Therapy*, *30*(2), 91–104.
- Flett, G. L., Hewitt, P. L., Garshowitz, M., & Martin, T. R. (1997). Personality, negative social interactions, and depressive symptoms. *Canadian Journal of Behavioural Science*, *29*(1), 28–37.
- Flett, G.L., Hewitt, P.L., Nepon, T., & Besser, A. (2018). Perfectionism cognitions theory: The cognitive side of perfectionism. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research and applications* (pp.89–110). New York, NY: Routledge.
- Flett, G. L., Hewitt, P. L., & Oliver, J. M., & Macdonald, S. (2002). Perfectionism in children and their parents: A developmental analysis. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research and treatment* (pp. 89–132). Washington, DC: American Psychological Association.
- Flett, G. L., Hewitt, P. L., Whelan, T., & Martin, T. R. (2007). The Perfectionism Cognitions Inventory: Psychometric properties and associations with distress and deficits in cognitive self-management. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *25*(4), 255–277.
- Flett, G.L., Madorsky, D., Hewitt, P., & Heisel, M. (2002). Perfectionism cognitions, rumination and psychological distress. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy*, *20*(1), 33–47.

- Flett, G. L., Molnar, D. S., Nepon, T., & Hewitt, P. L. (2012). A mediational model of perfectionistic automatic thoughts and psychosomatic symptoms: The roles of negative affect and daily hassles. *Personality and Individual Differences, 52*(5), 565–570.
- Flett, G.L., Nepon, T., & Hewitt, P.L. (2016). Perfectionism, worry and rumination in health and mental health: A review and a conceptual framework for a cognitive theory of perfectionism. In F.S. Sirois & D.S. Molnar (Eds.), *Perfectionism, Health and Well-being* (pp.121–155). Basel, Switzerland: Springer International.
- Flett, G. L., Nepon, T., Hewitt, P. L., & Fitzgerald, K. (2016). Perfectionism, components of stress reactivity, and depressive symptoms. *Journal of Psychopathology and Behavioral Assessment, 38*(4), 645–654.
- Flett, G. L., Newby, J., Hewitt, P. L., & Persaud, C. (2011). Perfectionistic automatic thoughts, trait perfectionism, and bulimic automatic thoughts in young women. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 29*(3), 192–206.
- Flick, U. (2012). *An introduction to qualitative research* (5th ed.). London, UK: Sage.
- Fredtoft, T., Poulsen, S., Bauer, M., & Malm, M. (1996). Dependency and perfectionism: Short-term dynamic group psychotherapy for university students. *Psychodynamic Counselling, 2*(4), 476–497.
- Freeston, M. H., Rheume, J., Letarte, H., Dugas, M. J., & Ladouceur, R. (1994). Why do people worry? *Personality and Individual Differences, 17*(6), 791–802.
- Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*(1), 119-126.
- Frost, R. O., & Henderson, K. J. (1991). Perfectionism and reactions to athletic competition. *Journal of Sport and Exercise Psychology, 13*(4), 323–335.
- Frost, R. O., & Marten, P. A. (1990). Perfectionism and evaluative threat. *Cognitive Therapy and Research, 14*(6), 559–572.
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*(5), 449–468.
- Frost, R. O., Trepanier, K. L., Brown, E. J., & Heimberg, R. G. (1997). Self-monitoring of mistakes among subjects high and low in perfectionistic concern over mistakes. *Cognitive Therapy and Research, 21*(2), 209–222.

- Frost, R. O., Turcotte, T. A., Heimberg, R. G., Mattia, J. I., Holt, C. S., & Hope, D. A. (1995). Reactions to mistakes among subjects high and low in perfectionistic concern over mistakes. *Cognitive Therapy and Research*, *19*(2), 195–205.
- Fuller, C. W., Junge, A., & Dvorak, J. (2012). Risk management: FIFA's approach for protecting the health of football players. *British Journal of Sports Medicine*, *46*(1), 11–17.
- Gautreau, C. M., Sherry, S. B., Mushquash, A. R., & Stewart, S. H. (2015). Is self-critical perfectionism an antecedent of or a consequence of social anxiety, or both? A 12-month, three-wave longitudinal study. *Personality and Individual Differences*, *82*, 125–130.
- Gaudreau, P., & Thompson, A. (2010). Testing a 2 × 2 model of dispositional perfectionism. *Personality and Individual Differences*, *48*(5), 532–537.
- Gaudreau, P., & Verner-Filion, J. (2012). Dispositional perfectionism and well-being: A test of the 2x2 model of perfectionism in the sport domain. *Sport, Exercise, and Performance Psychology*, *1*(1), 29–43.
- Gay, L. R., Mills, G. E., Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications*. Upper Saddle River, NJ: Prentice Hall.
- Giles, D.C. (2002). *Advanced research methods in psychology*. London, UK: Routledge.
- Gillham, B. (2005). *Research Interviewing: The range of techniques: A practical guide*. London, UK: McGraw-Hill Education.
- Gillison, F., Osborn, M., Standage, M., & Skevington, S. (2009). Exploring the experience of introjected regulation for exercise across gender in adolescence. *Psychology of Sport and Exercise*, *10*(3), 309–319.
- Glover, D. S., Brown, G. P., Fairburn, C. G., & Shafran, R. (2007). A preliminary evaluation of cognitive-behaviour therapy for clinical perfectionism: A case series. *British Journal of Clinical Psychology*, *46*(1), 85–94.
- Goleman, D. (1998). *Working with emotional intelligence*. New York, NY: Bantam Books.
- Gotwals, J. K., & Dunn, J. G. H. (2009). A multi-method multi-analytic approach to establishing internal construct validity evidence: The Sport Multidimensional Perfectionism Scale 2. *Measurement in Physical Education and Exercise Science*, *13*(2), 71–92.

- Gotwals, J.K., & Spencer-Cavaliere, N. (2014). Intercollegiate perfectionistic athletes' perspectives on achievement: Contributions to the understanding and assessment of perfectionism in sport. *International Journal of Sport Psychology, 45*, 271–297.
- Gotwals, J. K., Stoeber, J., Dunn, J. G., & Stoll, O. (2012). Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence. *Canadian Psychology/Psychologie Canadienne, 53*(4), 263–279.
- Gould, D., Petlichkoff, L., & Weinberg, R. S. (1984). Antecedents of, temporal changes in, and relationships between CSAI-2 subcomponents. *Journal of Sport Psychology, 6*(3), 289–304.
- Gouttebauge, V., & Aoki, H. (2014). Lifespan perspective of professional footballers' health. *Asian Journal of Sports Medicine, 5*(4), e23813.
- Gouttebauge, V., Aoki, H., & Kerkhoffs, G. (2015). Prevalence and determinants of symptoms related to mental disorders in retired male professional footballers. *The Journal of Sports Medicine and Physical Fitness, 56*(5), 648–54.
- Gouttebauge, V., Frings-Dresen, M.H.W., & Sluiter, J.K. (2015). Mental and psychosocial health among current and former professional footballers. *Occupational Medicine, 65*(3), 190–196.
- Gouttebauge, V., Aoki, H., Ekstrand, J., Verhagen, E. A., & Kerkhoffs, G. M. (2016). Are severe musculoskeletal injuries associated with symptoms of common mental disorders among male European professional footballers? *Knee Surgery, Sports Traumatology, Arthroscopy, 24*(12), 3934–3942.
- Graham, J.W., Cumsille, P.E., & Elek-Fisk, E. (2003). Methods for handling missing data. In J.A. Schinka & W.F. Velicer (Eds.), *Research methods in psychology* (pp. 87–112). New York, NY: Wiley.
- Gray, J. A. (1991). Fear, panic, and anxiety: What's in a name?. *Psychological Inquiry, 2*(1), 77–78.
- Green, C. (2009). *Every boy's dream: England's football future on the line*. London, UK: A&C Black Publishers Ltd.
- Greenhalgh, T. (2014). *How to read a paper: The basics of evidence-based medicine*. Chichester, UK: Wiley-Blackwell.
- Greenspon, T.S. (2014). Is there an antidote to perfectionism? *Psychology in the Schools, 5*(9), 986–998.
- Grisogono, V. (1989). *Sports injuries: A self-help guide*. London, UK: John Murray.

- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Thousand Oaks, CA: Sage.
- Guest, G., Namey, E. E., & Mitchell, M. L. (2012). *Collecting qualitative data: A field manual for applied research*. London, UK: Sage.
- Guskiewicz, K. M., Marshall, S. W., Bailes, J., McCrea, M., Harding, H. P., Matthews, A., ... & Cantu, R. C. (2007). Recurrent concussion and risk of depression in retired professional football players. *Medicine and Science in Sports and Exercise*, 39(6), 903–909.
- Gustafsson, H., & Lundqvist, C. (2016). Working with perfectionism in elite sport: A Cognitive Behavioural Therapy perspective. In A.P. Hill (Ed.) *The psychology of perfectionism in sport, dance and exercise* (pp. 201–221). London, UK: Routledge.
- Gustafsson, H., Lundqvist, C., & Tod, D. (2017). Cognitive behavioral intervention in sport psychology: A case illustration of the exposure method with an elite athlete. *Journal of Sport Psychology in Action*, 8(3), 152–162.
- Haase, A. M., Prapavessis, H., & Owens, R. G. (1999). Perfectionism and eating attitudes in competitive rowers: Moderating effects of body mass, weight classification and gender. *Psychology and Health*, 14(4), 643–657.
- Hagger, M. S., & Chatzisarantis, N. L. (2009). Integrating the theory of planned behaviour and self-determination theory in health behaviour: A meta-analysis. *British Journal of Health Psychology*, 14(2), 275–302.
- Hagger, M. S., Chatzisarantis, N. L., Griffin, M., & Thatcher, J. (2005). Injury representations, coping, emotions, and functional outcomes in athletes with sports-related injuries: A test of self-regulation theory. *Journal of Applied Social Psychology*, 35, 2345–2374.
- Haig, B. D. (2018). *The philosophy of quantitative methods*. New York, NY: Oxford University Press.
- Hall, H. K. (2006) Perfectionism: A Hallmark Quality of World Class Performers, or a Psychological Impediment to Athletic Development? In D. Hackfort & G. Tenenbaum (Eds.), *Perspectives in sport and exercise psychology: Essential processes for attaining peak performance* (pp. 178–211). Oxford, UK: Meyer & Meyer Publishers.
- Hall, H. K. (2016). Reflections on perfectionism and its influence on motivational processes in sport dance, and exercise. In A.P. Hill (Ed.), *The psychology of perfectionism in sport, dance and exercise* (pp. 275–295). London, UK: Routledge.

- Hall, H. K., & Hill, A. P. (2012). Perfectionism, dysfunctional achievement striving and burnout in aspiring athletes: The motivational implications for performing artists. *Theatre, Dance and Performance Training*, 3(2), 216–228.
- Hall, H. K., Hill, A. P., Appleton, P. R., & Kozub, S. A. (2009). The mediating influence of unconditional self-acceptance and labile self-esteem on the relationship between multidimensional perfectionism and exercise dependence. *Psychology of Sport and Exercise*, 10(1), 35–44.
- Hall, H. K., Kerr, A. W., & Matthews, J. (1998). Precompetitive anxiety in sport: The contribution of achievement goals and perfectionism. *Journal of Sport and Exercise Psychology*, 20(2), 194–217.
- Hamachek, D.E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology: A Journal of Human Behavior*, 15(1), 27–33.
- Hamaker, E. L., Kuiper, R. M., & Grasman, R. P. (2015). A critique of the cross-lagged panel model. *Psychological Methods*, 20(1), 102–116.
- Handley, A. K., Egan, S. J., Kane, R. T., & Rees, C. S. (2015). A randomised controlled trial of group cognitive behavioural therapy for perfectionism. *Behaviour Research and Therapy*, 68, 37–47.
- Hanin, Y. L. (2010). Coping with anxiety in sport. In A. R. Nicholls (Ed.), *Coping in sport: Theory, methods, and related constructs* (pp. 159–175). Hauppauge, NY: Nova Science.
- Hannah, D. R., & Lautsch, B. A. (2011). Counting in qualitative research: Why to conduct it, when to avoid it, and when to closet it. *Journal of Management Inquiry*, 20(1), 14–22.
- Hanton, S., Thomas, O., & Maynard, I. (2004). Competitive anxiety responses in the week leading up to competition: The role of intensity, direction and frequency dimensions. *Psychology of Sport and Exercise*, 5(2), 169–181.
- Hardy, L., Jones, G., & Gould, D. (1996). *Understanding psychological preparation for sport: Theory and practice of elite performers*. Chichester, UK: Wiley.
- Harris, P. W., Pepper, C. M., & Maack, D. J. (2008). The relationship between maladaptive perfectionism and depressive symptoms: The mediating role of rumination. *Personality and Individual Differences*, 44(1), 150–160.
- Harwood, C., Drew, A., & Knight, C. J. (2010). Parental stressors in professional youth football academies: A qualitative investigation of specialising stage parents. *Qualitative Research in Sport and Exercise*, 2(1), 39–55.



- Hawkins, R. D., & Fuller, C. W. (1999). A prospective epidemiological study of injuries in four English professional football clubs. *British Journal of Sports Medicine*, 33(3), 196–203.
- Hayes, A., Hope, D. A., & Hayes, S. (2007). Towards an understanding of the process and mechanisms of change in cognitive behavioral therapy: Linking innovative methodology with fundamental questions. *Clinical Psychology Review*, 27(6), 679–681.
- Hayes, A. F., & Scharkow, M. (2013). The relative trustworthiness of inferential tests of the indirect effect in statistical mediation analysis: Does method really matter?. *Psychological Science*, 24(10), 1918–1927.
- Heatheron, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin*, 110(1), 86–108.
- Hewitt, P. L., Caelian, C., Flett, G. L., Collins, L., & Flynn, C. (2002). Perfectionism in children: Associations with depression, anxiety, and anger. *Personality and Individual Differences*, 32(6), 1049–1061.
- Hewitt, P.L., & Flett, G.L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456–470.
- Hewitt, P. L., & Flett, G. L. (1993). Dimensions of perfectionism, daily stress, and depression: A test of the specific vulnerability hypothesis. *Journal of Abnormal Psychology*, 102(1), 58–65.
- Hewitt, P. L., & Flett, G. L. (2002). Perfectionism and stress processes in psychopathology. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 255–284). Washington, DC: American Psychological Association.
- Hewitt, P. L., & Flett, G. L. (2004). *Multidimensional Perfectionism Scale (MPS): Technical manual*. Toronto, Canada: Multi-Health Systems.
- Hewitt, P. L., Flett, G. L., & Ediger, E. (1996). Perfectionism and depression: Longitudinal assessment of a specific vulnerability hypothesis. *Journal of Abnormal Psychology*, 105(2), 276–280.
- Hewitt, P. L., Flett, G. L., Ediger, E., Norton, G. R., & Flynn, C. A. (1998). Perfectionism in chronic and state symptoms of depression. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement*, 30(4), 234–242.
- Hewitt, P. L., Flett, G. L., & Mikail, S. F. (1995). Perfectionism and relationship adjustment in pain patients and their spouses. *Journal of Family Psychology*, 9(3), 335–347.

- Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. New York, NY: Guilford Press.
- Hewitt, P. L., Flett, G. L., Mikail, S. F., Kealy, D., & Zhang, L. C. (2018). Perfectionism in the therapeutic context: The Perfectionism Social Disconnection Model. In J. Stoeber (Ed.) *The Psychology of Perfectionism: Theory, Research, Applications*. (pp. 306–329). London, UK: Routledge.
- Hewitt, P. L., Flett, G. L., Sherry, S. B., & Caelian, C. (2006). Trait perfectionism dimensions and suicidal behaviour. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 215–235). Washington, DC: American Psychological Association.
- Hewitt, P. L., Flett, G. L., Sherry, S. B., Habke, M., Parkin, M., Lam, R. W., ... & Stein, M. B. (2003). The interpersonal expression of perfection: Perfectionistic self-presentation and psychological distress. *Journal of Personality and Social Psychology*, *84*(6), 1303–1325.
- Hewitt, P. L., Flett, G. L., & Turnbull, W. (1994). Borderline personality disorder: An investigation with the Multidimensional Perfectionism Scale. *European Journal of Psychological Assessment*, *10*(1), 28–33.
- Hewitt, P. L., Flett, G. L., Turnbull-Donovan, W., & Mikail, S. F. (1991). The Multidimensional Perfectionism Scale: Reliability, validity, and psychometric properties in psychiatric samples. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *3*(3), 464–468.
- Hewitt, P. L., Habke, A. M., Lee-Baggle, D. L., Sherry, S. B., & Flett, G. L. (2008). The impact of perfectionistic self-presentation on the cognitive, affective, and physiological experience of a clinical interview. *Psychiatry: Interpersonal and Biological Processes*, *71*(2), 93–122.
- Hewitt, P. L., Mikail, S. F., Flett, G. L., Tasca, G. A., Flynn, C. A., Deng, X., ... & Chen, C. (2015). Psychodynamic/interpersonal group psychotherapy for perfectionism: Evaluating the effectiveness of a short-term treatment. *Psychotherapy*, *52*(2), 205–217.
- Hewitt, P. L., Mittelstaedt, W. M., & Flett, G. L. (1990). Self-oriented perfectionism and generalized performance importance in depression. *Individual Psychology: Journal of Adlerian Theory, Research & Practice*, *46*(1), 67–73.
- Hewitt, P. L., Mittelstaedt, W., & Wollert, R. (1989). Validation of a measure of perfectionism. *Journal of Personality Assessment*, *53*(1), 133–144.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, *94*(3), 319–340.

- Hill, A.P. (2013). Perfectionism and burnout in junior soccer players: A test of the 2 × 2 model of dispositional perfectionism. *Journal of Sport and Exercise Psychology, 35*(1), 18–29.
- Hill, A.P., & Appleton, P.R. (2011). The predictive ability of the frequency of perfectionistic cognitions, self-oriented perfectionism, and socially prescribed perfectionism in relation to symptoms of burnout in youth rugby players. *Journal of Sports Sciences, 29*(7), 695–703.
- Hill, A. P., Appleton, P. R., & Mallinson, S. H. (2016). Development and initial validation of the Performance Perfectionism Scale for Sport (PPS-S). *Journal of Psychoeducational Assessment, 34*(7), 653–669.
- Hill, A.P., & Curran, T. (2016). Multidimensional perfectionism and burnout: A meta-analysis. *Personality and Social Psychology Review, 20*(3), 269–288.
- Hill, A. P., & Davis, P. A. (2014). Perfectionism and emotion regulation in coaches: A test of the 2× 2 model of dispositional perfectionism. *Motivation and Emotion, 38*(5), 715–726
- Hill, A. P., Hall, H. K., & Appleton, P. R. (2010a). Perfectionism and athlete burnout in junior elite athletes: The mediating role of coping tendencies. *Anxiety, Stress, and Coping, 23*(4), 415–430.
- Hill, A. P., Hall, H. K., & Appleton, P. R. (2010b). A comparative examination of the correlates of self-oriented perfectionism and conscientious achievement striving in male cricket academy players. *Psychology of Sport and Exercise, 11*(2), 1162–168.
- Hill, A. P., Hall, H. K., Appleton, P. R., & Kozub, S. A. (2008) Perfectionism and burnout in junior elite soccer players: The mediating influence of unconditional self-acceptance. *Psychology of Sport and Exercise, 9*(5), 630–644.
- Hill, A. P., Hall, H. K., Appleton, P. R., & Murray, J. J. (2010). Perfectionism and burnout in canoe polo and kayak slalom athletes: The mediating influence of validation and growth-seeking. *The Sport Psychologist, 24*(1), 16–34.
- Hill, A. P., Hall, H. K., Duda, J. L., & Appleton, P. R. (2011). The cognitive, affective and behavioural responses of self-oriented perfectionists following successive failure on a muscular endurance task. *International Journal of Sport and Exercise Psychology, 9*(2), 189–207.
- Hill, A. P., Jowett, G. E., & Mallinson-Howard, S. H. (2018). Perfectionism in sport, dance, and exercise. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 155–174). New York, NY, US: Routledge/Taylor & Francis Group.

- Hill, A. P., Mallinson-Howard, S. H., & Jowett, G. E. (2018). Multidimensional perfectionism in sport: A meta-analytical review. *Sport, Exercise, and Performance Psychology, 7*(3), 235–270.
- Hill, A. P., Mallinson-Howard, S. H., Madigan, D. J., & Jowett, G. E. (2019). Perfectionism in sport, dance, and exercise: An extended review and reanalysis. In G. Tenenbaum and R. C. Eklund. (Eds.), *Handbook of Sport Psychology* (4th Ed). New Jersey: John Wiley & Sons.
- Hill, R. W., McIntire, K., & Bacharach, V. R. (1997). Perfectionism and the big five factors. *Journal of Social Behavior and Personality, 12*(1), 257–270.
- Hill, A. P., Stoeber, J., Brown, A., & Appleton, P. R. (2014). Team perfectionism and team performance: A prospective study. *Journal of Sport and Exercise Psychology, 36*(3), 303–315.
- Hill, C.E., Thompson, B.J., & Williams, E.N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist, 25*(4), 517–572.
- Hill, A.P., Witcher, C.S., Gotwals, J.K., & Leyland, A.F. (2015). A qualitative study of perfectionism among self-identified perfectionists in sport and the performing arts. *Sport, Exercise, and Performance Psychology, 44*(4), 237–253.
- Hill, R. W., Zrull, M. C., & Turlington, S. (1997). Perfectionism and interpersonal problems. *Journal of Personality Assessment, 69*(1), 81–103.
- Hilt, L. M., Cha, C. B., & Nolen-Hoeksema, S. (2008). Non-suicidal self-injury in young adolescent girls: Moderators of the distress function relationship. *Journal of Consulting and Clinical Psychology, 76*(1), 63–71.
- Ho, M. S., Appleton, P. R., Cumming, J., & Duda, J. L. (2015). Examining the relationship between perfectionism dimensions and burning out symptoms in deaf and hearing athletes. *Journal of Clinical Sport Psychology, 9*(2), 156–172.
- Hoffman, L., & Stawski, R. S. (2009). Persons as contexts: Evaluating between-person and within-person effects in longitudinal analysis. *Research in Human Development, 6*(2–3), 97–120.
- Hollender, M. H. (1965). Perfectionism. *Comprehensive Psychiatry, 6*, 94–103.
- Horney, K. (1950). *Neurosis and human growth*. New York, NY: Norton.
- Hu, L. T., & Bentler, P. M. (1999). Cut off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55.

- Huang, C. (2011). Achievement goals and achievement emotions: A meta-analysis. *Educational Psychology Review*, 23(3), 359–388.
- Irish Football Association (2016). *Football Development Department: Delivering the Youth Strategy*. Retrieved from <https://www.irishfa.com/media/4204/football-development-report-april-2016.pdf>
- Ingram, R. E. (1990). Self-focused attention in clinical disorders: Review and a conceptual model. *Psychological Bulletin*, 107(2), 156–176.
- Ingram, R. E., & Kendall, P. C. (1986). Cognitive clinical psychology: Implications of an information processing perspective. In R. E. Ingram (Ed.), *Information processing approaches to clinical psychology* (pp. 3–21). Orlando, FL: Academic Press.
- Ingram, R. E., Kendall, P. C., Siegle, G., Guarino, J., & McLaughlin, S. C. (1995). Psychometric properties of the positive automatic thoughts questionnaire. *Psychological Assessment*, 7(4), 495–507.
- Ingram, R. E., Miranda, J., & Segal, Z. S. (1998). *Cognitive vulnerability to depression*. New York, NY: Guilford Press.
- James, K., & Rimes, K. A. (2018). Mindfulness-based cognitive therapy versus pure cognitive behavioural self-help for perfectionism: A pilot randomised study. *Mindfulness*, 9(3), 801–814.
- Jamieson, J. P., Mendes, W. B., Blackstock, E., & Schmader, T. (2010). Turning the knots in your stomach into bows: Reappraising arousal improves performance on the GRE. *Journal of Experimental Social Psychology*, 46(1), 208–212.
- Jarrett, M. A., & Ollendick, T. H. (2008). A conceptual review of the comorbidity of attention-deficit/hyperactivity disorder and anxiety: Implications for future research and practice. *Clinical Psychology Review*, 28(7), 1266–1280.
- Johnson, B., & Christensen, L. (2004). Quantitative, qualitative, and mixed research. *Educational Researcher*, 33(7), 14–26.
- Jones, G. (1995). More than just a game: Research developments and issues in competitive anxiety in sport. *British Journal of Psychology*, 86(4), 449–539.
- Jones, M. V., Lane, A. M., Bray, S. R., Uphill, M., & Catlin, J. (2005). Development and validation of the sport emotion questionnaire. *Journal of Sports and Exercise Psychology*, 27(4), 407–431.
- Jones, M., Meijen, C., McCarthy, P. J., & Sheffield, D. (2009). A theory of challenge and threat states in athletes. *International Review of Sport and Exercise Psychology*, 2(2), 161–180.

- Jones, G., Swain, A., & Cale, A. (1991). Gender Differences in precompetition temporal patterning and antecedents of anxiety and self-confidence. *Journal of Sport and Exercise Psychology*, 13(1), 1–15.
- Josselson, R. (2014). Introduction to Qualitative Psychology. *Qualitative Psychology*, 1(1), 1–3.
- Jowett, G. E., Hill, A. P., Forsdyke, D., & Gledhill, A. (2018). Perfectionism and coping with injury in marathon runners: A test of the 2×2 model of perfectionism. *Psychology of Sport and Exercise*, 37, 26–32.
- Jowett, G. E., Hill, A. P., Hall, H. K., & Curran, T. (2013). Perfectionism and junior athlete burnout: The mediating role of autonomous and controlled motivation. *Sport, Exercise, and Performance Psychology*, 2(1), 48–61.
- Jowett, G.E., Mallinson, S.H., & Hill, A.P. (2016). An independent effects approach to perfectionism in sport, dance, and exercise. In A.P. Hill (Ed.), *The psychology of perfectionism in sport, dance and exercise* (pp. 85–149). New York, NY: Routledge/Taylor & Francis Group.
- Junge, A., Dvorak, J., Rosch, D., Graf-Baumann, T., Chomiak, J., & Peterson, L. (2000). Psychological and sport-specific characteristics of football players. *The American Journal of Sports Medicine*, 28(5), 22–28.
- Junge, A., & Feddermann-Demont, N. (2016). Prevalence of depression and anxiety in top-level male and female football players. *BMJ Open Sport Exercise Medicine*, 2(1), 1–7.
- Kagan, J., Reznick, J. S., & Snidman, N. (1990). The temperamental qualities of inhibition and lack of inhibition. In M. Lewis, S. M. Miller (Ed.), *Handbook of developmental psychopathology* (pp. 219–226). Boston, MA: Springer.
- Kashdan, T. B., Volkmann, J. R., Breen, W. E., & Han, S. (2007). Social anxiety and romantic relationships: The costs and benefits of negative emotion expression are context-dependent. *Journal of Anxiety Disorders*, 21(4), 475–492.
- Kaufman, K.A., Glass, C.R., & Arnkoff, D.B. (2009). An evaluation of Mindful Sport Performance Enhancement (MSPE): A new mental training approach to promote flow in athletes. *Journal of Clinical Sport Psychology*, 4, 334–356.
- Kaye, W. H., Bulik, C. M., Thornton, L., Barbarich, N., Masters, K., & Price Foundation Collaborative Group. (2004). Comorbidity of anxiety disorders with anorexia and bulimia nervosa. *American Journal of Psychiatry*, 161(12), 2215–2221.

- Kaye, M. P., Conroy, D. E., & Fifer, A. M. (2008). Individual differences in incompetence avoidance. *Journal of Sport and Exercise Psychology, 30*(1), 110–132.
- Kearns, H., Forbes, A., & Gardiner, M. (2007). A cognitive behavioural coaching intervention for the treatment of perfectionism and self-handicapping in a non-clinical population. *Behaviour Change, 24*(3), 157–172.
- Keijsers, L. (2016). Parental monitoring and adolescent problem behaviors: How much do we really know?. *International Journal of Behavioral Development, 40*(3), 271–281.
- Kenney-Benson, G. A., & Pomerantz, E. M. (2005). The role of mothers' use of control in children's perfectionism: Implications for the development of children's depressive symptoms. *Journal of Personality, 73*(1), 23–46.
- Kilic, O., Aoki, H., Haagensen, R., Jensen, C., Johnson, U., Kerkhoffs, G. M. M. J., & Gouttebauge, V. (2017). Symptoms of common mental disorders and related stressors in Danish professional football and handball. *European Journal of Sport Science, 17*(10), 1328–1334.
- Kinser, P. A., & Robins, J. L. (2013). Control group design: Enhancing rigor in research of mind-body therapies for depression. *Evidence-Based Complementary and Alternative Medicine, 1*–10.
- Kitayama, S., Park, J., Boylan, J., Miyamoto, Y., Levine, C., Markus, H., Karasawa M, Coe, C., Kawakami, N., Love, G.D., & Ryff, C.D. (2015). Expression of anger and ill health in two cultures: An examination of inflammation and cardiovascular risk. *Psychological Science, 26*(2), 211–220.
- Kobori, O., & Tanno, Y. (2004). Development of multidimensional perfectionism cognition inventory. *Japanese Journal of Personality, 13*(1), 34–43.
- Kobori, O., & Tanno, Y. (2005). Self-oriented perfectionism and its relationship to positive and negative affect: The mediation of positive and negative perfectionism cognitions. *Cognitive Therapy and Research, 29*(5), 555–567.
- Kobori, O., Yoshie, M., Kudo, K., & Ohtsuki, T. (2011). Traits and cognitions of perfectionism and their relation with coping style, effort, achievement, and performance anxiety in Japanese musicians. *Journal of Anxiety Disorders, 25*, 674–679.
- Koerner, N., & Dugas, M.J. (2008). An investigation of appraisals in individuals vulnerable to excessive worry: The role of intolerance to uncertainty. *Cognitive Therapy and Research, 32*, 619-638.

- Koivula, N., Hassmén, P., & Fallby (2002). Self-esteem and perfectionism in elite athletes: Effects on competitive anxiety and confidence. *Personality and Individual Differences, 32*(5), 865–875.
- Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*(1), 138–143.
- Krauss, S. E. (2005). Research paradigms and meaning making: A primer. *The Qualitative Report, 10*(4), 758–770.
- Kuppens, P., Oravecz, Z., & Tuerlinckx, F. (2010). Feelings change: Accounting for individual differences in the temporal dynamics of affect. *Journal of Personality and Social Psychology, 99*(6), 1042–60.
- Kutlesa, N., & Arthur, N. (2008). Overcoming negative aspects of perfectionism through group treatment. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 26*(3), 134–150.
- Krane, V., Williams, J., & Feltz, D. (1992). Path analysis examining relationships among cognitive anxiety, somatic anxiety, state confidence, performance expectations, and golf performance. *Journal of Sport Behavior, 15*(4), 279–295.
- Krasnow, D., Mainwaring, L., & Kerr, G. (1999) Injury, Stress and Perfectionism in Young Dancers and Gymnasts. *Journal of Dance Medicine & Science, 3*(2), 51–58.
- Kumar, R. (2005). *Research methodology: A step-by-step guide for beginners* London, UK: Sage.
- Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.
- Lambert, M. J. (2005). Early response in psychotherapy: Further evidence for the importance of common factors rather than “placebo effects”. *Journal of Clinical Psychology, 61*(7), 855–869.
- Lane, A. M., & Chappell, R. C. (2001). Mood and performance relationships among players at the World Student Games basketball competition. *Journal of Sport Behavior, 24*(2), 182–187.
- Lane, A., Harwood, C., & Nevill, A. (2005). Confirmatory factor analysis of the Thought Occurrence Questionnaire for Sport (TOQS) among adolescent athletes. *Anxiety, Stress and Coping, 18*(3), 245–254.
- Lane, A. M., Terry, P. C., Beedie, C. J., Curry, D. A., & Clark, N. (2001). Mood and performance: Test of a conceptual model with a focus on depressed mood. *Psychology of Sport and Exercise, 2*(3), 157–172.



- Last, C. G. (2006). *Help for worried kids: How your child can conquer anxiety and fear*. New York, NY: Guilford Press.
- Laurenceau, J. P., Hayes, A. M., & Feldman, G. C. (2007). Some methodological and statistical issues in the study of change processes in psychotherapy. *Clinical Psychology Review, 27*(6), 682–695.
- Lavallee, D., Gordon, S., & Grove, J. R. (1997). Retirement from sport and the loss of athletic identity. *Journal of Personal and Interpersonal Loss, 2*(2), 129–147.
- Lavallee, D., & Robinson, H. K. (2007). In pursuit of an identity: A qualitative exploration of retirement from women's artistic gymnastics. *Psychology of Sport and Exercise, 8*(1), 119–141.
- Law, G., & Bloyce, D. (2017). 'Pressure to play?' A sociological analysis of professional football managers' behaviour towards injured players. *Soccer & Society, 1–21*.
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford, UK: Oxford University Press.
- Lazarus, R. S. (1998). *Fifty years of the research and theory of R.S. Lazarus: An analysis of historical and perennial issues*. Mahwah, NJ: Erlbaum.
- Lazarus, R. S. (1999). *Stress and emotion: A new synthesis*. New York, NY: Springer Publishing Co.
- Lazarus, R. S. (2000). Cognitive-motivational-relational theory of emotion. In Y.L. Hanin (Ed.), *Emotions in sport* (pp. 39–63). Champaign, IL: Human Kinetics.
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 141–169.
- Leith, L. M. (2008) *The Psychology of Achieving Sports Excellence: A Self-help Guide for all athletes*. Ontario, Canada: Sports Book Publisher.
- Lemyre, P. N., Hall, H. K., & Roberts, G. C. (2008). A social cognitive approach to burnout in elite athletes. *Scandinavian Journal of Medicine & Science in Sports, 18*(2), 221–234.
- Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology, 81*(1), 146–159.
- Lewis, C., Pearce, J., & Bisson, J. I. (2012). Efficacy, cost-effectiveness and acceptability of self-help interventions for anxiety disorders: A systematic review. *The British Journal of Psychiatry, 200*(1), 15–21.
- Libby, S., Reynolds, S., Derisley, J., & Clark, S. (2004). Cognitive appraisals in young people with obsessive-compulsive disorder. *Journal of Child Psychology and Psychiatry, 45*(6), 1076–1084.

- Lizmore, M.R., Dunn, J.G.H., & Causgrove Dunn, J. (2016). Reactions to mistakes as a function of perfectionism and situation criticality in curling. *International Journal of Sport Psychology, 47*(1), 81–101.
- Lloyd, S., Schmidt, U., Khondoker, M., & Tchanturia, K. (2015). Can psychological interventions reduce perfectionism? A systematic review and meta-analysis. *Behavioural and Cognitive Psychotherapy, 43*(6), 705–731.
- Lyubomirsky, S., King, L. A., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803–855.
- Lyubomirsky, S., Layous, K., Chancellor, J., & Nelson, S. K. (2015). Thinking about rumination: The scholarly contributions and intellectual legacy of Susan Nolen-Hoeksema. *Annual Review of Clinical Psychology, 11*, 1–22.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*(2), 137–155.
- Lyubomirsky, S., Tucker, K. L., Caldwell, N. D., & Berg, K. (1999). Why ruminators are poor problem solvers: Clues from the phenomenology of dysphoric rumination. *Journal of personality and social psychology, 77*(5), 1041–1060.
- Mabweazara, S. Z., Andrews, B. S., & Leach, L. L. (2014). Changes in state anxiety prior to competition: Sport and exercise psychology. *African Journal for Physical Health Education, Recreation and Dance, 20*(21), 492–499.
- Macedo, A., Marques, C., Quaresma, V., Soares, M. J., Amaral, A. P., Araújo, A. I., & Pereira, A. T. (2017). Are perfectionism cognitions and cognitive emotion regulation strategies mediators between perfectionism and psychological distress? *Personality and Individual Differences, 119*(1), 46–51.
- Mackie, D. M., & Worth, L. T. (1989). Processing deficits and the mediation of positive affect in persuasion. *Journal of Personality and Social Psychology, 57*(1), 27–40.
- Mackinnon, S. P., Sherry, S. B., & Pratt, M. W. (2013). The relationship between perfectionism, agency, and communion: A longitudinal mixed methods analysis. *Journal of Research in Personality, 47*(4), 263–271.
- Madigan, D. J., Stoeber, J., & Passfield, L. (2015). Perfectionism and burnout in junior athletes: A three-month longitudinal study. *Journal of Sport & Exercise Psychology, 37*, 305–315.
- Madigan, D. J., Stoeber, J., & Passfield, L. (2017). Perfectionism and training distress in junior athletes: A longitudinal investigation. *Journal of Sports Sciences, 35*(5), 470–475.

- Mallinson, S. H., & Hill, A. P. (2011). The relationship between multidimensional perfectionism and psychological need thwarting in junior sports participants. *Psychology of Sport and Exercise, 12*, 676–684.
- Mallinson-Howard, S. H., Knight, C. J., Hill, A. P., & Hall, H. K. (2018). The 2x 2 model of perfectionism and youth sport participation: A mixed-methods approach. *Psychology of Sport and Exercise, 36*, 162–173.
- Manley, A., Roderick, M., & Parker, A. (2016). Disciplinary mechanisms and the discourse of identity: The creation of 'silence' in an elite sports academy. *Culture and Organization, 22*(3), 221–244.
- Marks, D.F., & Yardley, L. (2004). *Research Methods for Clinical and Health Psychology*. London, UK: Sage.
- Marsh, H. W., Hau, K. T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling, 11*(3), 320–341.
- Martens, R., Burton, D., Vealey, R. S., Bump, L. A., & Smith, D. E. (1990). Development and validation of the Competitive State Anxiety Inventory-2. In R. Martens, R. S. Vealey, & D. Burton (Eds.), *Competitive anxiety in sport* (pp. 117–190). Champaign, IL: Human Kinetics.
- Martin, L. L., & Tesser, A. (1989). Toward a motivational structural theory of ruminative thought. In J. S. Uleman & J. A. Bargh (Eds.), *Unintentional thought* (pp. 306–326). New York, NY: Guilford.
- Martin, L.L., & Tesser, A. (1996). Some ruminative thoughts. In R.S. Wyer Jr. (Ed.), *Ruminative thoughts* (pp. 1–47). Mahwah, NJ: Erlbaum.
- Martin, L.L., & Tesser, A. (2006). Extending the goal progress theory of rumination: Goal reevaluation and growth. In L.J. Sanna & E.C. Chang (Eds.), *Judgement over time: The interplay of thoughts, feelings, and behaviours* (pp.145-162). New York, NY: Oxford University Press.
- Martin, L. L., Tesser, A., & McIntosh, W. D. (1993). Wanting but not having: The effects of unattained goals on thoughts and feelings. In D. M. Wegner, & J. W. Pennebaker (Eds.), *Handbook of mental control* (pp. 552–572). Englewood Cliffs, NJ: Prentice Hall.
- Martinent, G., & Ferrand, C. (2007). A cluster analysis of precompetitive anxiety: Relationship with perfectionism and trait anxiety. *Personality and Individual Differences, 43*(7), 1676–1686.

- Martinent, G., & Ferrand, C. (2009). A naturalistic study of the directional interpretation process of discrete emotions during high-stakes table tennis matches. *Journal of Sport and Exercise Psychology, 31*(3), 318–336.
- Martinent, G., Ferrand, C., Guillet, E., & Gauthier, S. (2010). Validation of the French version of the Competitive State Anxiety Inventory-2 Revised (CSAI-2R) including frequency and direction scales. *Psychology of Sport and Exercise, 11*(1), 51–57.
- Matcham, F., Ali, S., Irving, K., Hotopf, M., & Chalder, T. (2016). Are depression and anxiety associated with disease activity in rheumatoid arthritis? A prospective study. *BMC Musculoskeletal Disorders, 17*(1), 155–164.
- Mathews, A. (1990). Why worry? The cognitive function of anxiety. *Behaviour Research and Therapy, 28*(6), 455–468.
- Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods, 12*(1), 23–44.
- Maynard, I. W., & Cotton, P. C. (1993). An investigation of two stress-management techniques in a field setting. *The Sport Psychologist, 7*(4), 375–387.
- Mayan, M. J. (2016). *Essentials of qualitative inquiry*. London, UK: Routledge.
- McArdle, S. (2010). Exploring domain-specific perfectionism. *Journal of Personality, 78*(2), 493–508.
- McCarthy, P. J., Jones, M. V., Harwood, C. G., & Olivier, S. (2010). What do young athletes implicitly understand about psychological skills?. *Journal of Clinical Sport Psychology, 4*(2), 158–172.
- McCown, W. G., & Carlson, G. (2004). Narcissism, perfectionism, and self-termination from treatment in outpatient cocaine users. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 22*(4), 325–336.
- McGannon, K. R., & Smith, B. (2015). Centralizing culture in cultural sport psychology research: The potential of narrative inquiry and discursive psychology. *Psychology of Sport and Exercise, 17*, 79–87.
- McLellan, I. (2008, September 20). The Cult of Football: A Religion for the Twentieth Century and Beyond. *Bleacher Report*. Retrieved from <https://bleacherreport.com/articles/59738-the-cult-of-football-a-religion-for-the-twentieth-century-and-beyond>
- McVey, G. L., Pepler, D., Davis, R., Flett, G. L., & Abdolell, M. (2002). Risk and protective factors associated with disordered eating during early adolescence. *The Journal of Early Adolescence, 22*(1), 75–95.

- Mellalieu, S. D., Hanton, S., & Fletcher, D. (2006). A competitive anxiety review: Recent directions in sport psychology research. In S. Hanton & S. D. Mellalieu (Eds.), *Literature reviews in sport psychology* (pp. 1–45). Hauppauge, NY: Nova Science.
- Mellalieu, S. D., Hanton, S., & O'Brien, M. (2004). Intensity and direction of competitive anxiety as a function of sport type and experience. *Scandinavian Journal of Medicine & Science in Sports*, *14*(5), 326–334.
- Mellick, M. (2017, May 4). Clarke Carlisle: 'Football must do more to fight depression' .*The Times*, Retrieved online <https://www.thetimes.co.uk/article/carlisle-football-must-do-more-to-fight-depression-w38mf6gx5>
- Melton, R. J. (1995). The role of positive affect in syllogism performance. *Personality and Social Psychology Bulletin*, *21*(8), 788–794.
- Mental Health Foundation. (2016). *Fundamental facts about mental health 2016*. Retrieved from <https://www.mentalhealth.org.uk/sites/default/files/fundamental-facts-about-mental-health-2016.pdf>
- Mental Health Foundation (2018) *Surviving or thriving? The state of the UK's mental health*. Retrieved from <https://www.mentalhealth.org.uk/publications/surviving-or-thriving-state-uks-mental-health>
- Merino, H., Senra, C., & Ferreiro, F. (2016). Are worry and rumination specific pathways linking neuroticism and symptoms of anxiety and depression in patients with generalized anxiety disorder, major depressive disorder and mixed anxiety-depressive disorder?. *PloS One*, *11*(5), e0156169.
- Merrell, R. S., Hannah, D. J., Van Arsdale, A. C., Buman, M. P., & Rice, K. G. (2011). Emergent themes in the writing of perfectionists: A qualitative study. *Psychotherapy Research*, *21*(5), 510–524.
- Messer, S. B., & Wampold, B. E. (2006). Let's face facts: Common factors are more potent than specific therapy common factors in dyadic coping 97 ingredients. *Clinical Psychology: Science and Practice*, *9*(1), 21–25.
- Miller, T. Q., Smith, T. W., Turner, C. W., Guijarro, M. L., & Hallet, A. J. (1996). A meta-analytic review of research on hostility and physical health. *Psychological Bulletin*, *119*(2), 322–348.

- Miller, J. L., & Vaillancourt, T. (2007). Relation between childhood peer victimization and adult perfectionism: Are victims of indirect aggression more perfectionistic?. *Aggressive Behavior, 33*(3), 230–241.
- Mills, A., Butt, J., Maynard, I., & Harwood, C. (2014). Examining the development environments of elite English Football Academies: The players' perspective. *International Journal of Sports Science and Coaching, 9*(6), 1457–1472.
- Mirowsky, J., & Ross, C.E. (2002). Selecting outcomes for the sociology of mental health: Issues of measurement and dimensionality. *Journal of Health and Social Behaviour, 43*(2), 152–170.
- Missildine, W. H. (1963). *Your inner child of the past*. New York, NY: Simon and Schuster.
- Mitchelson, J. K., & Burns, L. R. (1998). Career mothers and perfectionism: Stress at work and at home. *Personality and Individual Differences, 25*(3), 477–485.
- Molnar, D. S., Reker, D. L., Culp, N. A., Sadava, S. W., & DeCourville, N. H. (2006). A mediated model of perfectionism, affect, and physical health. *Journal of Research in Personality, 40*(5), 482–500.
- Morris, L. W., Davis, M. A., & Hutchings, C. H. (1981). Cognitive and emotional components of anxiety: Literature review and a revised worry–emotionality scale. *Journal of Educational Psychology, 73*(4), 541–555.
- Mosewich, A. D., Crocker, P. R., Kowalski, K. C., & DeLongis, A. (2013). Applying self-compassion in sport: An intervention with women athletes. *Journal of Sport and Exercise Psychology, 35*(5), 514–524.
- Muris, P., Merckelbach, H., Schmidt, H., Gadet, B., & Bogie, N. (2001). Anxiety and depression as correlates of self-reported behavioural inhibition in normal adolescents. *Behaviour Research and Therapy, 39*(9), 1051–1061.
- Musiat, P., Conrod, P., Treasure, J., Tylee, A., Williams, C., & Schmidt, U. (2014). Targeted prevention of common mental health disorders in university students: Randomised controlled trial of a transdiagnostic trait-focused web-based intervention. *PLoS One, 9*(4), e93621.
- Muthén, L. K., & Muthén, B. (1998–2012). Mplus. *The comprehensive modelling program for applied researchers: User's guide, (7<sup>th</sup> Ed)*. Los Angeles, CA: Muthén & Muthén.
- Nealis, L. J., Sherry, S. B., Lee-Baggley, D. L., Stewart, S. H., & Macneil, M. A. (2016). Revitalizing narcissistic perfectionism: Evidence of the reliability and the validity of an emerging construct. *Journal of Psychopathology and Behavioral Assessment, 38*(3), 493–504.

- Nehmy, T. J., & Wade, T. D. (2015). Reducing the onset of negative affect in adolescents: Evaluation of a perfectionism program in a universal prevention setting. *Behaviour Research and Therapy*, *67*, 55–63.
- Nicholls, A. R., Perry, J. L., & Calmeiro, L. (2014). Precompetitive achievement goals, stress appraisals, emotions, and coping among athletes. *Journal of Sport and Exercise Psychology*, *36*(5), 433–445.
- Nicholls, A. R., & Polman, R. C. (2007). Coping in sport: A systematic review. *Journal of Sports Sciences*, *25*(1), 11–31.
- Nobel, R., Manassis, K., & Wilansky-Traynor, P. (2012). The role of perfectionism in relation to an intervention to reduce anxious and depressive symptoms in children. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *30*(2), 77–90.
- Nolen-Hoeksema, S. (1987). Sex differences in unipolar depression: Evidence and theory. *Psychological Bulletin*, *101*(2), 259–282.
- Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, *100*(4), 569–582.
- Nolen-Hoeksema, S. (2003). *Women who think too much: How to break free of overthinking and reclaim your life*. New York, NY: Palgrave-Macmillan.
- Nolen-Hoeksema, S. & Davis, C. G. (1999) "Thanks for sharing that" Ruminators and their social support networks, *Journal of Personality and Social Psychology*, *77*(4), 810–814.
- Nolen-Hoeksema, S., Gilbert, K., & Hilt, L. M. (2015). Rumination and self-regulation in adolescence. In G. Oettingen & P. Gollwitzer (Eds.), *Self-Regulation in Adolescence* (The Jacobs Foundation Series on Adolescence), (pp. 311–331). Cambridge, UK: Cambridge University.
- Nolen-Hoeksema, S., Larson, J., & Grayson, C. (1999). Explaining the gender difference in depressive symptoms. *Journal of Personality and Social Psychology*, *77*(5), 1061–1072.
- Nolen-Hoeksema, S., Morrow, J., & Fredrickson, B. L. (1993). Response styles and the duration of episodes of depressed mood. *Journal of Abnormal Psychology*, *102*(1), 20–28.
- Nolen-Hoeksema, S., Stice, E., Wade, E., & Bohon, C. (2007). Reciprocal relations between rumination and bulimic, substance abuse and depressive symptoms in female adolescents. *Journal of Abnormal Psychology*, *116*(1), 198–207.
- Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science*, *3*(5), 400–424.

- Nordin, S.M., Harris, G., & Cummings, J. (2003). Disturbed eating in young, competitive gymnasts: Differences between three gymnastics disciplines. *European Journal of Sport Science*, 3(5), 1–14.
- Nordin-Bates, S. M., Hill, A. P., Cumming, J., Aujla, I. J., & Redding, E. (2014). A longitudinal examination of the relationship between perfectionism and motivational climate in dance. *Journal of Sport and Exercise Psychology*, 36(4), 382–391.
- Nordin-Bates, S. M., Schwarz, J. F., Quested, E., Cumming, J., Aujla, I. J., & Redding, E. (2016). Within-and between-person predictors of disordered eating attitudes among male and female dancers: Findings from the UK Centres for Advanced Training. *Psychology of Sport and Exercise*, 27, 101–111.
- Nordin-Bates, S. M., Walker, I. J., & Redding, E. (2011). Correlates of disordered eating attitudes among male and female young talented dancers: Findings from the UK Centres for Advanced Training. *Eating Disorders*, 19(3), 211–233.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychological theory*. New York, NY: MacGraw-Hill.
- O'Connor, D., O'Connor, R., & Marshall, R. (2007). Perfectionism and psychological distress: Evidence of the mediating effects of rumination. *European Journal of Personality*, 21, 429–452.
- O'Connor, R. C., Rasmussen, S., Miles, J., & Hawton, K. (2009). Self-harm in adolescents: Self-report survey in schools in Scotland. *The British Journal of Psychiatry*, 194(1), 68–72.
- O'Dwyer, L. M., & Bernauer, J. A. (2014). *Quantitative research for the qualitative researcher*. Thousand Oaks, CA: Sage Publications.
- Oliver, J. M., Hart, B. A., Ross, M. J., & Katz, B. M. (2001). Healthy perfectionism and positive expectations about counseling. *North American Journal of Psychology*, 3(2), 229–242.
- Olson, M. L., & Kwon, P. (2008). Brooding perfectionism: Refining the roles of rumination and perfectionism in the etiology of depression. *Cognitive Therapy and Research*, 32(6), 788–802.
- Pacht, A. R. (1984). Reflections on perfection. *American Psychologist*, 39(4), 386–390.
- Pálsson, E. (2016). *Prevalence of anxiety and depression symptoms among football players at a top level in Iceland* (BSc thesis, Reykjavík University, School of Business). Retrieved from <http://hdl.handle.net/1946/25654>



- Papageorgiou, C., & Wells, A. (2004). Nature, functions, and beliefs about depressive rumination. In C. Papageorgiou & A. Wells, *Depressive rumination: Nature, theory, and treatment*. New York, NY: Wiley.
- Parsafar, P., & Davis, E.L. (2018). Intrapersonal emotion regulation processes influence what children remember about their experiences. *Child Development, 00(0)*, 1–17.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Patton, M. Q. (2015). *Qualitative research and methods: Integrating theory and practice*. London, UK: Sage.
- Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley, & R. F. Krueger (Eds.), *Handbook of research methods in personality* (pp. 224–239). London, UK: Guilford.
- Peat, J., Mellis, C., Williams, K., & Xuan, W. (2002). *Health Science Research: A Handbook of Quantitative Methods*. London, UK: Sage.
- Pirbaglou, M., Cribbie, R., Irvine, J., Radhu, N., Vora, K., & Ritvo, P. (2013). Perfectionism, anxiety, and depressive distress: Evidence for the mediating role of negative automatic thoughts and anxiety sensitivity. *Journal of American College Health, 61(8)*, 477–483.
- Pleva, J., & Wade, T.D. (2007). Guided self-help versus pure self-help for perfectionism: A randomised control trial. *Behaviour Research and Therapy, 45(5)*, 849–861.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88(5)*, 879–903.
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies, 47(11)*, 1451–1458.
- Powers, T. A., Koestner, R., Zuroff, D. C., Milyavskaya, M., & Gorin, A. A. (2011). The effects of self-criticism and self-oriented perfectionism on goal pursuit. *Personality and Social Psychology Bulletin, 37(7)*, 964–975.
- Preacher, K. J., & Selig, J. P. (2012). Advantages of Monte Carlo confidence intervals for indirect effects. *Communication Methods and Measures, 6(2)*, 77–98.
- Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods, 15(3)*, 209–233.

- Premier League (2017, October 1). Elite Player Performance Plan: Long-term strategy designed to advance Premier League Youth Development. *Premier League News*. Retrieved from <https://www.premierleague.com/news/58930>
- Prinz, B., Dvořák, J., & Junge, A. (2016). Symptoms and risk factors of depression during and after the football career of elite female players. *BMJ Open Sport & Exercise Medicine*, 2(1), e000124.
- NHS Digital (2017). *Smoking, drinking and drug use among young people*. Retrieved from <https://digital.nhs.uk/data-and-information/publications/statistical/smoking-drinking-and-drug-use-among-young-people-in-england/2016>
- Quick, M. (2017, August 29). How does a football transfer work?. *BBC News*. Retrieved from <http://www.bbc.com/capital/story/20170829-how-does-a-football-transfer-work>
- Quick, S., Dalziel, D., Thornton, A., & Raynor, S. (2008). *School Sport Survey 2007/08* (Research Report DCSF-RW063). TNS for the Department for Children, Schools and Families.
- Radhu, N., Daskalakis, Z. J., Arpin-Cribbie, C. A., Irvine, J., & Ritvo, P. (2012). Evaluating a web-based cognitive-behavioral therapy for maladaptive perfectionism in university students. *Journal of American College Health*, 60(5), 357–366.
- Raedeke, T. D., & Smith, A. L. (2001). Development and preliminary validation of an athlete burnout measure. *Journal of Sport and Exercise Psychology*, 23(4), 281–306.
- Raghunathan, R., & Pham, M. T. (1999). All negative moods are not equal: Motivational influences of anxiety and sadness on decision making. *Organizational Behavior and Human Decision Processes*, 79(1), 56–77.
- Ranganathan, P., Pramesh, C.S., & Aggarwal, R. (2016). Common pitfalls in statistical analysis: Intention-to-treat versus per-protocol analysis. *Perspectives in Clinical Research*, 7(3), 144–146.
- Rasmussen, S. A., Elliott, M. A., & O'Connor, R. C. (2012). Psychological distress and perfectionism in recent suicide attempters: The role of behavioural inhibition and activation. *Personality and Individual Differences*, 52(6), 680–685.
- Rathschlag, M., & Memmert, D. (2014). Reducing anxiety and enhancing physical performance by using an advanced version of EMDR: A pilot study. *Brain and Behavior*, 4(3), 348–355.

- Reed, G. F. (1985). *Obsessional experience and compulsive behaviour: A cognitive-structural approach*. Orlando, FL: Academic Press.
- Reeves, C. W., Nicholls, A. R., & McKenna, J. (2011). The effects of a coping intervention on coping self-efficacy, coping effectiveness, and subjective performance among adolescent soccer players. *International Journal of Sport and Exercise Psychology*, 9(2), 126–142.
- Reng, R. (2015). *A life too short: The tragedy of Robert Enke*. London, UK: Yellow Jersey Press.
- Reuther, E. T., Davis III, T. E., Rudy, B. M., Jenkins, W. S., Whiting, S. E., & May, A. C. (2013). Intolerance of uncertainty as a mediator of the relationship between perfectionism and obsessive-compulsive symptom severity. *Depression and Anxiety*, 30(8), 773–777.
- Rice, K. G., & Aldea, M. A. (2006). State dependence and trait stability of perfectionism: A short-term longitudinal study. *Journal of Counseling Psychology*, 53(2), 205–213.
- Rice, K.G., Bair, C.J., Castro, J.R., Cohen, B.N., & Hood, C.A. (2003). Meanings of perfectionism: A quantitative and qualitative analysis. *Journal of Cognitive Psychotherapy*, 17(1), 39–58.
- Rice, S. M., Purcell, R., De Silva, S., McGorry, P. D., & Parker, A. G. (2016). The mental health of elite athletes: A narrative systematic review. *Sports Medicine*, 46(9), 1333–1353.
- Richards, L., & Morse, J. M. (2012). *Readme first for a user's guide to qualitative methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Richards, P. S., Owen, L., & Stein, S. (1993). A religiously oriented group counseling intervention for self-defeating perfectionism: A pilot study. *Counseling and Values*, 37(2), 96–104.
- Richardson, J.T.E. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review*, 6(2), 135–147.
- Riley, C., Lee, M., Cooper, Z., Fairburn, C. G., & Shafran, R. (2007). A randomised controlled trial of cognitive-behaviour therapy for clinical perfectionism: A preliminary study. *Behaviour Research and Therapy*, 45(9), 2221–2231.
- Robazza, C., & Bortoli, L. (2007). Perceived impact of anger and anxiety on sporting performance in rugby players. *Psychology of Sport and Exercise*, 8(6), 875–896.
- Roderick, M. (2006). *The work of professional football: A labour of love?* London, UK: Routledge.

- Roderick, M., Waddington, I., & Parker, G., (2000). Playing hurt: Managing injuries in English professional football. *International Review for the Sociology of Sport*, 35(2), 165–180.
- Rogers, M. L., & Joiner, T. E. (2017). Rumination, suicidal ideation, and suicide attempts: A meta-analytic review. *Review of General Psychology*, 21(2), 132–142.
- Röthlin, P., Birrer, D., Horvath, S., & Grosse Holtforth, M. (2016). Mindfulness promotes the ability to deliver performance in highly demanding situations. *Mindfulness*, 7(3), 727–733.
- Roy-Byrne, P.P., Davidson, K.W., Kessler, R.C., Asmundson, G.J., Goodwin, R.D., Kubzansky, L., Lydiard, R.B., Massie, M.J., Katon, W., Laden, S.K., & Stein, M.B. (2008). Anxiety disorders and comorbid medical illness. *General Hospital Psychiatry*, 30(3), 208–225.
- Rozenal, A., Shafran, R., Wade, T., Egan, S., Nordgren, L. B., Carlbring, P., ... & Trosell, L. (2017). A randomized controlled trial of internet-based cognitive behavior therapy for perfectionism including an investigation of outcome predictors. *Behaviour Research and Therapy*, 95, 79–86.
- Rubin, H. J., & Rubin, I. S. (2011). *Qualitative interviewing: The art of hearing data*. Thousand Oaks, CA: Sage.
- Rudolph, S. G., Flett, G. L., & Hewitt, P. L. (2007). Perfectionism and deficits in cognitive emotion regulation. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 25(4), 343–357.
- Rusting, C. L., & Nolen-Hoeksema, S. (1998). Regulating responses to anger: Effects of rumination and distraction on angry mood. *Journal of Personality and Social Psychology*, 74(3), 790–803.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.
- Sabin, C. A., Lepri, A., & Phillips, A. N. (2000). A practical guide to applying the intention-to-treat principle to clinical trials in HIV infection. *HIV Clinical Trials*, 1(2), 31–38.
- Saboonchi, F., & Lundh, L.G. (2003). Perfectionism, anger, somatic health, and positive affect. *Personality and Individual Differences*, 35(7), 1585–1599.
- Sagar, S. S., Busch, B.K., & Jowett, S. (2010). Success and failure, fear of failure, and coping responses of adolescent academy football players. *Journal of Applied Sport Psychology*, 6(22), 213–230.

- Sagar, S. S., & Stoeber, J. (2009). Perfectionism, Fear of Failure, and Affective Responses to Success and Failure: The Central Role of Fear of Experiencing Shame and Embarrassment. *Journal of Sport and Exercise Psychology, 31*(5), 602–627.
- Sapieja, K.M., Dunn, J.G.H., & Holt, N.L. (2011). Perfectionism and perceptions of parenting styles in male youth soccer. *Journal of Sport and Exercise Psychology, 33*(1), 20–39.
- Sarin, S., Abela, J., & Auerbach, R. (2005). The response styles theory of depression: A test of specificity and causal mediation. *Cognition & Emotion, 19*(5), 751–761.
- Scheier, M. F., Weintraub, J. K., & Carver, C. S. (1986). Coping with stress: Divergent strategies of optimists and pessimists. *Journal of Personality and Social Psychology, 51*(6), 1257–1264.
- Schnall, S., Roper, J., & Fessler, D. M. (2010). Elevation leads to altruistic behavior. *Psychological Science, 21*(3), 315–320.
- Schuler, P.A. (2000). Perfectionism and gifted adolescents. *Prufrock Journal, 11*(4), 183–196.
- Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development, 6*(2–3), 144–164.
- Sellars, P. A., Evans, L., & Thomas, O. (2016). The effects of perfectionism in elite sport: Experiences of unhealthy perfectionists. *The Sport Psychologist, 30*(3), 219–230.
- Sedghi, A. (2014, December 10). How sport dominated social media in 2014. The Guardian. Retrieved from <https://www.theguardian.com/football/2014/dec/10/how-sport-dominated-social-media-in-2014>
- Shafran, R., Cooper, Z. & Fairburn, C.G. (2002) Clinical perfectionism: A cognitive-behavioural analysis. *Behaviour Research and Therapy, 40*(7), 773–791.
- Shafran, R., Egan, S., & Wade, T. (2010). *Overcoming perfectionism: A self-help guide using cognitive behavioural techniques*. Hachette, UK: Robinson Publishing.
- Shafran, R., Lee, M., & Fairburn, C. G. (2004). Clinical perfectionism: A case report. *Behavioural and Cognitive Psychotherapy, 32*(3), 353–357.
- Shafran, R., & Mansell, W. (2001). Perfectionism and psychopathology: A review of research and treatment. *Clinical Psychology Review, 21*(6), 879–906.

- Shannon, A., Goldberg, J. O., Flett, G. L., & Hewitt, P. L. (2018). The relationship between perfectionism and mental illness stigma. *Personality and Individual Differences, 126*, 66–70.
- Sherry, S. B., Richards, J. E., Sherry, D. L., & Stewart, S. H. (2014). Self-critical perfectionism is a vulnerability factor for depression but not anxiety: A 12-month, 3-wave longitudinal study. *Journal of Research in Personality, 52*, 1–5.
- Short, M. M., & Mazmanian, D. (2013). Perfectionism and negative repetitive thoughts: Examining a multiple mediator model in relation to mindfulness. *Personality and Individual Differences, 55*(6), 716–721.
- Silk, J. S., Steinberg, L., & Morris, A. S. (2003). Adolescents' emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development, 74*(6), 1869–1880.
- Slaney, R.B., & Ashby, J.S. (1996). Perfectionists: Study of a criterion group. *Journal of Counseling & Development, 74*(4), 393–398.
- Slaney, R.B., Chadha, N., Mobley, M., & Kennedy, S. (2000). Perfectionism in Asian Indians exploring the meaning of the construct in India. *The Counseling Psychologist, 28*(1), 10–31.
- Slaney, R.B., Rice, K.G., Mobley, M., Trippi, J., & Ashby, J.S. (2001). The revised almost perfect scale. *Measurement and Evaluation in Counseling and Development, 34*(3), 130–145.
- Smith, A. (2016, April 22). Clarke Carlisle: 'I should be dead. I am delighted, blessed I can use my life'. *The Guardian*. Retrieved from <https://www.theguardian.com/football/2016/apr/22/clarke-carlisle-i-should-be-dead-blessed-interview-burnley-qpr>
- Smith, A. (2017, September 1). Premier League transfers: How much did your club spend? *Sky Sports News*. Retrieved from <http://www.skysports.com/football/news/11095/11015137/premier-league-transfers-how-much-did-your-club-spend>
- Smith, J. M., Alloy, L. B., & Abramson, L. Y. (2006). Cognitive vulnerability to depression, rumination, hopelessness, and suicidal ideation: Multiple pathways to self-injurious thinking. *Suicide and Life-Threatening Behavior, 36*(4), 443–454.
- Smith, J. P., & Book, S. W. (2008). Anxiety and substance use disorders: A review. *The Psychiatric Times, 25*(10), 19–23.

- Smith, J. C., Bradley, M. M., & Lang, P. J. (2005). State anxiety and affective physiology: Effects of sustained exposure to affective pictures. *Biological Psychology*, 69(3), 247–260.
- Smith, J. K., & Deemer, D. K. (2000). The problem of criteria in the age of relativism. *Handbook of Qualitative Research*, 2, 877–896.
- Smith, C. A., & Ellsworth, P. C. (1985). Patterns of cognitive appraisal in emotion. *Journal of Personality and Social Psychology*, 48(4), 813.
- Smith, E. P., Hill, A. P., & Hall, H. K. (2018). Perfectionism, Burnout and Depressive Symptoms in Youth Soccer Players: A Longitudinal Study. *Journal of Clinical Sport Psychology*, 1–34.
- Smith, C. A., & Lazarus, R. S. (1990). Emotion and adaptation. In L.A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp.609–637). New York, NY: Guilford.
- Smith, K. E., Mason, T. B., & Lavender, J. M. (2018). Rumination and eating disorder psychopathology: A meta-analysis. *Clinical Psychology Review*, 61, 9–23.
- Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology*, 11(1), 101–121.
- Smith, M. M., Saklofske, D. H., Yan, G., & Sherry, S. B. (2015). Perfectionistic strivings and perfectionistic concerns interact to predict negative emotionality: Support for the tripartite model of perfectionism in Canadian and Chinese university students. *Personality and Individual Differences*, 81, 141–147.
- Smith, M. M., Saklofske, D. H., Stoeber, J., & Sherry, S. B. (2016). The big three perfectionism scale: A new measure of perfectionism. *Journal of Psychoeducational Assessment*, 34(7), 670–687.
- Smith, M. M., Sherry, S. B., Rnic, K., Saklofske, D. H., Enns, M., & Gralnick, T. (2016). Are perfectionism dimensions vulnerability factors for depressive symptoms after controlling for neuroticism? A meta-analysis of 10 longitudinal studies. *European Journal of Personality*, 30(2), 201–212.
- Smith, R.E., Smoll, F.L., & Schultz, R.W. (1990). Measurement and correlates of sport specific cognitive and somatic trait anxiety: The Sport Anxiety Scale. *Anxiety Research*, 2(4), 263–280.

- Smith, R.E., Smoll, F.L., & Wiechman, S.A. (1998). Measurement of trait anxiety in sport. In J.L. Duda (Ed.), *Advances in sport and exercise psychology measurement* (pp. 105–128). Morgantown, WV: Fitness Information Technology.
- Smith, M. M., Vidovic, V., Sherry, S. B., Stewart, S. H., & Saklofske, D. H. (2018). Are perfectionism dimensions risk factors for anxiety symptoms? A meta-analysis of 11 longitudinal studies. *Anxiety, Stress, & Coping*, *31*(1), 4–20.
- Somov, P. (2010). Present perfect: a mindfulness approach to letting go of perfectionism and the need for control. Oakland, CA: New Harbinger Publications.
- Sparkes, A. C., & Smith, B. (2014). *Qualitative research methods in sport, exercise, and health: From process to product*. London, UK: Routledge.
- Spasojević, J., & Alloy, L. B. (2001). Rumination as a common mechanism relating depressive risk factors to depression. *Emotion*, *1*(1), 25–37.
- Speirs Neumeister, K. L. (2004a). Factors influencing the development of perfectionism in gifted college students. *Gifted Child Quarterly*, *48*(4), 259–274.
- Speirs Neumeister, K. L. (2004b). Understanding the relationship between perfectionism and achievement motivation in gifted college students. *Gifted Child Quarterly*, *48*(3), 219–231.
- Speirs Neumeister, K.L. (2004c). Interpreting successes and failures: The influence of perfectionism on perspective. *Journal for the Education of the Gifted*, *27*(4), 311–335.
- Speirs Neumeister, K.L. Williams, K.K., & Cross, T.L. (2007). Perfectionism in gifted high-school students: Responses to academic challenge. *Roeper Review*, *29*(5), 11–18.
- Speirs Neumeister, K.L., Williams, K.K., & Cross, T.L. (2009). Gifted high-school students' perspectives on the development of perfectionism. *Roeper Review*, *31*(4), 198–206.
- Spielberger, C. D. (1966). Theory and research on anxiety. In C. D. Spielberger (Ed.), *Anxiety and behavior* (pp. 3–20). San Diego, CA: Academic Press.
- Spielberger, C. D. (1972). Anxiety as an emotional state. In C. D. Spielberger (Ed.), *Anxiety: Current trends in theory and research* (pp. 23–49). New York, NY: Academic Press.
- Spielberger, C. D. (1988). *Manual for the state-trait anger expression inventory (STAXI)*. Odessa, FL: Psychological Assessment Resources.



- Spielberger, C. D. (1991). *State-trait anger expression inventory*. Orlando, Florida, FL: Psychological Assessment Resources.
- Spielberger, C. D. (1999). *Manual for the State-Trait Anger Expression Inventory-2*. Odessa, FL: Psychological Assessment Resources.
- Spielberger, C. D., Jacobs, G., Russell, S., & Crane, R. S. (1983). Assessment of anger: The State-Trait Anger Scale. In J. N. Butcher, & C. D. Spielberger (Eds.), *Advances in personality assessment* (pp. 159–187). Hillsdale, NJ: Erlbaum.
- Sport Business Group (2015). *Revolution: Annual Review of Football Finance – Highlights*. Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/sports-business-group/deloitte-uk-arff-2015-highlights.pdf>
- Sport Scotland (2008). *Sports Participation in Scotland 2008* (Research Digest No. 110). Retrieved from [https://sportscotland.org.uk/documents/participation/sports\\_participation\\_in\\_scotland\\_2008\\_research\\_digest\\_july\\_2010.pdf](https://sportscotland.org.uk/documents/participation/sports_participation_in_scotland_2008_research_digest_july_2010.pdf)
- Squires, N. (2018, 24 March). Jonny Wilkinson exclusive: England rugby hero opens up on mental health problems. *The Express*. Retrieved from <https://www.express.co.uk/sport/rugby-union/935231/Jonny-Wilkinson-Toulon-Dave-Alfred-rugby-union-anxiety-coach-captain>
- Statistica (2017). *Premier League – Statistics and facts*. Retrieved from <https://www.statista.com/topics/1773/premier-league/>
- Steele, A. L., & Wade, T. D. (2008). A randomised trial investigating guided self-help to reduce perfectionism and its impact on bulimia nervosa: A pilot study. *Behaviour Research and Therapy*, *46*(12), 1316–1323.
- Steele, A. L., Waite, S., Egan, S. J., Finnigan, J., Handley, A., & Wade, T. D. (2013). Psycho-education and group cognitive-behavioural therapy for clinical perfectionism: a case-series evaluation. *Behavioural and Cognitive Psychotherapy*, *41*(2), 129–143.
- Stein, J., Luppá, M., Mahnke, J., Weyerer, S., Schomerus, G., & Riedel-Heller, S.G. (2014). Screening for depression by telephone using the German version of the Center for Epidemiological Studies Depression Scale (CES-D). *Psychiatrische Praxis*, *41*(3), 135–41.
- Stirling, A., & Kerr, G. (2012). Perceived vulnerabilities of female athletes to the development of disordered eating behaviours. *European Journal of Sport Science*, *12*(3), 262–273.

- Stoeber, J. (2011). The dual nature of perfectionism in sports: Relationships with emotion, motivation, and performance. *International Review of Sport and Exercise Psychology*, 4(2), 128–145.
- Stoeber, J. (2012). Perfectionism and performance. In S. M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 294–306). New York, NY: Oxford University Press
- Stoeber, J. (2014a). Perfectionism in sport and dance: A double-edged sword. *International Journal of Sport Psychology*, 45(4), 385–394.
- Stoeber, J. (2014b). How other-oriented perfectionism differs from self-oriented and socially prescribed perfectionism. *Journal of Psychopathology and Behavioral Assessment*, 36(2), 329–338.
- Stoeber, J. (2018). The psychology of perfectionism: Critical issues, open questions, and future directions. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 333–352). London, UK: Routledge.
- Stoeber, J., & Becker, C. (2008). Perfectionism, achievement motives, and attribution of success and failure in female soccer players. *International Journal of Psychology*, 43(6), 980–987.
- Stoeber, J., & Childs, J. H. (2010). The assessment of self-oriented and socially prescribed perfectionism: Subscales make a difference. *Journal of Personality Assessment*, 92(6), 577–585.
- Stoeber, J., Corr, P.J., Smith, M. M., & Saklofske, D. H. (2018). Perfectionism and personality. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 68–88). London, UK: Routledge.
- Stoeber, J., Haskew, A. E., & Scott, C. (2015). Perfectionism and exam performance: The mediating effect of task-approach goals. *Personality and Individual Differences*, 74, 171–176.
- Stoeber, J., Hutchfield, J., & Wood, K. V. (2008). Perfectionism, self-efficacy, and aspiration level: Differential effects of perfectionistic striving and self-criticism after success and failure. *Personality and Individual Differences*, 45(4), 323-327.
- Stoeber, J., & Madigan, D. J. (2016). Measuring perfectionism in sport, dance, and exercise: Review, critique, recommendations. In A. P. Hill (Ed.), *The psychology of perfectionism in sport, dance, and exercise* (pp. 31-56). London, UK: Routledge.

- Stoeber, J., Madigan, D. J., Damian, L. E., Esposito, R. M., & Lombardo, C. (2017). Perfectionism and eating disorder symptoms in female university students: The central role of perfectionistic self-presentation. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 22(4), 641-648.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, 10(4), 295-319.
- Stoeber, J., Otto, K., Pescheck, E., Becker, C., & Stoll, O. (2007). Perfectionism and competitive anxiety in athletes: Differentiating striving for perfection and negative reactions to imperfection. *Personality and Individual Differences*, 42(6), 959-969.
- Stoeber, J., Otto, K., & Stoll, O. (2006). *MIPS: Multidimensional Inventory of Perfectionism in Sport English version*. Unpublished manuscript, School of Psychology, University of Kent, Kent, UK.
- Stoeber, J., Schneider, N., Hussain, R., & Matthews, K. (2014). Perfectionism and negative affect after repeated failure. *Journal of Individual Differences*, 35(2), 87-94.
- Stoeber, J., & Stoeber, F. S. (2009). Domains of perfectionism: Prevalence and relationships with perfectionism, gender, age, and satisfaction with life. *Personality and Individual Differences*, 46(4), 530-535.
- Stoeber, J., Stoll, O., Salmi, O., & Tiikkaja, J. (2009). Perfectionism and achievement goals in young Finnish ice-hockey players aspiring to make the Under-16 national team. *Journal of Sports Sciences*, 27(1), 85-94.
- Stoeber, J., Uphill, M. A., & Hotham, S. (2009). Predicting race performance in triathlon: The role of perfectionism, achievement goals, and personal goal setting. *Journal of Sport and Exercise Psychology*, 31(2), 211-245.
- Stornelli, D., Flett, G. L., & Hewitt, P. L. (2009). Perfectionism, achievement, and affect in children: A comparison of students from gifted, arts, and regular programs. *Canadian Journal of School Psychology*, 24(4), 267-283.
- Strauss, A. L. (1987). *Qualitative analysis for social scientists*. New York, NY: Cambridge University Press.
- Streiner, D., & Geddes, J. (2001). Intention to treat analysis in clinical trials when there are missing data. *Evidence-Based Mental Health*, 4(3), 70-71.
- Suddaby, R. (2006). From the editors: What grounded theory is not. *Academy of Management Journal*, 49, 633-642.
- Suinn, R. M. (2001). The terrible twos — anger and anxiety: Hazardous to your health. *American Psychologist*, 56(1), 27-36.

- Sutton, J., & Austin, Z. (2015). Qualitative research: Data collection, analysis, and management. *The Canadian Journal of Hospital Pharmacy*, 68(3), 226–231.
- Sysko, R., & Walsh, B. T. (2008). A critical evaluation of the efficacy of self-help interventions for the treatment of bulimia nervosa and binge-eating disorder. *International Journal of Eating Disorders*, 41(2), 97–112.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston, MA: Allyn & Bacon.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Essex, UK: Pearson Education Limited.
- Taris, T. W. (2000). *A primer in longitudinal data analysis*. Thousand Oaks, CA: Sage.
- Taylor, M. (2007, January 17). Politics and the people's game: Football and political culture in twentieth century Britain. *Idrottsforum*. Retrieved from <https://idrottsforum.org/articles/taylor/taylor070117.pdf>
- Terry, P.C., Lane, A.M., & Fogarty, G. (2003). Construct validity of the Profile of Mood States-A for use with adults. *Psychology of Sport and Exercise*, 4(2), 125–139.
- Terry, P.C., Lane, A.M., Lane, H.J., & Keohane, L. (1999). Development and validation of a mood measure for adolescents: POMS-A. *Journal of Sports Sciences*, 17(11), 861–872.
- Terry, P.C., & Slade, A. (1995). Discriminant Effectiveness of Psychological State Measures in Predicting Performance Outcome in Karate Competition. *Perceptual and Motor Skills*, 81(1), 275–286.
- The Football Association (2017, March 21). FA invested record £127 million back into every level of the game in 2016–17. *The Football Association*. Retrieved from <http://www.thefa.com/news/2018/mar/20/fa-financial-results-2016-17-210318>
- Thienot, E., Jackson, B., Dimmock, J., Grove, J. R., Bernier, M., & Fournier, J. F. (2014). Development and preliminary validation of the mindfulness inventory for sport. *Psychology of Sport and Exercise*, 15(1), 72–80.
- Thomas, P. R., Murphy, S. M., & Hardy, L. E. W. (1999). Test of performance strategies: Development and preliminary validation of a comprehensive measure of athletes' psychological skills. *Journal of Sports Sciences*, 17(9), 697–711.

- Thompson, R. W., Kaufman, K. A., De Petrillo, L. A., Glass, C. R., & Arnkoff, D. B. (2011). One year follow-up of mindful sport performance enhancement (MSPE) with archers, golfers, and runners. *Journal of Clinical Sport Psychology, 5*(2), 99–116.
- Tod, D., & Lavalley, D. (2013). *The psychology of strength and conditioning*. London, UK: Routledge.
- Totterdell, P. (2000). Catching moods and hitting runs: Mood linkage and subjective performance in professional sport teams. *Journal of Applied Psychology, 85*(6), 848–859.
- Tracy, S.J. (2010) Qualitative Quality: Eight 'Big-Tent' Criteria for Excellent Qualitative Research. *Qualitative Inquiry, 16*(10), 837–851.
- Treynor, W., Gonzalez, R., & Nolen-Hoeksema, S. (2003). Rumination reconsidered: A psychometric analysis. *Cognitive Therapy and Research, 27*(3), 247–259.
- Turner, S. M., Beidel, D. C., & Wolff, P. L. (1996). Is behavioral inhibition related to the anxiety disorders? *Clinical Psychology Review, 16*(2), 157–172.
- UEFA (2017). *UEFA report: Registered female footballers on the rise*. Retrieved from <https://www.uefa.com/insideuefa/football-development/womens-football/news/newsid=2516070.html>
- UEFA (2017). *Women's football across the national associations 2016/17*. Retrieved from [https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/43/13/56/2431356\\_DOWNLOAD.pdf](https://www.uefa.com/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/43/13/56/2431356_DOWNLOAD.pdf)
- Uphill, M. A., & Dray, K. (2009). Giving yourself a good beating: appraisal, attribution, rumination, and counterfactual thinking. *Journal of Sports Science & Medicine, 8*(CSSI3), 5–12.
- Vallance, J. K., Dunn, J. G., & Causgrove Dunn, J. L. (2006). Perfectionism, anger, and situation criticality in competitive youth ice hockey. *Journal of Sport and Exercise Psychology, 28*(3), 383–406.
- Van Laethem, M., Beckers, D. G., Kompier, M. A., Kecklund, G., van den Bossche, S. N., & Geurts, S. A. (2015). Bidirectional relations between work-related stress, sleep quality and perseverative cognition. *Journal of Psychosomatic Research, 79*(5), 391–398.
- Van Ramele, S., Aoki, H., Kerkhoffs, G. M., & Gouttebauge, V. (2017). Mental health in retired professional football players: 12-month incidence, adverse life events and support. *Psychology of Sport and Exercise, 28*, 85–90.

- Vast, R. L., Young, R. L., & Thomas, P. R. (2010). Emotions in sport: Perceived effects on attention, concentration, and performance. *Australian Psychologist, 45*(2), 132–140.
- Vekas, E. J., & Wade, T. D. (2017). The impact of a universal intervention targeting perfectionism in children: An exploratory controlled trial. *British Journal of Clinical Psychology, 56*(4), 458–473.
- Vella, L. D., & Cameron-Smith, D. (2010). Alcohol, athletic performance and recovery. *Nutrients, 2*(8), 781–789.
- Verduyn, P., & Lavrijsen, S. (2015). Which emotions last longest and why: The role of event importance and rumination. *Motivation & Emotion, 39*, 119–127.
- Visagie, L., Loxton, H., Stallard, P., & Silverman, W.K. (2017). Insights into the Feelings, Thoughts, and Behaviors of Children with Visual Impairments: A Focus Group Study Prior to Adapting a Cognitive Behavior Therapy–Based Anxiety Intervention. *Journal of Visual Impairment & Blindness, 111*(3), 231–246.
- Ward, A., Lyubomirsky, S., Sousa, L., & Nolen-Hoeksema, S. (2003). Can't quite commit: Rumination and uncertainty. *Personality and Social Psychology Bulletin, 29*(1), 96–107.
- Warriner, K., & Lavallee, D. (2008). The retirement experiences of elite female gymnasts: Self-identity and the physical self. *Journal of Applied Sport Psychology, 20*(3), 301–317.
- Watkins, E.R. (2008). Constructive and unconstructive repetitive thought. *Psychological Bulletin, 134*(2), 163–206.
- Watkins, E. R., & Nolen-Hoeksema, S. (2014). A habit-goal framework of depressive rumination. *Journal of Abnormal Psychology, 123*(1), 24–34.
- Watson, P. J., Varnell, S. P., & Morris, R. J. (1999). Self-reported narcissism and perfectionism: An ego-psychological perspective and the continuum hypothesis. *Imagination, Cognition and Personality, 19*(1), 59–69.
- Weissman, A. N., & Beck, A. T. (1978). *Development and validations of the Dysfunctional Attitudes Scale: A preliminary investigation*. Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Ontario, Canada.
- Wheeler, H. A., Blankstein, K. R., Antony, M. M., McCabe, R. E., & Bieling, P. J. (2011). Perfectionism in anxiety and depression: Comparisons across disorders, relations with symptom severity, and role of comorbidity. *International Journal of Cognitive Therapy, 4*(1), 66–91.

- Wiggins, M. S. (1998). Anxiety intensity and direction: Preperformance temporal patterns and expectations in athletes. *Journal of Applied Sport Psychology, 10*(2), 201–211.
- Wilksch, S. M., Durbridge, M. R., & Wade, T. D. (2008). A preliminary controlled comparison of programs designed to reduce risk of eating disorders targeting perfectionism and media literacy. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*(8), 939–947.
- Williams, R. (2004, January 11). The born again perfectionist eyes a Serena slam. *The Guardian*. Retrieved from <https://www.theguardian.com/sport/2003/jan/11/tennis.comment>
- Williams, S. (2009, March 4). Football academies: kicking and screaming. *The Telegraph*. Retrieved from <http://www.telegraph.co.uk/sport/football/4938593/Football-academies-kickingand-screaming.html>
- Williams, J. M., & Andersen, M. B. (1998). Psychosocial antecedents of sport injury: Review and critique of the stress and injury model. *Journal of Applied Sport Psychology, 10*(1), 5–25.
- Wimberley, T. E., Mintz, L. B., & Suh, H. (2016). Perfectionism and mindfulness: Effectiveness of a bibliotherapy intervention. *Mindfulness, 7*(2), 433–444.
- Wimberley, T. E., & Stasio, M. J. (2013). Perfectionistic thoughts, personal standards, and evaluative concerns: Further investigating relationships to psychological distress. *Cognitive Therapy and Research, 37*(2), 277–283.
- Wippert, P. M., & Wippert, J. (2008). Perceived stress and prevalence of traumatic stress symptoms following athletic career termination. *Journal of Clinical Sport Psychology, 2*(1), 1–16.
- Wippert, P. M., & Wippert, J. (2010). The effects of involuntary athletic career termination on psychological distress. *Journal of Clinical Sport Psychology, 4*(2), 133–149.
- Woodman, T., & Hardy, L. (2003). The relative impact of cognitive anxiety and self-confidence upon sport performance: A meta-analysis. *Journal of Sports Sciences, 21*(6), 443–457.
- Woodman, T., Davis, P. A., Hardy, L., Callow, N., Glasscock, I., & Yuill-Proctor, J. (2009). Emotions and sport performance: An exploration of happiness, hope, and anger. *Journal of Sport and Exercise Psychology, 31*(2), 169–188.

- Wylleman, P., De Knop, P., Ewing, M., & Cumming, S. (2000). Transitions in youth sport: A developmental perspective on parental involvement. In D. Lavallee & P. Wylleman (Eds.), *Career transitions in sport: International perspectives* (pp. 143–160). Morgantown, WV: Fitness Information Technology.
- Young, J. A., Pearce, A. I., Kane, R., & Pain, M. (2006). Leaving the professional tennis circuit: Exploratory study of experiences and reactions from elite female athletes. *British Journal of Sports Medicine, 40*(5), 477–482.
- Zeifman, R. J., Atkey, S. K., Young, R. E., Flett, G. L., Hewitt, P. L., & Goldberg, J. O. (2015). When ideals get in the way of self-care: Perfectionism and self-stigma for seeking psychological help among high school students. *Canadian Journal of School Psychology, 30*(4), 273–287.
- Zeigler-Hill, V., Clark, C. B., & Pickard, J. D. (2008). Narcissistic subtypes and contingent self-esteem: Do all narcissists base their self-esteem on the same domains? *Journal of Personality, 76*(4), 753–774.
- Zetterberg, M., Rozental, A., Carlbring, P., & Andersson, G. (2017, November). *Internet-based treatment of perfectionism: A randomized controlled trial comparing two types of self-help*. Paper presented at the Ninth Swedish Congress on Internet Interventions, Linköping, Sweden.
- Zuroff, D. C., Blatt, S. J., Sotsky, S. M., Krupnick, J. L., Martin, D. J., Sanislow III, C. A., & Simmens, S. (2000). Relation of therapeutic alliance and perfectionism to outcome in brief outpatient treatment of depression. *Journal of Consulting and Clinical Psychology, 68*(1), 114–124.



## List of Abbreviations

APS-R	Almost Perfect Scale-Revised
ATSPPH	Attitudes Towards Seeking Professional Psychological Help
BPS	Burn's Perfectionism Scale
CAPS	Child and Adolescent Perfectionism Scale
CBT	cognitive behavioural therapy
CM	concerns over mistakes
CPQ	Clinical Perfectionism Questionnaire
CSAI-2	Competitive State Anxiety Inventory-2
DA	doubts about action
DAS	Dysfunctional Attitude Scale
F-MPS	Frost Multidimensional Perfectionism Scale
HF-MPS	Hewitt and Flett's Multidimensional Perfectionism Scale
MSPE	Mindful Sport Performance Enhancement
OCD	obsessive compulsive disorder
OOP	other-oriented perfectionism
PC	perfectionistic concerns/evaluative concerns
PCI	Perfectionistic Cognitions Inventory
PCT	Perfectionism Cognitions Theory
PS	Personal standards/perfectionistic strivings
SEQ	Sport Emotion Questionnaire
SMPS	Sport-Multidimensional Perfectionism Scale
SOP	self-oriented perfectionism
SPP	socially prescribed perfectionism
STAXI	State-Trait Anger Expression Inventory

## Appendix A

### Confirmation of ethical approval

#### A.1 Study one and two ethics approval letter



Faculty of Health and Life Sciences  
Lord Mayor's Walk YORK YO31 7EX  
Tel: (01904)876734  
Fax: (01904)876500

16<sup>th</sup> October 2015

Nathalie Noret  
Chair of Faculty of Health & Life  
Sciences Research Ethics  
Committee  
Direct Line 876311  
E-mail: n.noret@yorks.j.ac.uk

Dear Tracy,

**RE: Perfectionistic Cognitions in Athletes**

**REF: 140089895\_Donachie\_14092015**

The research ethics committee has approved, without reservation, the above research ethics submission of 14<sup>th</sup> September 2015.

Yours sincerely

A handwritten signature in black ink, appearing to read "N. Noret".

## A.2 Study three ethics approval letter



Faculty of Health and Life Sciences  
Lord Mayor's Walk YORK YO31 7EX  
Tel: (01904) 876734  
Fax: (01904) 876500

15<sup>th</sup> October 2015

Nathalie Noret  
Chair of Faculty of Health & Life  
Sciences Research Ethics  
Committee  
Direct Line 876311  
E-mail: n.noret@yorksja.ac.uk

Dear Tracy,

RE: Perfectionism and the rumination process in elite junior athletes

REF: 140089895\_Donachie\_24102016

The research ethics committee has approved, without reservation, the above research ethics submission of 6<sup>th</sup> October, 2016.

Yours sincerely

A handwritten signature in black ink, appearing to read "N. Noret".

### A.3 Study four ethics approval letter



Faculty of Health and Life Sciences  
Lord Mayor's Walk YORK YO31 7EX  
Tel: (01904) 876734  
Fax: (01904) 876500

6<sup>th</sup> February, 2017

Nathalie Noret  
Chair of Faculty of Health & Life  
Sciences Research Ethics  
Committee  
Direct Line 876311  
E-mail: n.noret@yorks.ac.uk

Dear Tracy,

**RE: Perfectionism and Self-Help in Footballers: A Randomised Control Trial**

**REF: 140089895\_Donachie2\_13122016**

The research ethics committee has approved, without reservation, the above research ethics submission of 13<sup>th</sup> December, 2016.

Yours sincerely

A handwritten signature in black ink, appearing to read "D. Noret".

## Appendix B

### Study information sheets and verbal assent/informed consent

#### B.1 Study one gatekeeper letter



Dear Coach

I am currently studying for a PhD degree in Sport and Exercise Psychology at York St John University. The area of research that my PhD concerns is footballers' thoughts and feelings in relation to sport. I would like to invite the players at your club to participate in this study.

#### **What would be required?**

If you allow us to recruit from your team, we will ask you to assist us in two ways. Firstly, we need you to distribute the opt-out consent forms to parents/guardians of potential participants. Secondly, we will ask you to help schedule a time when we can meet with your players to administer the questionnaires. The questionnaire will take approximately 15-20 minutes to complete. It would be extremely helpful if this was immediately after a match, or at their post-match training session. Pencils, questionnaires and DBS checked personnel would be provided.

#### **What's in it for you?**

The findings of the project would be made available in written summary for your club and will contribute towards a greater understanding of cognitive, behavioural and emotional experiences of young people involved in sport.

We hope you will help us with this research project. If you could let me know about your willingness to participate by contacting me, Tracy Donachie, on Tel: 07734854387; or via e-mail [t.donachie@yorksj.ac.uk](mailto:t.donachie@yorksj.ac.uk). If you have any questions, please do not hesitate to contact me. We greatly appreciate your assistance with this project and would like to thank you for the time you have given to help us so far. I look forward to your reply.

Kind regards

A handwritten signature in black ink that reads "Tracy Donachie".

Tracy Donachie

## B.2 Study one parent information sheet and opt-out consent template



Dear Parent/Guardian

Your child's sports club is currently involved in a research project looking at examining the thoughts and feelings of youth athletes when participating in sport. This project has received full support from the Research Ethics Sub Committee at York St John University and is considered to be of minimal risk.

The information gained from this research will contribute towards a better understanding of young peoples' experiences in sport and how these can be improved. To gain this information, your child will soon be invited to complete a short questionnaire at one of their training sessions and this will take approximately 15-20 minutes.

Your child's participation in this research project is completely voluntary and they will be able to withdraw from participation at any time without incurring prejudice. Their responses will be completely anonymous and viewed only by myself and the research project supervisors (Prof. Howard Hall; Dr. Andy Hill; and Dr. Lynne Gabriel). Once collected, only the group data will be analysed (i.e., there will be no focus on the response of any individual child). All data will be securely stored at York St John University and any hard copy data will be destroyed within 5 years.

If you are **not** willing to allow your child to take part in this research project, please contact Tracy Donachie (Tel: 01904 876239; E-mail [t.donachie@yorks.j.ac.uk](mailto:t.donachie@yorks.j.ac.uk)) or you can inform your child or their coach that you do not wish them to participate. If you have any questions regarding participation please do not hesitate to contact me.

We greatly appreciate your assistance with this project and would like to thank you for the time you have given to help us so far.

Kind regards

A handwritten signature in black ink that reads "Tracy Donachie".

Tracy Donachie

### B.3 Study one athlete information sheet and opt-out consent



Dear Athlete

We would like you to help us with a piece of research looking at your thoughts and feelings about playing your sport.

We hope that the information gained from this research will help us to better understand youth athletes' experiences in sport and how they can be made better. In order to take part we would like you to complete a short survey. This will take approximately 15-20 minutes.

Giving your name is not necessary and only the researchers involved will see your responses unless we believe you are at risk of harm. You do not have to complete the survey if you feel that you do not want to. You can stop answering the questions in the survey at any time without having to say why you want to stop or you can miss out questions if you do not wish to answer them. Your answers will be kept safely at York St John University for 5 years and then they will be erased.

If you would like to take part, please complete the questionnaire and hand it back to the researcher or your coach.

If you have any questions about taking part in this survey please contact Tracy Donachie on 07734854387 or you can e-mail at [t.donachie@yorksj.ac.uk](mailto:t.donachie@yorksj.ac.uk).

We are very thankful for your help with this project.

Yours in Sport,

A handwritten signature in black ink that reads "Tracy Donachie". The signature is written in a cursive style with a small 'a' above the 'i' in "Donachie".

Tracy Donachie

## B.4 Study one verbal assent

"Hi,

We are here today because we would like your help with a piece of research that is looking at the thoughts and feelings that youth athletes have about playing their sport.

We hope that the information gained will help us (Sport and Exercise Psychology researchers from York St John University) to better understand youth athletes. In order to take part we would like you to complete a short survey before you start training and it will take approximately 15-20 minutes to complete.

Your name is not required and your responses will be securely stored at York St John University. The research team will only share your information if we believe you are at risk of harm.

You do not have to complete the survey if you feel you don't want to and you are free to stop completing the survey at any time and nothing bad will happen if you do decide to stop.

We hope that you choose to take part so we can better understand how youth athletes feel about taking part in sport.

Would you like to take part in this project? If so, please complete the questionnaire and hand it back to the researcher or your coach."



## **B.5 Study one verbal debrief**

“Thank you for taking part in the study. Your participation has played a part in helping me achieve my project aims of understanding the thoughts and feelings of footballers.

If this questionnaire has caused any distress or discomfort, support may be available from your club chaplain and also if you are involved in the national squad, you may be eligible for sport psychology support. Alternatively, you can discuss any concerns with your coach.

If you do have any questions, feel free to contact me, Tracy Donachie, (t.donachie@yorksjac.uk), PhD student, Faculty of Health and Life Sciences, York St John University, Lord Mayor's Walk, York, N. Yorkshire, YO31 7FX

Thank you for your help with this project.”

## B.6 Study three debrief



Thank you for taking part in the study. Your participation has played a part in helping me achieve my project aims of understanding the thoughts and feelings of perfectionistic footballers.

The information you gave me will be held anonymously. This means that it will be impossible for people to know what you told me. If you want to withdraw your data from my study, this can be done up until I have transcribed and anonymised the interview.

If the interview or the questionnaire has caused any distress or discomfort, support may be available from your club chaplain. If you are involved in the national squad, you may be eligible for sport psychology support. Alternatively, you can discuss any concerns with your coach.

If you want to speak to someone outside sport, you may wish to call Support Line on 01708 765200 who offer confidential emotional support to children, young adults and adults or contact them via email at: [info@supportline.org.uk](mailto:info@supportline.org.uk).

If you do have any questions, feel free to contact me, Tracy Donachie, ([t.donachie@yorksjac.uk](mailto:t.donachie@yorksjac.uk)), PhD Candidate, Faculty of Health and Life Sciences, York St John University, Lord Mayor's Walk, York, N. Yorkshire, YO31 7FX or you can contact the Chair of the Research Committee, Professor Howard Hall, on Tel: 01904 876 302 or via email at [h.hall@yorksi.ac.uk](mailto:h.hall@yorksi.ac.uk).

Thank you for your help with this project.

A handwritten signature in black ink that reads "Tracy Donachie". The signature is written in a cursive style with a large initial "T".

Tracy Donachie

## B.7 Study four gatekeeper letter



Dear Coach

I am currently studying for a PhD degree in Sport and Exercise Psychology at York St John University. The area of research that I am interested in is perfectionism within football.

I am looking to recruit footballers (aged over 18+ years old) who identify as a perfectionist and would like to learn ways to manage their perfectionism.

**How would I like you to help me?** Mainly, we would ask for you to explain the nature of the study (see information below) to your players and then distribute information sheets and consent forms. If players agree to be part of the study, the information sheet informs them to contact me directly by returning the consent form via post or email.

**What's in it for you?** The findings of the project would be made available in written summary for your club and will contribute towards a greater understanding of cognitive, behavioural and emotional experiences of people involved in sport.

### **The Project: Managing Perfectionism in Footballers**

**Purpose of the study:** We are aiming to see if self-help reading strategies are effective in managing perfectionism in footballers. This project has received full support from the Research Ethics Sub Committee at York St John University and is considered to be of minimal risk.

### **What will the project involve?**

Players will complete a questionnaire about perfectionism and their thoughts and feelings about sport on three different occasions over 13-weeks. Following the completion of the first questionnaire, participants will be given a self-help book to read at their own pace within 8-weeks. Players will receive the book "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" by Anthony and Swinson which helps people explore the impact of perfectionism on their life and provides coping skills to help them deal with making mistakes. This book has been awarded The Association for Behavioural and Cognitive Therapies Self-Help Seal of Merit - an award given on outstanding self-help books that are consistent with cognitive behavioural therapy (CBT) principles. During the 8-weeks, I will give players a phone call fortnightly to answer any questions they may have and to discuss their progress. At the end of the 8-weeks, they will be asked to complete another questionnaire and return the book. Finally, I will contact them again after 5-weeks to complete a follow-up questionnaire.

**Do they have to take part?** They do not need to take part if they do not want to and can stop at any time without having to explain why. They are also able to miss out any questions on the survey without having to give a reason.

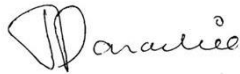
**What will happen to the results of the research project?** The player's questionnaires will be kept safely at York St John University for 5-years and then they will be erased. We may use footballer's questionnaire when reporting the findings of the study. However, the footballer will not be identifiable.

**How do they sign up?** Please hand out the information sheet provided and ask players to read the information. If they are interested in taking part, they should review the consent form, and return it to me, Tracy Donachie, either via email [t.donachie@yorks.ac.uk](mailto:t.donachie@yorks.ac.uk) or via post: Tracy Donachie, Graduate Centre, York St John University, Lord Mayor's Walk, York, YO31 7EX.

If you have any questions about this project, please feel free to contact me or the Chair of the Research Committee, Professor Howard Hall, on Tel: 01904 876 302 or via email at [h.hall@yorks.ac.uk](mailto:h.hall@yorks.ac.uk).

We greatly appreciate your assistance with this project and I would like to thank you for the time you have given to help so far. I look forward to your reply.

Kind regards

A handwritten signature in black ink, appearing to read 'Tracy Donachie'. The signature is written in a cursive style with a large, stylized initial 'T'.

Tracy Donachie

## B.8 Study four athlete information and consent



Dear Athlete

My name is Tracy Donachie and I am currently studying for a PhD degree in Sport and Exercise Psychology at York St John University. The area of research that I am interested in is perfectionism in football.

I am looking to recruit footballers (aged 18 + years old) who identify as a perfectionist and would like to learn ways to manage their perfectionism.

### **Managing your Perfectionism**

We would like you to take part in a research project. Before you decide whether or not you would like to, you need to understand why the research is being done and what it will involve. Please read this sheet and feel free to ask any questions.

**Purpose of the study:** We are aiming to see if self-help reading strategies are effective in reducing perfectionism in footballers. This project has received full support from the Research Ethics Sub Committee at York St John University and is considered to be of minimal risk.

**Why have you been chosen?** You have been asked to take part because as a footballer you may be interested in learning about perfectionism.

### **What do you have to do if you take part?**

- 1) You will be asked to complete a questionnaire about perfectionism and your thoughts and feelings about sport. This should take about 20 minutes and will be completed either over the telephone or at a location where you feel comfortable e.g., training venue.
- 2) Within 7 days, you will be given a self-help book on managing perfectionism to read at your own pace over 8-weeks. The book you will receive is "When Perfect Isn't Good Enough: Strategies for Coping with Perfectionism" by Anthony and Swinson which helps people explore the impact of perfectionism on their life and provides coping skills to help deal with making mistakes. This book has been awarded The Association for Behavioural and Cognitive Therapies Self-Help Seal of Merit -- an award given on outstanding self-help books that are consistent with cognitive behavioural therapy (CBT) principles. During the 8-weeks of reading this book, I will give you a phone call/email to answer any questions you may have and to discuss your progress.
- 3) At the end of the 8-weeks, you will be asked to complete a further questionnaire which again, will be completed either over the telephone or at a location where you feel comfortable e.g., training venue.
- 4) Finally, after a further 5-weeks, there will be a final follow-up questionnaire which will be completed either over the telephone or at a location where you feel comfortable e.g., training venue.
- 5) You will be asked to return the self-help book either by collection or by sending it back to me by a postage-paid envelope.

**Do you have to take part?** You do not need to take part if you do not want to. If you agree to take part, you can stop at any time without having to explain why. You can also miss out any questions on the survey without having to explain why.

**What are the possible disadvantages and risks of taking part?** Some of the questions and exercises in the book ask you to think about yourself, your experiences in sport and your relationships with others. If you feel this would make you uncomfortable you may not want to take part.

**What are the possible benefits of taking part?** The benefits of reading the books are unclear but they aim to improve your well-being and performance. This is not guaranteed however, but we hope the study will help us better understand the experiences of athletes in order to help them in the

As an informed participant of this research study, I understand that:

- My participation is voluntary and I may stop participation at any time without giving a reason.
- I will complete a short questionnaire on three occasions: 1) prior to reading the self-help book; 2) at the end of 8-weeks and 3) 5-weeks after finishing the book.
- During the time of reading the book, the researcher will contact me via phone or email to allow me to ask any questions and to talk about my progress.
- I will return the book to Tracy Donachie at the end of the 8-weeks.
- All data will be stored anonymously once it has been collected. As such, if I decide I want to withdraw from the study, all data collected during my enrolment will be retained for analysis. If I decide to withdraw from the study, I should contact Tracy Donachie.
- The findings of this study may be shared with clubs in order to inform coaching practice. However, my information will not be identifiable.
- The research has been approved by York St John University Ethics Committee. This means it has been approved by a panel of professionals to make sure it meets high standards.
- I do not have to answer all the questions on the survey and I am aware of what my participation involves.
- I understand that Tracy Donachie will treat my participation in this study confidentially and that anything I say over the phone will be treated confidentially, unless it leaves Tracy to believe that my safety is in danger. In this case, she cannot keep your information confidential and will have to share that information to ensure my safety.

I have read and understood the above, and agree to take part:

Participant's name.....

Participant's Signature: ..... Date .....

Email.....

Phone.....

Address.....Postcode.....

I have explained the above and answered all the questions by the participant:

Researcher's Signature: ..... Date: .....



## B.9 Study four control group letter



Motivation,  
Performance  
& Wellbeing

Dear Athlete

Thank you for agreeing to take part in the **Managing your Perfectionism project**. Unfortunately, all the spaces have been filled for the project and you have been put on a waiting list. As part of being on the waiting list, you will have the option of receiving the self-help book in approximately 3-months.

### What do you do as part of the waitlist group?

- 1) You will be asked to complete a questionnaire about perfectionism and your thoughts and feelings about sport. This should take about 20 minutes. This will be completed either over the telephone or at a location where you feel comfortable e.g. training venue.
- 2) At the end of the 8-weeks, you will then be asked to complete another questionnaire. Again, this will be completed either over the telephone or at a location where you feel comfortable e.g. training venue.
- 3) Finally, after a further 5-weeks, there will be a final follow-up questionnaire which will be completed either over the telephone or at a location where you feel comfortable e.g. training venue.
- 4) At this point, you will have access to the intervention book for 8-weeks. Unfortunately you won't have access to support whilst reading the book and will not need to complete any more forms.

**Do I have to take part?** You do not need to take part if you do not want to and you can stop at any time. You do not need to explain why. You do not have to complete the survey or answer all questions if you feel that you do not want to. You can stop answering the questions at any time without having to say why you want to stop or you can miss out questions if you do not wish to answer them. Your answers will be kept safely at York St John University for 5 years and then they will be erased.

**Will my questionnaire be shared with others?** No one will see the content of your questionnaire except the research team.

**What will happen to the results of the research project?** We may use your questionnaire when reporting the findings of the study. However, you will not be identifiable.

If you would like to continue in taking part, please review the consent form on the next sheet, and return it to me, Tracy Donachie, either via email [t.donachie@yorksj.ac.uk](mailto:t.donachie@yorksj.ac.uk) or via post: Tracy Donachie, Graduate Centre, York St John University, Lord Mayor's Walk, York, YO31 7EX. If you have any questions, feel free to contact me via email or Tel: 07734854387 or the Chair of the Research Committee, Professor Howard Hall, on Tel: 01904 876 302 or via email at [h.hall@yorksj.ac.uk](mailto:h.hall@yorksj.ac.uk).

We are very thankful for your help with this project.

Yours in Sport,

A handwritten signature in black ink that reads 'Tracy Donachie'.



As an informed participant of this research study, I understand that:

- My participation is voluntary and I may stop participation at any time and without giving a reason.
- I will complete a short questionnaire in the next 7-days, then in 8-weeks and then again 5-weeks. At this point, I will be given access to the same book as those who completed the project.
- During the time of reading the book, I will not have access to support.
- I will return the book to Tracy Donachie after 8-weeks of receiving it.
- All data will be stored anonymously once it has been collected. As such, if I decide I want to withdraw my data from the study I will only be able to do this until the questionnaire has been anonymized. If I decide to withdraw my data, I should ask contact Tracy Donachie.
- The research has been approved by York St John University Ethics Committee. This means it has been approved by a panel of professionals to make sure it meets high standards.
- I can answer any questions I want and I am aware of what my participation involves.
- I understand that Tracy Donachie will treat my participation in this study confidentially and that anything during the telephone calls will be treated confidentially, unless it leaves Tracy to believe that my safety is in danger. In this case, she cannot keep your information confidential and will have to share that information to ensure my safety.

I have read and understood the above, and agree to take part:

Participant's name.....

Participant's Signature: ..... Date .....

Current football club: .....

Email: .....

Phone: .....

Address: .....Postcode: .....

I have explained the above and answered all the questions by the participant:

Researcher's Signature: ..... Date: .....



## Appendix C

### Instruments used across studies

#### C.1 Multidimensional Perfectionism Scale (Hewitt & Flett, 1991)

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. When I am working on something, I cannot relax until it is perfect.	1	2	3	4	5	6	7
2. I am not likely to criticise someone for giving up too easily.	1	2	3	4	5	6	7
3. It is not important that the people I am close to are successful.	1	2	3	4	5	6	7
4. I seldom criticise my friends for accepting second best.	1	2	3	4	5	6	7
5. I find it difficult to meet others' expectations of me.	1	2	3	4	5	6	7
6. One of my goals is to be perfect in everything I do.	1	2	3	4	5	6	7
7. Everything that others do must be of top-notch quality.	1	2	3	4	5	6	7
8. I never aim for perfection in my sport.	1	2	3	4	5	6	7
9. Those around me readily accept that I can make mistakes too.	1	2	3	4	5	6	7
10. It doesn't matter when someone close to me does not do their absolute best.	1	2	3	4	5	6	7
11. The better I do, the better I am expected to do.	1	2	3	4	5	6	7
12. I seldom feel the need to be perfect.	1	2	3	4	5	6	7
13. Anything that I do that is less than excellent will be seen as poor performance by those around me.	1	2	3	4	5	6	7
14. I strive to be as perfect as I can be.	1	2	3	4	5	6	7
15. It is very important that I am perfect in everything I attempt.	1	2	3	4	5	6	7
16. I have high expectations for the people who are important to me.	1	2	3	4	5	6	7

17. I strive to be the best at everything I do.	1	2	3	4	5	6	7
18. The people around me expect me to succeed at everything I do.	1	2	3	4	5	6	7
19. I do not have very high standards for those around me.	1	2	3	4	5	6	7
20. I demand nothing less than perfection of myself.	1	2	3	4	5	6	7
21. Others will like me even if I don't excel at everything.	1	2	3	4	5	6	7
22. I can't be bothered with people who won't strive to better themselves.	1	2	3	4	5	6	7
23. It makes me uneasy to see errors in my performance.	1	2	3	4	5	6	7
24. I do not expect a lot from my friends.	1	2	3	4	5	6	7
25. Success means that I must work even harder to please others.	1	2	3	4	5	6	7
26. If I ask someone to do something, I expect it to be done flawlessly.	1	2	3	4	5	6	7
27. I cannot stand to see people close to me make mistakes.	1	2	3	4	5	6	7
28. I am perfectionistic in setting goals.	1	2	3	4	5	6	7
29. The people who matter to me should never let me down.	1	2	3	4	5	6	7
30. Others think I'm OK even when I do not succeed.	1	2	3	4	5	6	7
31. I feel that people are too demanding of me.	1	2	3	4	5	6	7
32. I must work to my full potential at all times.	1	2	3	4	5	6	7
33. Although they may not show it, other people get very upset with me when I slip up.	1	2	3	4	5	6	7
34. I do not have to be the best at whatever I do.	1	2	3	4	5	6	7
35. My family expects me to be perfect.	1	2	3	4	5	6	7
36. I do not have very high goals for myself.	1	2	3	4	5	6	7
37. My parents rarely expected me to excel in all aspects of my life.	1	2	3	4	5	6	7
38. I respect people who are average.	1	2	3	4	5	6	7
39. People expect nothing less than perfection from me.	1	2	3	4	5	6	7

40. I set very high standards for myself.	1	2	3	4	5	6	7
41. People expect more from me than I am capable of giving.	1	2	3	4	5	6	7
42. I must always be successful in activities that are important to me.	1	2	3	4	5	6	7
43. It does not matter to me when a close friend does not try their hardest.	1	2	3	4	5	6	7
44. People around me think that I am still competent even if I make a mistake.	1	2	3	4	5	6	7
45. I seldom expect others to excel at whatever they do.	1	2	3	4	5	6	7

**C.2 Child and Adolescent Perfectionism Scale (Flett, Hewitt,  
Boucher, Davidson, & Munro, 1997)**

False – Not true of me	Mostly False	Neither False nor True	Mostly True	Very True of Me					
1	2	3	4	5					
<b>When practicing/playing football:</b>									
1.	I try to be perfect in everything I do.				1	2	3	4	5
2.	I want to be the best at everything I do.				1	2	3	4	5
3.	My parents don't always expect me to be perfect in everything I do.				1	2	3	4	5
4.	I feel that I have to do my best all the time.				1	2	3	4	5
5.	There are people in my life who expect me to be perfect.				1	2	3	4	5
6.	I always try to be the best in a match.				1	2	3	4	5
7.	It really bothers me if I don't do my best all the time.				1	2	3	4	5
8.	My family expects me to be perfect.				1	2	3	4	5
9.	I don't always try to be the best.				1	2	3	4	5
10.	People expect more from me than I am able to give.				1	2	3	4	5
11.	I get mad at myself when I make a mistake.				1	2	3	4	5
12.	Other people think that I have failed if I do not do my very best all the time.				1	2	3	4	5
13.	Other people always expect me to be perfect.				1	2	3	4	5
14.	I get upset if I make even one mistake in the match.				1	2	3	4	5
15.	People around me expect me to be great at everything.				1	2	3	4	5
16.	When I do something, it has to be perfect.				1	2	3	4	5
17.	My coaches expect my football to be perfect.				1	2	3	4	5
18.	I do not have to be the best at everything I do.				1	2	3	4	5
19.	I am always expected to do better than others.				1	2	3	4	5
20.	Even when I play well, I feel that I have failed if I am not the best on the team.				1	2	3	4	5
21.	I feel people ask too much of me.				1	2	3	4	5
22.	I can't stand to be less than perfect.				1	2	3	4	5

### C.3 Perfectionistic Cognitions Inventory (Flett, Hewitt, Blankstein & Gray, 1998)

Listed below are thoughts that may pop into a footballer's head. Please read each thought and **indicate how frequently, if at all, the thought occurred to you over the last week**.

Not at all	Sometimes	Moderately Often	Often	All of the Time
0	1	2	3	4

1.	Why can't I be perfect?	0	1	2	3	4
2.	I need to do better	0	1	2	3	4
3.	I should be perfect	0	1	2	3	4
4.	I should never make the same mistake twice	0	1	2	3	4
5.	I've got to keep working on my goals	0	1	2	3	4
6.	I have to be the best	0	1	2	3	4
7.	I should be doing more	0	1	2	3	4
8.	I can't stand to make mistakes	0	1	2	3	4
9.	I have to work hard all the time	0	1	2	3	4
10.	No matter how much I do, it's never enough	0	1	2	3	4
11.	People expect me to be perfect	0	1	2	3	4
12.	I must be efficient at all times	0	1	2	3	4
13.	My goals are very high	0	1	2	3	4
14.	I can always do better, even if things are almost perfect	0	1	2	3	4
15.	I expect to be perfect	0	1	2	3	4
16.	Why can't things be perfect?	0	1	2	3	4
17.	My work has to be superior	0	1	2	3	4
18.	It would be great if everything in my life was perfect	0	1	2	3	4
19.	My work should be flawless	0	1	2	3	4
20.	Things are seldom ideal	0	1	2	3	4
21.	How well am I doing?	0	1	2	3	4
22.	I can't do this perfectly	0	1	2	3	4
23.	I certainly have high standards	0	1	2	3	4
24.	Maybe I should lower my goals	0	1	2	3	4
25.	I am too much of a perfectionist	0	1	2	3	4

### C.4 Sport Emotion Questionnaire (Jones, Lane, Bray, Uphill, & Catlin, 2005)

Listed below you will find a list of words that describe feelings that footballers may experience. Please read each one carefully and indicate on the scale next to each item how you feel **right now, at this moment**, in relation to your **most recent** football match.

Not at all	A little	Moderately	Quite a bit	Extremely
0	1	2	3	4

1.	Uneasy	0	1	2	3	4
2.	Upset	0	1	2	3	4
3.	Exhilarated (ecstatic)	0	1	2	3	4
4.	Irritated	0	1	2	3	4
5.	Pleased	0	1	2	3	4
6.	Tense	0	1	2	3	4
7.	Sad	0	1	2	3	4
8.	Excited	0	1	2	3	4
9.	Furious	0	1	2	3	4
10.	Joyful	0	1	2	3	4
11.	Nervous	0	1	2	3	4
12.	Unhappy	0	1	2	3	4
13.	Enthusiastic	0	1	2	3	4
14.	Annoyed	0	1	2	3	4
15.	Cheerful	0	1	2	3	4
16.	Apprehensive (nervous)	0	1	2	3	4
17.	Disappointed	0	1	2	3	4
18.	Angry	0	1	2	3	4
19.	Energetic	0	1	2	3	4
20.	Happy	0	1	2	3	4
21.	Anxious	0	1	2	3	4
22.	Dejected (feeling down)	0	1	2	3	4

### C.5 Competitive State Anxiety Inventory-2 (Martens, Burton, Vealey, Bump, & Smith, 1990)

A number of statements that footballers use to describe their feelings before competition are given below. Read each statement and then circle the number that indicates **how you feel right now, at this moment, in relation to your next upcoming football match.**

Not at all	Somewhat	Moderately so	Very much so
1	2	4	3

1.	I am concerned about this competition.	1	2	3	4
2.	I feel nervous.	1	2	3	4
3.	I have self-doubts.	1	2	3	4
4.	I feel jittery (nervous).*	1	2	3	4
5.	I am concerned I may not do as well in this competition as I could.	1	2	3	4
6.	My body feels tense.	1	2	3	4
7.	I am concerned about losing.	1	2	3	4
8.	My body feels relaxed.	1	2	3	4
9.	I feel tense in my stomach.	1	2	3	4
10.	I am concerned about choking under pressure (messing up).	1	2	3	4
11.	I'm concerned about performing poorly.	1	2	3	4
12.	My heart is racing.	1	2	3	4
13.	I'm concerned about reaching my goal.	1	2	3	4
14.	I feel my stomach sinking.	1	2	3	4
15.	I'm concerned that others will be disappointed with my performance.	1	2	3	4
16.	My hands are clammy (sweaty)*.	1	2	3	4
17.	I'm concerned I won't be able to concentrate.	1	2	3	4
18.	My body feels tight.	1	2	3	4

### C.6 Reactions-to-Mistakes Anger Scale (Spielberger, 1999)

Read each statement and then circle the number that indicates **how you feel right now**, if you think about making an important mistake or playing very poorly in your next upcoming match. Remember that there are no right or wrong answers. Do not spend too much time on any one statement, but give the answer which seems to best describe your present feelings.

Not at all	Somewhat	Moderately so	Very much so
1	2	4	3

1.	I am furious	1	2	3	4
2.	I feel irritated	1	2	3	4
3.	I feel angry	1	2	3	4
4.	I feel like yelling at somebody	1	2	3	4
5.	I feel like breaking things*	1	2	3	4
6.	I am mad	1	2	3	4
7.	I feel like hitting something*	1	2	3	4
8.	I feel like hitting someone	1	2	3	4
9.	I feel like swearing	1	2	3	4
10.	I feel annoyed	1	2	3	4
11.	I feel like kicking somebody	1	2	3	4
12.	I feel like swearing out loud*	1	2	3	4
13.	I feel like shouting	1	2	3	4
14.	I feel like hurting someone*	1	2	3	4
15.	I feel like shouting out loud	1	2	3	4



### C.7 The Attitudes Towards Seeking Professional Psychological Help (Fischer & Farina, 1995)

Disagree	Partly Disagree	Partly Agree	Agree
0	1	2	3

1.	If I believed I was having a mental breakdown, my first inclination would be to get professional attention.	0	1	2	3
2.	The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.	0	1	2	3
3.	If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.	0	1	2	3
4.	There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help.	0	1	2	3
5.	I would want to get psychological help if I were worried or upset for a long period of time.	0	1	2	3
6.	I might want to have psychological counselling in the future.	0	1	2	3
7.	A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.	0	1	2	3
8.	Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.	0	1	2	3
9.	A person should work out his or her own problems; getting psychological counseling would be a last resort.	0	1	2	3
10.	Personal and emotional troubles, like many things, tend to work out by themselves.	0	1	2	3

## C.8 Book Progress

Please answer the following questions regarding how much of the book/exercises you have completed.

1. How many of the book chapters have you read?	
2. How many of the exercises have you completed?	
3. How much time have you spent reading the book (in hours)?	
4. How much time have you spent doing the exercises (in hours)?	
5. How <i>useful</i> did you find the book and exercises (from 1 = not very useful to 10 = very useful)?	
6. How <i>readable</i> did you find the book and exercises (from 1 = not very readable to 10 = very readable)?	
7. How <i>easy</i> were the exercises to understand (from 1 = not very easy to 10 = very easy)?	

## Appendix D

### Interview questions

#### D.1 Interview Questions

1. Can you tell me a bit about your football experience so far?
2. What does football mean to you?
3. Can tell me about some of your successes and disappointments within football.
4. Can you describe to me what you think being a perfectionist is?
5. What is it about yourself that makes you see yourself as a perfectionist?
6. Can you describe in what ways your perfectionism shows itself?
7. Can you discuss how being a perfectionist influences you at football?
8. What are the advantages of being a perfectionist?
9. What are the disadvantages of being a perfectionist?
10. Think about the last time you did well in a match? Can you describe that to me?
11. Think about the last time you felt you didn't play well in a match? Can you describe that to me?
12. There are many challenging situations that footballers may encounter; can you describe an aspect of football that you find most stressful or challenging?
13. I am going to ask you about a range of challenging situations that you may or may have not encountered, take your time to think if you have been faced with such a situation. If so, I will ask you a few more questions about this, and if not, imagine you will be faced with this situation and describe how you think you would react. Can you recall a specific time that you found .... challenging and can you describe that situation/setting as vividly as possible?
  - a) Learning a new skill
  - b) Being outperformed by an opponent

- c) Making a key mistake
  - d) Nonattainment of goals (Personal goals or team goals)
  - e) Having imperfections exposed in public (e.g., coach, crowd)
  - f) Experiencing injury or illness or condition
  - g) Burnout and exhaustion
  - h) Role transition/changes to position in team
14. I have asked you a lot about the thoughts you have in response to situation, can you tell me about any ways you have tried to manage your thoughts?
15. If you were to sum up your thoughts and feelings about perfectionism in one sentence, what would you say?
16. If I were to summarize what you have told me, would it be fair to say x, y and z?
17. I wanted to better understand your experience of thoughts and feelings related to perfectionism, have we missed anything?
18. Is there anything that you came here wanting to say that you didn't get a chance to say?

## D.2 Follow-up questions and prompts for interviews

Main Question	Follow-up questions and prompts
1. Can you tell me a bit about your football experience so far?	
2. What does football mean to you?	How important is it compared to other things?  Has there been a time in your life when football has been more important than it is now, and can you describe that period of time for me?
3. Can tell me about some of your successes and disappointments in football.	How do you know when you have been successful?  What does success mean to you?  How do you know when you have failed?  What does failure mean to you?
4. Can you describe to me what you think being a perfectionist is?	
5. What is it about yourself that makes you see yourself as a perfectionist?	Do other people refer to you as a perfectionist?  What do you think makes others see you as a perfectionist? (coaches, friends, teachers, family)
6. Can you describe in what ways your	In what way, if any, do others influence you being a

perfectionism shows itself?

perfectionist?

Can you describe some of the thoughts/feelings you may have that relate to being a perfectionist?

7. Can you discuss how being a perfectionist influences you at football?

8. What are the advantages of being a perfectionist?

9. What are the disadvantages of being a perfectionist?

10. Think about the last time you did well in a match? Can you describe that to me?

11. Think about the last time you felt you didn't play well in a match? Can you describe that to me?

12. There are many challenging situations that footballers may encounter; can you describe an aspect of football that you find most stressful or challenging?

Can you describe how you felt?

Can you describe how you were afterwards? On way home? That evening? The next day?

13. I am going to ask you about a range of challenging situations that you may have encountered, take your time to think if you have been faced with such a situation. If so, I will ask you a few more questions about this. Can you recall a specific time that you found .... challenging and can you describe that situation/setting as vividly as possible? (See D.2)

Can you give me example of specific things you would say to yourself? When did these thoughts occur?

14. I have asked you a lot about the thoughts you have in response to situation, can you tell me about any ways you have tried to manage

your thoughts?

15. If you were to sum up your thoughts and feelings about perfectionism in one sentence, what would you say?

16. If I were to summarize what you have told me, would it be fair to say x, y and z?

17. I wanted to better understand your experience of thoughts and feelings related to perfectionism, have we missed anything?

18. Is there anything that you came here wanting to say that you didn't get a chance to say?