Perfectionism and youth sport experiences: A social-cognitive perspective

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

The University of Leeds

York St John University

Faculty of Health and Life Sciences

September 2015

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.

Jointly-authored publications included in the thesis:

Mallinson, S.H., Hill, A.P., Hall, H.K., & Gotwals, J.K. (2014). The 2×2 model of perfectionism and school- and community-based sport participation. *Psychology in the Schools,* 9, 972-985. DOI: 10.1002/pits.21796

Contributions of the candidate and co-authors:

Sarah H. Mallinson – Project lead in designing the study, data collecting, literature searching, and writing the introduction, method, results, and discussion. Lead correspondent with the Chair of the Research Ethics Sub-Committee at York St John University and the Journal Editor, Professor McIntosh, and Special Issue Editor, Dr Fletcher, during submissions and following reviews.

Andrew P. Hill – Provided feedback on several drafts of the manuscript and the proposed response to reviewers. In addition, offered guidance at study inception and on the statistical analysis of the results.

Howard K. Hall – Provided feedback on the final draft of the manuscript. In particular, this pertained to the rationale outlined in the introduction. Also, offered guidance at study inception.

John K. Gotwals – Provided feedback on the final draft of the manuscript and the proposed response to reviewers.

Acknowledgements

I would like to acknowledge and give my unreserved thanks to all those who have supported me throughout this process. There are a few sets of individuals who I would particularly like to extend my gratitude to. First, to my fellow graduate students, present and past, it would not have been as enjoyable without your companionship and for that I am grateful. I would especially like to thank my supervisors Andy Hill and Howard Hall for their support, patience, and guidance over the past four years. I am looking forward to our future collaborations and growing this line of research. To colleagues who have helped along this process, I would also like to give my thanks. Gareth Jowett, Camilla Knight, and John Gotwals, you have all been great sources of support at pivotal time points and again I look forward to future collaborations. To all of the coaches, teachers, and athletes that have made this thesis possible, I am forever grateful.

My most heartfelt thanks must go to my friends and family. To my Mum and Dad, who have always taught me that hard works pays off, I am extremely grateful for your continued support. To my brother, you have lifted me with your positivity and to Alex you are one of the reasons that I have the desire to continue researching in youth sport.

My final thanks go to my husband Ross. Your unwavering support, endless kindness, and unconditional love have helped me through. I look forward to our next chapter.

Abstract

Research has identified that perfectionism influences the way young people think, feel, and behave in sport. Typically, this research has focused on the separate effects of two main dimensions of perfectionism. The purpose of this thesis was to extend such research by testing the recently developed 2×2 model of perfectionism, which focuses on combinations (or subtypes) of the two main dimensions of perfectionism, in relation to the quality of young people's sport experiences. The first of four studies suggested that the four subtypes of perfectionism from the 2×2 model are predictive of indicators of positive experiences in youth sport in a manner consistent with the model's hypotheses. The second study suggested that the four subtypes are also predictive of indicators of negative experiences in youth sport but support for the model's hypotheses was less consistent. The third study adopted qualitative research methods to explore the experiences of youth sport participants deemed prototypical of the four subtypes from their own perspective. The findings suggested that sport experiences differed considerably across the four subtypes and supported the model to varying degrees. The final study sought to understand where practitioners might be able to intervene and so examined the moderating role of perceptions of coaches and peers on the four subtypes in regards to young people's sport experiences. The findings demonstrated that in a high coach task-involving climate all four subtypes experience lower friendship conflict, while in a high coach ego-involving climate three of the four subtypes experience less enjoyment. Collectively, these studies suggest that the 2×2 model of perfectionism is a useful framework for understanding the experiences of youth sport participants. To intervene at the level of the coach-created motivational climate may improve the sport experiences of young people who differ in combinations of perfectionism dimensions.

Table of Contents

List of Tables

List of Figures

Chapter 1 – Introduction

Sport is highly valued the world over. One only has to look at different sources of media or go to their local recreation centres to see how meaningful sport is to a large number of people. In the United Kingdom, sport is viewed as an important part of the culture (The Culture, Media, and Sport Committee, 2014). This is reflected in both viewing figures for sport and participation numbers. During 2014/2015, for example, 15.5 million people aged 16 years and over played sport at least once a week in England (Sport England, 2015). Further, recent estimates suggest that on a four-week basis, 84% of children (5 to 10 years) and 97% of adolescents (11 to 15 years) in England take part in some form of sport (Department for Culture Media and Sport; DCMS, 2014).

The high proportion of children and adolescents participating in sport in England is consistent with the longstanding belief that sport is a popular activity among young people (De Knop, Engström, Skirstad, & Weiss, 1996). The term *youth sport* is often used to capture how the majority of young people take part in sport. Youth sports can be defined as organised, individual and team sport activities that typically involve young people aged less than 18 years and occur under adult supervision (Duda & Ntoumanis, 2009). In England they include, but are not limited to, school-based sport activities (e.g., team practices) and community-based sports (e.g., sports clubs) (White & Rowe, 1996). From 2013 to 2014, nearly three quarters (74%) of children and adolescents in England participated in such sports on a competitive basis in school and a third (34%) outside of school (DCMS, 2014).

1.1 Youth sport experiences and outcomes

In an overview of young people's involvement in sport, Côté and Fraser-Thomas (2007) highlighted three potential benefits of participating in youth sports. These benefits pertain to (i) performance, (ii) physical health, and (iii) psychosocial development. In terms of performance benefits, youth sports provide a context in which a range of general and specific motor skills can be acquired (Côté & Fraser-

Thomas, 2007). It is the development of such motor skills that is thought to "serve as a foundation for recreational adult sport participants as well as future national sport stars" (Côté, Strachan, & Fraser-Thomas, 2008, pp. 34). Research supports this assertion and through two main pathways (i.e., early specialisation and early diversification) has demonstrated how children and adolescents can acquire the motor skills necessary for lifelong recreational participation and expert performance (for an overview, see Côté & Abernethy, 2012).

Youth sport is also thought to provide the basis for improved physical health among young people (Côté & Fraser-Thomas, 2007). In essence, this is because youth sports afford the opportunity to be physically active. Research indicates that physical activity has beneficial effects on adiposity, cardiovascular fitness, and musculoskeletal health during childhood (see Janssen & LeBlanc, 2010). According to Fraser-Thomas, Côté, and Deakin (2005), there are additional long-term physical and mental health benefits that can occur as the result of childhood physical activity. Specifically, because childhood physical activity habits have been shown to be important predictors of adult physical activity habits (Robertson-Wilson, Baker, Derbyshire, & Côté, 2003), physically active young people are less likely to develop chronic diseases and numerous co-morbidities in childhood or later life. These include cancer, cardiovascular disease, diabetes, obesity, osteoporosis, stroke, and mental health problems. In this regards, the protective effect of moderate levels of physical activity for health in both child and adult populations has received considerable empirical support (for reviews, see Bauman, 2004 and Biddle, Gorely, & Stensel, 2004, respectively).

Beyond these well documented performance and health benefits, youth sports may also serve as a vehicle for young people's psychosocial development (Côté & Fraser-Thomas, 2007). Drawing on positive youth development research, a range of life skills can be learned through sport (Gould & Carson, 2008). Life skills have been defined as "those skills that enable individuals to succeed in the different environments in which they live such as school, home and in their neighborhoods. Life skills can be behavioral (communicating effectively with peers and adults) or cognitive (making effective decisions); interpersonal (being assertive) or intrapersonal (setting goals)" (Danish, Forneris, Hodge, & Heke, 2004, pp. 40).

Several youth sport programmes have integrated teaching life skills alongside physical skills (e.g., Sports United to Promote Education and Recreation; Danish, Fazio, Nellen, & Owens, 2002). Young people involved in such programmes have been found to demonstrate improved social skills, problem solving, leadership, and goal setting, amongst other important life skills (for a review, see Goudas, 2010).

Youth sport involvement also has the potential to build character (Shields & Bredemeier, 1995). In a broad sense, character is the distinctive nature of a person (Concise Oxford English Dictionary, 2011). Researchers concerned with positive youth development define character as "respect for societal and cultural rules, possession of standards for correct behaviors, a sense of right and wrong (morality), and integrity" (Lerner et al., 2005, pp. 23). Moral character in sport involves four qualities of compassion, fairness, integrity, and sportspersonship (Shields & Bredemeier, 1995). A number of lines of research have been established in regards to young people's moral values, functioning, and behaviours in sport (see Kavussanu, 2007 and Shields & Bredemeier, 2007 for reviews). This body of research suggests that, under the right conditions, youth sports involvement can foster sportspersonship (e.g., a commitment to sport and respect for social conventions, rules, and officials) and other prosocial behaviour (e.g., helping an injured opponent or encouraging a teammate).

There are a plethora of other desirable psychosocial outcomes associated with youth sports involvement. First, positive youth sport experiences can involve considerable enjoyment and contribute to subjective well-being among young people (e.g., increased positive affect, happiness, and life satisfaction; see Fraser-Thomas et al., 2005). Further, young people involved in extracurricular sports tend to exhibit greater confidence in their abilities and possess higher self-esteem (e.g., Linver, Roth, & Brooks-Gunn, 2009; Marsh & Kleitman, 2003). Constructive interpersonal relationships may also be developed through youth sports participation (Côté & Fraser-Thomas, 2007). These include positive peer relationships (e.g., peer acceptance, belonging, and friendships) and supportive relationships with coaches and parents (see Weiss, Kipp, & Bolter, 2012 for an overview).

Finally, youth sport involvement may hold academic, professional, and civic benefits. For instance, young people participating in extracurricular sports have been

found to enjoy school more and have reduced rates of school dropout (Eccles & Barber, 1999; Mahoney & Cairns, 1997). Further, academic performance and cognitive functioning have been positively associated with school sports (see Trudeau & Shephard, 2008 for a review). Research has also demonstrated that extracurricular sport involvement can positively impact future career options and career achievement outcomes (Barber, Eccles, & Stone, 2001; Larson & Verma, 1999). Some of the wider civic gains that have been linked with young people's sport involvement include community integration (Carpenter, 2001) and a reduction in delinquent behaviours (see McMahon & Bleur, 2013 for a review).

While participating in youth sports offers a range of desirable outcomes, this is not the case for all participants. Fraser-Thomas and Côté (2009), amongst others (e.g., Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2011; Dworkin & Larson, 2006; Holt & Neeley, 2011), have highlighted that youth sports can also be a source of negative experiences and undesirable outcomes. In terms of the physical demands, traumatic and overuse injuries are common among child and adolescent sport participants (Merkel & Molony, 2012). The prevalence of such injuries has been attributed to increased pressures in youth sport. For instance, youth sport participants are often encouraged to train and play at higher intensities from a young age (DiFiori et al., 2014). This places stress on the developing skeletal and muscular systems of young sport participants, which can cause injury (Merkel & Molony, 2012).

Disordered eating attitudes and behaviours are another concern in youth sport (Côté & Fraser-Thomas, 2007). In fact, research suggests that eating disorders can be more prevalent among adolescent sport participants than their non-athletic counterparts (Bratland-Sanda & Sundgot-Borgen, 2013). There are far-reaching consequences associated with disordered eating attitudes and behaviours. For instance, weight loss, sleep disturbance, and poor self-esteem (see Petrie & Greenleaf, 2012 for an overview). Whether eating disorders develop among young sport participants is largely due to the sport environment, amongst other sociocultural pressures (Petrie & Greenleaf, 2012).

As opposed to building character, youth sports involvement may actually serve to build characters (Shields & Bredemeier, 1995). In particular, acts of violence and

aggression (e.g., intentionally trying to injure an opponent) are evident among youth sports participants (Shields, Bredemeier, La Voi, & Power, 2005). Other forms of antisocial behaviour exhibited by youth sport participants include making fun of others, cheating behaviours, and a lack of sportspersonship (Martin, Gould, & Ewing, 2015; Shields et al., 2005). Engaging in antisocial behaviour can extend beyond the immediate sport context. For example, increased alcohol consumption and drug use have been linked with young people involved in sports (see Lisha & Sussman, 2010 for a review).

Finally, youth sport participants may be at risk of greater psychological and interpersonal difficulties. For instance, young people can be exposed to high levels stress and anxiety through sport (Choi, Johnson, & Kim, 2014). Based on this, syndromes such as athlete burnout have become an area of concern for those examining young aspiring sport performers (see Goodger, Gorely, Lavallee, & Harwood, 2007 for a review). Low confidence and self-esteem, greater negative affect, and unconstructive peer and adult interactions are equally evident in youth sports (Hansen, Larson, & Dworkin, 2003; Overman, 2014). It is factors such as these that have been associated with dropping out of sport (Crane & Temple, 2014). To drop out of sport has its own set of complications as the many and varied benefits on offer through youth sport involvement cannot be realised. Clearly, if youth sports are to bring about desirable rather than undesirable developmental outcomes for all participants we must understand the factors that serve to shape young people's sport experiences (Fraser-Thomas & Côté, 2009; Smoll & Smith, 2002; Weiss, 2013).

1.1.1 A social-cognitive perspective on youth sport experiences

Motivation is one construct central to determining the quality of a child's sport experience (Quested & Duda, 2011). Several theories of motivation feature heavily in research examining the predictors of and responses to youth sport involvement. Roberts (2012) indicates that theories of motivation "may be viewed as being on a continuum ranging from deterministic to mechanistic to organismic to cognitive" (pp. 7). Deterministic and mechanistic theories are typically exemplified by drive theories, which posit that human behaviours occur as a consequence of the desire to satisfy innate instincts or needs (Roberts, 2012). Hull (1951) and Spence's (1956) drive theories were popular models in general psychology up to the 1960's (Graham

& Weiner, 1996). However, their popularity lost momentum due to widespread criticism over being too reductionist and simplistic (Graham & Weiner, 1996). In accord, these theories are considered too unsophisticated to capture the complexities of motivation in sport (Roberts, 2001).

Recognising the limitations of deterministic and mechanistic theories of motivation, cognitive theories emerged both inside and outside of sport in the 1960's and beyond (Graham & Weiner, 1996; Roberts, 1992). An example of one of the most prominent cognitive theories of motivation is attribution theory (Weiner, 1986). Cognitive theories posit that cognitions and thoughts direct behaviour (Roberts, 1992). In this way, individuals are not passive recipients of external influences or governed by psychological drives (Roberts, 2001). Instead, individuals are active and "initiate action through subjective interpretation of the achievement context" (Roberts, 2001, pp. 4). Despite valuable contributions of cognitive theories, such as attribution theory, to understanding motivation in sport these too have received criticism. The main criticisms concern viewing humans as too rational in planning their behaviours and ignoring the meaning and value of sport (Roberts, 2001). In response, theories grounded in a social-cognitive perspective have emerged as one of the most popular and cotemporary means of understanding motivation in sport (Roberts, 2001, 2012).

Social-cognitive theories of motivation view individuals as "an active participant in decision making and in planning achievement behaviour" (Roberts, Treasure, & Conroy, 2007, pp. 3). It is the interaction between the situation and personal sources of motivation that inform these processes (Roberts, 2001). In the same manner as cognitive theories, individuals' cognitions and beliefs are thought to direct behaviours but this is in tandem with the goals individuals value (Roberts, 1992). Recognising the capability of human beings to be intentional and self-directive, social-cognitive theories of motivation overcome the limitations of earlier theories and are thought to better account for the dynamic nature of motivation (Roberts et al., 2007). Some social-cognitive based theories that have been used to understand young people's experiences in sport include, perceived competence theory (Harter, 1978), self-efficacy theory (Bandura, 1977), and achievement goal theory (Nicholls, 1984). Common to these models is the role of the social-

environment in shaping sport experiences and the mediating influence of how individuals give meaning to their achievement-related behaviour through perceptions of competence and success (Roberts, 2012; Weiss, 2008). It is beyond the scope of this thesis to comprehensively review each of these theories individually. Thus, to exemplify a social-cognitive perspective on youth sport experiences, the most well-established theory (i.e., achievement goal theory, Roberts, 2012) is described below.

1.1.1.1 An example of a social-cognitive approach: Achievement Goal Theory

Achievement goal theory (e.g., Ames, 1992; Dweck, 1986; Maehr & Braskamp, 1986; Nicholls, 1984, 1989) originates from educational psychology and developmental work with children (see Roberts, 2001). It asserts that "children's sport experiences are shaped by the way in which success is defined and one's personal competence is judged" (Quested & Duda, 2011, pp. 127). Competence (sometimes termed ability) can be conceived in two different ways (task and ego) and at two levels (state of involvement and disposition) (Harwood, Spray, & Keegan, 2008). At the state level, an individual may be task-involved or ego-involved. When task-involved, "the goal of action is to develop mastery, improvement, or learning, and the demonstration of ability is self-referenced" (Roberts, 2012, pp. 10). Thus, success is based on one's own mastery or improvement. When ego-involved, the goal of action is "to demonstrate ability relative to others, or to outperform others, so ability is other referenced" (Roberts, 2012, pp. 10). Thus, success is based on demonstrating either superior performance compared to others or equal performance with less effort than others. As the two states of involvement are considered mutually exclusive, there can be fluctuations between individuals being task-involved and ego-involved in a sport session (Standage & Treasure, 2002). At the dispositional level there are two goal orientations, namely task orientation and ego orientation. These two goal orientations are considered to be orthogonal and so can coexist in high or low combinations (Roberts, 2012). In addition, a task orientation and an ego orientation are thought to predispose individuals to behave in a task-involved or ego-involved manner in sport (Roberts, 2012).

Achievement goal theory also incorporates situational factors in the form of the motivational climate. Created by significant others (e.g., coaches, parents, and/or peers), the motivational climate is another factor that makes it more or less likely that an individual will be task-involved or ego-involved in an achievement context (Ames, 1992; Duda & Balaguer, 2007; Dweck & Leggett, 1988; Nicholls, 1984, 1989; Roberts, 2012). With regards to sport, there are two main motivational climates: task-involving and ego-involving (Duda, 1996; Treasure & Roberts, 1995). A task-involving climate supports effort, learning, and cooperation (Standage, Duda, & Pensgaard, 2005). When environmental features focus on personal improvement, it reinforces an individuals' likelihood of being task-involved (Ames, 1992; Ames & Archer, 1988). In contrast, an ego-involving climate emphasises winning, being better than others, and rivalry amongst individuals (Standage et al., 2005). When environmental features focus on social comparison, it is more likely that ego-involvement will be fostered (Ames, 1992; Ames & Archer, 1988).

The positive impact of task orientation and a task-involving climate is clear. A robust evidence base demonstrates the performance and health enhancing benefits of being task-involved (see Roberts, 2012 for a review). Beyond this, findings are also unequivocal regarding the association between youth sport experiences that are task-involving and desirable psychosocial outcomes (Duda, 2001, 2005). For instance, a task orientation has positive associations with enjoyment, self-esteem, positive affect, sportspersonship, and adaptive peer relationships (e.g., Atkins, Johnson, Force, & Petrie, 2015; Biddle, Wang, Kavussanu, & Spray, 2003; D'Arripe-Longueville, Pantaléon, & Smith, 2006; Ommundsen, Roberts, Lemyre, & Miller, 2005; Stuntz & Weiss, 2009). It also has inverse associations with negative affect, anxiety, burnout, and intentions to drop out (e.g., Biddle et al., 2003; Grossbard, Cumming, Standage, Smith, & Smoll, 2007; Le Bars, Gernigon, & Ninot, 2009; Lemyre, Hall, & Roberts, 2008). Similar findings are evident for a task-involving climate. In a recent systematic review, Harwood, Keegan, Smith, and Raine (2015) found a task-involving climate to be positively associated with self-esteem, positive affect, and prosocial behaviour, amongst other adaptive processes and outcomes. It also has inverse associations with negative affect and antisocial behaviour (Harwood et al., 2015). In accord, it is personal and interpersonal outcomes such as these that

can be used as indicators of the quality of individuals' experiences in sport (see Conroy & Coatsworth, 2006).

The negative impact of an ego orientation and ego-involving climate in terms of the quality of the sport experience is equally as apparent. In particular, undesirable psychosocial outcomes can ensue in youth sports when participants are ego-involved and perceive their competence to be low, are concerned with failure, and/or are acting in a manner that serves to protect self-worth (Roberts, 2012). Research has demonstrated that an ego orientation is inversely associated with enjoyment, self-esteem, prosocial behaviour, and adaptive peer relationships (e.g., Cumming, Smith, Smoll, Standage, & Grossbard, 2008; Ommundsen et al., 2005; Kavussanu, 2006; Smith, Balaguer, & Duda, 2006a). It also has positive associations with anxiety, negative affect, burnout, antisocial behaviour, and peer conflict (e.g., Biddle et al., 2003; Cumming et al., 2008; Lemyre et al., 2008; Sage & Kavussanu, 2007; Smith et al., 2006a). Harwood et al. (2015) found an ego-involving climate to be inversely associated with self-esteem and positive affect but positively associated with negative affect and antisocial behaviour.

The preceding example of a social-cognitive approach to motivation illustrates a number of important points. First, young people's experiences and outcomes in sport are shaped by various personal and social-environment factors. In terms of the personal factors, it is how an individual perceives and gives meaning to their sport involvement that determines whether desirable or undesirable outcomes will ensue. Cues from the social-environment make it more or less likely that an individual will experience sport in a positive or negative manner (Quested & Duda, 2011; Roberts et al., 2007). Thus, it is factors such as these that must be taken into account if youth sports are to bring about positive experiences and desirable outcomes for all its young participants. Consistent with this perspective, this thesis focuses on a personality factor, perfectionism, and then later the motivational climate in terms of young people's sport experiences.

1.2   Perfectionism

Broadly, perfectionism is a personality characteristic that involves setting and striving for exceedingly high standards of performance accompanied by a preoccupation with harsh critical evaluations (Frost, Marten, Lahart, & Rosenblate, 1990). Perfectionism is common in many domains (Stoeber & Stoeber, 2009). In particular, it can be observed in achievement domains such as sport (Dunn, Gotwals, & Causgrove Dunn, 2005). In the sport domain, perfectionism is a characteristic with which many high level competitors identify (Hill, Witcher, Gotwals, & Leyland, 2015). For example, when discussing the London 2012 Olympic Games, personal setbacks, and his dogged pursuit of the ultimate performance standard (i.e., winning an Olympic gold medal), Great British male diver Tom Daley (2012) stated: "I'm a perfectionist and I'm going for gold."

There are a number of other high profile examples of perfectionism at play in sport. For instance, American female tennis player Serena Williams admitted to being a perfectionist early on in her career: "I'm a perfectionist. I'm pretty much insatiable. I feel there are so many things I can improve on." It is Williams' relentless drive for perfect performances that has arguably led her to win 21 Grand Slam titles and gain her current world number one female singles tennis player ranking (WTA, 2015). However, at times, her perfectionistic tendencies seemed to have hampered her career. Most memorably, Williams lost the US Open semi-final in 2009 after being warned for racquet abuse and then verbally intimidating a line umpire who had called her for a service foot-fault at a set down (Hodgkinson, 2009). In this case, it is possible that a rigid adherence to high standards, in which minor flaws in performance are not tolerated, enacted self and outward-focused criticism, ultimately undermining her success.

Although typically observed amongst the elite, perfectionism appears relevant to a wide range of sport participants. In a recent review, Gotwals, Stoeber, Dunn, and Stoll (2012) demonstrated an array of populations and sport settings wherein perfectionistic tendencies have an important role in terms of functioning. These populations included children and adolescents. School and community-based sport groups formed the settings for their sport involvement. Thus, perfectionism may be

influential for many of the young people choosing to invest their time in youth sports.

1.2.1 Conceptualising perfectionism

A number of researchers have traced the origins of perfectionism (e.g., Enns & Cox, 2002; Hall, 2006; Stoeber & Childs, 2011). Briefly, early approaches to defining perfectionism were unidimensional in nature and focused almost entirely on cognitive factors. That is, perfectionism was considered a function of irrational, self-directed cognitions, and affect such as stringent self-evaluative tendencies (Burns, 1980; Ellis, 1962; Hamachek, 1978; Hollender, 1965; Pacht, 1984). In this way, perfectionism was considered a solely undesirable trait (Hewitt & Flett, 1991). This is reflected in the early research instruments used to capture perfectionistic tendencies. For example, Burns (1980) used an adapted version of the Dysfunctional Attitude Scale (Weissman & Beck, 1978) to capture what he terms the neurotic cognitive style of perfectionism. Contemporary understanding is that perfectionism is best conceptualised as a multidimensional construct (Flett & Hewitt, 2002). While some researchers have suggested a need to revisit unidimensional perspectives in order to distinguish perfectionism itself from its associated features (e.g., Rhéaume et al., 2000; Shafran, Cooper, & Fairburn, 2002), a multidimensional view remains dominant inside and outside of sport.

There are two main multidimensional models and measures of perfectionism that have typically been adopted by researchers (Enns & Cox, 2002). These arose from the differing laboratories of Frost et al. (1990) and Hewitt and Flett (1991). Both involve intrapersonal and interpersonal facets, which are reflective of the constructs central to the generally accepted definition of perfectionism (i.e., the setting of and striving to reach high standards as well as overly critical evaluations). In terms of Hewitt and Flett's (1991) conceptualisation, intrapersonal and interpersonal facets are captured among three dimensions of perfectionism. These dimensions are termed self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism and are thought to vary as a function of the direction to which standards are focused (Hall, 2006).

Self-oriented perfectionism is self-directed (Hewitt & Flett, 1991). It entails setting and pursuing high personal standards and stringent self-evaluation. In this way, there is an importance placed on actively striving for perfection and being perfect (Campbell & Di Paula, 2002). The motivational component that underpins self-oriented perfectionism is characterised by striving to attain perfection whilst actively trying to avoid failure (Hall, 2006; Hewitt & Flett, 1991). Owing to the sense of conditional self-acceptance that is involved in self-oriented perfectionism, this intrapersonal dimension has been deemed a vulnerability factor for psychological difficulties (see Flett & Hewitt, 2006).

Socially prescribed perfectionism is similarly self-directed but includes beliefs about others. Specifically, it involves striving to reach high standards but these are perceived to be imposed by significant others, who will be overly critical if standards are not met. As such, it entails beliefs that others hold high expectations and that acceptance and approval from others is contingent on achieving standards (Campbell & Di Paula, 2002). This is to the extent that self-worth appears dependent on achievement. The motivational component is therefore reflected by a need to gain the approval and avoid the disapproval of others (Hewitt & Flett, 1991). Perceiving pressure to be perfect rather than pursuing standards based on an intrinsic desire to achieve indicates that the motives underpinning this dimension of perfectionism are more extrinsic than self-oriented perfectionism (Hall, 2006).

Other-oriented perfectionism has an outward focus. It involves the demand for others to meet the exceedingly high standards that one imposes. This is alongside stringently evaluating others if they fall short of these standards (Hall, 2006). In accord, there is an importance placed on others being perfect (Hewitt & Flett, 1991). The motivational component is interpersonal in nature. Due to its focus on others and not the self, understanding of this dimension of perfectionism remains underdeveloped compared to self-oriented perfectionism and socially prescribed perfectionism (see Stoeber, 2014). All three dimensions can be assessed by a multidimensional perfectionism scale (H-MPS; Hewitt & Flett, 1991).

Frost and colleagues also offer a means of capturing their perfectionism construct through composition of a multidimensional perfectionism scale (F-MPS; Frost et al., 1990). The dimensions encapsulated by this measure are seen to differ

from those of Hewitt and Flett's (1991) measure. The F-MPS contains six dimensions of perfectionism. Of these dimensions, four focus on the self-directed qualities of perfectionism (Frost et al., 1990). These include personal standards, concern over mistakes, doubts about actions, and a need for organisation, order, and precision. The remaining two dimensions reflect the interpersonal qualities of perfectionism and include a perception of high parental expectations and of excessive parental criticism (Frost et al., 1990).

Frost et al. (1990) describe personal standards as the setting of and striving for high standards. In this way, the striving to meet exacting standards energises and directs behaviour. Concern over mistakes relates to an overly critical self-evaluative tendency and involves the fear of making mistakes. Frost et al. (1990) state that it is the fear of making mistakes and of failure that acts as the motivator for pursuing high standards. Doubts about the quality of one's actions also relates to a stringent self-evaluative tendency. However, it involves the sense that a performance or task has not been satisfactorily completed as well as feelings of uncertainty regarding when a task is complete (Frost et al., 1990). A need for organisation, order, and precision is not considered to directly impact the setting of standards or how they are critically evaluated but it concerns the manner in which individuals go about striving to meet standards (Frost et al. 1990). Finally, parental expectations and criticism involve the assumption that acceptance and self-worth are contingent upon meeting parental expectations and a failure to do so might result in parental disapproval as well as the loss of parental support (Frost et al., 1990).

A number of perfectionism researchers (e.g., Anshel & Eom, 2003; Dunn et al., 2005; Shafran et al., 2002; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007) have suggested that multidimensional conceptualisations and measures of perfectionism may operate better at a domain as opposed to a global level. This is because findings from both inside and outside of sport suggest that there are specific domains of a person's life in which perfectionism functions (e.g., Dunn, Causgrove Dunn, & Syrotuik, 2002; McArdle, 2010; Mitchelson & Burns, 1998; Stoeber & Stoeber, 2009). This has led to questions being raised about the applicability of certain aspects of global measures of perfectionism, when extrapolating extant measures like the F-MPS to the sport domain. In response to this, two sport-specific versions

of the F-MPS have been devised (i.e., Sport-MPS; Dunn, et al., 2002; Sport-MPS-2; Gotwals & Dunn, 2009). The two versions include measures of coach pressure and parental pressure in place of parental expectations and parental criticism dimensions as they are considered more salient to the sport domain. To date, these measures have been shown to possess greater predictive ability than global measures and often supplant 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). The H-MPS has also been adapted for use with athletes. Typically, this has been achieved by amending the instructions of the instrument to focus on sport-specific cognitions and beliefs (e.g., Appleton, Hall, & Hill, 2010; Hill, Hall, Appleton & Kozub, 2008; Mallinson & Hill, 2011).

Another sport-specific measure of perfectionism that has recently been adopted is the Multidimensional Inventory of Perfectionism in Sports (MIPS; Stoeber et al., 2007). This inventory is firmly grounded in the notion that perfectionism ought to be captured at the domain as opposed to global level. The MIPS contains seven subscales. The first two subscales are termed striving for perfection and negative reactions to imperfection and can be applied to training and competition. Further, they have a self-directed focus and are akin to personal standards and concerns over mistakes from the F-MPS, respectively (Stoeber et al., 2007). The remaining 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 concern the high expectations that individuals place on teammates and negative reactions to non-perfect performance of teammates (see Stoeber, Otto, & Stoll, 2006). Striving for perfection and negative reactions to imperfection are the most widely adopted subscales in sport, while less is known about the interpersonal subscales.

There are an additional two multidimensional measures that can be used to capture perfectionism in sport, if appropriately amended. These are the revised Almost Perfect Scale (APS-R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001) and the Perfectionism Inventory (PI; R.W. Hill et al., 2004). In terms of the APS-R, it originally involved three subscales: standards (high personal performance standards and expectations), discrepancy (the perceived difference between high personal

standards and evaluations of meeting those standards), and order (preference for organisation, order, and neatness). In a recently revised version, order has been disregarded as it does not contribute to an understanding of perfectionism above and beyond the other two subscales (see Rice, Richards, & Tueller, 2014). Thus, standards and discrepancy form the main dimensions of interest in this measure.

The PI is an eight subscale measure designed to capture the most important constructs from the H-MPS and F-MPS, along with additional features of perfectionism (R.W. Hill et al., 2004). In comparison to the H-MPS and F-MPS, the PI subscales of striving for excellence (the pursuit of high standards), concern over mistakes (experiencing distress over making a mistake), and organisation (being neat and orderly) are self-directed and have respective counterparts (i.e., self-oriented perfectionism and personal standards, concern over mistakes, and organisation). A need for approval (individuals seek validation from others and are sensitive to criticism) from the PI is also self-directed but like socially prescribed perfectionism (H-MPS) it includes beliefs about others. High standards for others (holding others to one's perfectionistic standards) and perceived parental pressure (the need to perform perfectly to obtain parental approval) from the PI are interpersonal qualities and again have respective counterparts compared to the H-MPS and F-MPS (i.e., other-oriented perfectionism and parental criticism and parental expectations). Planfulness (planning ahead and deliberating over decisions) and rumination (obsessively worrying about past errors) are qualities of perfectionism unique to the PI. To date, research in sport has limited its focus to striving for excellence, concern over mistakes, need for approval, and rumination (see Elison & Partridge, 2012).

1.2.1.1 A hierarchical model of perfectionism

Based on the preceding multidimensional view, a hierarchical model of perfectionism has emerged both inside and outside of sport (e.g., Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Stoeber, 2011). Specifically, the hierarchical model builds on multidimensional models of perfectionism by organising their intrapersonal and interpersonal facets into two parsimonious higher-order dimensions of perfectionism. There is both a theoretical and an empirical basis for this model. First, it aligns with the position of early theorists that perfectionism

may be normal (i.e., perfectionists strive to achieve high standards of performance and can derive satisfaction from their efforts) and neurotic (i.e., perfectionists strive for high standards of performance but are never satisfied with their efforts) (Hamachek, 1978). Second, the empirical basis stems from factor-analytical studies that have examined the convergence between dimensions of perfectionism from different multidimensional models and identified two broad dimensions of perfectionism (e.g., Bieling, Israeli, & Antony, 2004; Cox, Enns, & Clara, 2002; Dunkley et al., 2000; Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). A variety of terms have so far been adopted to reflect the two dimensions of perfectionism. Examples include, adaptive perfectionism and maladaptive perfectionism (Cox et al., 2002), personal standards perfectionism and evaluative concerns perfectionism (Dunkley et al., 2000), and perfectionistic strivings and perfectionistic concerns (Stoeber & Otto, 2006). In line with one of the first studies to adopt the hierarchical model in sport (i.e., Gaudreau & Antl, 2008), the terms personal standards perfectionism and evaluative concerns perfectionism will be adopted for this thesis.

Personal standards perfectionism involves striving for perfection and setting excessively high personal standards for performance (Gaudreau & Antl, 2008). According to Stoeber (2011), it can be captured through use of single subscales or a combination of subscales from existing sport-specific measures of perfectionism and/or global measures adapted for sport. The most reliable proxies from sport-specific measures include personal standards measured by the Sport-MPS or the Sport-MPS-2 and striving for perfection measured by the MIPS. For global measures adapted for sport, the most reliable proxies include self-oriented perfectionism measured by the H-MPS, personal standards measured by the F-MPS, high standards measured by the APS-R, and striving for excellence measured by the PI. This is because these sub-dimensions are thought to share tendencies that are conceptually consistent with this dimension of perfectionism (e.g., standard setting for oneself and striving to attain exacting standards; Dunkley et al., 2000).

Evaluative concerns perfectionism, on the other hand, involves harsh self-critical evaluations, concerns about others' unrealistic expectations and criticisms as well as doubts about one's abilities to meet socially imposed perfectionistic standards (Gaudreau & Antl, 2008). Stoeber (2011) indicates that the most reliable

proxies from sport-specific and adapted global measures of perfectionism include concern over mistakes (Sport-MPS, Sport-MPS-2, F-MPS, or PI), a combination of concern over mistakes and doubts about actions (Sport-MPS-2 or F-MPS), negative reactions to imperfection (MIPS), socially prescribed perfectionism (H-MPS), and discrepancy (APS-R). This is because these sub-dimensions are thought to share tendencies central to defining this particular dimension of perfectionism (e.g., striving to reach unrealistic standards imposed by critical others and an overly critical self-evaluative nature; Dunkley et al., 2000).

1.3 A review of perfectionism research in sport

A large proportion of extant perfectionism research in sport has considered the effects of personal standards perfectionism and evaluative concerns perfectionism separately (Stoeber, 2011). Outside of sport, this has been termed a dimensional approach and is evident in research using bivariate correlations and other analyses that focus on only one of the two dimensions of perfectionism (Stoeber & Otto, 2006). The approach can also include a focus on the unique effects of personal standards perfectionism and evaluative concerns perfectionism. This entails examining the effects of the two dimensions of perfectionism after controlling for their correlation (Stoeber & Otto, 2006). Often this is achieved by statistical partialling, which involves holding the effects of one variable constant while examining the effects of another (Lynam, Hoyle, & Newman, 2006). The unique effects of personal standards perfectionism and evaluative concerns perfectionism are evident in research using multiple regressions, structural equation modelling, or presenting partial correlations.

In sport, a recent systematic review has drawn together research that has examined the effects of the two dimensions of perfectionism separately (Gotwals et al., 2012). This body of research demonstrates a differentiation in motives, performance, and psychosocial outcomes for personal standards perfectionism and evaluative concerns perfectionism. First, when bivariate correlations for personal standards perfectionism are considered a mixed motivational profile emerges among athletes. That is, bivariate correlations indicate that personal standards perfectionism involves achievement motives that are both adaptive (e.g., hope of success; Stoeber

& Becker, 2008) and maladaptive (e.g., fear of failure; Kaye, Conroy, & Fifer, 2008; Sagar & Stoeber, 2009). Further, it has positive relationships with both task-goals and ego-goals (e.g., Appleton, Hall, & Hill, 2009; Dunn et al., 2002; Hall, Kerr, & Matthews, 1998; McArdle & Duda, 2004; Ommundsen et al., 2005) or ego-goals only (Lemyre et al., 2008). When the valence of task- and ego-goals are considered, personal standards perfectionism involves goal orientations that are both adaptive (mastery-approach and performance-approach) and maladaptive (mastery-avoidance and/or performance-avoidance) (e.g., Stoeber, Stoll, Pescheck, & Otto, 2008; Stoeber, Stoll, Salmi, & Tiikkaja, 2009). Finally, bivariate correlations for personal standards perfectionism demonstrate that its underpinning motivational regulations are both adaptive (identified and intrinsic) and maladaptive (introjected and external) (McArdle & Duda, 2004).

When the unique effects are considered, a clearer positive motivational profile emerges. First, partial correlations indicate that personal standards perfectionism still involves hope for success (Stoeber & Becker, 2008) but it now has an inverse or non-significant relationship with fear of failure (Kaye et al., 2008; Sagar & Stoeber, 2009; Stoeber & Becker, 2008). Further, it has a non-significant relationship with ego-goals only (Lemyre et al., 2008) but still involves both task-goals and ego-goals (Appleton et al., 2009; Dunn et al., 2002; Hall et al., 1998; McArdle & Duda, 2004; Ommundsen et al., 2005). Whilst this initially appears problematic, partial correlations demonstrate that personal standards perfectionism now only has significant relationships with an adaptive approach goal orientation (mastery-approach and performance-approach) (e.g., Stoeber et al., 2008; Stoeber et al., 2009). Finally, while external regulation still helps to characterise personal standards perfectionism, alongside more adaptive identified and intrinsic regulations, it now has a non-significant relationship with introjected motivation (McArde & Duda, 2004). Taken together, the findings suggest that personal standards perfectionism should energise achievement striving among sport participants in a manner similar to how goals can motivate and direct behaviour toward more satisfying experiences (see Latham & Locke, 2007). This is particularly evident when the effects of evaluative concerns perfectionism are controlled for.

Based on both bivariate and partial correlations, the assertion that personal standards perfectionism should direct individuals toward more positive experiences in sport is generally supported. First, Stoeber and colleagues have found positive relationships between personal standards perfectionism and performance in competition and training (Stoeber et al., 2009; Stoll, Lau, & Stoeber, 2008). It also has positive relationships with a range of desirable personal and interpersonal outcomes indicative of a more positive sport experience. For personal outcomes it is related to positive affect, self-confidence, and self-esteem (e.g., Hall et al., 1998; Kaye et al., 2008; McArdle & Duda, 2008; Sagar & Stoeber, 2009). The interpersonal outcomes it relates to include constructive peer relationships (Ommundsen et al., 2005). Inverse relationships with undesirable personal and interpersonal outcomes are also evident (e.g., somatic anxiety, burnout, and friendship conflict; Chen, Kee, & Tsai, 2009; Hall et al., 1998; Ommundsen et al., 2005). Where relationships with undesirable personal outcomes may initially have been positive, these became non-significant or inverse following partialling (e.g., negative affect, cognitive anxiety, and trait anger; Dunn et al., 2006; Hall et al., 1998; Stoeber et al., 2007; Vallance et al., 2006).

The pattern of motivation and related outcomes for evaluative concerns perfectionism is more straightforward. That is, whether evaluative concerns perfectionism is considered whole or partialled, it is predictive of higher fear of failure (Sagar & Stoeber, 2009) and has positive relationships with ego-goals (e.g., Appleton et al., 2009; Dunn et al., 2002; Ommundsen et al., 2005) and a maladaptive, avoidant goal orientation (e.g., performance-avoidance, performance-approach, and mastery-avoidance; Stoeber et al., 2008; Stoeber et al., 2009). It also has an inverse relationship with task-goals (Lemyre et al., 2008) and demonstrates positive relationships with less internalised and more external underpinning motivational regulations (e.g., introjected and external; McArdle & Duda, 2004). Congruent with evaluative concerns perfectionism involving maladaptive achievement mechanisms, it is a non-significant predictor of performance in competition and has inverse or non-significant relationships with performance in training (Stoeber et al., 2009; Stoll et al., 2008). It also has positive relationships with undesirable personal and interpersonal outcomes indicative of a more negative

sport experience (e.g., negative affect, cognitive and somatic anxiety, anger, burnout, and friendship conflict; Hall et al., 1998; Hill et al., 2008; Kaye et al., 2008; Ommundsen et al., 2005; Vallance et al., 2006). Finally, inverse relationships with desirable personal and interpersonal outcomes are also evident (e.g., self-esteem, self-worth, and constructive peer relations; Gotwals, Dunn, & Wayment, 2003; McArdle & Duda, 2008; Ommundsen et al., 2005).

The majority of the studies in the preceding review included young people. Thus, it is no surprise that studies conducted with junior sport participants since the review have produced similar findings for the two dimensions of perfectionism. Specifically, bivariate correlations for personal standards perfectionism reveal a mixed motivational profile. That is, personal standards perfectionism is positively related to psychological need thwarting (Mallinson & Hill, 2011), intrinsic, introjected, and external regulations (Appleton & Hill, 2012), autonomous and controlled motivation (Jowett, Hill, Hall, & Curran, 2013; Mouratidis & Michou, 2011), and harmonious and obsessive passion (Curran, Hill, Jowett, & Mallinson, 2014). It also has an inverse relationship with amotivation (Appleton & Hill, 2012) and involves more adaptive coping strategies (Mouratidis & Michou, 2011). In terms of psychosocial outcomes, it demonstrates an inverse relationship with athlete burnout (e.g., Appleton & Hill, 2012; Jowett et al., 2013; Madigan, Stoeber, & Passfield, 2015a) and non-significant relationship with undesirable attitudes toward doping (Madigan, Stoeber, & Passfield, 2015b).

When considered independent of evaluative concerns perfectionism, some of the associations between personal standards perfectionism and the aforementioned processes and outcomes become more adaptive or remain the same. For instance, personal standards perfectionism emerges as an inverse predictor of psychological need thwarting and undesirable attitudes toward doping (Madigan et al., 2015b; Mallinson & Hill, 2011). It also has a positive association with autonomous motivation only (Jowett et al., 2013). An inverse association with athlete burnout is maintained (Appleton & Hill, 2012; Jowett et al., 2013; Madigan et al., 2015a). Both harmonious passion and obsessive passion still serve to characterise personal standards perfectionism (Curran et al., 2014).

Where evaluative concerns perfectionism is considered, it displays a more maladaptive profile. That is, evaluative concerns perfectionism is a positive predictor of psychological need thwarting (Mallinson & Hill, 2011). Further, it has positive associations with identified, introjected, and external motivational regulations, amotivation, and controlled motivation (Appleton & Hill, 2012; Jowett et al., 2013; Mouratidis & Michou, 2011). It also involves obsessive passion (Curran et al., 2014). Adaptive coping strategies are inversely related to evaluative concerns perfectionism (Mouratidis & Michou, 2011). Finally, it is positively associated with athlete burnout (Appleton & Hill, 2012; Jowett et al., 2013; Madigan et al., 2015a).

From the evidence presented, it is possible to draw some broad conclusions about the effects of personal standards perfectionism and evaluative concerns perfectionism in terms of young people's sport experiences. First, because personal standards perfectionism involves a more adaptive motivational profile, it can seemingly contribute to heightened achievement striving and desirable performance and psychosocial outcomes among young sport participants. As such, it speaks to engendering a more positive experience in sport. This is particularly evident when it is considered in the absence of evaluative concerns perfectionism. Without examining the unique effects of personal standards perfectionism, such outcomes may often be suppressed (Stoeber & Otto, 2006; Gotwals et al., 2012). Second, because evaluative concerns perfectionism involves a more maladaptive motivational profile, it renders young sport participants vulnerable to undesirable performance and psychosocial outcomes. Thus, it engenders a more negative sport experience.

1.3.1 Limitations of perfectionism research in sport

While considering personal standards perfectionism and evaluative concerns perfectionism separately has furthered our understanding of their effects, there is a notable drawback to adopting such an approach. Specifically, this relates to the perils of partialling the effects of personal standards perfectionism and evaluative concerns perfectionism, as noted by Hill (2014). Lynam et al. (2006) provide a useful exposition of the perils of partialling. Of crucial concern is the conceptual ambiguity that can follow from partialling. That is, partialling involves the removal of parts of a predictor variable that overlap with another variable. Once the

overlapping variance between variables has been removed, it can sometimes be difficult to know what construct is represented by the residualised variable. In some instances, it is unlikely that the residualised variable will be representative of the original, whole variable. This is particularly the case where two independent variables are initially highly correlated as there is a large amount of overlapping variance to be removed, which then results in decreased similarity between the original and residualised variable (Lynam et al., 2006). A further interpretational issue arises when suppression occurs following partialling. Suppression can be seen when the relationship between an independent and dependent variable increases or changes its direction. As the relationship did not initially exist, it cannot be attributed to the original variable (Hill, 2014). Consequently, researchers may draw inappropriate conclusions about the effects of the original variable based on findings that actually pertain to an ambiguous residualised variable.

Drawing on Lynam et al. (2006), Hill (2014) recently sought to examine the extent to which these issues influenced the examination of perfectionism in athletes. In his paper, Hill (2014) compared the relationship between personal standards perfectionism and constructs from its nomological network (e.g., motivational regulations) before (raw scores) and after (residualised scores) partialling the effects of evaluative concerns perfectionism. The focus on personal standards perfectionism was driven by longstanding debate concerning the (mal)adaptive nature of this broad dimension of perfectionism (see Gotwals et al., 2012). It was thought that comparing raw and residualised scores would help reveal the extent to which raw personal standards perfectionism and residualised personal standards perfectionism represent the same construct. Following partialling, the findings indicated that 14 of the 18 relationships between personal standards perfectionism and its related constructs changed in magnitude, direction, or statistical significance. Of these changed relationships, four indicated suppression (i.e., for mastery-approach, performance-avoidance, intrinsic motivation to accomplish, and amotivation). Based on these findings, Hill (2014) suggested that personal standards perfectionism may undergo substantial changes following partialling and that researchers should be wary of the conceptual implications of these changes. In particular, whether residualised

personal standards perfectionism still holds relevance for understanding the effects of perfectionism as a multidimensional construct.

To further explain this critique, it is necessary to consider what residualised personal standards perfectionism captures. Although this is not quite clear, Hill (2014) suggested that through removing overlapping features of evaluative concerns perfectionism (e.g., self-evaluative components) the residualised variable may reflect more of a pure form of personal standards perfectionism. DiBartolo, Frost, Chang, LaSota, and Grills (2004) describe pure personal standards perfectionism as the pursuit of personal standards in the absence of contingent self-worth. Hill (2014), amongst others (e.g., Flett & Hewitt, 2014; Powers, Koestner, Zuroff, Milyavskaya, & Gorin, 2011), has then queried how pure personal standards perfectionism differs from more general adaptive forms of achievement striving. That said, residualised (or pure) personal standards perfectionism may have more to say about adaptive forms of achievement striving than it does the effects of personal standards perfectionism in multidimensional perfectionism.

The preceding point is further strengthened when we consider the correlated nature of personal standards perfectionism and evaluative concerns perfectionism. Research inside and outside of sport typically demonstrates that personal standards perfectionism and evaluative concerns perfectionism have a moderate-to-high correlation (see Gotwals et al. 2012; Stoeber & Otto, 2006). To partial the effects of personal standards perfectionism and evaluative concerns perfectionism disregards the importance of this correlation. In particular, Hill (2014) identified that personal standards perfectionism is left without cognitive and regulatory features central to both personal standards perfectionism and evaluative concerns perfectionism (e.g., fear of failure) following partialling. Thus, the residualised (or pure) personal standards perfectionism construct may only provide partial insight into the behaviours that could result from personal standards perfectionism in achievement situations. This calls into question whether it is desirable to lose such information and how appropriate it is that findings pertaining to pure personal standards perfectionism dominate what is currently understood about the effects of multidimensional perfectionism in sport. Flett and Hewitt (2014) seem to support that losing such features from personal standards perfectionism is undesirable

because it has limited value for understanding what was originally conceived and intended of perfectionism:

> One could imagine what Alfred Adler would say in response to someone who indicated that he or she was still going to study perfectionism but was first going to remove the inferiority striving component. Once these inferiority strivings are removed statistically, would Adler still regard the transformed variable as reflecting perfectionism? (pp. 399).

1.3.2 Alternative analytical and theoretical approaches

A number of alternative approaches could be adopted to address the limitations associated with examining the separate and unique effects of personal standards perfectionism and evaluative concerns perfectionism. One approach, in keeping with a variable-oriented research tradition, concerns combining sub-dimensions of perfectionism. In sport, this approach has been advocated by Dunn and colleagues (e.g., Dunn et al., 2002; Dunn et al., 2006; Vallance et al., 2006) and is based on the similar theoretical grounds as the hierarchical model of perfectionism. That is, there are two main dimensions of perfectionism (i.e., one dimension characterised by striving for high standards and one dimension characterised by evaluative concerns). Thus, to better understand perfectionism in its entirety, Dunn and colleagues argue that sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism ought to be considered concurrently.

Canonical correlation analysis has most often been used to simultaneously consider scores across sub-dimensions of perfectionism. Based on this approach, two profiles of perfectionism have typically emerged. The first is a 'healthy' profile (moderate-high positive loadings of sub-dimensions of personal standards perfectionism and moderate-high negative loadings of sub-dimensions of evaluative concerns perfectionism). The second is an 'unhealthy' profile (moderate-high loadings of sub-dimensions of both personal standards perfectionism and evaluative concerns perfectionism). To date, this approach has provided useful insights into the effects of different combinations of sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism among young sport participants

(e.g., goal orientations, anger, anxiety, body image, self-esteem, and peer relationships; Dunn et al., 2002; Dunn et al., 2011; Gotwals, Dunn, Causgrove Dunn, & Gamache, 2010; Gotwals et al., 2003; Ommundsen et al., 2005; Vallance et al., 2006). However, there is a notable drawback to consider. That is, the approach relies on additive effects (an overall effect based on two or more independent effects) and not interaction effects (the effect of an independent variable on a dependent variable, depending on the level of another independent variable). As such, the approach cannot provide insights into how the presence of personal standards perfectionism and evaluative concerns perfectionism may alter their respective associations with an outcome.

1.4   The 2 × 2 model of perfectionism

The 2 × 2 model of perfectionism (Gaudreau & Thompson, 2010) is a relatively recent addition to the perfectionism literature. The model is inspired by a typological approach to personality and the integration of variable-oriented and person-oriented (i.e., focus on groups of perfectionists) research traditions (Gaudreau & Verner-Filion, 2012). A fundamental assumption of the 2 × 2 model is that personal standards perfectionism and evaluative concerns perfectionism coexist to varying degrees within all individuals (Gaudreau & Thompson, 2010). Thus, within-person combinations of the two main dimensions form the central focus of the model. In particular, four prototypical within-person combinations (or subtypes) of perfectionism have been outlined in the 2 × 2 model.

The first subtype is non-perfectionism (low personal standards perfectionism/low evaluative concerns perfectionism) and represents individuals who are not personally oriented toward striving for perfection and do not perceive significant others as putting pressure on them to pursue perfectionistic standards (Gaudreau & Thompson, 2010). The second subtype is pure personal standards perfectionism (high personal standards perfectionism/low evaluative concerns perfectionism) and represents individuals who pursue perfectionistic standards that are derived from the self (Gaudreau & Thompson, 2010). The third subtype is pure evaluative concerns perfectionism (low personal standards perfectionism/high evaluative concerns perfectionism) and describes individuals who strive to meet

perfectionistic standards derived from pressures in the social-environment (Gaudreau & Thompson, 2010). The fourth subtype is mixed perfectionism (high personal standards perfectionism/high evaluative concerns perfectionism) and typifies individuals who perceive pressure from significant others to strive for perfection but also personally adhere to perfectionistic standards (Gaudreau & Thompson, 2010).

To assess the comparative effects of the subtypes, four hypotheses have been proposed (Gaudreau & Thompson, 2010). These hypotheses are grounded in extant research and concepts derived from organismic theories of motivation (e.g., internalisation, regulation, and person-environment congruence). In response to early criticism of the model (see Stoeber, 2012a), the wording of the second hypothesis has recently been revised (Gaudreau, 2013). Hypothesis 1 states that pure personal standards perfectionism will either be associated with better (1a), poorer (1b), or no different (1c) outcomes compared with non-perfectionism. This is consistent with findings regarding the equivocal nature of personal standards perfectionism (e.g., Stoeber & Otto, 2006). Hypothesis 2 asserts that pure evaluative concerns perfectionism will be associated with worse outcomes compared to non-perfectionism. This is because it is considered a non-internalised and externally regulated subtype in which perfectionistic standards are not tied to personal values (Gaudreau & Verner-Filion, 2012). Hypothesis 3 states that mixed perfectionism will be associated with better outcomes compared to pure evaluative concerns perfectionism. This is because mixed perfectionism is a partially internalised subtype in which negative effects of perceived pressure from the social-environment may be attenuated by the pursuit of perfectionistic standards that are somewhat personally valued (Gaudreau & Verner-Filion, 2012). Based on the same premise and the assertion that pure personal standards perfectionism may involve a more internalised pursuit of perfectionistic standards (Gaudreau & Verner-Filion, 2012), hypothesis 4 contends that mixed perfectionism will be associated with worse outcomes compared to pure personal standards perfectionism.

A number of analyses can be adopted to test the model's four hypotheses. One approach that has been advocated is to examine the interaction between personal standards perfectionism and evaluative concerns perfectionism (Gaudreau &

Thompson, 2010). This is because the interaction can provide insight into whether the relationship between two variables is altered in the presence of another (Baron & Kenny, 1986). This variable-oriented approach is often achieved using moderated multiple regression (e.g., Gaudreau & Verner-Filion, 2012). However, latent moderated structural models have also been employed (Franche, Gaudreau, & Miranda, 2012; Smith, Saklofske, Yan, & Sherry, 2015). It is noteworthy that an interaction between the two dimensions of perfectionism is not always necessary as Gaudreau (2012) has demonstrated that main effects and slopes are sufficient to test the model's hypotheses. Thus, multiple regression analysis is also evident in research examining the comparative effects of the four subtypes (e.g., Crocker, Gaudreau, Mosewich, & Kljajic, 2014; Damian, Stoeber, Negru, & Băban, 2014).

Here it should be noted that the 2×2 model was not the first model to acknowledge the coexistence of the two dimensions of perfectionism. In 2006, Stoeber and Otto addressed this issue in an alternative tripartite model. Based on a person-oriented approach, the tripartite model includes three subtypes of perfectionism. These are healthy perfectionism (high personal standards perfectionism/low evaluative concerns perfectionism), unhealthy perfectionism (high personal standards perfectionism/high evaluative concerns perfectionism), and non-perfectionism (low personal standards perfectionism irrespective of the level of evaluative concerns perfectionism). Comparing these subtypes to the 2×2 model, healthy perfectionism equates to pure personal standards perfectionism and both are viewed as the most adaptive subtypes (Stoeber, 2012a). Unhealthy perfectionism equates to mixed perfectionism and while unhealthy perfectionism is the most maladaptive subtype in the tripartite model, mixed perfectionism is not regarded as such in the 2×2 model. This is because high personal standards are considered to exacerbate the maladaptive effects of high evaluative concerns in the tripartite model, but can buffer against the maladaptive effects of high evaluative concerns in the 2×2 model (Smith, et al., 2015). In accord, pure evaluative concerns perfectionism is considered the most maladaptive subtype in the 2×2 model. This subtype is subsumed into non-perfectionism in the tripartite model and so non-perfectionism in the 2×2 model is not deemed an equivalent subtype (Stoeber, 2012a).

1.4.1 A review of the 2 × 2 model of perfectionism research

A relatively small but growing number of studies have tested the 2 × 2 model inside (Crocker et al., 2014; Gaudreau & Verner-Filion, 2012; Hill, 2013; Hill & Davis, 2014) and outside of sport (Cumming & Duda, 2012; Damian et al., 2014; Douilliez & Lefèvre, 2011; Franche et al., 2012; Gaudreau, 2012; Gaudreau & Thompson, 2010; Li, Hou, Chi, Liu, & Hager, 2014; Quested, Cumming, & Duda, 2014; Smith et al., 2015). With the exception of Smith et al. (2015), these studies have provided support for the approach. In particular, the findings of these studies have corroborated the majority (but not all) of the model's hypotheses. A review of these studies is provided below. It begins with the line of research that first established the 2 × 2 model using a variable-oriented approach outside of sport. This is followed by a consideration of studies that have adopted a person-oriented approach, using cluster analysis, cross-culturally and in dance. The most recent study to have adopted the model outside of sport is then presented. The review concludes with research that tests the model in sport.

The initial test of the 2 × 2 model aimed to differentiate the four subtypes of perfectionism etiologically and functionally (Gaudreau & Thompson, 2010). To do so, undergraduate students were examined in terms of perfectionism, self-determined motivation, and indicators of psychological adjustment (life-satisfaction, positive and negative affect, and academic goal progress). Personal standards perfectionism and evaluative concerns perfectionism were constituted using multiple sub-dimensions from the H-MPS and F-MPS. Moderated hierarchical regressions revealed an interactive effect of the two dimensions of perfectionism. In support of hypothesis 1a, pure personal standards perfectionism was associated with more self-determined motivation and better psychological adjustment (higher life satisfaction, positive affect, and subjective vitality) compared to non-perfectionism. However, there was no difference between these two subtypes in terms of negative affect. While this is suggestive of hypothesis 1c, a failure to reject the null hypothesis is not deemed sufficient to support hypothesis 1c (see Gaudreau, 2013; Stoeber, 2012a). Pure evaluative concerns perfectionism was associated with less self-determined motivation and worse psychological adjustment compared to non-perfectionism (full support for hypothesis 2). Mixed perfectionism was associated with more self-

determined motivation and better psychological adjustment compared to pure evaluative concerns perfectionism but the opposite pattern emerged compared to pure personal standards perfectionism (full support for hypotheses 3 and 4). Thus, pure personal standards perfectionism was considered the most adaptive subtype. Further, pure evaluative concerns perfectionism was the most maladaptive subtype and ought to be differentiated from non-perfectionism.

The first follow-up test of the 2×2 model was conducted by Douilliez and Lefèvre (2011). Instead of psychological adjustment, Douilliez and Lefèvre (2011) focused on psychological maladjustment (depressive symptoms). Again, the study involved undergraduate students and the two main dimensions of perfectionism were constituted using multiple sub-dimensions from the H-MPS and F-MPS. In contrast to Gaudreau and Thompson's (2010) study, a significant interactive effect of the two main dimensions of perfectionism did not emerge. A hierarchical regression and simple slopes analysis revealed that depressive symptoms differed across the four subtypes in a manner consistent with two of the model's hypotheses. That is, pure evaluative concerns perfectionism was associated with higher depressive symptoms than non-perfectionism (support for hypothesis 2). Mixed perfectionism was associated with higher depressive symptoms than pure personal standards perfectionism (support for hypothesis 4). The findings again confirmed that high personal standards in the presence of low evaluative concerns are adaptive and that pure evaluative concerns perfectionism and non-perfectionism ought to be differentiated. However, a lack of support for hypothesis 3 suggested that evaluative concerns perfectionism may be problematic irrespective of the level of personal standards perfectionism. This was in context of an undesirable outcome that is inextricably linked with evaluative concerns perfectionism. The implication, therefore, was that pure evaluative concerns perfectionism may not always be the most maladaptive subtype dependent upon the characteristics of the outcome.

Noting that the 2×2 model may function without interaction effects, Gaudreau (2012) built on Douilliez and Lefèvre's (2011) study by means of a methodological note. This involved an examination of the four subtypes of perfectionism in regards to grade point average. Again, this was among undergraduate students but the two main dimensions of perfectionism were captured

using single instead of multiple sub-dimensions from the H-MPS (self-oriented perfectionism and socially prescribed perfectionism). Main effects derived from multiple regressions were found to be a reliable heuristic to test the hypotheses of the 2×2 model when interactive effects are absent. In particular, predicted values obtained from regression equations indicated that pure personal standards perfectionism was associated with a higher grade point average compared to non-perfectionism (support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with a lower grade point average compared to non-perfectionism (support for hypothesis 2). Mixed perfectionism was associated with a higher grade point average compared to pure evaluative concerns perfectionism (support for hypothesis 3) and a lower grade point average compared to pure personal standards perfectionism (support for hypothesis 4). Thus, in relation to a desirable outcome, the findings corroborated all of Gaudreau and Thompson's (2010) findings regarding the tenets and hypotheses of the model.

Having established that the four subtypes of perfectionism from the 2×2 model can be differentiated, Franche et al. (2012) sought to address the moderating role of culture. This is because differences in cultural norms are thought to influence perceptions of perfectionism. To examine this issue, European Canadians and Asian Canadians were compared in terms of their perfectionism, academic satisfaction, and grade point average. Personal standards perfectionism and evaluative concerns perfectionism were again captured using single sub-dimensions of self-oriented perfectionism and socially prescribed perfectionism. Results of latent moderation structural models indicated that culture moderated the relationship between perfectionism and academic satisfaction but not grade point average. For academic satisfaction all four hypotheses (1a, 2, 3, and 4) were supported among European Canadians. However, only hypotheses 1a and 3 were supported among Asian Canadians. For grade point average, hypotheses 1a, 2, and 3 were supported among European Canadians and Asian Canadians. It was concluded that regardless of culture, pure evaluative concerns perfectionism is a more detrimental subtype than mixed perfectionism. Thus, the findings again supported the assertion that high personal standards offer some protection in mixed perfectionism in regards to desirable rather than undesirable outcomes.

China is another non-western culture where the 2×2 model has received attention (Li et al., 2014). The study focused on perfectionism, the mediating role of coping styles, and burnout among IT employees. Personal standards perfectionism and evaluative concerns perfectionism were captured using single sub-dimensions from the APS-R (high standards and discrepancy). Results of structural equation models demonstrated that coping styles acted as partial or full mediators. Cluster analysis and ANOVAs revealed that pure personal standards perfectionism was associated with more problem-focused coping and higher professional efficacy (a symptom of burnout) compared to non-perfectionism (partial support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with more emotion-focused coping and higher burnout (all three symptoms and total) compared to non-perfectionism (partial support for hypothesis 2). Mixed perfectionism was associated with less emotion-focused coping compared to pure evaluative concerns perfectionism (partial support for hypothesis 3) but less problem-focused coping, more emotion-focused coping, and higher burnout (all three symptoms and total) compared to pure personal standards perfectionism (full support for hypothesis 4). The findings were again taken as support for differentiating pure evaluative concerns perfectionism and non-perfectionism. In line with Douilliez and Lefèvre's (2011) findings, the buffering role of high personal standards in mixed perfectionism did not extend to undesirable outcomes that are interwoven with evaluative concerns perfectionism (e.g., burnout) or certain desirable coping styles either.

A person-oriented approach has also been adopted to test the 2×2 model in dance (Cumming & Duda, 2012; Quested et al., 2014). In particular, Cumming and Duda (2012) examined perfectionism and indicators of body-related concerns (social physique anxiety) and psychological health (positive and negative affect, physical symptoms, and emotional and physical exhaustion) among vocational dance students (range 14 to 20 years). Personal standards perfectionism and evaluative concerns perfectionism were constituted using both single and multiple sub-dimensions from the F-MPS (personal standards and a combination of concern over mistakes and doubts about actions). Results of cluster analysis, ANCOVA, and MANOVAs indicated that pure personal standards perfectionism was associated with higher levels of positive affect compared to non-perfectionism (partial support for

hypothesis 1a). Pure evaluative concerns perfectionism was associated with higher negative affect and physical symptoms compared to non-perfectionism (partial support for hypothesis 2). There was no supportive evidence for hypothesis 3. Mixed perfectionism was associated with higher levels of social physique anxiety, negative affect, physical symptoms, and emotional and physical exhaustion compared to pure personal standards perfectionism (partial support for hypothesis 4). Thus, the findings again provided support for four subtypes of perfectionism but highlighted the problematic nature of evaluative concerns perfectionism irrespective of high (or low) personal standards or the valence of the outcome.

To address the recurring concern that high personal standards in mixed perfectionism may not buffer against evaluative concerns, Quested et al. (2014) conducted a further analysis of Cumming and Duda's (2012) data. Specifically, the four cluster profiles from Cumming and Duda's (2012) study were re-examined in terms of motivation (intrinsic motivation and fear of failure) and self-evaluation (self-esteem and body dissatisfaction). A series of ANOVAs demonstrated that pure personal standards perfectionism was associated with higher levels of intrinsic motivation compared to non-perfectionism (partial support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with higher fear of failure and lower self-esteem compared to non-perfectionism (partial support for hypothesis 2). Again there was no supportive evidence for hypothesis 3. Mixed perfectionism was associated with higher levels of fear of failure and body dissatisfaction and lower levels of self-esteem compared to pure personal standards perfectionism (partial support for hypothesis 4). Thus, the findings added further credence to the assertion that mixed perfectionism may not be more adaptive than pure evaluative concerns perfectionism. However, it was cautioned that the findings may be confounded by using the same sample and analytical strategy as Cumming and Duda (2012).

In the most recent test of the 2×2 model outside of sport, Damian et al. (2014) revisited some of the issues arising from the aforementioned tests of the 2×2 model. That is, perfectionism and positive and negative affect were examined among adolescents because of mixed evidence regarding how the four subtypes function across such desirable and undesirable outcomes. Single sub-dimensions of self-oriented perfectionism and socially prescribed perfectionism were used to

capture personal standards perfectionism and evaluative concerns perfectionism. Main effects demonstrated support for hypotheses 1a, 2, 3, and 4 for positive affect but only hypotheses 2 and 4 for negative affect. As with all previous tests, differentiating pure evaluative concerns perfectionism and non-perfectionism emerged as important. Further, high personal standards were only protective against evaluative concerns for desirable and not undesirable outcomes.

Desirable outcomes formed the focus of the earliest test of the 2×2 model in sport (Gaudreau & Verner-Filion, 2012). Specifically, perfectionism was examined in relation to indicators of psychological adjustment (life satisfaction, positive affect, and subjective vitality) among high level athletes (regional to national level) of varying ages (range 14 to 28 years). As with many of the studies outside of sport (e.g., Damian et al., 2014; Franche et al. 2014; Gaudreau, 2012), personal standards perfectionism and evaluative concerns perfectionism were constituted using self-oriented perfectionism and socially prescribed perfectionism. Moderated hierarchical regressions revealed an interaction effect of the two dimensions of perfectionism. There was no supportive evidence for hypotheses 1a or 1b. Pure evaluative concerns perfectionism was associated with lower levels of psychological adjustment compared to non-perfectionism (full support for hypothesis 2). Mixed perfectionism was associated with higher levels of psychological adjustment compared to pure evaluative concerns perfectionism (full support for hypothesis 3) and lower life satisfaction compared to pure personal standards perfectionism (partial support for hypothesis 4). While the findings were not as consistent as Gaudreau and Thompson's (2010) initial test outside of sport, they indicated that the tenets and hypotheses of the model are applicable in the sport domain.

The next test of the 2×2 model in sport was conducted by Hill (2013). Perfectionism and burnout among young academy soccer players (range 13 to 19 years) formed the focus. As with early tests of the model outside of sport (e.g., Gaudreau & Thompson, 2010; Douilliez & Lefèvre, 2011), personal standards perfectionism and evaluative concerns perfectionism were constituted using multiple sub-dimensions from the H-MPS and F-MPS. Based on main and interactive effects, pure personal standards perfectionism was associated with lower reduced sense of accomplishment (a symptom of burnout) and total burnout compared to non-

perfectionism (partial support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with higher burnout (all three symptoms and total burnout) compared to non-perfectionism (full support for hypothesis 2). Mixed perfectionism was associated with lower reduced sense of accomplishment and devaluation (two symptoms) and total burnout compared to pure evaluative concerns perfectionism (partial support for hypothesis 3). It was also associated with higher reduced sense of accomplishment and emotional physical exhaustion (two symptoms) and total burnout compared to pure personal standards perfectionism (partial support for hypothesis 4). Thus, the findings differed to those found for burnout in Li et al.'s (2014) study and generally indicated that high standards may have some protective effect in mixed perfectionism. Due to the undesirable nature of burnout, the findings further complicated debate over this latter issue. That is, outside of sport it remains unclear whether protective effects of high personal standards in mixed perfectionism extend to both desirable and undesirable outcomes with support more consistent for the former.

Looking to other actors in sport, Hill and Davis (2014) provided a test of the 2 × 2 model in relation to emotion regulation among coaches. Personal standards perfectionism and evaluative concerns perfectionism were constituted in the same manner as Hill (2013). Emotion regulation was characterised by desirable (cognitive reappraisal, anger control-in, and anger control-out) and undesirable (expressive suppression) strategies. Main and interaction effects demonstrated that pure personal standards perfectionism was associated with more desirable emotion regulation strategies compared to non-perfectionism (partial support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with less desirable emotion regulation strategies compared to non-perfectionism (partial support for hypothesis 2). A more complex picture emerged for mixed perfectionism. That is, compared to pure evaluative concerns perfectionism, mixed perfectionism was associated with more desirable emotion regulation strategies (partial support for hypothesis 3) and more undesirable emotion regulation strategies (contradicting hypothesis 3). As expected, mixed perfectionism was associated with less desirable and more undesirable emotion regulation strategies compared to pure personal standards perfectionism (full support for hypothesis 4). Thus, the tenets and hypotheses of the

model were generally supported. However, the notable exception was finding that high personal standards may be an aggravating factor in mixed perfectionism. The suggestion here was that mixed perfectionism may, at times, be a more detrimental subtype than pure evaluative concerns perfectionism.

In the most recent examination of the 2×2 model in sport, Crocker et al. (2014) focused on perfectionism, the stress process, and the moderating role of goal progress. Specifically, the combined and interactive effects of personal standards perfectionism and evaluative concern perfectionism (as captured by single sub-dimensions from the Sport-MPS-2) were considered in relation to goal progress, cognitive appraisal, coping, and affect among varsity athletes (range 17 to 24 years). Goal progress was a moderating factor in terms of desirable (control appraisal) and undesirable (avoidance coping) coping strategies. Main effects demonstrated that pure personal standards perfectionism was associated with more desirable outcomes (goal progress, control and challenge appraisals, and positive affect) compared to non-perfectionism (partial support for hypothesis 1a). Pure evaluative concerns perfectionism was associated with less desirable (goal progress, control and challenge appraisals) and more undesirable outcomes (threat appraisal, avoidance coping, and negative affect) compared to non-perfectionism (partial support for hypothesis 2). Mixed perfectionism was associated with less desirable outcomes (goal progress, control and challenge appraisals, and positive affect) than pure evaluative concerns perfectionism (partial support for hypothesis 3). It was also associated with less desirable (goal progress, control and challenge appraisals) and more undesirable outcomes (threat appraisal, avoidance coping, and negative affect) compared to mixed perfectionism (partial support for hypothesis 4). Thus, again high personal standards may or may not provide protective effects in mixed perfectionism dependent on the valence of the outcome.

To summarise, research inside and outside of sport generally supports the more adaptive nature of pure personal standards perfectionism in comparison to non-perfectionism. That is, there has been support for hypothesis 1a but no support for hypothesis 1b. On occasion, no difference between pure personal standards perfectionism and non-perfectionism has been found. This latter finding may be suggestive of hypothesis 1c. However, this assertion remains unclear because

equivalence tests, which reverse the usual null hypothesis, have yet to be conducted (see Gaudreau, 2013).

In line with hypothesis 2, pure evaluative concerns perfectionism has been found to be a maladaptive subtype compared to non-perfectionism, suggesting that these two subtypes of perfectionism ought to be differentiated. When compared to mixed perfectionism, pure evaluative concerns perfectionism appears more maladaptive for desirable outcomes (support for hypothesis 3). However, this finding often does not hold for undesirable outcomes (a lack of support for hypothesis 3). In some instances, mixed perfectionism has been found to be more maladaptive than pure evaluative concerns perfectionism (contradictory evidence for hypothesis 3). These findings both support and contradict the position that high personal standards can buffer the negative effects of evaluative concerns and that pure evaluative concerns perfectionism is always the most maladaptive subtype.

Finally, mixed perfectionism has been found to be associated with less desirable and more undesirable outcomes compared to pure personal standards perfectionism (support for hypothesis 4). This comparison is of particular interest as some researchers (e.g., Hall, Jowett, & Hill, 2014) would consider that perfectionism as traditionally described (e.g., striving for perfectionistic standards accompanied by evaluative concerns; Blatt, 1995) is captured only by mixed perfectionism. The findings of current research suggest that when achievement striving is driven by mixed perfectionism it may bring about some costs compared to striving for high standards alone. In accord, pure personal standards perfectionism appears to convey benefits in comparison to other subtypes. A visual summary of findings for all of the hypotheses across studies outside of sport is presented in Table 1.1. This is replicated for studies in sport in Table 1.2.

Table 1.1 Summary of hypotheses supported, unsupported, and contradicted in research outside of sport

Study	Outcome measure	H1a	H2	H3	H4
Damian et al. (2014)	Positive affect	✓	✓	✓	✓
	Negative affect	○	✓	○	✓
Li et al. (2014)	Reflective coping	✓	○	○	✓
	Reactive coping	○	✓	✓	✓
	Suppressive coping	○	✓	✓	✓
	Emotional exhaustion	○	✓	○	✓
	Cynicism	○	✓	○	✓
	Professional efficacy	✓	✓	○	✓
	Total burnout	○	✓	○	✓
Quested et al. (2014)	Intrinsic motivation	✓	○	○	○
	Fear of failure	○	✓	○	✓
	Self-esteem	○	✓	○	✓
	Body dissatisfaction	○	○	○	✓
Cumming & Duda (2012)	*Social physique anxiety*	○	○	○	✓
	Positive affect	✓	○	○	○
	Negative affect	○	✓	○	✓
	Physical symptoms	○	✓	○	✓
	Emotional and physical exhaustion	○	○	○	✓
Franche et al. (2012)	Grade point average [i]	✓	✓	✓	○
	Academic satisfaction (Asian)	✓	○	✓	○
	Academic satisfaction (European)	✓	✓	✓	✓
Gaudreau (2012)	Grade point average	✓	✓	✓	✓
Douilliez & Lefèvre (2011)	*Depressive symptoms*	○	✓	○	✓

Gaudreau & Thompson (2010)	Academic self-determination [i]	✓	✓	✓	✓
	Academic satisfaction [i]	✓	✓	✓	✓
	Positive affect [i]	✓	✓	✓	✓
	Negative affect [i]	○	✓	✓	✓
	Goal progress [i]	✓	✓	✓	✓

Note. [i] = significant interaction ($p < .05$) between personal standards perfectionism and evaluative concerns perfectionism; ✓ = hypothesis supported; ○ = a lack of support for the hypothesis; † = contradictory evidence; *italics* = undesirable outcome.

Table 1.2 Summary of hypotheses supported, unsupported, and contradicted in
research in sport

Study	Outcome measure	H1a	H2	H3	H4
Crocker et al. (2014)	Athlete goal progress	✓	✓	✓	✓
	Control appraisal	✓	✓	✓	✓
	Challenge appraisal	✓	✓	✓	✓
	Threat appraisal	○	✓	○	✓
	Emotion-focused coping	○	○	○	○
	Problem-focused coping	○	○	○	○
	Avoidance coping	○	✓	○	✓
	Positive affect	✓	○	✓	○
	Negative affect	○	✓	○	✓
Hill & Davis (2014)	Cognitive reappraisal	✓	○	✓	○
	Expressive suppression [i]	○	○	†	✓
	Anger control-in	✓	✓	✓	✓
	Anger control-out	✓	✓	✓	✓
Hill (2013)	*Total burnout*	✓	✓	✓	✓
	Reduced sense of accomplishment	✓	✓	✓	✓
	Emotional and physical exhaustion	○	✓	○	✓
	Sport devaluation [i]	○	✓	✓	○
Gaudreau & Verner-Filion (2012)	Positive affect [i]	○	✓	✓	○
	Subjective vitality [i]	○	✓	✓	○
	Life satisfaction	○	✓	✓	✓

Note. [i] = significant interaction ($p < .05$) between personal standards perfectionism and evaluative concerns perfectionism; ✓ = hypothesis supported; ○ = a lack of support for the hypothesis; † = contradictory evidence; *italics* = undesirable outcome.

1.5   Aims of the thesis

Based on the preceding overview, the broad aim of this thesis is to extend previous research by focusing on the combined effects of the two main dimensions of perfectionism on the quality of young people's experiences in sport. The specific aim is to test the hypotheses of the 2×2 model of perfectionism in regards to youth sport participants' experiences using different research methods.

In line with these aims, the first study of this thesis adopts a cross-sectional, survey-based design to examine the influence of the four subtypes of perfectionism from the 2×2 model on desirable personal and interpersonal outcomes indicative of a more positive experience in youth sport. Consistent with the psychosocial development objective of youth sport and research that examines responses to youth sport involvement using a social-cognitive approach to motivation, these positive indicators include enjoyment, physical self-worth, and perceptions of peer relationships (these variables are described in detail later).

The second study of this thesis also adopts a cross-sectional, survey-based design to examine the influence of the four subtypes of perfectionism from the 2×2 model on young people's experiences in sport. Taking into account that youth sport involvement can be both positive and negative, greater emphasis is placed on undesirable personal and interpersonal outcomes indicative of a more negative experience. In this case, negative indicators include negative (and positive) feelings, anxiety, antisocial (and prosocial) behaviour, and intentions to drop out (again these variables are described in detail later). Owing to the relative infancy of the 2×2 model, hypotheses across studies one and two are made in line with the model's hypotheses.

The third study of this thesis employs qualitative research methods to explore the meaning of sport involvement for young people deemed prototypical of the four subtypes from the 2×2 model. Looking to a social-cognitive approach to motivation, the meaning that young people ascribe is important for understanding and predicting the quality of their sport experiences. To date, research testing the 2×2 model (as well as perfectionism research more broadly) has heavily relied on quantitative methods to examine such issues. This is also the case for studies one

and two of this thesis. Thus, research adopting qualitative methods will provide a necessary extension to this area of research.

The final study of this thesis aims to offer insight into avenues where practitioners might intervene to improve the quality of young people's experiences in sport. Drawing on a social-cognitive approach to motivation, significant others from within the social-environment are known to be instrumental in endorsing task-involving and ego-involving cues and so help to shape the sport experience. In this vein, a cross-sectional, survey-based design is employed to understand the influence of perceptions of coaches and peers on the experiences of youth sport participants. Specifically, the moderating effects of perceptions of the coach-created and peer-created motivational climate across the four subtypes of perfectionism will be examined in relation to desirable (enjoyment) and undesirable (anxiety, friendship conflict, and intentions to drop out) outcomes in youth sport. This offers an extension beyond the assessment of two-way interactions between personal standards perfectionism and evaluative concerns perfectionism to the assessment of three-way interactions between personal standards perfectionism, evaluative concerns perfectionism, and the motivational climate.

Overall, this line of research makes a novel and important contribution to extant perfectionism research by employing different research methods to test the 2×2 model of perfectionism against the backdrop of a social-cognitive perspective on youth sport experiences.

Chapter 2 – The 2 × 2 model of perfectionism and positive experiences in youth sport [1]

As outlined in the previous chapter, the specific aim of this thesis is to test the 2 × 2 model of perfectionism (Gaudreau & Thompson, 2010) in regards to youth sport participants' experiences. This is because current understanding of perfectionism in youth sport is generally limited to the independent effects of two main dimensions of perfectionism (personal standards perfectionism and evaluative concerns perfectionism). While the 2 × 2 model offers a contemporary means to examine the combined effects of the two dimensions of perfectionism, it has yet to be tested with respect to the experiences of youth sport participants. According to Côté and Fraser-Thomas (2007), the three main objectives of youth sport are for its participants to gain physical health, performance, and psychosocial benefits (Côté & Fraser-Thomas, 2007). In terms of the latter, positive youth sport experiences can involve considerable enjoyment, enhanced feelings of self-worth, and constructive peer relationships. Thus, the purpose of the first study of this thesis was to provide an initial test of the 2 × 2 model in relation to the experiences of youth sport participants by examining such desirable personal and interpersonal outcomes. These outcomes are described below and are consistent with research that examines responses to youth sport involvement from a social-cognitive perspective. This is followed by a theoretical explanation for the associations between the four subtypes of perfectionism from the 2 × 2 model and these outcomes. A review of research that pertains to the four subtypes of perfectionism and these outcomes and a rationale for examining this issue in youth sport is then provided. The chapter concludes with a study that tests the 2 × 2 model in terms of youth sport participants' enjoyment, physical self-worth, and sport friendship quality.

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[1] Chapter 2 adapted with copyright clearance for Mallinson, S.H., Hill, A.P., Hall, H.K., & Gotwals, J.K. (2014). The 2 × 2 model of perfectionism and school- and community-based sport participation. *Psychology in the Schools, 9,* 972-985.

2.1 Personal and interpersonal indicators of positive experiences in youth sport

For many young people, participation in sport can be enjoyable (McCarthy & Jones, 2005). Sport enjoyment has been defined as "a positive affective response to the sport experience that reflects generalized feelings such as pleasure, liking, and fun" (Scanlan & Simons, 1992, pp. 202 – 203). In this way, sport enjoyment is considered to be less general than positive affect but not as specific as emotions such as joy (Scanlan, Babkes, & Scanlan, 2005). It should be noted that there has been some debate over the nature of the construct of enjoyment in sport (see Kimiecik & Harris, 1996; Wankel, 1997). However, because Scanlan and colleagues' definition has most often been used in regards to youth sport (McCarthy, Jones, & Clark-Carter, 2008) it is adopted here.

There are a number of reasons why researchers in the area of youth sport assert that enjoyment is important to consider. One main reason concerns the role that enjoyment plays in terms of continued involvement in youth sports (McCarthy & Jones, 2005). That is, enjoyment is a crucial factor in determining initial and future commitment among youth sport participants (e.g., Carpenter, Scanlan, Simons, & Lobel, 1993; McCarthy et al., 2008; Weiss, Kimmel, & Smith, 2001). A lack of enjoyment is thought to contribute to dropping out of youth sports (Crane & Temple, 2014). In accord, enjoyment features prominently in many of the social-cognitive based theories of motivation that have been used to understand youth sport involvement (e.g., achievement goal theory, competence motivation theory, and the sport commitment model; Harter, 1978, 1981; Nicholls, 1989; Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993).

Compared with other positive emotions in sport, enjoyment has received considerable empirical attention (McCarthy, 2011). Beyond its influence on sport commitment, research regarding enjoyment in youth sport has focused on its sources. This line of research demonstrates key personal (e.g., perceptions of ability/competence, task and ego orientation, and mastery-approach goals; Jaakkola, Ntoumanis, & Liukkonen, 2015; McCarthy et al., 2008; Morris & Kavussanu, 2009) and social-environment factors (e.g., parental support/lack of parental pressure, task-

involving climates, and peer acceptance/close friendships; Kanters & Casper, 2008; Smith, Ullrich-French, Walker, & Hurley, 2006b; Vazou, Ntoumanis, & Duda, 2006) that help make sport enjoyable. Based on the preceding overview, enjoyment is clearly a desirable personal outcome and central to positive youth sport experiences.

Another desirable personal outcome that is closely tied to enjoyment in youth sport is self-esteem or self-worth (Weiss, 2000). The terms self-esteem and self-worth are typically considered synonymous in research with children (Whitehead, 1995) and so are regarded in the same manner here. Self-esteem has been defined as "the level of global regard that one has for the self as a person" (Harter, 1993, pp. 88). Current understanding is that self-esteem is multidimensional (Kipp & Weiss, 2013). For example, Harter (1999) has identified that perceptions of ability in domains that are developmentally relevant and personally important contribute to overall self-esteem. However, self-esteem is not just the sum of domain-specific judgements of abilities as independent global evaluations of the self can also be made (Harter, 1999). In childhood (8 to 11 years), five domains hold relevance for self-esteem (scholastic competence, physical competence, physical appearance, social competence, and behavioural conduct) (Harter, 2012). During adolescence (12 to 18 years), an additional three domains (job competence, close friendships, and romantic relationships) become significant (Harter, 2012).

In relation to young people's sport involvement, it is how participants regard themselves not only at the global level but in the physical domain that is considered important (Kipp & Weiss, 2013). Building on the work of Harter (1985, 1988), Fox and Corbin (1989) developed a hierarchical model that helps to provide further insights into perceptions of the physical self. In Fox and Corbin's (1989) model, physical self-worth reflects overall "feelings of pride, self-respect, satisfaction, and confidence in the physical self" (pp. 413) and underpins global self-esteem. Four subdomains contribute to physical self-worth (sport competence, physical strength, body attractiveness, and physical condition) but independent evaluations of physical self-worth can also be made. The reasons that physical self-perceptions, in particular physical self-worth, are considered important are similar to those given for enjoyment. That is, physical self-perceptions are significant correlates of physical

activity (including youth sports) among young people (Kipp & Weiss, 2013). Further, physical self-perceptions form the basis of many social-cognitive models of motivation (see Babic et al., 2014).

A number of personal and social-environment factors have been found to have a positive impact on young sport participants' physical self-perceptions. Research that has focused on physical self-worth demonstrates positive associations with perceived competence (e.g., Çağlar & Aşçi, 2010; Lubans, Morhan, & McCormack, 2011). Task and ego orientations have also been positively correlated with physical self-worth (e.g., Biddle & Wang, 2003; Kavussanu, 2007). In terms of social-environment factors, coach and peer task-involving climates have been positively related to physical self-worth (Le Bars et al., 2009; Vazou et al., 2006). Additional noteworthy social-environment correlates include perceptions of leader support (Ullrich-French, McDonough & Smith, 2012) and close friendships (Smith 1999).

One final desirable outcome that has been linked to both enjoyment and physical self-worth in youth sport concerns constructive peer relationships (Weiss & Stuntz, 2004). The two dimensions of peer relationships that have frequently been examined in youth sports are peer acceptance and friendship quality (Smith & D'Arripe-Longueville, 2014). To define, "peer acceptance encompasses one's status or popularity in their peer group" (Smith, 1999, pp. 30). Friendship is "the experience of having a close, mutual, dyadic relationship" (Smith et al., 2006b, pp. 363). Friendship quality refers to specific aspects of the friendship that can be positive or negative. In terms of sport friendship quality, the positive aspects involve companionship and pleasant play, self-esteem enhancement and supportiveness, having things in common, and conflict resolution (Weiss & Smith, 1999). Friendship conflict is the negative aspect of sport friendship quality (Weiss & Smith, 1999).

The reasons that peer relationships are considered important in youth sport are again similar to those given for enjoyment and physical self-worth. First, young people often state peer acceptance and friendships as motives for their sport participation (see Smith & D'Arripe-Longueville, 2014). In accord, peer relationships have been shown to be predictive of sport continuation (e.g., Ullrich-French & Smith, 2009). Positive peer relationships are also thought to contribute to young people's well-being (see Roberts, 2012). Although peer acceptance and

friendship quality are both important to consider, friendship quality appears particularly crucial because adaptive friendships can protect against the negative effects of a lack of peer acceptance (e.g., Smith et al., 2006b).

Research regarding peer relationships in youth sport has increased in recent years (Smith & D'Arripe-Longueville, 2014). Through such research, associations have been established between friendship quality and other important personal and social-environment factors. For instance, perceived competence (Ullrich-French & Smith, 2009; Smith et al., 2006b) and a task orientation (Ommundsen et al., 2005; Smith et al., 2006a) are positively related to adaptive friendship quality. A task orientation is also inversely related to friendship conflict (Ommundsen et al., 2005). In contrast, an ego orientation is inversely related to adaptive friendship quality but positively related to friendship conflict (Ommundsen et al., 2005; Smith et al., 2006a). Perceptions of a task-involving climate (Smith et al., 2006a) and good quality coach-athlete (Riley & Smith, 2011) and parent (Ullrich-French & Smith, 2009) relationships are positively related to adaptive friendship quality. An ego-involving climate (Ommundsen et al., 2005; Smith et al., 2006a) and poor quality parent relationships (Ullrich-French & Smith, 2006) are inversely related to adaptive friendship quality and positively related to friendship conflict. Finally, perceived conflict with parents is positively associated with friendship conflict (Ullrich-French & Smith, 2006).

2.2 The 2 × 2 model of perfectionism and indicators of positive experiences in youth sport

There are theoretical reasons to suspect that the four subtypes of perfectionism from the 2 × 2 model of perfectionism (Gaudreau & Thompson, 2010) could differentially influence enjoyment, physical self-worth, and friendship quality in youth sport. Here, it ought to be stated that non-perfectionism (low personal standards perfectionism/low evaluative concerns perfectionism) is a "relatively adaptive condition to which the other subtypes can be compared" (Gaudreau & Vener-Filion, 2012, pp. 31). As non-perfectionism is considered a control condition, it is the potential effects of the other three subtypes that warrant attention. First, pure

personal standards perfectionism (high personal standards perfectionism/low evaluative concerns perfectionism) reflects individuals who pursue high standards derived from the self (Gaudreau & Thompson, 2010). It is well documented that individuals unburdened by evaluative concerns are able to derive pleasure from pursuing personally valued goals and can gain self-worth through accomplishment of such goals in sport (see Hall et al., 2014). Thus, pure personal standards perfectionism has the potential to bring about enjoyment and feelings of physical self-worth. Some young people view collaboration with their peers as important for achieving success in sport (Ommundsen et al., 2005). As there is a distinct lack of concern over others in pure personal standards perfectionism, better quality friendships may also be possible for this subtype.

In contrast, pure evaluative concerns perfectionism (low personal standards perfectionism/high evaluative concerns perfectionism) is unlikely to engender enjoyment, physical self-worth, or adaptive friendships. This subtype of perfectionism reflects individuals who feel pressures from their social-environment to meet the unrealistically high standards that others hold for them (Gaudreau, 2012). When goals lack personal value, it is unlikely that satisfaction or enjoyment will be experienced (Gaudreau & Verner-Filion, 2012). In addition, the belief that others demand perfection can lead to self-worth being contingent upon achievement (Hall et al., 2014). Anything less than perfect performance, therefore, is likely to be met with disapproval from others and this may serve to undermine self-worth. To avoid negative evaluation and protect self-worth, young people may withdraw from their peers in sport and so jeopardise the development of adaptive friendships (Ommundsen et al., 2005).

Mixed perfectionism involves both high personal standards perfectionism and high evaluative concerns perfectionism. This subtype has generated some debate in terms of its effects. Specifically, Douilliez and Lefèvre (2011) have highlighted that pursuing high personal standards may serve to protect against the maladaptive effects of high evaluative concerns perfectionism. In this way, mixed perfectionism may allow youth sport participants to experience some enjoyment, feelings of physical self-worth, and adaptive friendships but not to the same extent as pure personal standards perfectionism. However, Stoeber and Otto (2006), amongst

others (e.g., Hall et al., 2014; Quested et al., 2014), have argued that the pursuit of high personal standards may actually exacerbate the maladaptive effects of high evaluative concerns perfectionism. This is because the self-worth of individuals who pursue high standards tends to be conditional on meeting those standards. Thus, mixed perfectionism may render youth sport participants unable to experience enjoyment, physical self-worth, and adaptive friendships, particularly in the long-term.

2.2.1 Perfectionism subtypes and indicators of positive experiences in youth sport: A review of research

In the previous chapter, research was reviewed in a manner that considered the separate and unique effects of the two main dimensions of perfectionism in sport. This was followed by a review of their combined effects in context of the 2×2 model. Here, research that pertains to the specific outcomes described above is summarised across these two areas. In addition, research that has examined the additive effects of sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism is also considered because such research can provide some insight into the combined effects of the two dimensions of perfectionism. For the summary of findings regarding the 2×2 model, emphasis is placed on research among dancers as well as athletes because perfectionism may have similar effects for dancers and sport participants (see Hall & Hill, 2012).

Research that has examined the separate and unique effects of personal standards perfectionism and evaluative concerns perfectionism in sport has yet to focus on enjoyment and physical self-worth. However, their effects may be inferred through correlations with related constructs, namely global positive affect (Kaye et al., 2008) and self-esteem (Gotwals et al., 2003; McArdle & Duda, 2008). In terms of friendship quality, one study has examined this issue (Ommundsen et al., 2005). What the aforementioned studies demonstrate is that personal standards perfectionism is either unrelated to or has positive correlations with positive affect and self-esteem. It is also either unrelated to or has an inverse correlation with adaptive friendship quality and is unrelated to friendship conflict. When personal standards perfectionism is partialled from evaluative concerns perfectionism, non-

significant and inverse correlations become positive and an inverse correlation emerges for friendship conflict (see Gotwals et al., 2012). In contrast, evaluative concerns perfectionism is unrelated to or has inverse correlations with positive affect, self-esteem, and adaptive friendship quality. It also has a positive correlation with friendship conflict. Thus, personal standards perfectionism, in the absence of evaluative concerns perfectionism, is associated with more desirable outcomes and evaluative concerns perfectionism is associated with less desirable outcomes. While understanding the separate effects of the two dimensions of perfectionism is important, it does not fully inform us of the effects of the four subtypes of perfectionism from the 2×2 model.

When sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism are considered simultaneously, through additive effects, some insight into the effects of the four subtypes of perfectionism can be gained. Constructs related to physical self-worth (self-esteem and attitudinal body image) have been examined using this approach. In terms of self-esteem, Gotwals et al. (2003) found that high evaluative concerns perfectionism was correlated with low self-esteem. Dunn et al. (2011) found that a combination of perfectionism dimensions similar to pure personal standards perfectionism was correlated with adaptive attitudinal body image. In contrast, a combination of perfectionism dimensions similar to mixed perfectionism was correlated with maladaptive attitudinal body image. In terms of friendship quality, Ommundsen et al. (2005) found that a maladaptive motivational pattern, including high evaluative concerns perfectionism, was correlated with maladaptive friendship quality. An adaptive motivational profile, including low evaluative concerns perfectionism, was correlated with adaptive friendship quality. Thus, the findings suggest that pure personal standards perfectionism may be associated with better physical self-worth and friendship quality, pure evaluative concerns may be associated with worse physical self-worth and friendship quality, and that mixed perfectionism may be associated with worse physical self-worth.

Research that has specifically examined the 2×2 model of perfectionism in sport and dance provides a more comprehensive picture of the effects of the four subtypes of perfectionism for constructs related to enjoyment (positive affect) and

physical self-worth (self-esteem, body dissatisfaction, and social physique anxiety). In terms of positive affect, pure personal standards perfectionism is associated with higher levels compared to non-perfectionism (some support for hypothesis 1a; Crocker et al., 2014; Cumming & Duda, 2012). Pure evaluative concerns perfectionism is associated with lower levels of positive affect compared to non-perfectionism (some support for hypothesis 2; Gaudreau & Verner-Filion, 2012). Mixed perfectionism is associated with higher levels of positive affect compared to pure evaluative concerns perfectionism (some support for hypothesis 3; Crocker et al., 2014; Gaudreau & Verner-Filion, 2012) but does not differ from pure personal standards perfectionism (a consistent lack of support for hypothesis 4; Crocker et al., 2014; Cumming & Duda, 2012; Gaudreau & Verner-Filion, 2012).

A different pattern of findings has emerged for constructs related to physical self-worth (self-esteem, body dissatisfaction, and social physique anxiety). For pure personal standards perfectionism compared to non-perfectionism, inconclusive findings are evident (a consistent lack of support for hypothesis 1a or 1b; Cumming & Duda, 2012; Quested et al., 2014). Pure evaluative concerns perfectionism is associated with lower levels of self-esteem than non-perfectionism (support for hypothesis 2; Quested et al., 2014) but these two subtypes do not significantly differ for body dissatisfaction and social physique anxiety (a lack of support for hypothesis 2; Cumming & Duda, 2012; Quested et al., 2014). Mixed perfectionism and pure evaluative concerns perfectionism do not significantly differ for self-esteem, body dissatisfaction, or social physique anxiety (a consistent lack of support for hypothesis 3; Cumming & Duda, 2012; Quested et al., 2014). Mixed perfectionism is associated with lower levels of self-esteem, body dissatisfaction, and social physique anxiety compared to pure personal standards perfectionism (consistent support for hypothesis 4; Cumming & Duda, 2012; Quested et al., 2014).

2.2.2 Rationale for this study

Although the preceding studies provide useful insights into the effects of the four subtypes of perfectionism on desirable outcomes in sport and dance, there are some issues that warrant attention. First, enjoyment has not been measured. Research that has examined a similar outcome (positive affect) through use of the 2 × 2 model has focused on older sport participants (Crocker et al., 2014; Gaudreau &

Verner-Filion, 2012) or vocational dance students (Cumming & Duda, 2012) and not youth sport participants. Earlier in this chapter, it was articulated that enjoyment is a more specific emotion than global positive affect and one that holds important implications for youth sport participants (e.g., enjoyment is predictive of continued sport participation). Thus, it seems necessary to examine the effects of the different subtypes of perfectionism on youth sport participants' enjoyment in its own right instead of inferring effects based on associations with similar constructs among different populations.

The second issue concerns physical self-worth. To date, studies that have focused on the combined effects of dimensions of perfectionism and physical self-perceptions are constrained to physical appearance (attitudinal body image, body dissatisfaction, and social physique anxiety; Cumming & Duda, 2012; Dunn et al., 2011; Quested et al., 2014). While there are strong associations between physical appearance and physical self-worth, it was previously demonstrated in this chapter that separate evaluations of physical self-worth can be made. Perceptions of physical self-worth of themselves have important implications in youth sport (e.g., physical self-worth is associated with well-being). In addition, the two studies that have focused on physical self-perceptions in context of the 2×2 model (Cumming & Duda, 2012; Quested et al., 2014) involved the same sample of vocational dancers. Quested et al. (2014) suggest that this might be problematic as their results may be specific to their sample. Thus, to use the 2×2 model to examine physical self-perceptions at the global level and in another sample (i.e., youth sport participants) would help address this concern and extend insight into the relationship between subtypes of perfectionism and the physical self for young people in sport.

Finally, perfectionism research in sport and dance has largely neglected peer relationships. In fact, only one study in the area of perfectionism has examined the quality of friendships among young sport participants (Ommundsen et al., 2005). Given the importance of peers in youth sport (e.g., a source of motivation and social support) and the potential for subtypes of perfectionism to undermine sport friendships, the lack of research in this area seems surprising. Thus, to examine friendship quality in terms of the 2×2 model would strengthen our understanding of this issue.

2.3 The present study

In sum, desirable outcomes such as enjoyment, physical self-worth, and peer relationships are important for understanding the quality of young people's sport experiences. There are theoretical and empirical reasons to assume that the four subtypes of perfectionism from the recently developed 2×2 model of perfectionism would have divergent effects on these outcomes. However, research has yet to examine this issue. Instead, research has tended to focus on the separate effects of the two main dimensions of perfectionism or additive effects in regard to these outcomes. Where the 2×2 model has been employed, the focus of studies has been on similar (yet distinct) outcomes in alternate populations. The purpose of the current study therefore was to examine the effects of the subtypes of perfectionism from the 2×2 model on desirable personal (enjoyment and physical self-worth) and interpersonal (friendship quality) outcomes indicative of a more positive experience in youth sport. In accord, the study forms an initial test of the 2×2 model in regard to young people's sport experiences.

2.3.1 Hypotheses

Drawing on extant research and tenets of the 2×2 model of perfectionism, it was hypothesised that pure personal standards perfectionism would be associated with higher levels of enjoyment, physical self-worth, and positive aspects of friendship quality when compared to non-perfectionism (hypothesis 1a). In contrast, pure evaluative concerns perfectionism would be associated with lower levels of enjoyment, physical self-worth, and positive aspects of friendship quality when compared to non-perfectionism (hypothesis 2). Mixed perfectionism would be associated with higher levels of enjoyment, physical self-worth, and positive aspects of friendship quality when compared to pure evaluative concerns perfectionism (hypothesis 3) but lower levels of these indicators when compared to pure personal standards perfectionism (hypothesis 4).

2.4 Method

2.4.1 Participants

Following institutional ethical approval (see Appendix A), 241 young sport participants ($n = 98$ males, $n = 143$ females, M age = 15.11 years, $SD = 2.03$ years, range = 11 – 19 years) were recruited from various school- and community-based sports. Participants were involved in their sport at a recreational ($n = 27$), club ($n = 107$), district ($n = 34$), county ($n = 31$), regional ($n = 28$), and/or national level ($n = 14$). On average, participants had taken part in their sport for 3.13 years ($SD = 2.36$) and trained and played for 4.12 hours per week ($SD = 3.62$). The sample reported on a 9-point Likert scale that their sport participation was very important ($M = 6.93$, $SD = 1.73$) in comparison to the other activities in their lives (1 = *not at all important*; 9 = *extremely important*).

2.4.2 Procedure

Initial contact was made with gatekeepers (e.g., coach, club secretary, and/or head teacher) of various school- and community-based sport groups in the North of England to explain the purpose and requirements of the study. For the school- and community-based sport groups willing to take part, an information sheet was distributed to prospective participants and their parent(s)/guardian(s). Parent/guardian consent and child assent was gained for those willing to participate (see Appendix B). Subsequently, participants were invited to complete a multi-section questionnaire. Questionnaires were administered at a time convenient for the organiser of the school- or community-based sport group (e.g., before or after a sports session).

2.4.3 Instruments

2.4.3.1 Multidimensional perfectionism

The Sport Multidimensional Perfectionism Scale 2 (Sport-MPS-2; Gotwals & Dunn, 2009) was used to assess personal standards perfectionism and evaluative concerns perfectionism. The Sport-MPS-2 contains six subscales labelled Personal Standards (7 items, e.g., 'I have extremely high goals for myself in my sport'), Concern Over Mistakes (8 items, e.g., 'If I fail in competition, I feel like a failure as

a person'), Doubts About Actions (6 items, e.g., 'Prior to competition, I rarely feel satisfied with my training'), Organization (6 items, e.g., 'I have and follow a pre-competitive routine'), Perceived Coach Pressure (6 items, e.g., 'My coach sets very high standards for me in competition') and Perceived Parental Pressure (9 items, e.g., 'My parents expect excellence from me in my sport'). Items are measured on a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*) and participants are asked to indicate how much they agree or disagree with statements that identify how athletes view certain aspects of their competitive sport experiences. Multiple independent investigations have produced supportive evidence regarding the validity and reliability of the Sport-MPS-2, including evidence regarding the instrument's internal reliability and subscale structure (e.g., Gotwals & Dunn, 2009; Gotwals et al., 2010). Consistent with the recommendations of Stoeber (2011), personal standards was used to reflect personal standards perfectionism and a combination of concern over mistakes and doubts about actions was used to constitute evaluative concerns perfectionism. Prior to adding them together, scores for concern over mistakes and doubts about actions were standardised so to ensure there was equal weighting in the composite. Scores for personal standards were also standardised for ease of interpretation and comparability. This approach has been adopted in a previous test of the 2×2 model (see Hill & Davis, 2014).

2.4.3.2 Enjoyment

Perceptions of enjoyment were captured using the sport enjoyment subscale of the Sport Commitment Model (Scanlan et al., 1993). The subscale includes four items asking about the participants' feelings towards playing their sport that season (e.g., 'Are you happy playing your sport?'). Participants are asked to the rate items on a 5-point Likert scale (1 = *not at all*; 5 = *very much*). Scanlan et al. (1993) have produced supportive evidence regarding adequate internal reliability of the subscale ($\alpha = .94$).

2.4.3.3 Physical self-worth

Perceptions of participant's physical self-worth were assessed using the physical self-worth subscale of the Children and Youth Physical Self-Perception Profile (Whitehead, 1995). The subscale contains six items in a structured

alternative format (e.g., 'Some kids are proud of themselves physically' but 'Other kids don't have much to be proud of physically'). The participant is asked to indicate which of the two statements comprising the item is most like them and the degree to which it is "sort of true" or "really true" for them. Responses are scored on a scale of 1 to 4, with 1 corresponding to a "really true" of me response to a negative statement and 4 corresponding to a "really true" of me response to a positive statement. Jones, Polman, and Peters (2009) have provided supportive evidence regarding adequate internal reliability of the subscale ($\alpha \geq .70$).

2.4.3.4 Sport friendship quality

The Sport Friendship Quality Scale (SFQS; Weiss & Smith, 1999) was used to assess participant's perceptions of their relationship with their best sport friend. The SFQS includes 22 items that assess the positive friendship aspects of self-esteem enhancement and supportiveness (SEES; 4 items, e.g., 'After I make mistakes, my friend encourages me'), loyalty and intimacy (LAI; 4 items, e.g., 'My friend looks out for me'), things in common (TIC; 4 items, e.g., 'My friend and I do similar things'), companionship and pleasant play (CPP; 4 items, e.g., 'My friend and I play well together') and conflict resolution (CR; 3 items, e.g., 'My friend and I make up easily when we have a fight'). The instrument also includes a friendship conflict aspect (CON; 3 items, e.g., 'My friend and I fight'). Items are rated on a 5-point Likert scale (1 = *not at all true*; 5 = *really true*). In terms of reliability and validity evidence, Weiss and Smith (1999) have demonstrated a satisfactory factorial structure and acceptable internal reliability for each subscale (α's $\geq .70$). All instruments used in this study are displayed in Appendix C.

2.5 Results

2.5.1 Preliminary analysis

A series of preliminary analyses (i.e., missing value analysis, assessment of normality, and an internal reliability analysis) were conducted prior to the main analyses. Missing value analysis indicated that there were 160 complete cases and 81 incomplete cases. Consistent with the recommendations of Tabachnick and Fidell (2007), 5 of the incomplete case participants were removed because their item non-

response exceeded 5%. In terms of the remaining incomplete cases ($n = 76$), none of the participants had item non-response for more than 5 items ($M = 1.89$, $SD = 1.27$, range = 1 to 5 items) and the ratio of missing data patterns to the number of incomplete cases was high (ratio = 0.85). As a result, the data was deemed missing in a non-systematic manner and missing values were replaced using the mean of the non-missing items from the subscale in each individual case (see Graham, Cumsille, & Elek-Fisk, 2003).

The data was then assessed for univariate and multivariate normality in accordance with Tabachnick and Fidell's (2007) recommendations. In terms of univariate outliers, 15 participants were removed based on standardised z-scores for subscales larger than 3.29 ($p < .001$, two-tailed). A further 2 participants' scores were considered multivariate outliers and removed because their Mahalanobis distance was greater than $\chi^2_{(10)} = 29.59$ ($p < .001$). The sample for the main statistical analysis comprised the remaining 219 participants ($n = 88$ males, $n = 131$ females, M age = 15.12, $SD = 2.02$, range = 11 to 19 years). To examine if there were any differences between genders and ages (early adolescence, 11 to 14 years and late adolescence, 15 to 19 years) for this sample, two separate Box's M tests were conducted. Owing to the sensitivity of the Box's M test, Tabachnick and Fidell (2007) recommend testing at the p < .001 significance level. The covariance matrix was homogenous across gender, Box's M (55, 113455.45) = 58.65 (p > .001) and age, Box's M (55, 124607.89) = 50.22 (p > .001) and so the remaining analyses were conducted without controlling for either gender or age. Internal reliability was sufficient for all of the subscales as Cronbach's alpha coefficients were ≥ .70 (see Table 2.1).

2.5.2 Descriptive statistics and bivariate correlation coefficients

Based on the Likert scales adopted and range of scores, the sample reported moderate levels of personal standards perfectionism and evaluative concerns perfectionism and moderate-to-high levels of all of the indicators of youth sport experience (see Table 2.1). Personal standards perfectionism had significant positive correlations with enjoyment and four of the sport friendship quality subscales (self-esteem enhancement and supportiveness, things in common, companionship and pleasant play, and conflict resolution). It was unrelated to physical self-worth and

the remaining sport friendship quality subscales (loyalty and intimacy and friendship conflict). Evaluative concerns perfectionism had significant negative correlations with physical self-worth and one of the sport friendship quality subscales (self-esteem enhancement and supportiveness). It had a significant positive correlation with friendship conflict and was unrelated to enjoyment and the remaining sport friendship quality subscales (loyalty and intimacy, things in common, companionship and pleasant play, and conflict resolution).

Table 2.1 Descriptive statistics and bivariate correlation coefficients between variables ($n = 219$)

	M	SD	1	2	3	4	5	6	7	8	9	10
1. PSP	3.10	.76	.82									
2. ECP	5.52	1.42	.58**	.89								
3. ENJOY	4.59	.57	.20**	-.10	.91							
4. PSW	2.71	.56	.01	-.24**	.21**	.70						
5. SEES	4.08	.70	.17*	-.18**	.41**	.18**	.77					
6. LAI	4.08	.84	.08	-.10	.27**	-.01	.48**	.83				
7. TIC	3.91	.75	.18**	.03	.35**	.06	.40**	.65**	.83			
8. CPP	4.21	.70	.16*	-.05	.35**	.08	.44**	.70**	.62**	.80		
9. CR	3.93	.83	.14*	-.10	.25**	.05	.46**	.41**	.43**	.36**	.78	
10. CON	2.31	1.11	.11	.31**	-.12	-.14*	-.28**	.04	.01	.01	-.12	.86

Note. *$p < .05$; **$p < .01$; internal reliability alpha coefficients are shown on the diagonal; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; ENJOY = enjoyment; PSW = physical self-worth; SEES = self-esteem enhancement and supportiveness; LAI = loyalty and intimacy; TIC = things in common; CPP = companionship and pleasant play; CR = conflict resolution; CON = friendship conflict; values presented for personal standards perfectionism and evaluative concerns perfectionism are derived from raw scores.

2.5.3 Test of the hypotheses of the 2 × 2 model of perfectionism

The hypotheses of the 2 × 2 model were tested based on the guidelines provided by Gaudreau and colleagues (Gaudreau, 2012; Gaudreau & Thompson, 2010). A hierarchical regression analysis was conducted for each of the indicators of youth sport experience (criterion variables). In the first step, scores for personal standards perfectionism and evaluative concerns perfectionism were entered (main effects model). In the second step, the interactive term (i.e., the product of personal standards perfectionism and evaluative concerns perfectionism) was entered (interaction effect model). Where a significant interaction effect did not emerge, the main effects model was interpreted using the heuristic provided by Gaudreau (2012). This involves the use of main effects and linear regression equations to calculate predicted values for the criterion variable across the four subtypes of perfectionism. Based on this, the hypotheses of the 2 × 2 model can be tested using main effects only. Where a significant interactive effect was identified, simple slopes analyses were conducted (see Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003). The first simple slope of personal standards perfectionism at low evaluative concerns perfectionism (-1SD) was used to compare pure personal standards perfectionism and non-perfectionism (hypothesis 1a; pure personal standards perfectionism will be associated with better outcomes compared to non-perfectionism). The second simple slope of personal standards perfectionism at high evaluative concerns perfectionism (+1SD) was used to compare pure evaluative concerns perfectionism and mixed perfectionism (hypothesis 3; mixed perfectionism will be associated with better outcomes compared to pure evaluative concerns perfectionism). The third simple slope of evaluative concerns perfectionism at low personal standards perfectionism (-1SD) was used to compare pure evaluative concerns perfectionism and non-perfectionism (hypothesis 2; pure evaluative concerns perfectionism will be associated with worse outcomes compared to non-perfectionism). The fourth simple slope of evaluative concerns perfectionism at high personal standards perfectionism (+1SD) was used to compare pure personal standards perfectionism and mixed perfectionism (hypothesis 4; mixed perfectionism will be associated with worse outcomes compared to pure personal

standards perfectionism). The final model (main effects model or interaction effect model) for each criterion variable are displayed in Table 2.2.

Table 2.2 Main and interaction effect models for each criterion variable ($n = 219$)

	F	Df	R^2	ΔR^2	PSP	ECP	PSP × ECP
					β / B (t)		
Enjoyment (main effects model)							
Step 1	13.50**	(2, 216)	.11		.39** / .22 (4.97)	-.32** / -.11 (-4.10)	
Physical self-worth (main effects model)							
Step 1	9.51**	(2, 216)	.08		.19* / .11 (2.35)	-.35** / -.11 (-4.36)	
Self-esteem enhancement and supportiveness (main effects model)							
Step 1	18.29**	(2, 216)	.15		.41** / .29 (5.31)	-.42** / -.17 (-5.44)	
Loyalty and intimacy (main effects model)							
Step 1	4.21*	(2, 216)	.04		.21*/ .17 (2.53)	-.22** / -.10 (-2.63)	
Things in common (interaction effect model)							
Step 1	6.64**	(2, 216)	.06		.29** / .22 (3.62)	-.20* / -.08 (-2.43)	
Step 2	6.60**	(3, 215)	.08	.03*	.30** / .23 (3.75)	-.20* / -.09 (-2.49)	.16* / .06
Companionship and pleasant play (main effects model)							
Step 1	6.25**	(2, 216)	.06		.28** / .20 (3.45)	-.21** / -.09 (-2.64)	
Conflict resolution (interaction effect model)							
Step 1	7.49**	(2, 216)	.07		.29** / .24 (3.57)	-.27** / -.13 (-3.28)	
Step 2	7.95**	(3, 215)	.10	.04**	.30** / .25 (3.73)	-.27** / -.13 (-3.38)	.19** / .07
Friendship conflict (main effects model)							
Step 1	12.63**	(2, 216)	.11		-.10 / -.11 (-1.28)	.37** / .24 (4.70)	

Note. *$p < .05$; **$p < .01$; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism. Any discrepancy between R-squared and R-squared change scores reflects rounding to 2 decimal places.

2.5.3.1 Enjoyment

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of enjoyment (B = .03, β =.10, t = 1.62, p = .11). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in enjoyment. Personal standards perfectionism was a significant positive predictor. Evaluative concerns perfectionism was a significant negative predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a, 2, 3, and 4.

2.5.3.2 Physical self-worth

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of physical self-worth (B = -.00, β = -.02, t = -.24, p = .81). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in physical self-worth. Personal standards perfectionism was a significant positive predictor. Evaluative concerns perfectionism was a significant negative predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a, 2, 3, and 4.

2.5.3.3 Sport friendship quality

Subscales of the sport friendship quality measure were analysed separately. In the interaction effect models, the interactive term was a non-significant predictor of four of the sport friendship quality subscales (self-esteem enhancement and supportiveness, B = .04, β = .12, t = 1.84, p = .07, loyalty and intimacy, B = .02, β = .04, t = .65, p = .52, companionship and pleasant play, B = .02, β = .07, t = 1.06, p = .29, and friendship conflict, B =.00, β = .00, t = .05, p = .96) but was a significant predictor of the remaining two sport friendship quality subscales (things in common and conflict resolution). Main effects models indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in the four sport friendship quality subscales (self-esteem enhancement and supportiveness, loyalty and intimacy, companionship and pleasant play, and friendship conflict). In the main effects models, personal standards

perfectionism was a significant positive predictor of self-esteem enhancement and supportiveness, loyalty and intimacy, and companionship and pleasant play. It was not a significant predictor of friendship conflict. In contrast, evaluative concerns perfectionism was a significant negative predictor of self-esteem enhancement and supportiveness, loyalty and intimacy, and companionship and pleasant play. It was also a significant positive predictor of friendship conflict. With reference to Gaudreau's (2012) heuristic, results for self-esteem enhancement and supportiveness, loyalty and intimacy, and companionship and pleasant play provided support for hypotheses 1a, 2, 3, and 4. For friendship conflict, it provided support for hypotheses 2 and 4 (but not 1a or 3).

Interaction effects for things in common and conflict resolution are displayed in Figure 1.1. Simple slopes analyses for things in common demonstrated that the second (B = .33, β = .43, 95% CI = .18 to .47, p < .05) and third (B = -.14, β = -.33, 95% CI = -.22 to -.06, p < .05) simple slopes were significant. The first (B = .13, β = .17, 95% CI = -.02 to .27, p > .05) and fourth (B = -.03, β = -.07, 95% CI = -.11 to .05, p > .05) simple slopes were non-significant. These findings support hypotheses 2 and 3 (but not 1a or 4). For conflict resolution, the second (B = .38, β = .45, 95% CI = .22 to .53, p < .05) and third (B = -.20, β = -.42, 95% CI = -.29 to -.11, p < .05) simple slopes were significant. The first (B = .12, β = .14, 95% CI = -.04 to .27, p > .05) and fourth (B = -.05, β = -.11, 95% CI = -.14 to .04, p > .05) simple slopes were non-significant. These findings support hypotheses 2 and 3 (but not 1a or 4).

Predicted values for all criterion variables across the four subtypes of perfectionism are displayed in Table 2.3. In order to determine the size of the differences identified between the four subtypes of perfectionism, standardised effect sizes (Cohen's d) were calculated for the four paired contrasts (i.e., the four combinations of subtypes of perfectionism used to test the hypotheses of the 2×2 model). This involves dividing the difference in predicted values between two subtypes of perfectionism by the standard deviation of the criterion variable (see Gaudreau & Verner-Filion, 2012). Standardised effect sizes are shown in Table 2.4.

Table 2.3 Predicted values for criterion variables across the four subtypes of
perfectionism

Criterion variable	Non-perfectionism	Pure PSP	Pure ECP	Mixed perfectionism
ENJOY	4.55	4.99	4.18	4.63
PSW	2.80	3.01	2.42	2.63
SEES	4.08	4.66	3.49	4.07
LAI	4.08	4.43	3.72	4.07
TIC	3.88	4.13	3.38	4.03
CPP	4.16	4.55	3.86	4.25
CR	3.97	4.20	3.26	4.01
CON	2.00	1.78	2.83	2.61

Note. Pure PSP = pure personal standards perfectionism; Pure ECP = pure
evaluative concerns perfectionism; ENJOY = enjoyment; PSW = physical self-
worth; SEES = self-esteem enhancement and supportiveness; LAI = loyalty and
intimacy; TIC = things in common; CPP = companionship and pleasant play; CR =
conflict resolution; CON = friendship conflict.

Table 2.4 Standardised effect sizes (Cohen's *d*) for paired contrasts between the
four subtypes of perfectionism

Criterion variable	Pure PSP vs. Non-perfectionism	Pure ECP vs. Non-perfectionism	Pure ECP vs. Mixed perfectionism	Pure PSP vs. Mixed perfectionism
ENJOY	.79	-.65	-.79	.65
PSW	.38	-.69	-.38	.69
SEES	.83	-.84	-.83	.84
LAI	.41	-.43	-.41	.43
TIC	.33	-.67	-.87	.13
CPP	.56	-.43	-.56	.43
CR	.28	-.86	-.90	.23
CON	-.20	.75	.20	-.75

Note. Pure PSP = pure personal standards perfectionism; Pure ECP = pure
evaluative concerns perfectionism; ENJOY = enjoyment; PSW = physical self-
worth; SEES = self-esteem enhancement and supportiveness; LAI = loyalty and
intimacy; TIC = things in common; CPP = companionship and pleasant play; CR =
conflict resolution; CON = friendship conflict. Effect sizes = .2 (small), .5
(medium), .8 (large) (Cohen, 1988).

Figure 2.1 Simple slopes of the relationship between evaluative concerns perfectionism and the criterion variable at low (-1SD) and high (+1SD) personal standards perfectionism.
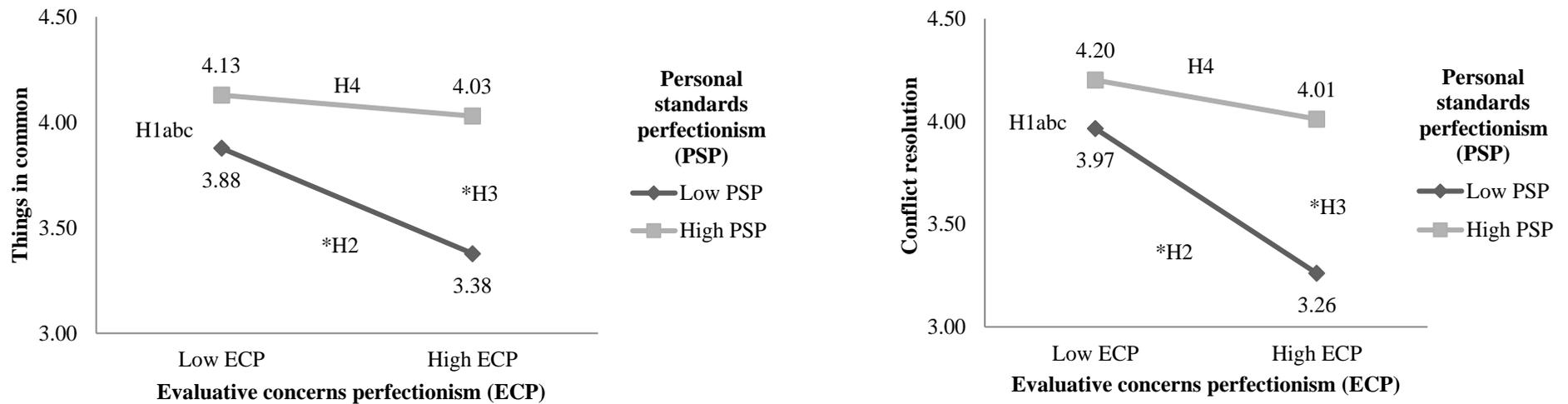
Note. H1abc represents a non-significant difference between pure personal standards perfectionism and non-perfectionism, $p > .05$; *H2 represents a significant difference between pure evaluative concerns perfectionism and non-perfectionism, $p < .05$; *H3 represents a significant difference between mixed perfectionism and pure evaluative concerns perfectionism, $p < .05$; H4 represents a non-significant difference between mixed perfectionism and pure personal standards perfectionism, $p > .05$.

2.6 Discussion

The current study examined the effects of the four subtypes of perfectionism from the 2×2 model of perfectionism on desirable personal (enjoyment and physical self-worth) and interpersonal (friendship quality) outcomes, indicative of a more positive experience in youth sport. Main and interaction effects indicated that pure personal standards perfectionism (high personal standards perfectionism/low evaluative concerns perfectionism) was associated with the most positive sport experience with support for hypothesis 1a of the 2×2 model evident in terms of enjoyment, physical self-worth, and three of the five positive aspects of sport friendship quality (self-esteem enhancement and supportiveness, loyalty and intimacy, and companionship and pleasant play). Pure evaluative concerns perfectionism (low personal standards perfectionism/high evaluative concerns perfectionism) was associated with the least positive sport experience with support evident for hypotheses 2 and 3 of the 2×2 model across all of the positive indicators of the sport experience examined. Mixed perfectionism (low personal standards perfectionism/high evaluative concerns perfectionism) was associated with a less favourable experience when compared to pure personal standards perfectionism with support for hypothesis 4 of the 2×2 model evident across indicators, with the exception of the two positive aspects of sport friendship quality where interactions were significant (things in common and conflict resolution).

2.6.1 Perfectionism subtypes and indicators of positive experiences in youth sport

Pure personal standards perfectionism was associated with more desirable personal outcomes in sport when compared to non-perfectionism (higher levels of both enjoyment and physical self-worth). This is consistent with the notion that pursuing goals and standards that are of personal value and interest is psychologically rewarding relative to the non-pursuit of such standards (Gaudreau & Thompson, 2010). When this finding is taken in context of previous tests of the 2×2 model, it adds to increasing evidence that pure personal standards perfectionism is associated with a more positive emotional experience inside and outside of sport

(Damian et al., 2014; Crocker at al., 2014; Cumming & Duda, 2012; Gaudreau & Thompson, 2010). This is the first study to demonstrate such an effect for physical self-perceptions when examining the 2×2 model. Previous studies that have considered perceptions of physical appearance among dancers found no difference between pure personal standards perfectionism and non-perfectionism (Cumming & Duda, 2012; Quested et al., 2014). One potential reason for previous findings is that the vocational dance environment can lend itself to intense negative scrutiny of one's physical appearance (Quested et al., 2014) and so the pursuit of high standards may not afford any respite for young dancers in this regard. In youth sports, arguably less emphasis is placed on physical appearance and confidence in the physical self, more broadly could stem from other sources (e.g., competence). Thus, pursuing and attaining personally valued standards may bring about feelings of physical self-worth in a youth sport environment.

The evidence was more mixed regarding the interpersonal experience for pure personal standards perfectionism compared with non-perfectionism. In some instances, higher levels of positive aspects of friendship quality were identified (self-esteem enhancement and supportiveness, loyalty and intimacy, and companionship and pleasant play). In other instances, including interaction effects, no differences were found (things in common, conflict resolution, and friendship conflict). This extends what is currently known about perfectionism and peer relationships in that previously, the presence of low evaluative concerns alone was the only condition considered important for more adaptive friendship quality to ensue (Ommundsen et al., 2005). The suggestion here is that striving for high personal standards in context of low evaluative concerns may enable young people to view their peers in a more constructive manner and experience better quality friendships. There is a consistency with previous research, however, in that holding high personal standards is neither beneficial nor harmful in terms of friendship conflict. Overall, pure personal standards perfectionism appears to be associated with a more positive sport experience.

As predicted, pure evaluative concerns perfectionism emerged as the subtype with the least positive sport experience. According to tenets of the 2×2 model, this is the most problematic subtype because it is non-internalised, externally regulated,

and lacks the buffering presence of personal standards perfectionism (Gaudreau & Verner-Filion, 2012). This was evident here in the comparisons with non-perfectionism. That is, the presence of high evaluative concerns perfectionism, unmitigated by personal standards perfectionism, was associated with lower levels of enjoyment, physical self-worth and all five of the positive aspects of sport friendship quality, and higher levels of friendship conflict compared with non-perfectionism. This adds to research inside and outside of sport that has found this subtype to be problematic for positive affect relative to non-perfectionism (Damian et al., 2014; Gaudreau & Thompson, 2010; Gaudreau & Verner-Filion, 2012). This is the first study to demonstrate such an association for physical self-perceptions. However, it does mirror findings for another global self-perception in dance (self-esteem; Quested et al., 2014), which again alludes to the importance of considering the type of self-perception when trying to understand the different effects of the four subtypes of perfectionism. The findings also support previous assertions that being high in concerns about critical evaluations from others alone may have a detrimental impact on friendship quality and heighten friendship conflict (Ommundsen et al. 2005).

With the exception of friendship conflict, the same pattern of findings for pure evaluative concerns perfectionism was evident when compared to mixed perfectionism (lower levels of enjoyment, physical self-worth and all five of the positive aspects of sport friendship quality). This supports other studies that have identified a buffering effect of high personal standards in mixed perfectionism for positive affect (Crocker et al., 2014; Damian et al., 2014; Gaudreau & Thompson, 2010; Gaudreau & Verner-Filion, 2012). For physical self-worth, this finding is inconsistent with research regarding physical self-perceptions in dance (Cumming & Duda, 2012; Quested et al., 2014). Based on their findings among young dancers, Quested et al. (2014) suggested that the presence of high personal standards in mixed perfectionism may actually be the source of further difficulties. However, the physical self-perceptions examined in the two studies conducted in dance could be considered undesirable (body dissatisfaction and social physique anxiety). A lack of protective effect of high personal standards was also found here for an undesirable outcome (friendship conflict). Taken together, these findings are consistent with the

notion that any protective effects of high personal standards in mixed perfectionism may be more apparent when assessing desirable rather than undesirable outcomes (see Damian et al., 2014; Douilliez & Lefèvre, 2011; Hill, 2013). As higher levels of positive aspects of friendship quality were also found for mixed perfectionism compared to pure evaluative concerns perfectionism, it further corroborates that the protective effect of high personal standards tends to manifest when desirable outcomes are considered.

Of final concern were the effects of mixed perfectionism in relation to pure personal standards perfectionism. Mixed perfectionism conveyed comparatively less desirable effects than pure personal standards perfectionism in terms of enjoyment, physical self-worth, three positive aspects of sport friendship quality, and friendship conflict. This was only not the case when a significant interaction was evident in predicting things in common and conflict resolution, as the two subtypes did not significantly differ. In regards to previous examinations of the 2×2 model, the findings support those found outside of sport for positive affect and physical self-perceptions (Cumming & Duda, 2012; Damian et al., 2014; Gaudreau & Thompson, 2010; Quested et al., 2014). Further, it corroborates that the presence of high evaluative concerns can be problematic for friendship quality (Ommundsen et al., 2005). Collectively, the findings suggest that when mixed perfectionism drives participation in sport it may carry some costs for youth sport participants' experiences relative to the pursuit of high goals alone. Overall, pure personal standards perfectionism prevails as the most adaptive subtype for the youth sport participants in this study.

2.7 Conclusion

The findings of the current study provide evidence that subtypes of perfectionism from the 2×2 model of perfectionism are predictive of personal and interpersonal indicators of experiences in youth sport. Pure personal standards perfectionism typically conveyed the most positive sport experience when compared to non-perfectionism and mixed perfectionism. Pure evaluative concerns perfectionism conferred the least positive sport experience when compared to non-perfectionism and mixed perfectionism. Mixed perfectionism seemed to provide a

more positive sport experience compared to pure evaluative concerns perfectionism but only when desirable outcomes were examined. Therefore, in its various guises, perfectionism has important implications for understanding positive experiences in youth sport.

Chapter 3 – The 2 × 2 model of perfectionism and negative experiences in youth sport

The findings of study one provided initial evidence that the four subtypes of perfectionism from the 2 × 2 model of perfectionism predict differing experiences in youth sport. Specifically, the four subtypes predicted desirable personal and interpersonal outcomes among youth sport participants in a manner consistent with the model's hypotheses. What largely remains unknown, however, is how the four subtypes of perfectionism relate to more negative experiences in youth sport. This is important because young people's experiences in sport can be both positive and negative, as indicated by desirable and undesirable outcomes (Côté & Fraser-Thomas, 2007). In study one of this thesis, there was also some evidence to suggest that the 2 × 2 model may be better suited to predicting desirable rather than undesirable outcomes. Research in other populations also attests to this (e.g., Damian et al., 2014; Douilliez & Lefèvre, 2011; Hill, 2013). Thus, the purpose of study two was to provide a further test of the 2 × 2 model in relation to the experiences of youth sport participants, but with greater emphasis placed on undesirable personal and interpersonal outcomes. In line with research adopting a social-cognitive approach to motivation in youth sport, these outcomes include negative (and positive) feelings, anxiety, antisocial (and prosocial) behaviour, and intentions to drop out. A description of each outcome is provided below. A theoretical justification for the associations between the four subtypes of perfectionism and these outcomes is then offered. This is followed by a review of research pertaining to the four subtypes and these outcomes as well as a rationale for a study in this regard. The chapter concludes with an empirical study that further tests the 2 × 2 model with respect to young people's sport experiences.

3.1 Personal and interpersonal indicators of negative experiences in youth sport

While involvement in youth sports can bring about positive emotional outcomes for young people (e.g., enjoyment), the emotional experiences of some young people are more negative. At a broad level, the emotional experiences of youth sport participants have been captured through negative and positive affect. Negative affect can be defined as a "general dimension of subjective distress" (Crocker, 1997, pp. 91). In contrast, positive affect "reflects pleasurable engagement" (Crocker, 1997, pp. 91). As these two higher-order dimensions of emotions are deemed orthogonal, both are considered important for understanding an individual's emotional experience in sport (see Crocker, 1997).

There are several reasons why negative and positive affect are of concern to youth sport researchers. The first is that ill-being is reflected by the experience of negative affect and well-being is reflected by the experience of positive affect (e.g., Adie, Duda, & Ntoumanis, 2010). In addition, negative and positive affect are linked to motivated behaviour in youth sport in divergent ways. For instance, negative affect is associated with psychosocial syndromes such as athlete burnout (e.g., Lemyre, Treasure, & Roberts, 2006). In contrast, positive affect is associated with continued sport involvement (see Crocker, Hoar, McDonough, Kowalski, & Niefer, 2004).

In line with a social-cognitive approach to motivation, many personal and social-environment factors are perceived to influence negative and positive affect among young sport participants. For instance, perceived competence, a task orientation, ego orientation, and mastery-approach goals are all positively associated with positive affect and performance avoidance goals are negatively associated (e.g., Adie et al., 2010; Biddle et al., 2003; Kipp & Weiss, 2013). An ego orientation and performance-approach goals are positively associated with negative affect and a task orientation is negatively associated (e.g., Adie et al., 2010; Biddle et al., 2003; Vansteenkiste, Mouratidis, & Lens, 2010). Among young gymnasts and dancers, perceptions of a coach task-involving climate are positively associated with positive affect and a coach ego-involving climate is negatively associated (e.g., Kipp &

Weiss, 2013; Quested & Duda, 2010). In addition, perceptions of a coach task-involving climate are negatively associated with negative affect and a coach ego-involving climate is positively associated (Quested & Duda, 2010).

Another undesirable personal outcome that can reflect a negative emotional experience in youth sport is anxiety. Adopting a trait and sport-specific perspective, anxiety can be viewed "as a learned tendency to respond with cognitive and/or somatic state anxiety to competitive sport situations in which the adequacy of the athlete's performance can be evaluated" (Smith & Smoll, 1990, pp. 421). In accord, sport-related anxiety measures tend to capture both cognitive and somatic components of anxiety. In terms of the cognitive component, concentration disruption and worry are often used as indicators (Smith, Smoll, Cumming, & Grossbard, 2006c). The somatic component is captured through perceptions of physiological arousal.

Anxiety is an outcome that has received extensive attention in youth sport. The main reasons for this is that it is so common and because numerous undesirable consequences have been associated with anxiety. In terms of motivated behaviour, these consequences include an avoidance of sport, lower enjoyment, and withdrawal from sport (see Crocker et al., 2004). Beyond such effects, anxiety has been implicated in athlete burnout (see Goodger et al., 2007). In addition, anxiety can have a detrimental impact on the physical functioning of young people in sport (e.g., disordered eating, injury, and sleep disturbance; Crocker et al., 2004).

Many studies have demonstrated the factors that influence anxiety in youth sport. For instance, perceived competence and a task orientation are negatively associated with anxiety, while an ego orientation is positively associated (e.g., Cumming et al., 2008; Grossbard et al., 2007; Smith et al., 2006c). When the valence of the goal is considered, mastery-avoidance and performance-avoidance goals are positively associated with anxiety and a mastery-approach goal is negatively associated (Morris & Kavussanu, 2009). Task-involving coach- and parent-created motivational climates are negatively associated with anxiety (e.g., O'Rourke, Smith, Smoll, & Cumming, 2014; Smith, Cumming, & Smoll, 2008; Smith et al., 2006c), while coach- parent- and peer-created ego-involving climates are positively associated (e.g., O'Rourke et al., 2014; Smith et al., 2008; Vazou et

al., 2006). Friendship conflict is also positively associated with anxiety and peer acceptance is negatively associated (Smith et al., 2006a).

Moral behaviour is another outcome that is of increasing interest where the experiences of youth sport participants are concerned (e.g., Bruner, Boardley, & Côté, 2014). Two forms of moral behaviour have often been considered. The first is antisocial behaviour, which is "behaviour intended to harm or disadvantage another" (Kavussanu, 2012, pp. 365). An example of this would be antagonising an opponent (Kavussanu, Seal, & Phillips, 2006). The second is prosocial behaviour, which is "behaviour intended to help or benefit another" (Kavussanu, 2012, pp.365). An example of this would be congratulating an opponent (Kavussanu et al., 2006). Antisocial and prosocial behaviour can extend beyond opponents, however, and concern behaviours toward teammates. Whether focused on opponents or teammates, antisocial and prosocial behaviours are considered important to examine concurrently if a more complete understanding of the moral behaviour of sport participants is to be gained (Kavussanu et al., 2006).

The reason why moral behaviours have been the subject of increased interest in youth sport is because of the potential implications that they hold. That is, antisocial behaviour may cause others distress or pain, while prosocial behaviour may serve to alleviate the distress and pain of others (Kavussanu, 2012). In this way, antisocial and prosocial behaviours can have maladaptive and adaptive consequences for the physical and psychological well-being of others, respectively. Some of the positive correlates of antisocial behaviour include an ego orientation, ego-involving climate, social status, and fear of failure (e.g., Sagar, Boardley, & Kavussanu, 2011; Sage & Kavussanu, 2007, 2008). By contrast, a task orientation, coach task-involving climate, social affiliation goals, and social recognition goals are positively associated with prosocial behaviour (e.g., Kavussanu, 2006; Sage & Kavussanu, 2007; Sage, Kavussanu, & Duda, 2006).

Finally, one concerning undesirable outcome that is associated with negative experiences in youth sport is dropping out (Fraser-Thomas, Côte, & Deakin, 2008). In relation to youth sport, drop out has either been captured through actual rates of drop out or intentions to drop out. In terms of intentions to drop out, these are considered a close predictor of behaviour (Sarrazin, Vallernad, Guillet, Pelletier, &

Cury, 2002). In this way, intentions to drop out are anticipated to lead to actual drop out (Sarrazin et al., 2002). Thus, through capturing intentions to drop out of sport it is widely held that insight into actual drop out behaviour can be gained (Sarrazin et al., 2002).

There are various reasons why intentions to drop out of youth sport are viewed as important to consider. Of growing concern is the finding that young people who spend less time being physically active are more likely to be engaging in sedentary behaviour (see Herman, Sabiston, Mathieu, Tremblay, & Paradis, 2014). Sedentary behaviour, such as television watching, has been linked with obesity and chronic disease (Tremblay et al., 2011). Thus, there is a potential for compromised physical health through dropping out of youth sports. In addition, if young people drop out of one sport and are not sampling another sport, then the many psychosocial benefits on offer to youth sport participants may not be realised.

Studies that have examined the factors associated with intentions to drop out have again pointed to a number of influential personal and social-environment factors. Consistent with a social-cognitive approach to motivation, a lack of perceived competence and enjoyment have been found to precede intentions to drop out (Guillet, Sarrazin, Fontayne, & Brustad, 2006; Quested et al., 2013). Further, a task orientation is inversely associated with intentions to drop out (Le Bars et al., 2009). Supportive parental behaviours and a parent task-involving climate are also inversely associated but certain parental beliefs (e.g., stereotypes) are implicated in intentions to drop out (Bioché, Plaza, Chalabaev, Guillet-Descas, & Sarrazin, 2013; Le Bars et al., 2009). In terms of the coach, a task-involving climate is inversely associated with intentions to drop out (Le Bars et al., 2009) but an ego-involving climate is thought to have the opposite effect (Sarrazin et al., 2002).

3.2 The 2 × 2 model of perfectionism and indicators of negative experiences in youth sport

In the previous chapter, it was outlined that three of the four subtypes of perfectionism from the 2 × 2 model (pure personal standards perfectionism, pure evaluative concerns perfectionism, and mixed perfectionism) would have divergent

associations with desirable outcomes in youth sport. Non-perfectionism served as a control condition. Here, it is reasoned that the same three subtypes may differentially relate to undesirable outcomes in a complementary manner to that of desirable outcomes. In particular, pure personal standards perfectionism should not lend itself to negative emotional experiences, antisocial behaviour, or intentions to drop out of youth sport because it reflects a more adaptive form of achievement striving. That is, in this subtype high standards are self-imposed and tied with personal values (Gaudreau & Verner-Filion, 2012) and there is a relative lack of criticism or doubt, which speaks to a subtype imbued with a task orientation (see Hall, Hill, & Appleton, 2013). It was documented earlier in this chapter that a task orientation is either unrelated to or inversely associated with negative affect, anxiety, antisocial behaviour, and intentions to drop out because self-focused, as opposed to other-referenced, individuals are less likely to experience concerns or engage in antisocial acts (Biddle et al., 2003). Thus, pure personal standards perfectionism would be expected to demonstrate similar associations. In the same vein, there is a potential for this subtype to experience positive affect through the pursuit and attainment of personally valued standards. In addition, prosocial behaviour may arise because a focus on personal development is thought to endorse a desire for fair play (Duda, Olsen, & Templin, 1991).

Pure evaluative concerns perfectionism is likely to engender a more negative emotional experience, antisocial behaviour, and intentions to drop out. This is because there are concerns over meeting the high standards imposed by others tied up in this subtype (Gaudreau & Thompson, 2010). Thus, sport participation may be viewed as a threatening situation in which negative evaluations will be made if the expectations of others are not met. This may then result in negative feelings toward sport participation and being anxious (see Hall et al., 1998). A desire to please and gain approval from others also suggests that an ego orientation is implicit in this subtype. Earlier in this chapter, it was demonstrated that an ego orientation is positively related to antisocial behaviour and can be negatively associated with prosocial behaviour. This is because ego oriented individuals have a desire to demonstrate superiority over others and may go to any lengths to do so (Biddle et al., 2003). Thus, the same might be expected here. Through being preoccupied with

gaining the approval of others, any satisfaction with accomplishment is also likely to be fleeting (see Appleton et al., 2009). Consequently, positive feelings are unlikely to prevail for this subtype and thoughts of dropping out may manifest.

In terms of mixed perfectionism, there is some uncertainty over how this subtype ought to relate to undesirable outcomes in youth sport. Early suppositions regarding the 2×2 model suggest that the pursuit of high personal standards could diminish some of the negative effects of high evaluative concerns (Douilliez, & Lefèvre, 2011). In accord, mixed perfectionism may afford less negative emotions, antisocial behaviour, and intentions to drop out, alongside more positive affect and prosocial behaviour, than pure evaluative concerns perfectionism. However, it is also possible that a personal adherence to high standards may not buffer any negative effects but actually serve to inform a pattern of achievement striving wherein self-worth is contingent on achievement (see Hall et al., 2014). This could have a detrimental influence on emotional experiences and morality as well as promote intentions to drop out.

3.2.1 Perfectionism subtypes and indicators of negative experiences in youth sport: A review of research

Research that has examined perfectionism in sport and the aforementioned outcomes will be summarised in this section. First, the separate and unique effects of personal standards perfectionism and evaluative concerns perfectionism will be outlined. This will be followed by research that has focused on the additive effects of sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism or the differences between perfectionism groups. Finally, research pertaining to the 2×2 model of perfectionism will be considered. In line with the previous chapter, research that has focused on athletes or dancers will form the focus of the 2×2 model summary.

In terms of the separate and unique effects of personal standards perfectionism and evaluative concerns perfectionism, negative emotional experiences (negative and positive affect and anxiety) have received the most attention. Moral behaviour and intentions to drop out have yet to be considered. The body of research on negative and positive affect has demonstrated that personal standards perfectionism

is positively and inversely related to negative affect (Ho, Appleton, Cumming, & Duda, 2015; Kaye et al., 2008; Sagar & Stoeber, 2009) and positively related to positive affect (Kaye et al., 2008; Sagar & Stoeber, 2009). When partialled from evaluative concerns perfectionism, the positive relationship between personal standards perfectionism and negative affect becomes non-significant (see Gotwals et al., 2012). In contrast, evaluative concerns perfectionism is positively related to negative affect (Ho et al., 2015; Kaye et al., 2008; Sagar & Stoeber, 2009) and inversely related to positive affect (Kaye et al., 2008). For cognitive and somatic anxiety, personal standards perfectionism is either negatively related to both components (Hamidi & Besharat, 2010) or is positively related to cognitive anxiety (Hall et al., 1998; Stoeber et al., 2007). When partialled from evaluative concerns perfectionism, this positive relationship has become negative (see Gotwals et al., 2012). Evaluative concerns perfectionism is positively related to both cognitive and somatic anxiety (Hall et al., 1998; Hamidi & Besharat, 2010; Stoeber et al., 2007). Thus, personal standards perfectionism is associated with less undesirable outcomes, particularly when partialled from evaluative concerns perfectionism. Evaluative concerns perfectionism is associated with more undesirable outcomes.

Looking to the additive effects of sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism, one study (Gotwals et al., 2010) provides some insight into the influence of subtypes of perfectionism from the 2×2 model on anxiety. Specifically, Gotwals et al. (2010) found that a combination of perfectionism dimensions similar to pure personal standards perfectionism was correlated with lower levels of concentration disruption. In addition, a combination of perfectionism dimensions similar to mixed perfectionism was correlated with higher levels of anxiety (concentration disruption, worry, and somatic anxiety). Adopting an alternative approach, a study by Koivula, Hassmén, and Fallby (2002) offers additional insight into the effects of the four subtypes of perfectionism from the 2×2 model on cognitive anxiety. Koivula et al. (2002) conducted a mean-split on sub-dimensions of personal standards perfectionism and evaluative concerns perfectionism to form different perfectionism groups. The findings demonstrated that a group similar to pure evaluative concerns perfectionism was associated with higher cognitive anxiety when compared to groups similar to non-perfectionism and

pure personal standards perfectionism. The same pattern of findings emerged for a group similar to mixed perfectionism. Pure evaluative concerns perfectionism and mixed perfectionism groups did not significantly differ in cognitive anxiety.

Two studies have specifically examined the effects of the four subtypes of perfectionism from the 2×2 model on both negative and positive affect among athletes and dancers (Crocker et al., 2014; Cumming & Duda, 2012). One study has considered positive affect only (Gaudreau & Verner-Filion, 2012). For negative affect, the pattern of findings has been consistent. That is, Crocker et al. (2014) and Cumming and Duda (2012) demonstrate inconclusive findings for non-perfectionism compared to pure personal standards perfectionism (a consistent lack of support for hypothesis 1a or 1b). Pure evaluative concerns perfectionism is associated with higher levels of negative affect compared to non-perfectionism (consistent support for hypothesis 2). The findings are inconclusive for mixed perfectionism compared to pure evaluative concerns perfectionism (a consistent lack of support for hypothesis 3). Mixed perfectionism is associated with higher levels of negative affect than pure personal standards perfectionism (consistent support for hypothesis 4). For positive affect, the findings have differed across the three studies but demonstrate that pure personal standards perfectionism is associated with higher levels of positive affect compared to non-perfectionism (some support for hypothesis 1a). Pure evaluative concerns perfectionism is associated with lower levels of positive affect compared to non-perfectionism (some support for hypothesis 2). Mixed perfectionism is associated with higher positive affect compared to pure evaluative concerns perfectionism (some support for hypothesis 3). The findings are inconclusive for mixed perfectionism compared to pure personal standards perfectionism (a consistent lack of support for hypothesis 4).

3.2.2 Rationale for this study

Based on the preceding overview, we currently have some understanding of the effects of different subtypes of perfectionism on negative emotional experiences in sport and dance. However, there are still some issues that remain. The first relates to negative and positive affect. At present, not all of the model's hypotheses have been supported across these two outcomes. In particular, the findings for negative affect have consistently demonstrated that hypothesis 1 and 3 of the 2×2 model do

not hold. The reason for this is unlikely to be developmental because research among adolescents outside of sport and dance has demonstrated the same pattern of findings (see Damian et al., 2014). One potential reason, however, could be due to the measure that has been adopted. That is, negative and positive affect have been assessed using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Diener et al. (2010) have recently suggested that the PANAS might not adequately capture the full range of emotions and feelings that individuals experience in a given context. Considering the importance of negative and positive affect for the ill-/well-being of youth sport participants and the implications of extant findings for the 2×2 model, it seems necessary to re-examine these outcomes using a scale that includes a broad range of negative and positive emotions and feelings.

The second issue relates to anxiety. That is, the study that provides the most insight into the effects of the four subtypes of perfectionism on anxiety (Koivula et al., 2002) did not employ either of the analytical approaches advocated for examining the 2×2 model (i.e., regression or cluster analysis). Thus, it remains unclear as to whether the findings of this study are constrained to the analytical approach used (mean-split). This is particularly important here because Koivula et al. (2002) demonstrated that mixed perfectionism and pure evaluative concerns perfectionism do not differ in cognitive anxiety. In context of the 2×2 model, this finding implies a lack of support for hypothesis 3. Throughout this thesis, it has been articulated that hypothesis 3 is highly contentious with researchers viewing the role of high personal standards in mixed perfectionism in opposing ways. Further, it is a lack of support for this hypothesis that often leads researchers to conclude that the 2×2 model may better account for desirable rather than undesirable outcomes. Thus, to examine the effects of the four subtypes of perfectionism on youth sport participants' anxiety using an analytical approach designed to test the 2×2 model's hypotheses would serve to contribute to this debate.

Finally, research that has examined personal standards perfectionism and evaluative concerns perfectionism separately or in combination has yet to consider moral behaviour or intentions to drop out of youth sport. This is problematic in its own right because the presence of desirable outcomes among youth sport

participants does not infer the absence of undesirable outcomes (i.e., youth sport participants might enjoy their sport but at the same time be developing antisocial behaviour). Although examining negative and positive affect and anxiety in context of the 2×2 model begins to address this issue, responses to the sport experience extend beyond emotions. Earlier in this chapter, theoretical reasons were offered for how the four subtypes from the 2×2 model ought to be associated with undesirable interpersonal outcomes such as moral behaviour as well as intentions to drop out. Thus, to examine these outcomes using the 2×2 model would help shed further light on the effects of perfectionism in terms of young people's sport experiences. There is an added benefit of being able to understand how the model functions for other types of undesirable outcomes. This is particularly important given that study one of this thesis produced an unexpected pattern of findings for an undesirable interpersonal outcome (i.e., friendship conflict).

3.3 The present study

In sum, the purpose of the current study was to provide a further test of the 2×2 model in youth sport with a particular focus on undesirable personal (negative and positive feelings, anxiety, intentions to drop out) and interpersonal (antisocial and prosocial behaviour) outcomes. This is because such undesirable outcomes serve to characterise some young people's sport experiences. There are theoretical and empirical reasons to suspect that the four subtypes of perfectionism from the 2×2 model of perfectionism would have different effects on such outcomes but research has yet to extensively examine this issue. Where studies have concerned the 2×2 model and undesirable outcomes, findings suggest that the 2×2 model may not function as expected. In accord, the study extends insight into the 2×2 model and its effects in terms of young people's sport experiences.

3.3.1 Hypotheses

In line with the tenets of the 2×2 model (Gaudreau, 2013), it was hypothesised that pure personal standards perfectionism would be associated with a less negative sport experience (i.e., lower negative feelings, anxiety, antisocial behaviour, and intentions to drop out and higher positive feelings and prosocial

behaviour) compared with non-perfectionism (hypothesis 1a). Pure evaluative concerns perfectionism would be associated with a more negative sport experience (i.e., higher negative feelings, anxiety, antisocial behaviour, and intentions to drop out and lower positive feelings and prosocial behaviour) compared to non-perfectionism (hypothesis 2). Mixed perfectionism would be associated with a less negative sport experience compared to pure evaluative concerns perfectionism (hypothesis 3) and a more negative sport experience compared to pure personal standards perfectionism (hypothesis 4).

3.4 Method

3.4.1 Participants

Following institutional ethical approval (see Appendix A), 222 young sport participants ($n = 65$ males, $n = 157$ females, M age $= 13.51$ years, $SD = 1.53$ years, range $= 11 - 18$ years) were recruited from a variety of school- and community-based sports. Participants were involved in their sports at recreational ($n = 38$), club ($n = 105$), district/county ($n = 62$), regional ($n = 11$) and national level ($n = 4$). There were two non-respondents in terms of sport participation level. On average, the sample had participated in their sport for 3.33 years ($SD = 2.42$) and trained and played for 5.09 hours per week ($SD = 5.08$). The sample reported on a nine-point Likert scale that their participation in sport was very important ($M = 7.27$, $SD = 1.64$) in comparison to the other activities in their lives (1 = *not at all important* to 9 = *extremely important*).

3.4.2 Procedure

Contact was initially made with gatekeepers (e.g., director of sport or head coach) of school- and community-based sport groups in the North of England. Through this contact, details of the study and potential involvement were discussed. For those clubs willing to be involved, an information sheet was distributed to sport participants and their parents/guardians. Parental/guardian consent and child assent was gained for those sport participants wishing to take part (see Appendix B). Participants were invited to complete a one-off multi-section questionnaire at a time convenient for the group (e.g., before or after a training session).

3.4.3 Instruments

3.4.3.1 Multidimensional perfectionism

Personal standards perfectionism and evaluative concerns perfectionism were captured using the Sport-MPS-2 (Gotwals & Dunn, 2009) and composites were formed using the same procedures outlined in chapter two.

3.4.3.2 Negative and positive feelings

Broad negative and positive affect toward sport participation were assessed using the Scale of Positive and Negative Experience (SPANE; Diener et al., 2010). The SPANE includes six items that reflect general negative feelings (e.g., bad, sad, angry) and six items that reflect general positive feelings (e.g., good, happy, joyful). The stem of the scale was amended to help participants focus their responses on sport (i.e., 'Please think about what you have been doing and experiencing in your sport during the past four weeks. Then report how much you experienced each of the following feelings'). Responses are measured on a 5-point Likert scale (1 = *very rarely or never* to 5 = *very often or always*). Diener et al. (2010) have produced supportive evidence regarding the validity and reliability of the SPANE.

3.4.3.3 Sport anxiety

The Sport Anxiety Scale-2 (SAS-2; Smith et al., 2006c) was used to measure anxiety in sport. It is designed for use with children and contains three five-item subscales that relate to concentration disruption (e.g., "It is hard for me to focus on what I am supposed to do"), worry (e.g., "I worry that I will not play well"), and somatic anxiety (e.g., "My body feels tense"). Items are preceded by the phrase 'Before or while I compete in sports'. Responses are measured on a 4-point Likert scale (1 = *not at all* to 4 = *very much*). Smith et al. (2006c) have produced supportive evidence regarding the validity and reliability of the SAS-2.

3.4.3.4 Antisocial and prosocial behaviour

Moral behaviour was assessed using the Prosocial and Antisocial Behaviour in Sport Scale (PABSS; Kavussanu & Boardley, 2009). The PABSS contains 20 items and four subscales. These capture antisocial behaviour toward teammates (5 items, e.g., 'criticized a teammate'), antisocial behaviour toward opponents (8 items, e.g.,

'tried to injure an opponent'), prosocial behaviour toward teammates (4 items; e.g., 'encouraged a teammate'), and prosocial behaviour toward opponents (3 items, e.g., 'helped an injured opponent'). Responses are measured on a 5-point Likert scale (1 = *never* to 5 = *very often*). Kavussanu, Stanger, and Boardley (2013) have provided evidence for the convergent, concurrent, and discriminant validity of the scale and for its test-retest reliability.

3.4.3.5 Intentions to drop out

Intentions to drop out were measured using four items similar to those recently employed in youth soccer (Quested et al., 2013). These four items were initially based on items used by Sarrazin et al. (2002). Two items were designed to elicit participants' intentions to drop out of their sport (e.g., "I am thinking of quitting my sport"). Two items were designed to elicit participants' intentions to continue with their sport (e.g., "I plan to play my sport next season"). Items are measured on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree).* An overall intention to drop out score is obtained by reverse coding the intentions to continue items and combining these with the intentions to drop out items. All instruments used in this study are displayed in Appendix C.

3.5 Results

3.5.1 Preliminary analysis

A missing value analysis indicated that there were 148 complete cases and 74 incomplete cases. Adhering to the recommendations of Tabachnick and Fidell (2007), participants with item non-response exceeding 5% were removed ($n = 14$). Item non-response ranged from 1 to 4 items ($M = 1.57$, $SD = .91$) for the remaining participants with missing data ($n = 60$). Assessment of the missing data patterns relative to the number of participants with missing data revealed a high ratio of .78. As such, the missing data was considered missing in a non-systematic manner and missing values were replaced using the mean of the non-missing items from the subscale in each individual case (see Graham et al., 2003).

Assessment of univariate and multivariate normality revealed nine univariate outliers (standardized z-scores larger than 3.29, $p < .001$, two-tailed). There were

three multivariate outliers (Mahalanobis distance: $\chi^2_{(12)} = 32.91$, $p < .001$). In accordance with Tabachnick and Fidell (2007), all univariate and multivariate outliers were removed. The sample for the main analysis comprised 196 participants ($n = 52$ males, $n = 144$ females, M age = 13.42 years, SD = 1.52 years, range = 11 – 18 years). To examine if there were any differences between genders and ages (early adolescence, 11 to 14 years and late adolescence, 15 to 18 years) for this sample, two separate Box's M tests were conducted. The covariance matrix was homogenous across gender, Box's M (78, 31395.22) = 134.10 (p = .001) and age, Box's M (78, 28540.04) = 131.12 (p > .001) and so the remaining analyses were conducted without controlling for either gender or age. Internal reliability was adequate for all subscales (see Table 3.1).

3.5.2 Descriptive statistics and bivariate correlation coefficients

Descriptive statistics for all predictor and criterion variables are displayed in Table 3.1. Bivariate correlation coefficients demonstrated that personal standards perfectionism had small positive associations with worry and somatic anxiety. It had medium positive associations with negative feelings, antisocial behaviour toward teammates, and antisocial behaviour toward opponents. It also had a small negative association with intentions to drop out. Personal standards perfectionism was unrelated to concentration disruption, positive feelings, prosocial behaviour toward teammates, and prosocial behaviour toward opponents. Evaluative concerns perfectionism had small positive correlations with concentration disruption and antisocial behaviour toward teammates. It had medium positive associations with negative feelings, worry, somatic anxiety, and antisocial behaviour toward opponents. It also had a small negative association with positive feelings. Evaluative concerns perfectionism was unrelated to prosocial behaviour toward teammates, prosocial behaviour toward opponents, and intentions to drop out.

Table 3.1 Descriptive statistics and bivariate correlation coefficients between variables ($n = 196$)

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. PSP	2.88	.86	.87											
2. ECP	4.98	1.48	.65**	.89										
3. NEG	2.05	.66	.35**	.48**	.75									
4. POS	3.83	.58	.09	-.28**	-.42**	.73								
5. DIS	1.52	.50	-.06	.28**	.29**	-.26**	.80							
6. WOR	2.69	.79	.18**	.33**	.27**	-.23**	.26**	.89						
7. SOM	1.80	.65	.21**	.34**	.24**	-.14	.40**	.50**	.83					
8. ABT	1.69	.75	.31**	.23**	.20**	.01	-.03	-.13	.01	.84				
9. ABO	1.51	.77	.42**	.35**	.20**	-.07	-.01	-.13	.11	.69**	.91			
10. PBT	4.31	.64	.04	-.05	.04	.19**	-.08	.13	.15*	-.08	-.03	.77		
11. PBO	3.27	1.00	.02	.11	.10	-.01	.14*	.02	.16*	-.04	.01	.37**	.81	
12. DROP[a]	1.35	.57	-.16*	.12	.09	-.30**	.39**	.10	.15*	.11	.11	-.21**	.05	.77

Note. $*p < .05$; $**p < .01$; internal reliability alpha coefficients are shown on the diagonal; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; NEG = negative feelings; POS = positive feelings; DIS = concentration disruption; WOR = worry; SOM = somatic anxiety; ABT = antisocial behaviour toward teammates; ABO = antisocial behaviours toward opponents; PBT = prosocial behaviours toward teammates; PBO = prosocial behaviours toward opponents; DROP = intentions to drop out; [a] There was one less respondent for intentions to drop out ($n = 195$); values presented for personal standards perfectionism and evaluative concerns perfectionism are derived from raw scores.

3.5.3 Test of the hypotheses of the 2 × 2 model of perfectionism

As with the previous test of the 2 × 2 model in this thesis, a hierarchical regression analysis was conducted for each of the criterion variables based on Gaudreau and colleagues' (Gaudreau, 2012; Gaudreau & Thompson, 2010) guidelines. Personal standards perfectionism and evaluative concerns perfectionism were entered in the first step (main effects model). In the second step, the interactive term (i.e., the product of personal standards perfectionism and evaluative concerns perfectionism) was entered (interaction effect model). Table 3.2 displays the results of the main analysis. Where a non-significant interaction effect was identified, the heuristic provided by Gaudreau (2012) was used to interpret main effects in terms of the model's hypotheses. Where a significant interaction effect was identified, simple slopes and predicted values were created based on equations outlined in Aiken and West (1991) and Cohen et al. (2003). These were used to examine the hypotheses from the 2 × 2 model. Predicted values for criterion variables across the four subtypes of perfectionism are displayed in Table 3.3. Predicted values were calculated for significant main or interaction effect models only. Standardised effect sizes for the difference between pairs of subtypes of perfectionism can be found in Table 3.4.

Table 3.2 Main and interaction effect models for each criterion variable ($n = 196$)

	F	df	R^2	ΔR^2	PSP	ECP	PSP $\times$ ECP
					β / B (t)		
Negative feelings (main effect model)							
Step 1	28.63**	(2, 193)	.23		.07 / .04 (.81)	.43** / .16 (5.19)	
Positive feelings (main effect model)							
Step 1	24.28**	(2, 193)	.20		.46**/ .27 (5.46)	-.58** / -.19 (-6.84)	
Concentration disruption (interaction effects model)							
Step 1	21.10**	(2, 193)	.18		-.42** / -.21 (-4.85)	.55** / .16 (6.44)	
Step 2	16.19**	(3, 192)	.20	.02*	-.45** / -.22 (-5.19)	.57** / .16 (6.67)	-.15* / -.04 (-2.32)
Worry (main effect model)							
Step 1	11.61**	(2, 193)	.11		-.05 / -.04 (-.54)	.36** / .16 (3.99)	
Somatic anxiety (main effect model)							
Step 1	12.94**	(2, 193)	.12		-.03 / -.02 (-.35)	.36** / .13 (4.09)	
Antisocial behaviour toward teammates (interaction effects model)							
Step 1	10.54**	(2, 193)	.10		.29** / .22 (3.20)	.04 / .02 (.43)	
Step 2	8.91**	(3, 192)	.12	.02*	.32** / .24 (3.53)	.02 / .01 (.25)	.16* / .07 (2.28)
Antisocial behaviour toward opponents (interaction effects model)							
Step 1	21.84**	(2, 193)	.19		.33** / .25 (3.83)	.14 / .06 (1.60)	
Step 2	18.26**	(3, 192)	.22	.04**	.37** / .28 (4.32)	.12 / .05 (1.40)	.20** / .08 (3.04)
Prosocial behaviour toward teammates (interaction effects model)							
Step 1	1.78	(2, 193)	.01		.13 / .08 (1.36)	-.13 / -.05 (-1.43)	
Step 2	3.21*	(3, 192)	.05	.04**	.16 / .10 (1.76)	-.15 / -.06 (-1.66)	.19** / .07 (2.69)
Prosocial behaviour toward opponents (main effect model)							

| Step 1 | 1.58 | (2, 193) | .02 | -.09 / -.09 (-.99) | .17 / .09 (1.77) |

Intentions to drop out (main effect model)

| Step 1 | 11.88** | (2, 192)[a] | .11 | -.41** / -.23 (-4.56) | .38** / .12 (4.27) |

Note. *$p < .05$; **$p < .01$; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism. [a] There was one less respondent for intentions to drop out. Any discrepancy between R-squared and R-squared change values reflects rounding to 2 decimal places.

3.5.3.1 Negative and positive feelings

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of negative feelings (B = .03, β = .09, t = 1.45, p = .15) or positive feelings (B = -.01, β = -.03, t = -.39, p = .70) toward sport participation. The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in negative and positive feelings toward sport participation. For negative feelings, personal standards perfectionism was a non-significant predictor. Evaluative concerns perfectionism was a significant positive predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 2 and 4 but not for 1a, 1b, or hypothesis 3. For positive feelings, personal standards perfectionism was a significant positive predictor. Evaluative concerns perfectionism was a significant negative predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a, 2, 3, and 4.

3.5.3.2 Sport anxiety

Subscales of the sport anxiety measure were analysed separately. In the interaction effect model, the interactive term was a significant predictor of concentration disruption. Simple slopes analysis (see Figure 3.1) demonstrated that the first simple slope of personal standards perfectionism at low evaluative concerns perfectionism (−1 SD) was significant (B = -.15, β = -.30, 95% CI = -.25 to -.05, p < .05). This provided support for hypothesis 1a. The second simple slope of personal standards perfectionism at high evaluative concerns perfectionism (+1 SD) was significant (B = -.30, β = -.59, CI = -.41 to -.18, p < .05). This provided support for hypothesis 3. The third simple slope of evaluative concerns perfectionism at low personal standards perfectionism (-1 SD) was significant (B = .20, β = .72, 95% CI = .14 to .26, p < .05). This provided support for hypothesis 2. The fourth simple slope of evaluative concerns perfectionism at high personal standards perfectionism (+1 SD) was significant (B = .12, β = .42, 95% CI = .06 to .18, p < .05). This provided support for hypothesis 4.

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of worry (B = -.02, β = -.05, t = -.77, p = .44) or somatic anxiety (B = -.03, β = -.08,

$t = -1.19$, $p = .23$). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in worry and somatic anxiety. For both worry and somatic anxiety, personal standards perfectionism was a non-significant predictor. Evaluative concerns perfectionism was a significant positive predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 2 and 4 but not 1a, 1b, or 3.

3.5.3.3 Antisocial and prosocial behaviour

In the interaction effect model, the interactive term was a significant predictor of antisocial behaviour toward teammates and antisocial behaviour toward opponents. Simple slopes analysis (see Figure 3.1) demonstrated that the first simple slope of personal standards perfectionism at low evaluative concerns perfectionism (-1 SD) was non-significant for antisocial behaviour toward teammates (B = .12, β = .16, 95% CI = -.03 to .28, p = .12) and antisocial behaviour toward opponents (B = .13, β = .17, 95% CI = -.02 to .28, p = .08). This provided a lack of support for hypothesis 1a or 1b. The second simple slope of personal standards perfectionism at high evaluative concerns perfectionism (+1 SD) was significant for antisocial behaviour toward teammates (B = .36, β = .47, CI = .18 to .53, $p < .05$) and antisocial behaviour toward opponents (B = .43, β = .56, CI = .26 to .61, $p < .05$). This provided support for hypothesis 3 but not in the anticipated direction. The third simple slope of evaluative concerns perfectionism at low personal standards perfectionism (-1 SD) was non-significant for antisocial behaviour toward teammates (B = -.06, β = -.13, 95% CI = -.15 to .04, p = .26) and antisocial behaviour toward opponents (B = -.03, β = -.08, 95% CI = -.13 to .06, p = .49). This provided a lack of support for hypothesis 2. The fourth simple slope of evaluative concerns perfectionism at high personal standards perfectionism (+1 SD) was non-significant for antisocial behaviour toward teammates (B = .08, β = .18, 95% CI = -.02 to .17, p = .10) but significant for antisocial behaviour toward opponents (B = .14, β = .31, 95% CI = .05 to .22, $p < .05$). This provided a lack of support and support for hypothesis 4, respectively.

In terms of prosocial behaviours, the interactive term was a significant predictor of prosocial behaviour toward teammates but not prosocial behaviour toward opponents (B = .05, β = .09, t = 1.24, p = .22). For prosocial behaviour

toward teammates, simple slopes analysis (see Figure 3.1) demonstrated that the first simple slope of personal standards perfectionism at low evaluative concerns perfectionism (−1 SD) was non-significant (B = -.02, β = -.02, 95% CI = -.15 to .12, p = .82). This provided a lack of support for hypothesis 1a or 1b. The second simple slope of personal standards perfectionism at high evaluative concerns perfectionism (+1 SD) was significant (B = .22, β = .35, CI = .07 to .38, p < .05). This provided support for hypothesis 3. The third simple slope of evaluative concerns perfectionism at low personal standards perfectionism (-1 SD) was significant (B = -.12, β = -.34, 95% CI = -.21 to -.04, p < .05). This provided support for hypothesis 2. The fourth simple slope of evaluative concerns perfectionism at high personal standards perfectionism (+1 SD) was non-significant (B = .01, β = .03, 95% CI = -.07 to .09, p = .76). This provided a lack of support for hypothesis 4. The main effect model did not account for a significant proportion of the variance in prosocial behaviour toward opponents. This model was not further interpreted.

3.5.3.4 Intentions to drop out

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of intentions to drop out (B = -.03, β = -.10, t = -1.42, p = .16). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in intentions to drop out. Personal standards perfectionism was a significant negative predictor. Evaluative concerns perfectionism was a significant positive predictor. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a, 2, 3, and 4.

Table 3.3 Predicted values for criterion variables across the four subtypes of
perfectionism

Criterion variable	Non-perfectionism	Pure PSP	Pure ECP	Mixed perfectionism
NEG	1.72	1.81	2.29	2.38
POS	3.90	4.43	3.23	3.77
DIS	1.43	1.13	2.14	1.55
WOR	2.45	2.37	3.01	2.94
SOM	1.59	1.55	2.06	2.02
ABT	1.48	1.73	1.28	1.99
ABO	1.19	1.46	1.07	1.94
PBT	4.34	4.31	3.91	4.36
DROP	1.37	.90	1.80	1.34

Note. Pure PSP = pure personal standards perfectionism; Pure ECP = pure
evaluative concerns perfectionism; NEG = negative feelings; POS = positive
feelings; DIS = concentration disruption; WOR = worry; SOM = somatic anxiety;
ABT = antisocial behaviour toward teammates; ABO = antisocial behaviour toward
opponents; PBT = prosocial behaviour toward teammates; DROP = intentions to
drop out.

Table 3.4 Standardised effect sizes (Cohen's *d*) for paired contrasts between the
four subtypes of perfectionism

Criterion variable	Pure PSP vs. Non-perfectionism	Pure ECP vs. Non-perfectionism	Pure ECP vs. Mixed perfectionism	Pure PSP vs. Mixed perfectionism
NEG	0.13	0.86	-0.14	-0.86
POS	0.92	-1.15	-0.92	1.15
DIS	-0.59	1.43	1.19	-0.84
WOR	-0.10	0.71	0.10	-0.71
SOM	-0.06	0.73	0.06	-0.73
ABT	0.33	-0.27	-0.95	-0.35
ABO	0.35	-0.16	-1.13	-0.62
PBT	-0.05	-0.67	-0.70	-0.08
DROP	-0.82	0.76	0.82	-0.76

Note. Pure PSP = pure personal standards perfectionism; Pure ECP = pure
evaluative concerns perfectionism; NEG = negative feelings; POS = positive
feelings; DIS = concentration disruption; WOR = worry; SOM = somatic anxiety;
ABT = antisocial behaviour toward teammates; ABO = antisocial behaviour toward
opponents; PBT = prosocial behaviour toward teammates; DROP = intentions to
drop out. Effect sizes = .2 (small), .5 (medium), .8 (large) (Cohen, 1988).

Figure 3.1 Simple slopes of the relationship between evaluative concerns perfectionism and the criterion variable at low (-1SD) and high (+1SD) personal standards perfectionism.
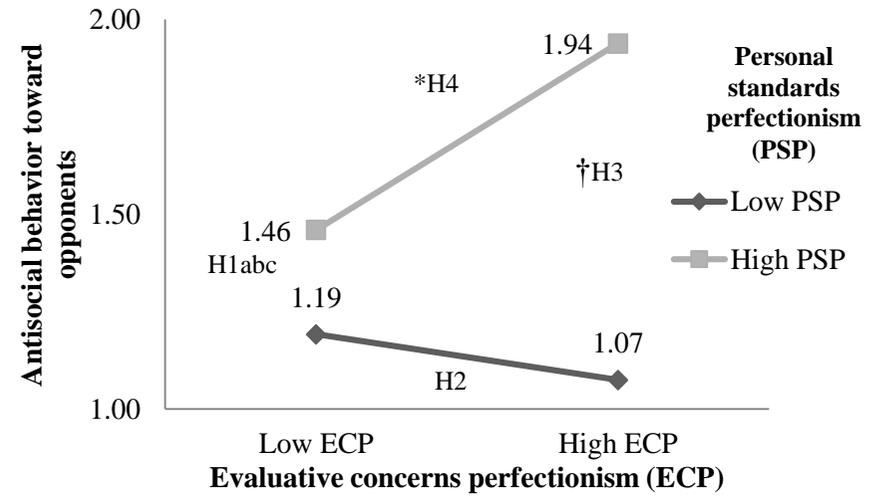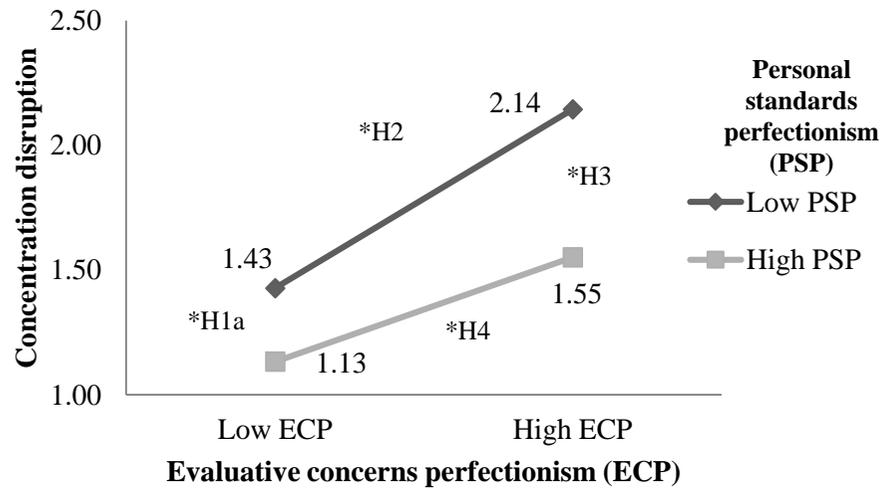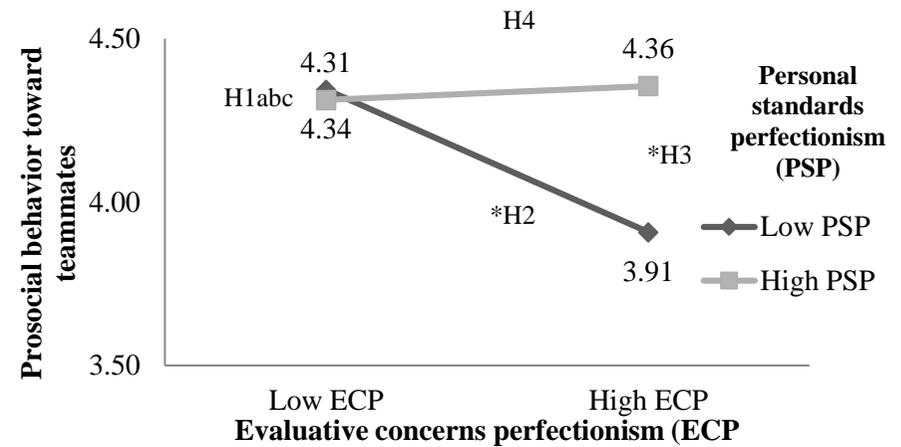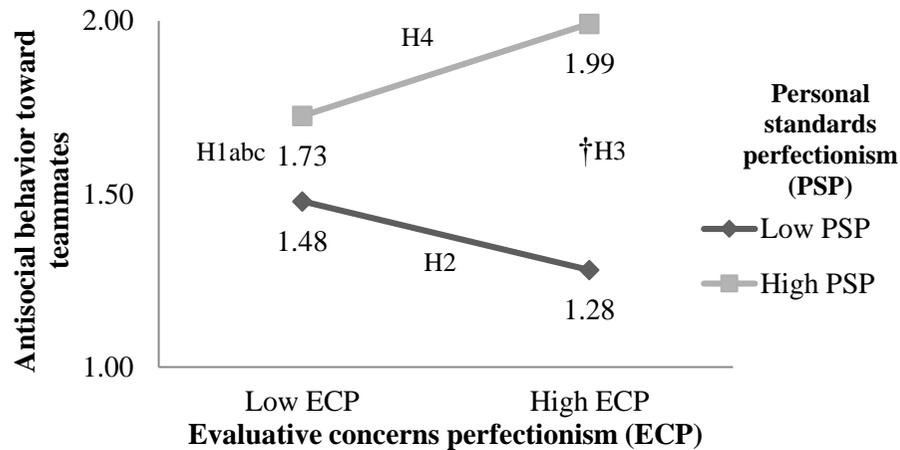
Note. H1abc represents a non-significant difference between pure personal standards perfectionism and non-perfectionism, $p > .05$ and *H1a represents a significant difference between these two subtypes in the expected direction $p < .05$; H2 represents a non-significant difference between pure evaluative concerns perfectionism and non-perfectionism $p > .05$ and *H2 represents a significant difference between these two subtypes in the expected direction, $p < .05$; H3 represents a non-significant difference between mixed perfectionism and pure evaluative concerns perfectionism, *H3 represents a significant difference between these two subtypes in the expected direction $p < .05$, †H3 represents a significant difference between these two subtypes in an unexpected direction $p < .05$; H4 represents a non-significant difference between mixed perfectionism and pure personal standards perfectionism, $p > .05$ and *H4 represents a significant difference between these two subtypes in the expected direction $p < .05$.

3.6 Discussion

The current study examined the effects of the four subtypes of perfectionism from the 2×2 model of perfectionism on young people's sport experiences with emphasis placed on undesirable personal (negative and positive feelings, anxiety, and intentions to drop out) and interpersonal (antisocial and prosocial behaviour) outcomes. Through an examination of such outcomes, the study builds directly on study one of this thesis and contributes to research concerned with how the 2×2 model functions across undesirable (and desirable) outcomes (e.g., Damian et al., 2014). Main and interaction effects indicated that pure personal standards perfectionism was associated with the least negative sport experience as some support was evident for hypothesis 1a (positive feelings, concentration disruption, and intentions to drop out). Pure evaluative concerns perfectionism was associated with a more negative sport experience when compared with non-perfectionism as hypothesis 2 was supported across outcomes, except antisocial behaviours. When pure evaluative concerns perfectionism was compared with mixed perfectionism the experiences of sport participants were ambivalent with some support (positive feelings, concentration disruption, prosocial behaviour, and intentions to drop out), a lack of support (negative feelings, worry, and somatic anxiety), and some contradictory evidence (antisocial behaviour) demonstrated for hypothesis 3. Mixed perfectionism was associated with a more negative sport experience when compared with pure personal standards perfectionism as hypothesis 4 was supported across outcomes, except antisocial and prosocial behaviour toward teammates.

3.6.1 Perfectionism subtypes and indicators of negative experiences in youth sport

As predicted, individuals high in personal standards and low in concerns were able to experience positive feelings, maintain focus in their sport, and were not planning to drop out. This was evident through higher levels of positive feelings and lower levels of concentration disruption and intentions to drop out for pure personal standards perfectionism compared to non-perfectionism. Taken in context of previous research, this corroborates the findings of study one of this thesis (and research more broadly) that indicates pure personal standards perfectionism is

associated with more positive emotional experiences. It also supports previous findings that any beneficial effect of having high personal standards may only extend to the concentration disruption component of anxiety (Gotwals et al., 2010). This is the first study to demonstrate that this subtype of perfectionism is associated with lower intentions to drop out of youth sport.

Although some anticipated findings for the comparison of pure personal standards perfectionism and non-perfectionism emerged, inconclusive findings were most prevalent for this contrast. That is, pure personal standards perfectionism conferred no psychological or behavioural 'rewards' for the remainder of the outcomes examined (i.e., negative feelings, worry, somatic anxiety, antisocial behaviour, and prosocial behaviour). This was not necessarily anticipated but corresponds with extant research that has examined the 2×2 model and negative affect in sport, dance, and among adolescents (Crocker et al., 2014; Cumming & Duda, 2012; Damian et al., 2014). Further, it contributes to research that suggests having high personal standards is largely unproblematic (neither enhancing nor undermining) for worry and somatic anxiety in intercollegiate athletes (Gotwals et al., 2010) and that pursuing personal standards alone does not interfere with the quality of social interactions among teammates in youth sport (Ommundsen et al., 2005). Overall, the findings indicate that the 2×2 model may function differently for undesirable outcomes and this subtype, particularly compared to desirable personal outcomes. The suggestion that pure personal standards perfectionism may neither increase nor decrease undesirable outcomes compared to non-perfectionism, appears to be supported (see Gaudreau & Thompson, 2010).

When compared to non-perfectionism, pure evaluative concerns perfectionism was associated with the most negative sport experience. It involved an emotional experience indicative of ill-being (higher negative affect and lower positive affect), anxiety, less prosocial functioning and greater intentions to drop out. This was to be expected and contributes to the wealth of research documenting the debilitating nature of being overly concerned with the expectations of others and fearing the consequences of failure for affect, anxiety, and other undesirable outcomes (e.g., Damian et al., 2012; Hill, 2013; Koivula et al., 2002). Further, the findings suggest that the 2×2 model is useful for understanding negative experiences and outcomes in youth sport. In this vein, the findings lend support to Gaudreau's (2013) assertion

that pure evaluative concerns perfectionism and non-perfectionism ought to be differentiated. This differentiation is not evident in alternate models of perfectionism (e.g., the tripartite model; see Stoeber & Otto, 2006).

The overall debilitating nature of pure evaluative concerns perfectionism was not unanimously supported, however. In fact, inconclusive findings (negative feelings, worry, and somatic anxiety) and contradictory findings (antisocial behaviour) emerged for pure evaluative concerns perfectionism compared to mixed perfectionism. In terms of the inconclusive findings, this again corroborates previous research inside and outside of sport for affect and anxiety (e.g., Crocker et al., 2014; Damian et al., 2014; Koivula et al., 2002). Of especial note, the contradictory findings suggest that striving to reach high personal standards accompanied by evaluative concerns may drive individuals to engage in more antisocial behaviour toward their teammates and opponents. This is only the second study to demonstrate contradictory findings for this contrast (see Hill & Davis, 2014). Such contradictory findings lend direct support for the side of current debate that suggests high personal standards may not always mitigate the negative effects of the critical evaluative processes involved in evaluative concerns perfectionism (e.g., Damian et al., 2014; Hill, 2013).

Finally, mixed perfectionism was associated with a more negative sport experience than non-perfectionism. The only exceptions to this were for antisocial and prosocial behaviour toward teammates. The findings support extant research regarding affect outside of sport and dance (e.g., Damian et al., 2014; Gaudreau & Thompson, 2010) but this is the first study to demonstrate such an effect in sport. The findings also support research that indicates mixed perfectionism is more problematic in terms of all components of anxiety than pure personal standards perfectionism (Gotwals et al., 2010). The overall suggestion here is that relative to adaptive forms of achievement striving, which pure personal standards perfectionism may reflect, mixed perfectionism appears to have some comparative costs. This lends further credence to the argument that perfectionism, as traditionally described, could bring about personal and interpersonal difficulties in sport (see Hall et al., 2012). The findings also go to demonstrate that striving for high personal standards is largely unproblematic among youth sport participants and pure personal standards perfectionism is again the most adaptive subtype.

3.7 Conclusion

The findings of this study demonstrate that subtypes of perfectionism from the 2×2 model of perfectionism are differentially related to indicators of the quality of young people's sport experiences. The manner in which they differ seems to be contingent on whether desirable or undesirable outcomes are examined and the outcome is personal or interpersonal in orientation. In particular, the proposed protective effect of high personal standards on high evaluative concerns in mixed perfectionism does not appear to extend to undesirable interpersonal outcomes. In this case, having high personal standards appears to exacerbate the issue. To understand the reasons for this, the meaning of sport for each of the subtypes of perfectionism may need to be examined. Having high personal standards alone or pure evaluative concerns alone contributes to less and more negative sport experiences, respectively.

Chapter 4 – A qualitative exploration of the 2×2 model of perfectionism and experiences in youth sport

The findings of studies one and two of this thesis suggested that the 2×2 model of perfectionism is a useful framework for understanding young people's sport experiences. That is, subtypes of perfectionism from the 2×2 model were predictive of indicators of positive and negative experiences in youth sport. This was in a manner that supported the model's hypotheses to differing degrees. In accord, the findings of these two studies corroborated findings of extant research testing the 2×2 model in other domains. One feature of studies one and two, that is common to all studies that have tested the 2×2 model so far, is that they relied on quantitative research methods to examine the effects of different subtypes of perfectionism and the model's hypotheses. In this chapter, it is reasoned that qualitative research methods would help broaden understanding in this area. More specifically, the purpose of study three was to explore the experiences of youth sport participants deemed prototypical of the four subtypes of perfectionism using qualitative research methods. The benefits and drawbacks of quantitative research methods and the need for qualitative research methods to understand perfectionism are first addressed. This is followed by a review of perfectionism research that has adopted qualitative methods outside and inside of the sport domain. A rationale regarding the use of qualitative research methods with respect to the 2×2 model and young people's sport experiences is then provided. This chapter concludes with a study employing both quantitative and qualitative research methods to explore young people's sport experiences in context of the 2×2 model.

4.1 A call for qualitative perfectionism research

Research that has examined the 2×2 model of perfectionism to date has exclusively used quantitative methods (e.g., instrument-based questionnaires; Crocker et al., 2014; Mallinson et al., 2014; Quested et al., 2014). The use of quantitative methods has been beneficial for a number of reasons. In particular, quantitative research methods allow for large amounts of numerical data on a phenomenon to be collected in a more objective (free from the bias of the

researcher), valid (accurate reflection of the phenomenon of interest), and reliable (reproducible) manner (Creswell, 2009). In accord, data arising from quantitative research methods can be used to corroborate (or contradict) theories about how and why phenomena occur (Johnson & Christensen, 2004). Statistically analysing data and testing hypotheses are the means through which theories can be falsified. In terms of the 2×2 model, then, quantitative research methods have enabled its tenets and hypotheses to be probed in a way that they can be supported (or refuted) with some degree of certainty. What is known from this research is that the model can provide useful insights into the experiences of a range of populations, including youth sport participants.

Although the benefits of using quantitative research methods to examine the 2×2 model are clear, to restrict our understanding to such methods might be problematic. For instance, quantitative research methods can be too mechanistic and reductive when attempting to understand the thoughts, feelings, and behaviours of individuals (Cohen, Manion, & Morrison, 2007). This is because quantitative research methods produce narrow data that is often constrained by the instrument, theoretical perspective, and/or analytical strategy employed (Cohen et al., 2007). Other important information, including the social context and underlying reasons and motives for individuals' thoughts and actions may also be underrepresented or even missed. Thus, by relying on quantitative methods to understand the 2×2 model, an artificial, static, and limited view of individuals' experiences may have been produced.

One fruitful alternative to quantitative approaches would be to adopt qualitative research methods (e.g., focus groups, interviews, and case studies) to gain a greater understanding of the lived experiences of individuals (Guest, Namey, & Mitchell, 2012). In particular, in qualitative research, emphasis is placed on discovering the personal meaning that individuals attach to their actions. Further, the interpretations that individuals make and perceptions held in relation to phenomena can be uncovered (Johnson & Christensen, 2004). The data that emerges through the use of qualitative research methods is often unconstrained by theory and also takes into account the social context. Consequently, qualitative research methods can inform us of a broader perspective on how and why phenomena occur and may offer a more meaningful and dynamic view (Guest et al., 2012). In light of these benefits,

qualitative research methods will be adopted here and for the first time in research examining the 2×2 model.

4.2 A review of qualitative perfectionism research

Over the past 20 years, a small (but growing) number of studies have employed qualitative research methods to study perfectionism. The following section will focus on three key areas of this body of research. First, it will address research in non-clinical settings that laid the foundations for using qualitative methods to understand perfectionism. Second, research adopting qualitative methods to explore perfectionism among gifted students will be reviewed because education is an achievement domain similar to sport and gifted students may display similar perfectionistic tendencies to sport participants (Wang, Fu, & Rice, 2012). Finally, research adopting qualitative methods to broaden insight into perfectionism among sport performers will be discussed.

4.2.1 Qualitative perfectionism research in non-clinical settings

The earliest qualitative perfectionism study was conducted by Slaney and Ashby (1996) in a non-clinical setting outside of sport. The aim was to understand perfectionism in a manner unconstrained by the maladaptive definitions and models of perfectionism proposed by clinicians and theorists at the time (e.g., Hewitt & Flett, 1991). Slaney and Ashby (1996) interviewed 21 female and 16 male students who self-identified as perfectionists or were referred as perfectionists by someone well-known to them. Through categorisation of responses, it emerged that most of the participants agreed they were perfectionistic in some domain and significant others regarded them in this manner. Participants identified having high standards of achievement and performance as the main defining feature of perfectionism and a sense of order was important. Procrastination also emerged as a feature of perfectionism but not for all of the participants. The origins of perfectionism seemed to stem from different sources (e.g., relatives and themselves) and their motives for the pursuit of perfection were either internal (e.g., feeling good) or external (e.g., receiving praise). Being perfectionistic was particularly problematic in terms of the academic and work aspects of participants' lives and for female participants, problems extended to interpersonal relationships. In addition, there appeared to be a discrepancy between participants feeling positive about their perfectionism but also

experiencing heightened distress. In spite of their distress, none of the participants wanted to give up their perfectionism. Through adopting a qualitative method, then, it became apparent that perfectionism may involve some adaptive qualities not outlined in extant models and a broader understanding of perfectionistic individuals emerged.

Building on the previous study, Slaney, Chadha, Mobley, and Kennedy (2000) sought to use a qualitative method to explore the features and meaning of the perfectionism construct cross-culturally. To do so, they adopted Slaney and Ashby's (1996) self-selected sampling approach and interviewed a small number of Asian Indian students and faculty (three males and two females) from a University in Delhi. The questioning route from Slaney and Ashby's (1996) study was used. Summaries of participant responses revealed that they generally considered themselves to be perfectionists and it was often intimated by other people. There were other consistencies with Slaney and Ashby's (1996) findings, including high standards being considered a central feature of perfectionism and a need for order being important. Further, perfectionism mainly affected the professional and academic aspects of participants' lives. Participants also viewed perfectionism positively and negatively, with some of the distress associated with perfectionism seemingly attributable to a mismatch between high standards and their perceived ability to meet such standards. The main differences that emerged between the 1996 and 2000 study were related to greater disparity in the sources underpinning the development of perfectionism and a lack of reported procrastination.

With Slaney and colleagues (1996, 2000) demonstrating the importance of understanding perfectionism from a perfectionist's viewpoint, Rice, Bair, Castro, Cohen, and Hood (2003) sought to extend this line of enquiry. Specifically, Rice et al. (2003) aimed to elicit the meaning of perfectionism across different types of perfectionists using quantitative and qualitative research methods. Initially, 30 male and 109 female students completed a multidimensional measure of perfectionism (F-MPS). In line with Parker (1997), F-MPS scores were cluster analysed and then prototypical adaptive perfectionists (personal standards perfectionism scores above the top one-third of the distribution and evaluative concerns perfectionism scores below the bottom one-third of the distribution), maladaptive perfectionists (personal standards perfectionism and evaluative concerns perfectionism scores above the top

one-third of the distribution), and non-perfectionists (personal standards perfectionism and evaluative concerns perfectionism scores in the middle one-third of the distribution) were identified. In total, two adaptive, four maladaptive, and three non-perfectionists were interviewed. Through qualitative data analysis, seven themes emerged. Across the different perfectionists, the most common theme was distress (i.e., never feeling satisfied with accomplishments, not knowing when enough had been done, and having interpersonal problems). The remaining six themes (desire to perform well, achievement/recognition, industriousness, distorted thought processes, obsessive-compulsive characteristics, and treatment considerations) were apparent to varying degrees. The overall meaning of perfectionism encompassed distress and emphasised the desire to perform well. By combining quantitative and qualitative research methods, the study overcame the participant self-selection bias associated with Slaney and colleagues' studies (1996, 2000) and further developed our understanding of perfectionism and the experiences of perfectionists.

4.2.2 Qualitative perfectionism research with gifted students

Alongside the aforementioned studies, qualitative studies also began to emerge in relation to perfectionism and gifted students. While Speirs Neumeister has arguably become the main proponent in this domain, a study by Schuler (2000) predates her work. Similar to Rice et al. (2003), Schuler (2000) used quantitative and qualitative methods to explore gifted adolescents' perceptions of perfectionism. First, 112 gifted school pupils at a rural school completed a modified version of the F-MPS and scores were cluster analysed. Twelve individuals from the 'normal' perfectionist (moderate personal standards perfectionism and low evaluative concerns perfectionism) and eight individuals from the 'neurotic' perfectionist (high personal standards perfectionism and high evaluative concerns perfectionism) clusters were interviewed. Qualitative data analysis revealed the theme of order and organisation for normal perfectionists, and concern over mistakes for neurotic perfectionists. Order and organisation emphasised normal perfectionists' need to be organised in order to achieve their personal best. Further, it took into account the supportive influence of parents, teachers, and peers in terms of doing one's best and the personal effort that normal perfectionists put forth to achieve as well as to rectify mistakes. By contrast, concern over mistakes comprised neurotic perfectionists'

need to be perfect and not mess up so as to gain approval and avoid disapproval from others. Here, parents, teachers, and peers were thought to contribute to neurotic perfectionists' heightened state of anxiety through unrealistic expectations and harsh critical evaluation. Related to this were the doubts that neurotic perfectionists had about whether their actions were good enough to meet self and socially-imposed expectations and a tendency to use maladaptive coping strategies (e.g., rumination, procrastination, and overworking).

In a larger study, Speirs Neumeister (2004a, 2004b, and 2004c) extended insight into perfectionism among gifted students. Again, participants were quantitatively identified for interviews but not through cluster analysis. Instead, 290 first year undergraduate honour students completed the H-MPS and six individuals high in personal standards perfectionism (a score of at least one standard deviation above the mean for self-oriented perfectionism only) and six individuals high in evaluative concerns perfectionism (a score of at least one standard deviation above the mean for socially prescribed perfectionism only) were selected. Inductive data analysis suggested that the development of perfectionism, achievement motivation, and interpretations of success and failure differed across the two groups. For individuals high in personal standards perfectionism, their perfectionism stemmed from early academic success, a lack of challenge/failure, modelling parents' perfectionistic tendencies, and receiving encouragement/support. A need for achievement motive underpinned their achievement goals and behaviours. Further, they attributed success and failure in an adaptive manner and would work harder in response to mistakes. For individuals high in evaluative concerns perfectionism, early academic success, perceptions of stringent expectations from others to achieve, and a fear of the consequences of not meeting such expectations contributed to the development of their perfectionism. Self-worth appeared contingent on achievement and avoiding disappointing others and a fear of failure motive underpinned their achievement goals and behaviours. Success and failure were attributed in a more maladaptive manner and they would employ maladaptive strategies such as procrastination.

In a final large study, Speirs Neumeister, Williams, and Cross (2007, 2009) used interviews to further explore the role of the social-environment in perfectionism and its development. Adopting the same protocol as Speirs

Neumeister (2004a, 2004b, and 2004c), 293 gifted high school students completed the H-MPS and scores were quantitatively screened for high self-oriented perfectionism, socially prescribed perfectionism, and/or other-oriented perfectionism. The final sample comprised 15 gifted students with high levels of one or more of the three dimensions of perfectionism. Interview data across these students indicated that perfectionistic tendencies could be exacerbated or attenuated dependent upon the cues emphasised in the social-environment. For example, observing the perfectionistic behaviours of peers in an academy setting led to increased perfectionism among those high in socially prescribed perfectionism. It also emerged that perfectionism may stem from a lack of challenge in early academic years, modelling parental perfectionism, and a need for parental approval or to avoid negative consequences (e.g., parental criticism). Collectively, the preceding series of studies with gifted students again demonstrates that qualitative research methods can provide useful insights into the perfectionism construct. In addition, these studies highlight that qualitative approaches can be beneficial for understanding the experiences associated with perfectionism among young people.

4.2.3 Qualitative perfectionism research in sport

Given the wide ranging benefits of adopting qualitative research methods to understand perfectionism in different populations, it is surprising that perfectionism researchers in sport have only recently adopted this approach. To date, two studies have used qualitative methods in regard to perfectionism in sport. The first study was conducted by Gotwals and Spencer-Cavaliere (2014) and focused on perfectionistic intercollegiate athletes' perspectives on achievement. Most recently, Hill et al. (2015) explored the meaning of perfectionism with a sample of high performance athletes (among other high performing individuals). Each study makes important contributions regarding the etiology and function of perfectionism in sport and point to domain-specific differences in the experiences of perfectionistic sport participants compared to perfectionists identified in contexts outside of sport.

Consistent with research in gifted students (e.g., Schuler, 2000), Gotwals and Spencer-Cavaliere (2014) adopted quantitative and qualitative methods to identify and interview perfectionistic sport participants. Specifically, 117 intercollegiate varsity athletes completed a domain-specific multidimensional measure of perfectionism (Sport-MPS-2). Based on a modified version of the sampling frame

used by Rice et al. (2003), participants were screened for being 'healthy'
perfectionists (high personal standards perfectionism scores in the 60th percentile
and low evaluative concerns perfectionism scores in the 40th percentile) or
'unhealthy' perfectionists (high personal standards perfectionism scores in the 66th
percentile and low evaluative concerns perfectionism scores in the 33rd percentile).
The reason for selecting participants in these two groups was to examine if the
tripartite model of perfectionism (see Stoeber & Otto, 2006), and its suppositions
about healthy and unhealthy perfectionists, would be supported when using
qualitative research methods among athletes. Participants' group affiliation (i.e.,
healthy or unhealthy perfectionist) was confirmed by referencing mean scores for
indicators of personal standards perfectionism and evaluative concerns
perfectionism to scale labels and through multivariate analysis of variance. Based on
these criteria, seven healthy perfectionists and 11 unhealthy perfectionists were
identified and interviewed (M age = 21.46 years, SD = 1.96).

Following inductive, thematic, and latent content analysis, three main themes
emerged. These themes were termed personal expectations, coping with challenge,
and the role of others, and the themes manifested in a divergent manner across the
two groups of perfectionists. In particular, healthy perfectionists were seen to put
forth effort and work hard to achieve their goals. Goals tended to be sport-specific
and reasonable but challenging. Healthy perfectionists would mentally prepare in
order to enhance chances of success and maintain a positive outlook when
challenged. This included employing adaptive coping strategies (e.g., accepting
positives and negatives, self-reflection, and goal adjustment) in the face of making
mistakes, not meeting personal standards, and losses. Healthy perfectionists also
viewed significant others in the sport experience (coaches, teammates, and parents)
as important sources of encouragement, feedback, and motivation.

Unhealthy perfectionists also valued effort and could derive some satisfaction
from working hard. However, this was accompanied by unrealistic expectations and
negative evaluations of themselves relative to others. Winning formed the
benchmark for success and focus was needed to achieve success. Unfortunately,
focus was often disrupted by factors such as making mistakes. In turn, making
mistakes, not meeting standards/expectations, and losses were met with negative
responses (e.g., self-criticism, frustration, and embarrassment). This appeared to be

due to unhealthy perfectionists feeling that they had let others down. In accord, significant others (particularly coaches and teammates) were viewed as both a source of support and social pressure for unhealthy perfectionists.

In a departure from Gotwals and Spencer-Cavaliere's (2014) mixed method approach, Hill et al. (2015) sought to understand high level performers' perceptions of perfectionism in a manner unconstrained by extant models. In this way, Hill et al.'s (2015) study replicates early qualitative research conducted in non-clinical settings (e.g., Slaney & Ashby, 1996). Adopting the same self-selection sampling strategy as Slaney and Ashby (1996), 15 high-level athletes and performing artists (dancers and musicians) were recruited and interviewed. Of these participants, the majority were athletes who had competed or were currently competing at International level (three males and four females; M age = 32 years; range = 29 to 39 years). The interview schedule employed was based on questions used by Slaney and colleagues (e.g., Slaney & Ashby, 1996; Slaney et al., 2000).

Using thematic analysis, drive, accomplishment, and strain emerged as the main descriptors of how participants perceived perfectionism and its influence on their lives. In terms of drive, it characterised the participants' view that high standards of achievement and performance are central to being a perfectionist. Participants would spend large quantities of time focusing on their next performance and how they might improve. Their focus on improvement and doing their best was almost to the point of obsession. Being meticulous was deemed necessary to achieve success and thoughts were rigid when it came to performance. That is, mistakes were not tolerated and anything less than perfection seemed to bring about feelings of extreme dissatisfaction. There appeared to be no respite through meeting high standards, however, as this was met with thoughts that more could be achieved.

Accomplishment and strain highlighted the specific benefits and drawbacks that participants perceived of being a perfectionist. In particular, participants viewed perfectionism as vital to their accomplishments and for reaching their full potential/succeeding in all aspects of their lives. Perfectionism was also tied up with satisfaction (albeit short-lived) and confidence, and is a mind-set that they would endorse. However, the high-level performers also experienced heightened anxiety, fear of failure, and felt a constant pressure to improve. This resulted in them devoting excessive amounts of time to engaging in their chosen activity at the

expense of engaging in other activities, ruminating about their performance, and not being able to relax. The consequences of this related to impaired interpersonal relationships, a lack of satisfaction, and exhaustion. Thus, perfectionism seemed of detriment to other areas of their lives.

4.2.4 Rationale for this study

Based on the preceding two qualitative accounts of perfectionists in sport, it is clearly advantageous to elicit sport participants' meaning and experiences of perfectionism in this way. In particular, such research has helped distinguish some of the most salient features of perfectionism in sport. Further, such research has started to establish whether extant models of perfectionism are appropriate for use in sport contexts. Finally, qualitative research has highlighted some areas for focus for individuals working with perfectionistic sport participants (e.g., thought processes, coping strategies, and perceptions of others). In light of this, it has been concluded that the area would benefit from further qualitative research (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015). The current study aimed to address this call and also attend to two omissions of extant accounts of perfectionists in sport.

The first omission of accounts of perfectionistic sport participants concerns how *youth sport* participants experience perfectionism. That is, the two studies that have adopted qualitative methods in sport (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015) focused on adult sport participants ($\geq$ 19 years old), which limits our understanding to adults' perspectives. Although Gotwals and Spencer-Cavaliere (2014) and Hill et al. (2015) noted some similarities between the experiences of perfectionistic adults in sport and perfectionistic adolescents in a gifted education context (Speirs Neumeister et al., 2007), there were also some differences. Based on the findings of these studies (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015; Speirs Neumeister et al., 2007), it seems likely that those differences were due to developmental as well as contextual factors but without examining the youth population, this assertion remains unclear. As such, it seems necessary to explore the experiences of perfectionistic youth sport participants using qualitative research methods as opposed to inferring them based on adult accounts.

The second omission of accounts of perfectionistic sport participants concerns the 2×2 model of perfectionism. That is, the two studies adopting qualitative methods in sport (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015) have either

focused on the experiences of perfectionists in a manner unrestrained by models and theory or centred on a tripartite model of perfectionism. Although there are potential benefits to adopting either approach, the collective drawback is that current understanding regarding the qualitative accounts of perfectionists in sport are mainly constrained to the tripartite model. There is current debate surrounding the number and characterisation of within-person combinations of perfectionism in sport (and research more broadly). Specifically, whether three (tripartite) or four (2×2 model) within-person combinations ought to be differentiated (see Smith et al., 2015). Using qualitative methods to explore the experiences of sport participants based on the 2×2 model of perfectionism, as opposed to a tripartite model, would make a valuable contribution to this debate.

4.3 The present study

To summarise, despite qualitative research methods offering a means to gain a broader understanding of the nature and consequences of perfectionism in sport, they have yet to be widely adopted in this domain. Of the two studies that have used qualitative research methods to elicit the meaning and experiences of perfectionism among sport participants, there are two notable omissions. First, each of the two studies focused on the perspectives of perfectionistic adult sport participants and not youth sport participants. Second, the personal accounts of sport participants in terms of the 2×2 model of perfectionism remain unknown. The purpose of the current study, therefore, was to explore the experiences of youth sport participants deemed prototypical of the four subtypes of perfectionism using qualitative research methods. In this way, the study has the potential to satisfy three important aims: (i) to provide novel insights into the sport experiences of youth participants who differ in combinations of perfectionism dimensions, (ii) to explore the 2×2 model of perfectionism in a more innovative manner, and (iii) to contribute to debate regarding whether three or four subtypes of perfectionism ought to be differentiated.

4.4 Method

In line with previous qualitative perfectionism studies (e.g., Gotwals & Spencer-Cavaliere, 2014; Rice et al., 2003; Schuler, 2000), this study adopted a two-phase design. In the first phase (quantitative grouping), a domain-specific

perfectionism instrument (Sport-MPS-2) and statistical analyses were employed. The purpose of this phase was to identify youth sport participants whose personal standards perfectionism and evaluative concerns perfectionism scores reflected the four subtypes of perfectionism from the 2×2 model. In the second phase (qualitative data collection), focus groups and semi-structured interviews were used. The purpose of this phase was to explore the experiences of youth sport participants deemed reflective or prototypical of the four subtypes of perfectionism through eliciting perspectives on their own sport involvement.

4.4.1 Philosophical approach

Aligned with the majority of research in the area of perfectionism in sport, the philosophical approach that underpins the research in this thesis is positivism/post-positivism (Creswell, 2009). Thus, determinism (outcomes are most likely determined by a cause) and reductionism (phenomena can be reduced to a discrete set of testable entities) inform my 'worldview' and it is through generating theory and testing hypotheses (a hypothetico-deductive model) that I accept phenomena can be understood (Creswell, 2009). In the present study, a pragmatic decision was taken to adopt the most appropriate research methods to address the purpose and aims of the study. In this regards, qualitative research methods (focus groups and semi-structured interviews) were necessary to elicit the sport experiences of young people who differ in combinations of perfectionism dimensions. Through employing such research methods in this study, I have come to appreciate the qualities that often lend focus groups and interviews to an interpretive philosophical approach (e.g., individuals' experiences can be highly complex). However, the current study can still be considered to be underpinned by positivism/post-positivism because the overarching purpose was to provide an additional test of the theoretical tenets and hypotheses of the 2×2 model of perfectionism. There are examples of studies in the youth sport literature more broadly that have adopted qualitative research methods, yet maintained a positivism/post-positivism approach (e.g., Vazou, Ntoumanis, & Duda, 2005).

4.4.2 Participants

For the quantitative grouping phase, participants were 192 females[2] enrolled in a school- or community-based sport group (*M* age = 13.91 years; *SD* = .90; range 12 – 16 years). Participants had been playing their sport for an average of 3.40 years (*SD* = 2.36) and trained and played for an average of 2.87 hours per week (*SD* = 2.35). The majority of participants were involved in their sport at club level and considered their participation to be very important compared to other activities in their lives (*M* = 6.49; *SD* = 1.68; 1 = *not at all important* to 9 = *extremely important*).

The focus group participants were 19 females (*M* age = 13.74 years; *SD* = .65; range 13 – 15 years) purposefully sampled from the quantitative grouping phase. Focus group participants had been playing their sport for an average of 2.56 years (*SD* = 1.90) and trained and played for an average of 2.31 hours per week (*SD* = 1.60). Their participation in sport was considered very important (*M* = 7.16; *SD* = 1.50). Interview participants were four females purposefully sampled from the focus group participants. Additional demographic information for focus group and interview participants is presented in Table 4.2.

4.4.3 Procedure

Following ethical approval (see Appendix A), gatekeepers (e.g., director of sport or head coach) of school and community-based sport groups were contacted to inform them of the study and invite their sport participants to take part. Gatekeepers, youth sport participants, and their parents/guardians were informed that the study would involve the participant completing a one-off questionnaire at a training session. Based on their responses, the participant may then be invited to attend a focus group at their school- or community-based sport club site. This may then be followed by an individual interview at a later date. For those willing to be involved, parental/guardian consent and child assent was gained (see Appendix B).

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[2] 119 of the participants are also involved in the final study of this thesis.

4.4.3.1 Quantitative grouping

In the quantitative grouping phase, participants completed the Sport-MPS-2 (Gotwals & Dunn, 2009) at the start of a training session. A missing value analysis revealed that there were 163 complete cases, 29 cases with missing data, and 24 unique missing data patterns. Five participants were removed due to $> 5 \%$ missing data (the equivalent of more than 2 items missing). In line with previous research (Mallinson & Hill, 2011), the mean of the missing subscale was used to impute values for the remaining missing data cases. A further 28 participants were removed based on not reporting their age ($n = 1$), indicating that English was not their first spoken language ($n = 17$), and perceiving their sport involvement to be less than moderately important (i.e., a score of < 4 on a 9-point scale) compared to other activities in their lives ($n = 10$). This was to help ensure that participants in the qualitative data collection phase would be the appropriate age and able to verbally discuss their sport experiences in a meaningful way. No univariate and multivariate outliers were detected. The final sample comprised 159 participants.

Following computation of personal standards perfectionism (i.e., personal standards) and evaluative concerns perfectionism (i.e., concern over mistakes added to doubts about actions) composites, a median-split was used to form four groups of participants reflective of the four subtypes of perfectionism from the 2×2 model. Extant research adopting a variable-centred approach has split data at the median or mean values to form high and low perfectionism groupings (e.g., Hill, Hall, Duda, & Appleton, 2011; Koivula et al., 2002). For non-perfectionism (low personal standards perfectionism/low evaluative concerns perfectionism), there were 56 participants. For pure personal standards perfectionism (high personal standards perfectionism/low evaluative concerns perfectionism), there were 22 participants. For pure evaluative concerns perfectionism (low personal standards perfectionism/high evaluative concerns perfectionism), there were 18 participants. For mixed perfectionism (high personal standards perfectionism/high evaluative concerns perfectionism), there were 63 participants.

Owing to the withdrawal of one school-based sport group, because of the departure of their gatekeeper and time constraints, 86 out of the 159 participants were available for the qualitative data collection phase. This equated to 26 non-perfectionism (*M* personal standards perfectionism $= 1.97$, *SD* $= .50$; *M* evaluative

concerns perfectionism = 3.90, *SD* = .80), 15 pure personal standards perfectionism (*M* personal standards perfectionism = 3.34, *SD* = .42; *M* evaluative concerns perfectionism = 4.24, *SD* = .64), seven pure evaluative concerns perfectionism (*M* personal standards perfectionism = 2.43, *SD* = .23; *M* evaluative concerns perfectionism = 5.77, *SD* = .83), and 38 mixed perfectionism (*M* personal standards perfectionism = 3.42, *SD* = .52; *M* evaluative concerns perfectionism = 6.39, *SD* = .84) participants. A between groups one-way ANOVA revealed that there was a statistically significant difference between the four subtypes in terms of personal standards perfectionism (F (3, 82) = 54.16, *p* < .05) and evaluative concerns perfectionism (F (3, 82) = 59.83, *p* < .05). Results of Scheffe post-hoc tests are displayed in Table 4.1. The pattern of findings is consistent with how the four subtypes of perfectionism should have similar or different levels of personal standards perfectionism and evaluative concerns perfectionism (e.g., non-perfectionism and pure evaluative concerns perfectionism both involve low personal standards perfectionism and do not significantly differ in this regard). Mean scores for personal standards perfectionism and evaluative concerns perfectionism across the four subtypes are similar to those obtained among young dancers using a similar multidimensional measure of perfectionism and cluster analysis (see Quested et al., 2014). Based on the preceding, the groups were considered appropriate for use in this study.

Table 4.1 Scheffe post-hoc comparisons of personal standards perfectionism and evaluative concerns perfectionism across the four subtypes of perfectionism (*n* = 86)

	Perfectionism Subtype		Mean Difference	Std. Error	Sig.	95% CI	
						Lower Bound	Upper Bound
PSP	Non-Perfectionism	Pure PSP	-1.38*	.16	.00	-1.82	-0.93
		Pure ECP	-.46	.20	.18	-1.04	.13
		Mixed perfectionism	-1.45*	.12	.00	-1.80	-1.11
	Pure PSP	Pure ECP	.92*	.22	.00	.29	1.54
		Mixed perfectionism	-.08	.15	.96	-.50	.34
	Pure ECP	Mixed perfectionism	-1.00*	.20	.00	-1.56	-.43
ECP	Non-Perfectionism	Pure PSP	-.34	.26	.63	-1.08	.40
		Pure ECP	-1.88*	.34	.00	-2.85	-.91
		Mixed perfectionism	-2.49*	.20	.00	-3.07	-1.91
	Pure PSP	Pure ECP	-1.54*	.36	.00	-2.58	-.50
		Mixed perfectionism	-2.15*	.24	.00	-2.84	-1.46
	Pure ECP	Mixed perfectionism	-.61	.33	.33	-1.55	.32

Note. * = $p < .05$; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism

4.4.3.2 Qualitative data collection

4.4.3.2.1 Focus groups

Focus groups were selected as the main qualitative research method for this study because they allow for the identification of shared and different experiences within a cohort (Kitzinger, 2005), which is useful here given the lack of qualitative data available. The criteria used to select participants from the quantitative grouping phase were based on gender, age, club involvement, and subtype of perfectionism. That is, focus groups were to include female participants, aged 13 to 15 years, from the same school- or community-based sport group, and who reflected the same subtype of perfectionism. These criteria were chosen for a number of practical and theoretical reasons. Specifically, single-gender focus groups with adolescents are considered more productive than mixed gender focus groups (Greenbaum, 1988). In addition, adolescent females are likely to have different experiences to adolescent males in youth sport (O'Sullivan & MacPhail, 2010). The narrow age range (13 – 15 years) addresses concerns over age imbalances in focus groups (Greenbaum, 1988) and is consistent with a developmental stage where participants are likely to be investing more time in their sport (see Côté et al., 2008). Thus, participants should be able to reflect on their sport experiences in more depth. Selection based on being involved in the same sport group should encourage participants to feel comfortable discussing their experiences (Hennessy & Heary, 2005). Inclusion of participants from the same subtype of perfectionism creates a homogeneous group (Morgan, 1997) and, in this case, should allow for any contrasts in sport experiences between subtypes of perfectionism to be observed.

The focus group design followed the recommendations of Krueger and Casey (2000). Each focus group involved the same moderator (lead author of this thesis) and an assistant moderator (a PhD or MRes sport and exercise psychology student), who took notes. The gatekeeper was nearby but not present during focus groups. There was an introduction period (welcome, overview of the topic, and establishing of ground rules), followed by the group discussion and a closure period (administering of a debrief sheet). Immediately following each focus group, the moderator and assistant moderator engaged in a debriefing conversation. The purpose of this was to discuss initial perceptions of the participants and any

emergent themes. The moderator noted down her own reflections following this debriefing.

In order to elicit participants' sport experiences in the focus group discussion, a semi-structured questioning route with opening, introductory, transition, key, and ending questions was employed. Where necessary, follow-up questions and prompts based on Patton (2002) were used. The introductory (e.g., how did you get into playing your sport?) and key questions (e.g., what things can your coach/parents/peers do or say that influence how much you like participating in your sport or not?) were adapted from previous qualitative studies concerning positive and negative experiences in youth sport (e.g., Holland, Woodcock, Cumming, & Duda, 2010; Keegan, Spray, Harwood, & Lavallee, 2010; McCarthy & Jones, 2007).

After receiving feedback on the semi-structured questioning route from a 'critical friend' (an impartial researcher who has previously conducted focus groups with young people in sport), five females (aged 13 years and involved in the same school-based sport group) took part in a pilot focus group. The purpose of the pilot group was to refine the questioning route, establish the typical duration of a focus group, and allow the moderator and assistant moderator to become familiar with the questions (Morgan, 1997). Following the pilot, one question regarding future sport intentions was added and minor changes to the sequence of questions were made. The questioning route and probes are outlined in Appendix D.

In total, four focus groups, involving four to five participants per group, were conducted (see Table 4.2). This equated to one focus group for each of the four subtypes of perfectionism. Focus groups ranged from 34 minutes to 43 minutes ($M = 39$ minutes; $SD = 4.5$). Prior to each focus group, there was a five-minute re-familiarisation period between the moderator (who had previously met the participants in the quantitative grouping phase) and participants. During this period, consent was sought and the purpose of the study was discussed. The inclusion of four to five participants meets recommendations that focus groups with children and adolescents should be smaller than adult focus groups (Hoppe, Wells, Morrison, Gillmore, & Wilsdon, 1995). The average duration of the focus groups is deemed typical for young people (Heary & Hennessy, 2002).

4.4.3.2.2 Individual semi-structured interviews

Individual semi-structured interviews were conducted to further explore some of the concepts that emerged from the focus groups and to supplement focus group data with information-rich cases (Patton, 2002). Participants prototypical of the four subtypes of perfectionism formed the cases of interest. A participant was considered prototypical if they met the criteria of having a personal standards perfectionism and evaluative concerns perfectionism score 1 standard deviation above or below the mean, dependent upon the subtype being examined (e.g., mixed perfectionism involves $zPSP \geq 1$ and $zECP \geq 1$) and/or their focus group responses were deemed typical for the subtype. Similar quantitative criteria have been adopted in research concerning perfectionism and the experiences of academically gifted adolescents (e.g., Speirs Neumeister et al., 2007, 2009).

In keeping with the focus group design, the same interviewer (previously the focus group moderator) conducted all individual interviews. The gatekeeper was nearby but not present during interviews. There was an introduction, main discussion, and a closure period. Following each interview the interviewer noted down their own reflections. The semi-structured interview guide (see Appendix D) was based on a previous qualitative study with intercollegiate perfectionistic athletes (Gotwals & Spencer-Cavaliere, 2014). The interviews drew on Gotwals and Spencer-Cavaliere's (2014) study because it yielded insights into personal (e.g., perceptions of success) and social-environment factors (e.g., the role of coaches, parents, and teammates), which had been identified as important by the participants in the focus groups. Prompts and questions based on Patton (2002) were also employed to follow-up on responses (see Appendix D).

In total, four individual interviews (one per subtype of perfectionism) were conducted (see Table 4.2). Interviews ranged from 21 minutes to 33 minutes ($M = 27$ minutes; $SD = 5$). This excluded a 10-minute re-familiarisation period with participants, which took place prior to the interviews. During this period, consent was sought and the purpose of this stage of the study was discussed. The intention was for the individual interviews to be shorter in duration than the focus groups so as not to overburden participants.

Table 4.2 Demographic information and mean scores for focus group and individual
interview participants (*n* = 19)

Demographic information			Mean scores	
Subtype of perfectionism	Age	Sport	PSP	ECP
Non-perfectionism	15	Netball	1.14	2.38
Non-perfectionism	**14**	**Netball**	**1.00**	**2.33**
Non-perfectionism	14	Netball	2.29	4.55
Non-perfectionism	14	Netball	1.57	3.83
Non-perfectionism	14	Netball	1.29	3.25
Pure PSP	14	Netball	3.43	4.79
Pure PSP	14	Netball	3.57	4.71
Pure PSP	14	Netball	3.00	4.71
Pure PSP	14	Netball	3.14	3.42
Pure PSP	**13***	**Netball**	**3.86**	**3.00**
Pure ECP	15	Dance	2.14	5.38
Pure ECP	14	Rugby	2.17	5.17
Pure ECP	13	Netball	2.29	6.71
Pure ECP	**13**	**Netball**	**2.67**	**5.54**
Mixed perfectionism	13	Netball	3.29	5.42
Mixed perfectionism	14	Dance/Athletics	3.71	6.42
Mixed perfectionism	**13***	**Badminton**	**3.71**	**7.29**
Mixed perfectionism	13	Swimming	2.86	6.50
Mixed perfectionism	13	Horse Riding/Netball	3.57	5.63

Note. Bold = participants included in individual interviews; * these participants were
14 years old when interviewed; PSP = personal standards perfectionism; ECP =
evaluative concerns perfectionism.

4.5 Data analysis

Each of the focus groups and individual interviews were audio-recorded and transcribed verbatim. Participants were given pseudonyms to help ensure anonymity. Transcripts were analysed using thematic analysis as outlined by Sparkes and Smith (2014). Thematic analysis was selected because it can be used by researchers working from different traditions to highlight the similarities and differences across a data set (Sparkes & Smith, 2014). In order to fulfil the aims of this study, it was important to identify any similarities and differences between subtypes of perfectionism in terms of youth sport experiences.

The thematic analysis was conducted based on the stages outlined in Sparkes and Smith (2014). For immersion, transcripts were read and re-read by the lead researcher (who was also the focus group moderator and individual interviewer) and a second impartial researcher[3] proficient in qualitative research in youth sport. To generate initial codes, the two researchers individually coded a focus group transcript immediately followed by the corresponding individual interview transcript for each subtype of perfectionism. Raw data themes were identified through sentences and statements (quotes) that related to a subjective experience. Quotes were then compared and contrasted with other quotes to find those with similar meanings and these were grouped into higher-order themes. Through further comparing and contrasting of quotes and themes, general dimensions were formed.

Based on Miles and Huberman (1994), the lead researcher created a data matrix of codes for each of the subtypes of perfectionism. The data matrix allowed the researchers to sort the different codes into possible themes. Data networks of the possible themes were then generated for each subtype of perfectionism and reviewed with the second researcher. The lead researcher then produced a narrative account of each theme. Data analysis continued throughout the write-up, with slight changes

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[3] It should be noted that this is not the same researcher who acted as a 'critical friend' in regards to the focus group questioning route.

being made to the theme titles and descriptions as a clearer interpretation of the data occurred.

4.5.1 Methodological rigour

To help ensure qualitative quality, key markers outlined by Tracy (2010) were considered. First, examining the 2×2 model of perfectionism using a qualitative method is novel and should extend insight into the model as well as hold some practical implications. Further, taking into account that the 2×2 model has recently generated debate in terms of its suppositions (see Gaudreau, 2013; Stoeber, 2012a), to examine its tenets in this manner is also timely. Thus, the topic of the study appears worthy and of significance as opposed to being one of convenience. Second, the study was designed in a manner that should satisfy rich rigor. That is, a variety of data collection methods were employed to gain enough data (questionnaires, focus groups, and semi-structured interviews) to address the research question. The lead researcher immersed herself in the context of the participants on multiple occasions to try and ensure enough time was spent gathering the data. Special attention was paid to the development and refinement of the questioning route to ensure its appropriateness (e.g., consulting a 'critical friend' and running a pilot focus group) for this population. The participants were selected based on being at a stage in their development where they should be able to discuss their sport experiences in-depth. To supplement transcripts, notes were taken by an assistant moderator during focus groups and reflections noted by the lead researcher after focus groups and interviews. Finally, the data analysis process involved two researchers, from differing backgrounds, who drew the same conclusions about different sources of data across the four subtypes of perfectionism. In this way, triangulation and a transparent data analytical strategy are evident.

4.6 Results

The analysis of the data highlighted differences in the meaning of sport and the underpinning reasons for participating in sport between individuals categorised within the four subtypes of perfectionism. The environment that could support or detract from participants gaining the desired outcomes from their sport involvement also appeared to differ between the subtypes. In the following sections, each of the subtype cases is described to provide insight into the context of the case. Following

each description, an explanation of the meaning of sport and related environment for each case is provided.

4.6.1 Non-perfectionism

Five female participants took part in the focus group: Erin (14 years old), Julia (14 years old), Lorna (14 years old), Melanie (14 years old), and Sonia (15 years old). All five participants identified netball as their main sport. Erin, Julia, Lorna, and Sonia had been playing since primary school and Melanie since secondary school. Sonia's primary school teacher introduced her to netball. Lorna's mother introduced Erin, Julia, and Lorna to netball and they first went to a netball club together outside of school. Melanie was introduced to netball by her secondary school PE teacher. The focus group took place at the participants' community netball club in conjunction with a training session. It was apparent that Erin, Julia, and Lorna were close school friends and all five of the participants were well known to each other as training partners and/or teammates. After the focus group, a follow-up interview was conducted with Erin. Erin was selected based on her focus group responses and low (-1SD) levels of personal standards perfectionism and evaluative concerns perfectionism.

4.6.1.1. Sport: An enjoyable hobby for friendship and learning

For these participants, netball was one of a number of hobbies they engaged in, as Erin said, "I feel netball is a big part of my life" but she also stated that, "I personally have other hobbies." Netball seemed to be important to participants for social and personal reasons, as Erin also expressed, "I think netball is a really great like social way of making friends and meeting new people but it's also really good exercise." Although netball was important for this group, it was not necessarily the hobby they most valued. This was clearly articulated by Julia, who said, "Sometimes it's like, when I have a match I can't drop everything to play netball." She further explained, "Kind of netball is a big part of my life but GCSEs are also a bigger part."

The social importance of netball initially appeared to be related to providing opportunities for the participants to be with friends and to make new friends, as Erin said, "…it's [netball's] a good place to catch up with friends as well, which I think is nice." Lorna reiterated this by saying, "You make loads of friends from it [netball]." However, the social value of netball was not restricted to spending time with friends,

but also having an opportunity to be part of a team that comprised friendly and similar others. This idea was articulated by Erin who said, "I think mostly people are the same as well so if you all feel good afterwards then that means you've worked well as a team, used teamwork skills, so everybody's been quite encouraging and happy and things."

Further to social opportunities, this group also valued their participation in netball because it provided them with an opportunity to develop, learn, and test their skills, as Erin said:

Yeah it's fun because we do different exercises to test different skills in netball like we do on Tuesday night we do dodging and stuff so maybe exercises that helps with dodging and then you play a game and you use that in your game and that shows how you can improve.

In contrast to their focus upon learning and development, the participants appeared to have limited regard for league placement or winning and losing. This was clearly illustrated in the following exchange:

Erin: …I mean we finished last season quite positive where did we come second so that was actually a big achievement for us because before we didn't do.

Julia: Yeah we didn't do that well.

Erin: But that proves that the training we've done has improved so that means if we're all dedicated players which I think most of us are with the training we have we can always be improving and if not like coming third I'm not saying we have to like always improve where we come just like noticing that we're playing better.

Erin then reinforced this idea when she said:

…like when we win that makes you think 'oh yeah let's train netball loads' and even when you lose like at some places you feel like 'oh we're not very good' but here it's kind of like we've lost but we're gonna do exercises and practices and drills that work on those areas that we need then put that back into our next match and then improve on that.

Overall, opportunities to develop friendships and skills were especially important for this group because they seemed to contribute to the overriding motive for participating in netball, which was enjoyment. For example, when asked why she

played netball, Julia simply stated, "Netball is really fun to play." When unpacking the influences on their enjoyment, Erin explained:

> Well I said making new friends that's good it makes you feel happy… I like encouraging other people as well… and learning new skills. So for example on Sundays we don't always play the full match we might umpire one quarter of it and learning something new like that is really interesting.

4.6.1.2 An environment that enables non-perfectionists to enjoy sport as a hobby for friendship and learning

There appeared to be several environmental factors that supported or detracted from the participants' experiences of sport as an enjoyable hobby for friendship and learning. Perceptions of coaches, parents, and peers were among the most prominent factors. With regards to coaches, having an understanding that sport was not the participants' only hobby appeared desirable. Julia said, "But Jill [coach] if you can't play 'oh don't worry it's fine' she just says 'oh you can play next time' like she doesn't see it as a bad thing to do." Coaches who did not understand the girls' competing priorities and commitments were seen as less desirable, as Erin explained, "…matches are always on the days I have Spanish and it's like which one do I choose and then if I say like 'oh I'm going to Spanish' they [coaches] get really annoyed."

When coaches adopted a more supportive approach, by offering instructional feedback in a non-threatening manner and praising the girls, they seemed able to reinforce the participants' desire for improvement. This was clearly articulated by Erin, who said:

> When you go wrong they [coaches] tell you how you can improve but they never shout at you and yeah. Then when you do something right you get loads of praise and it makes you feel good and it makes you keep going and practicing at home and joining other clubs and stuff so then you can improve that.

By being supportive of performance attempts and accepting of mistakes, a coach could further support the value that this group placed on developing and testing their skills. This was reflected in the following exchange:

> Julia: Yeah cos it's like when like you get encouraged like you think you can do it and then you can do it well it just makes you feel better.

Lorna: And even if you don't do it well you tried.

Erin: And Jill's [coach] always like 'well tried Erin' even if you've done something wrong.

However, a coach could also detract from the participants' desire for improvement if they expressed performance or outcome expectations or provided criticism. Such behaviours from a coach could result in the girls withdrawing from the unfavourable context. This was communicated by Julia and Lorna:

Julia: Like when we played for our other team.

Lorna: Oh yeah.

Julia: They were a bit strict like they expected you to be like.

Lorna: Amazing.

Julia: Yeah probably so much better than you actually like were like when you didn't really know like what to do in like a situation and like not shout at you but they'd say like 'oh no you shouldn't have done that'.

Lorna: And they'd expect more like in the boring warm up and by the time you're in your game you're really tired.

Parents and peers also played an important role in supporting the participants' desire for improvement and reinforcing their confidence. In terms of parents, they achieved this by being supportive of performance attempts and offering feedback about their performance. Erin clearly articulated this when she said:

Well it's good when your parents encourage you… you could see the massive difference between how confident you'd be without it and with it so when they say like 'oh you played really well there' or even if you didn't play well they still pick up on the positive things cos they're parents… but it also helps when they say how you can improve… cos you think I know what I have to do now so I can play better.

Peers seemed to achieve this by being supportive. This was exemplified when Erin said, "…friends can say things like that [pick up on positives and how to improve] as well so they might compliment you on how you played in that game they might say you know 'you're good at netball' that really helps you believe in yourself."

There was another role that peers adopted in supporting the participants' desire to demonstrate competence through personal improvement. That is, more able peers served as a reference point for improvement. This was demonstrated in the following exchange:

Erin: We played a game the other week and we noticed loads of techniques that the other team were using that we hadn't and it wasn't really like that we didn't enjoy the match but it was more like you thought 'oh maybe we should do that' and think about it and it kind of makes you feel a little bit like 'oh we should train harder we should be learning those things'.

Julia: Yeah when the teams like so much better than you you think 'oh', not in like a bad way but you think.

Erin: Oh they work well together.

Julia: Yeah like we should do this.

Although peers could support the meaning and value of sport for this group, there were a number of ways in which they could also detract from it. For instance, peers were perceived as preventing participants from having an opportunity to demonstrate improvement if they behaved in an unfair manner, as Sonia, Erin, and Melanie discussed:

Sonia: Maybe when you're playing against like a rough team that's bad when you're playing and they're really, really rough and they like elbow you and trip you up, stuff like that.

Erin: Yeah people like it can be quite sneaky cos people can do things like small things.

Melanie: And get away with it.

Erin: Like scratch you and elbow you but if the umpire cos they have to look at the whole game they won't notice it and that can be, and then you might say something but it doesn't change how you like you can't change the score but you know you could have played better if that person wasn't there distracting you.

Further, peers seemed to detract from sport being an enjoyable social endeavour if they were not friendly or if they were too focused on competition. This was outlined in the following exchange:

Julia: Yeah cos they take it like really seriously so they don't like, like when you mark someone it's usually like you like smile but they just walk on and like.

Sonia: Or you try and talk to them and they're like 'why are you talking to me?'

Julia: Yeah or they just take it really seriously and like budge you out the way.

Erin: There's been times when people have said rude comments about the way people look and we have someone on our team people have laughed at her for falling over or maybe cos she has asthma or something like that and people make rude comments about everyone that's unnecessary.

4.6.2 Pure personal standards perfectionism

Five female participants took part in the focus group: Bryony (14 years old), Ellie (14 years old), Gemma (13 years old), Imogen (14 years old), and Lydia (14 years old). All five participants identified netball as their main sport and had been playing in some capacity since primary school. Bryony started playing netball because all her friends played. Ellie's mother introduced her to netball and she first played for a 'high-five' netball team outside of school that her mother helped to run. Gemma and Imogen were introduced to playing netball in their final year of primary school by a teacher who also played netball. Gemma started playing netball outside of school because two of her friends played. Lydia was introduced to netball by a school friend's mother and first went to a netball club outside of school that differed from her current club. The focus group took place at the participants' community netball club in conjunction with a training session. It was apparent that Bryony, Ellie, and Lydia were close friends and that all of the participants were well known to each other as training partners and/or teammates. After the focus group, a follow-up interview was conducted with Gemma. Gemma was selected based on her focus group responses and high (+1SD) levels of personal standards perfectionism and low (-1SD) levels of evaluative concerns perfectionism.

4.6.2.1. Sport: A collaborative adventure to achieve team success

For these participants, emphasis was placed on netball being a collaborative team endeavour, as Gemma said that she liked netball because, "I think just like the whole team thing and playing like together." Imogen further expressed, "I liked it [netball] because at primary school we only really did like cross country and like sports where you had to do it on your own so I liked it [netball] cos of other girls." The reason collaborating with teammates seemed to be so important to this group was because it enabled them to achieve success, as Ellie said, "you participate as a team… and motivate each other cos like we all want to do well." Success or 'doing well' appeared to manifest in working to the best of their abilities together and winning as a team. Lydia explained, "…we play a match like we all try and do it the

best we can and it like pays off cos like all our matches so far we've had we've won so we're doing pretty well."

As success was tied up in working to their best as a team, it was vital that all team members were of a similar disposition, as Gemma explained, "Just like trying with all their effort and just constantly running and jumping and not giving up and just trying to stay positive even if it could be a bad situation." There was also a sense that teammates who did not put forth effort to achieve team success were not tolerated by this group, as Gemma also said:

> …they [teammates] don't try and that's like annoy like the rest of the team and just annoys everybody I think… if I know that they're fine and they just can't be bothered then it kind of irritates me because it's like well everybody else is putting in their best so why can't like you do the same.

Such was the emphasis placed on working well together as a team that it appeared to underpin enjoyment for this group, as Gemma said, "Just that you're happy you played well you just feel like as a team you feel really like together and happy and like you've really enjoyed it and you've done well." However, it was not just working well as a team that contributed to enjoyment, as Gemma also described, "like when we win I always really enjoy that especially the whole like winning with your friends as a team that's I really like the feeling of like well done and things." Thus, enjoyment for this group was also located in winning as a team. When team triumphs came against opponents that were perceived to be of higher ability and the girls had worked well together, then enjoyment was even more pronounced. The following exchange illustrates this:

Ellie: I enjoyed our match on Thursday.

Focus group moderator: What was it about that that was good Ellie?

Lydia: We won.

Ellie: Well I dunno I think it's quite nice because they're like a private school and really posh and I think it's quite nice that like it doesn't really matter what facilities you have we can still beat them and also I quite liked it because we worked quite well as a team.

Lydia: Yeah we started to concentrate more.

Ellie: And.

Lydia: We won.

Ellie: Yeah and we were quite competitive, yeah but in a positive way.

Winning and losing were kept in perspective, however, as Ellie said:

> …we did like really well compared to previous years because we like practiced a lot and quite a lot of the game we might have lost overall but we actually like won one half of it and it was against teams like that we've always considered much better than us... it was a good achievement.

When this group did achieve as a team, there was a sense of pride, as Gemma stated, "…everyone proud that you've actually like achieved something." Similarly, if individuals were recognised for the efforts that they put forth to do their best for the team this also evoked feelings of pride and satisfaction, as Gemma explained, "…you get a feeling of like pride like I was picked out of all these people, it just makes you feel quite good about yourself." Although there was a sense that the girls in this group could take pride and satisfaction from their endeavours, they could also be frustrated and disappointed with themselves if they did not perform to their best. Imogen explained, "…when you get injured… it means that you can't play the best that you could… so it's frustrating." Gemma went on to say, "Usually when I feel bad after a training session it's when I think I didn't do so well… because I didn't think I was performing to my like full."

4.6.2.2 An environment without critical evaluation

There were a number of factors that were important for supporting or detracting from participants being able to experience sport as an opportunity for success through team collaboration. The two most prominent factors concerned the role of the coach and perceptions of peers. In terms of the coach, this group seemed to require an environment where they were setting the criteria for achievement, as Bryony said:

> …at [team] like if you want to change or you want to improve like your skills… if you want like you don't have to do one set thing all the time and I like the freedom of that like you can choose what you want to improve on.

The girls in this group also appeared most comfortable if their coach had limited expectations of them, as Bryony expressed, "…I enjoy it at [team] a bit more because you get less kind of like pressure on everything and it is a bit more enjoyable really because you're not yeah, I think a bit less is expected of you."

Beyond supporting the girls by structuring an environment with few outcome expectations, a coach who supported the girls' desire for collaborative team success by reinforcing messages of trying their best and offering instructional feedback in a non-threatening manner was also viewed positively. Imogen articulated this idea:

> Well I like it cos our coach I feel like she knows us like inside out a bit she can have a joke with us and kind of like have a laugh and stuff but like she always wants us to like do our best and stuff and I like it cos like if you're a shooter she might say like if I shoot she might say that was like rubbish or something cos she knows how I usually play and like I understand then she'll tell me what to do next and she just like helps us all really.

Gemma reinforced this when she said:

> It's like half time or something and then they [coaches] say something that you like need to improve on that like makes you want to go back out and like focus on that thing and make sure you like perfect it.

In terms of peers, teammates could support this groups' desire to work well together as a team by being encouraging, as Bryony and Ellie discussed:

> Bryony: Well if you're playing and like you do something good and then someone cheers or whatever like you know like they think you're doing it well as well it feels like you're being part of the team.

> Ellie: Yeah like whenever you make an interception and like people shout at you well done and whatever it kind of helps motivate you and feel like you're working as a team.

Peers could detract from netball being a collaborative endeavour, however, if they were unfriendly or judgmental. As the girls discussed:

> Lydia: I don't know it's like with trials like with the [academy] thing from in June, it was in June, and I've gotten into it before but this time I didn't get in and it was absolutely awful and I hated it.

Ellie: I felt like everyone was like much better than me.

Imogen: It was so difficult.

Ellie: And I was like tired after the first few minutes.

Lydia: The girls that do it weren't very supportive. They were more (20:55 unknown) for themselves.

Imogen further explained:

I felt like some of the girls there like went with their friends and they were a bit like we should all get in together and I felt like they felt as if some of us weren't as good as them so they were a bit like 'oh there's not really much point being friends with them cos they probably won't get in' it just felt a bit like that.

In addition, peers who were thought to be elevating themselves above the team and again were judgmental were also viewed negatively by this group. Ellie and Lorna explained:

Lydia: Evie was telling us all what we could do better, the thing is she wasn't doing it in a nice way she was like 'I'm gonna tell you all what you're doing wrong you need to do this'.

Ellie: Everyone fell out and we.

Lydia: We all had a go at each other and we did really bad in the end we just couldn't be bothered cos it was like after school so we were all just like yeah.

4.6.3 Pure evaluative concerns perfectionism

Four female participants took part in the focus group: Brooke (14 years old), Bianca (15 years old), Maisie (13 years old), and Kiera (13 years old). Across the four participants, three different main sports were identified. Brooke played rugby most often and had been playing for a team outside of school since the second year of secondary school. She was introduced to rugby by her female cousin, who used to play with her, and father, who was a former player. Bianca identified that she participated in dance most often and had been involved in her current dance troop outside of school since the second year of secondary school. A friend who used to attend the same school had invited her to attend the dance troop. Maisie and Kiera both played netball most often and had attended school practices since their first

year of secondary school. They were both introduced to playing netball by their current secondary school PE teachers. The focus group took place at the participants' secondary school in conjunction with a lunchtime practice. It was apparent that all four of the participants were known to each other as fellow school pupils or PE classmates but none were close friends. After the focus group, a follow-up interview was conducted with Kiera. Kiera was selected based on her focus group responses.

4.6.3.1 Sport: An opportunity to experience belonging, togetherness, and hide within a crowd

These participants placed considerable emphasis on sport providing an opportunity for them to develop connections with others, as Bianca said she liked dance because, "…in dance we work together cos we're in a group and so we're in a whole squad so we do a dance together so you get to work with other people…" Kiera also expressed, "I like it [netball] cos I find it more fun than other sports that I've played before and the fact that like you work in a team…" For this group, social connections appeared to be about more than just working together and extended to feelings of belonging and togetherness, as Brooke said, "…it's [rugby's] just fun cos we're all like a family…" Kiera reiterated this when she said, "…it's [netball's] kind of like large like large community type thing and yeah like everyone's just there to help you and give you encouragement."

There seemed to be a protective function associated with belonging to a group of equal and supportive peers for these girls, as Keira explained, "…like you don't get judged for it like cos we all like do the same can do things and like if you make a mistake it doesn't matter cos everyone's there to support you." Being aware of other people's judgements was a recurring concern for this group but feeling strongly connected with and supported by peers appeared to waylay some of these worries. This was illustrated in the following exchange between Kiera and Maisie:

> Kiera: Like the first time we played in teams against each other I was
> panicking quite a lot because I thought 'oh if I do a mistake then like will
> everyone hate me or something' but like now when we're playing teams
> against each it's not like that at all like everyone's really supportive and like
> even if you make a mistake it doesn't matter.

Maisie: Like yeah I thought that as well like when you first started going to the matches and everything it was kind of like you wanted to like make sure you got it right rather than in lessons and things but then like as it got on it was just really enjoyable going like on the bus and then coming back and it never really mattered that much cos we were all like friends and we were helping each other.

It was the feeling of belonging, all being in sport together, and not being exposed and judged that seemed to underpin enjoyment for this group. Maisie illustrated this nicely when she said:

I just like netball cos you're kind of like one of the team instead of like running in athletics where it's just one winner you do just kind of feel less like judged and you can just have fun and work as you know like a team and work with your friends and everything.

Brooke went on to say, "I just like how we can all be different but all like do the same thing like we can all like I dunno we can all help each other out and not like be bothered by whatever goes on or anything, I find it fun, different." As the enjoyment for this group was in belonging with others and not being evaluated, winning was not a valued objective for these girls. Beatrice articulated this point when she said, "Well I just don't think it's all about the winning I don't really care about the what you get I just like doing it [dance]." Brooke reiterated this when she said, "…it's not about like winning or anything that I like about rugby…" Keira further expressed, "...even if you win or lose it doesn't really matter…"

4.6.3.2 A judgement and challenge-free environment

There were many personal and environmental factors that supported or detracted from sport being valued as a social opportunity free from judgement for this group. With respect to the personal, this group seemed to require a sense of agency and control over their sport involvement as this could temper concerns over being evaluated, as Kiera said:

Like so if like you're there [at lunchtime practice] voluntarily like there's not as much like pressure to do well because like you're going voluntarily so like if you like made a mistake or anything it wouldn't go towards a grade or anything.

The preference for an environment free from the judgement of others, such as teachers/coaches was reiterated by Brooke, when she said:

> Well on Tuesday some of our rugby like girls we went over to [another school] and started training there like by ourselves without a teacher or anything and it was just fun and like how we helped each other out like some of us weren't good at kicking but the people that were good at kicking like taught us how to do it like properly and stuff. It was just fun.

When asked why it was fun, Brooke explained:

> It's nothing like really different it's just you feel like you feel more like connection more like you know your friends so you don't care like what you look like what you are around them… around a teacher you just feel like a bit… it just feels weird.

Brooke and Bianca further expanded on this idea:

> Brooke: I don't know like a bit you just feel a bit awkward if you do it wrong and then the teachers just like 'oh right'.
>
> Bianca: Always testing you.
>
> Brooke: Yeah.
>
> Bianca: But then with your friends you're just.
>
> Brooke: You just have a laugh.

Teachers/coaches supported the girls' values for social connection by being friendly, supportive, or tolerant of mistakes, as Bianca described:

> …our teacher is a teacher at this school as well and she's very laid back in lessons and her attitude reflects in us and she treats she doesn't treat us like little kids and students she treats us like friends she's dancing with so that makes it a lot it makes more fun…

On discussing their sport teacher/coach, Kiera and Maisie said:

> Kiera: The teachers and like people there are all supportive if you make a mistake they're like 'oh it doesn't matter like try again next time'.

Maisie: Yeah I think they're just kind of all encouraging like Miss [teacher] she's a PE teacher she's just kind of with us all and really wants you to do well.

In contrast, parents did not seem to be as instrumental in supporting the girls' desire for togetherness, as Bianca simply stated, "Well when they [parents] come and watch I guess it's nice to hear them say you danced well…" Parents appeared more influential in detracting from the girls' desire to be social and participate devoid of evaluation. The manner in which they did this was by having high expectations or being unsupportive, as Brooke said:

My dad like is a really like he just pushes you and cos he was like he used to be on one of the biggest like rugby teams he used to be like really known and then he just like tries to push me into doing well like trying to get me more out there into the rugby kind of thing and it just gets really really stressful and I feel like I have to change the way I am to make it like so he would like be happy with like my performance and what I do.

Kiera also recalled:

I remember doing like a couple of things in class and I'll have told like my mum about it and but she never offered me any reassurance or like 'oh that's terrible like you could have done so much better' and it'll be like I know I could have done a bit better but you could have been a bit more supportive than that.

The most prominent environmental factor that influenced whether the meaning of sport was supported or not for this group were their peers. Bianca clearly articulated this when she said:

If they're [peers] nice to you then it makes you want to be around them more so if you've got like say it doesn't really come up much in dance because it's not really a competitive sport in its own cos we're all together but in other sports that I've played I have noticed people who get competitive makes you want to play less because they kind of ruin the sport and ruin the fun because they care too much for what they're gaining rather than actual taking part which kind of ruins it in a way.

When unpacking what overly competitive peers meant, Kiera said:

> Like you're playing and if you like miss with the pass or say if you like drop it when like you catch it and you drop it and then the other person gets it and everyone just starts having a go at you like it's [netball's] a team sport like you can't just have like a go at one person and like when you're playing against another team people who just like start trying to put the other team off so that they can win.

The negative consequences associated with encountering peers whose values were not aligned with the social values of this group were also expressed by Kiera, when she said:

> …it can just like sometimes effect the way you work like when people get overly competitive like if you're scared that you're gonna do something wrong and everyone's gonna pick up on it and then start having a go at you which can sometimes make you not want to play because you're just like worried about people how they're gonna be before you go into a match…

4.6.4 Mixed perfectionism

Five female participants took part in the focus group: Bridget (14 years old), Eden (13 years old), Caitlin (13 years old), Danielle (13 years old), and Hannah (13 years old). Across the five participants, they participated in six different sports. Bridget indicated that athletics and dance were her main sports. She had participated in athletics since primary school and her mother first introduced her to dance when she was three years old. Bridget attended a dance school with her friend. Eden played badminton and was introduced by her parents in the first year of secondary school. Initially, she practiced with her parents outside of school and then joined her secondary school badminton club in her second year of playing. Caitlin indicated that netball and horse riding were her main sports. She had played netball for her school team since primary school and her mother, who also rode, introduced her to riding when she was four years old. Danielle was a swimmer and her mother first took her swimming when she was two years old. Her mother considered swimming to be an essential life skill and so Danielle's two siblings went swimming with her. Hannah played netball and had participated in a team inside and outside of school since primary school. Her primary school teacher first introduced her to netball.

The focus group took place at the participants' secondary school in conjunction with a lunchtime practice. It was apparent that all five of the participants were known to each other as PE classmates, training partners, and/or teammates. All participants were friendly with each other but none seemed to be close friends. After the focus group, a follow-up interview was conducted with Eden. Eden was selected based on her focus group responses and high (+1SD) levels of personal standards perfectionism and evaluative concerns perfectionism.

4.6.4.1 Sport: A time to shine and affirm self-worth

For these participants, sport was an arena in which they could feel competent, as Caitlin said, "Well I'm usually quite confident in sport… just kind of like having that reassurance that you are like good at something like just find that comfort within like sports." Hannah also said, "It [netball] just boosts your confidence it makes you feel like you are good at something." Eden simply stated, "I just think it's really good that you have a sport that you can play..." Other domains in their lives did not seem to afford them the same opportunity to feel confident, as Bridget said, "…when I'm at school I don't feel like as confident but then when I'm at dance I'm confident and just a lot different and free and yeah." Ultimately, through participating in sport, these girls felt that they could be themselves, as Caitlin said, "It's [sport is] just reassuring and something where you can just be yourself…"

Perceptions of competence appeared to be linked with performing to the best of their abilities, as Eden said, "If you've played a good game if you feel like you've done all you can, even if you didn't win, as long as you've done all you can you've played at your best." Competence judgements also involved winning, as Hannah said, "Well you just want to play your best and just focus on the game and nothing else so and if you play your best you're probably gonna win." Given the value this group placed on feeling competent, self-criticism and negative emotions were invoked when they did not perform to their best, as Caitlin said:

> It's quite frustrating when like you can't do something like you try quite a few times and it's not going well for you, you can't do it or it's just like something negative keeps happening… for example you're trying to like go into the bend but the horse keeps like running out or something and like you're trying as hard as possible and like you've done what your coach has like told you to but

you like you just can't do it so then it gives you that feeling like you feel like you've just let yourself down a bit...

Being recognised by peers as being competent was a valued outcome for this group because it seemed to hold positive implications for their self-worth, as Danielle said:

…I do get into it a lot in rounders but cos it's sort of like I sort of like the fact that it's sort of like depending on you to sort of like score and get a rounder so it sort of like drives you more to like do well in the sport… and when it drives you it just sort of makes you feel a bit more like wanted in a sort of way…

There was a balancing act, however, between being recognised for their competence and not feeling responsible when their personal contributions were not effective enough, as Caitlin said:

…with like a team sport that I play (19:03 unknown) letting someone down like you kind of feel responsible and like you don't want to like jeopardise winning or like getting to the place where you want to be at like the end of that competitive match…

Further, the girls expressed concerns over having their competence negatively evaluated by others and letting others down if they did not perform to their best, as Caitlin also said:

Well like at school it might be like my friends or like peers who like might be expecting you to be good at that and then if I'm not… I'm not like sure how they feel but it might be like disappointing or like might be unsure of how good I actually am at that sport or like just like sometimes like parents and like family and things cos you want to like impress them make them proud and things.

Learning from others and for themselves was seen as vital to self-advancement and being able to demonstrate their ability. This was clearly illustrated in the following exchange:

Hannah: Well you get to meet new people as well and you hear about how they play and you also see their tactics and then you can use the tactics to make your team better and you.

Bridget: Yeah you hear like other people's stories of like what they use to help them so you can sort of go off that and help yourself by hearing what they've said.

When peers demonstrated superior ability to these girls, they viewed this in a dichotomous manner. On the one hand, it was viewed as another opportunity to help them improve and become better than others, as Danielle expressed:

With like the people at swimming sometimes they may be better like better at a stroke than me but that sort of like motivates me to sort of like get faster and like try and sort of like, sort of like a fun competition between like people in groups so we sort of like try and beat each other and motivate each other.

On the other, it made them feel like they lacked competence and this invoked self-criticism, as Eden said, "It's usually like when I can't do something that everybody else can and so I feel like I'm letting myself down cos I know I can probably do it cos everybody else can do it but then I just feel bad cos I've let myself down…"

Overall, demonstrating their best in sport, relative to themselves or others, was related to some feelings of enjoyment, as Eden said, "I think I would feel like I'd achieved something because obviously you've done well in your sport you feel proud of yourself that you've gone and done something well and you can sort of feel good about it."

4.6.4.2 A competence-supportive environment/an environment for success

There appeared to be several important factors that could support or detract from participants' experiences of sport as an opportunity to develop and demonstrate competence. First, these girls seemed to require some clear criteria for success against which their competence would be judged, as Bridget said:

For me in dance I know that I always do better in like training so when it comes to an exam I feel I don't do as well… It sort of like puts me off because like when my dance teacher is like giving me something to aim for then I feel fine and I've got something to go for but when like they're just watching me and not telling me anything I sort of feel like I don't know anything and any of my routines.

When judgements were perceived as unfair (e.g., incongruent feedback with the criteria for success), offered by peers of perceived lesser status (e.g., those not as invested or as capable), or were unexpected, this ran counter to the value this group placed on demonstrating competence, as Eden said:

> I usually don't like it when they [coaches] sort of repeat on something but I already know how to do it just I've made a mistake and they think that I can't do it and are telling me how to do it again…

Caitlin went on to say:

> Maybe if like one of your teammates or something like kind of says 'oh come on like mark-up' in something like netball and sometimes like I'm a bit annoyed with them… you kind of feel like 'why don't you have a go' sort of thing and it's just like other people judging you sometimes.

Bridget further illustrated this idea when she said:

> Well it's kind of annoying when like you feel like you've done something good but then they [teacher/coach] pick up on something that you don't realise but you think you're doing it fine and they pick up on it and you don't realise that you're doing it.

The coach seemed to play an important role in supporting this groups' need to develop their abilities by ensuring equal opportunity for personal advancement, as Eden said, "…here everybody gets to play the same amount of games so we get the same amount of practice and no one gets left out…" Coaches also supported the girls' desire to demonstrate competence by offering praise/recognition, as Hannah said, "It's good when they [coaches] recognise you've done something good and it builds on your confidence as well and yeah." The final manner in which coaches supported the values of this group was by offering helpful advice, as Hannah said, "Just everyone around you they give you advice and using people's advice it just helps to build on your knowledge of the game." When coaches did not behave in this manner, it could result in participants withdrawing from the undesirable sport environment, as Eden stated:

> I suppose the person that's running the group cos if they're not very nice if they're not supportive of you if they're not helping you, you don't really want to like come to the club because if they're not willing to help you and they're

the person that's meant to be teaching you not necessarily teaching you but like helping you improve and they're not then that's not really the person you want helping you.

Parents also seemed to be able to support this groups' desire for personal advancement by offering useful advice, as Eden further articulated:

Both my parents aren't really sporty anymore but they both used to play badminton so they know like what it takes and what I've got to do to improve and what areas are important so they can like help me to get better…

As was alluded to in earlier quotes, peers were viewed as important co-competitors in this groups' quest for competence. However, there were a number of ways in which they could detract from this role. In particular, peers who overshadowed this group led to them feeling disappointed that their best may not be good enough, as Danielle said:

If you're like if you're working against each other in groups and then they win and then they boast it just makes you feel a bit like great thanks for that because you like know even if you have tried to your potential it's sort of still makes you feel like you'll never be like never maybe like on that same level as them in sport and so it like puts you down a bit.

Further, when peers engaged in unsportspersonlike conduct, it ran counter to the enjoyment that this group could derive from demonstrating their best performance, as Eden said, "Bad sportsmanship people that don't play by the rules argue back sort of make games unenjoyable to play." This appeared to be undesirable to the extent that this group would rather not participate, as Eden also said:

I think again I'd be a bit put off about I wouldn't really want to do many competitions cos if everybody else was like that [unsportspersonlike] like anyone else I'd played against I wouldn't really want to play with anybody else.

4.7 Discussion

The current study explored the experiences of youth sport participants deemed prototypical of the four subtypes of perfectionism from the 2×2 model using focus

groups and interviews (qualitative data collection methods). The findings will initially be discussed in context of a social-cognitive perspective on youth sport experiences. This satisfies the first aim of this study, which was to provide novel insights into the sport experiences of youth participants who differ in combinations of perfectionism dimensions. A comparison between the four subtypes of perfectionism will then serve as a test of the hypotheses of the 2×2 model. This will include some discussion around whether three or four subtypes of perfectionism ought to be differentiated.

4.7.1 The sport experiences of perfectionistic youth sport participants

Based on the two themes that emerged for each of the four subtypes of perfectionism, there were varying degrees of similarities and differences across young people's sport experiences. In terms of the theme the meaning of sport/underpinning reasons for sport involvement, the non-perfectionism group appeared to value sport because it was an opportunity to learn and develop their skills. When interpreted in context of a social-cognitive perspective on youth sport experiences, the non-perfectionism groups' focus on improvement aligns with task involvement (Roberts, 2012). That is, the girls in the non-perfectionism group adopted task-goals as their way of defining and demonstrating competence. The pure personal standards perfectionism and mixed perfectionism groups also appeared to adopt task-goals, as they placed value on effort and improvement but winning and demonstrating superior competence relative to others were also valued by these two groups. This suggests that the pure personal standards perfectionism and mixed perfectionism groups were oriented toward both task and ego goals (Duda & Balaguer, 2007). With a lack of focus on either self-improvement or normative competence, the pure evaluative concerns perfectionism group did not appear to align with a dichotomous goal approach.

The pure evaluative concerns perfectionism group, along with the non-perfectionism and pure personal standards perfectionism groups, did however place high value on taking part in sport for social reasons (e.g., to be with friends, make new friends, and work with similar others). This aligns with social affiliation goals for participation (i.e., to develop and maintain mutually satisfying relationships with similar others), which are frequently observed in youth sport (see Allen, 2003). In addition, it adds to suggestions that the social aspects of achievement goals ought to

be considered (see Harwood et al., 2008). For the pure evaluative concerns perfectionism group, a sense of belonging was also a valued social goal (see Allen, 2006). Such social goals and motives appeared to be less important for the mixed perfectionism group, other than for evaluation and making comparisons (see Smith, 2007).

In terms of the theme relating to the environment, the role of coach/teachers was emphasised by all four groups. For the non-perfectionism and pure personal standards perfectionism groups, the desired coach climate entailed a number of similar features (e.g., facilitating athlete input, instructional feedback, recognition for improvement, acceptance of mistakes, and reinforcement of effort). At the same time, these two groups perceived that coach pressure/expectations and punitive behaviours were undesirable. Taken together, this is aligned with a coach task-involving climate, which is a motivational climate wherein many youth sport participants flourish (see Duda, 2013). Some of these features were also emphasised by the pure evaluative concerns perfectionism and mixed perfectionism groups (e.g., acceptance of mistakes) but these two groups did not appear to be as strongly aligned with this approach. For the pure evaluative concerns perfectionism group, lower levels of coach/teacher involvement were preferable and for the mixed perfectionism group, there was a sense that a coach ego-involving climate (see Duda & Balaguer, 2007) may be necessary to support some of their desired outcomes (e.g., comparing and competing against peers).

Similarly, parents and peers seemed to need to endorse task involvement and a peer task-involving climate (see Vazou et al., 2006) for the non-perfectionism and pure personal standards perfectionism groups. The pure evaluative concerns perfectionism group was more concerned with what parents ought not to be doing, which involved holding high (outcome) expectations and highlighting flaws. Thus, suggesting a parent ego-involving climate (see White, Duda, & Hart, 1992) was detrimental for this group. The mixed perfectionism group valued parents more for their instructional feedback. Across all four groups, peers were viewed negatively if they were unfair, unfriendly, or invested in sport to a greater extent than the girls in each respective group, which suggests that a peer ego-involving climate was undesirable. This is consistent with assertions that adolescents function better in

sport when ego-involving criteria are less prominent (Ntoumanis, Vazou, & Duda, 2007).

4.7.2 A comparison of the four subtypes of perfectionism from the 2 × 2 model

In context of extant perfectionism literature, relatively little is known about non-perfectionism other than it is deemed an adaptive control condition (Gaudreau & Verner-Filion, 2012). The findings of this study help to shed some light on this issue and are consistent with what might be expected of non-perfectionism. That is, non-perfectionism entails individuals who are neither striving for perfectionistic standards nor are they overly concerned with pressures emanating from the self or social-environment (Gaudreau & Thompson, 2010). If participants do not attach meaning to their sport involvement in this manner then their self-worth is unlikely to be contingent upon their sport achievements (Hill, Hall, & Appleton, 2011). This was demonstrated by netball only being a hobby for this group. Participants are also unlikely to be validation-seeking (Hill, Hall, Appleton, & Murray, 2010). This seemed relevant here as participants did not appear to be actively pursuing praise or highlighting social evaluation as a concern. Without staking self-worth on sport achievements and being unburdened by fears of evaluation, it seems reasonable that task involvement served as the motivational state for this group and that they experienced considerable enjoyment.

To test the first hypothesis of the 2 × 2 model, it involves a comparison of non-perfectionism and pure personal standards perfectionism. It is posited that pure personal standards perfectionism will either be associated with better (hypothesis 1a), poorer (hypothesis 1b), or equivalent (hypothesis 1c) outcomes compared to non-perfectionism (Gaudreau & Thompson, 2010). Consistent with what is known about pure personal standards perfectionism (see Gaudreau & Thompson, 2010), the pure personal standards perfectionism group in this study did appear to be concerned with standards and attainment. This was demonstrated by a focus on effort and doing their best for their team to succeed (e.g., win). Such findings regarding effort mirror qualitative findings among older athletes for the equivalent subtype of perfectionism in the tripartite model (i.e., healthy perfectionism; see Gotwals & Spencer-Cavaliere, 2014). However, the focus on winning for the pure personal standards perfectionism group stands in contrast to Gotwals and Spencer-Cavaliere's (2014) findings. There

was also some indication here that team and personal accomplishments brought about satisfaction for this group but self-criticism and negative emotions ensued when they could not perform to their best. This finding is consistent with Hill et al.'s (2011) assertion that those striving for high standards are likely to incur difficulties when personal standards are not met. Contrasting the findings for the pure personal standards perfectionism group with the non-perfectionism group then, the suggestion is that the participants in both groups experienced similar outcomes (hypothesis 1c) when all was going well but in times of adversity, hypothesis 1b may prevail.

Hypothesis 2 of the 2×2 model involves a comparison between pure evaluative concerns perfectionism and non-perfectionism, with an expectation that pure evaluative concerns perfectionism will be associated with worse outcomes than non-perfectionism (Gaudreau & Thompson, 2010). In terms of what is currently understood about pure evaluative concerns perfectionism (see Gaudreau & Verner-Filion, 2012), the girls in this group were clearly preoccupied with the negative evaluations of others and appeared to have standards expected of them by parents or teachers/coaches. However, they were not necessarily pursuing such standards and placed greater emphasis on not wanting to make mistakes as this would result in critical evaluations from others and negative emotions. This finding is similar to qualitative findings among gifted adolescents for a neurotic perfectionism group involving high evaluative concerns perfectionism (Schuler, 2000). Contrasting the pure evaluative concerns perfectionism group with the non-perfectionism group then, support for hypothesis 2 seemed evident. What this finding implies, in context of the debate regarding whether three of four subtypes of perfectionism ought to be distinguished (see Smith et al., 2015), is that differentiating four subtypes seems more appropriate because the non-perfectionism and pure evaluative concerns perfectionism groups described qualitatively different experiences.

Hypotheses 3 and 4 of the 2×2 model involve a comparison of mixed perfectionism with pure evaluative concerns perfectionism and pure personal standards perfectionism, with an expectation that mixed perfectionism will be associated with better and worse outcomes, respectively. Consistent with what is known about mixed perfectionism (see Gaudreau & Verner-Filion, 2012), the girls in the mixed perfectionism group were concerned with standards and attainment (e.g., by demonstrating their best relative to themselves and others) and perceived pressures from the social-environment (e.g., concerns over being judged

incompetent by others). These findings are largely consistent with findings among older athletes for the equivalent subtype of perfectionism in the tripartite model (i.e., unhealthy perfectionism; see Gotwals & Spencer-Cavaliere, 2014). There were other consistencies with Gotwals and Spencer-Cavaliere's (2014) findings as this group also engaged in self-criticism when they could not demonstrate their best and were aware of letting others down. Contrasting mixed perfectionism with pure evaluative concerns perfectionism then, there appeared to be less of a heavy burden of evaluative concerns and some enjoyment could be derived from the attainment of standards. Thus, hypothesis 3 appeared supported to some degree. Contrasting mixed perfectionism with pure personal standards perfectionism, although there were similarities in terms of taking satisfaction from accomplishments and engaging in self-criticism when their personal best could not be demonstrated, concerns over the evaluations of others for the mixed perfectionism subtype appeared to add to problems. Consequently, hypothesis 4 appeared to be supported.

4.8 Conclusion

This study was the first to explore the sport experiences of young people in context of the 2×2 model of perfectionism using qualitative data collection methods. The findings provide initial evidence that the meaning and value young people give to their sport involvement differ considerably across the four subtypes of perfectionism from the 2×2 model. In addition, features of the social-environment appear crucial in determining whether young people, who differ in combinations of perfectionism dimensions, will gain the desired outcomes from their sport involvement. When the experiences of these young sport participants are compared and contrasted, support for the hypotheses of the 2×2 model is variable with some indication that those striving for high standards may incur difficulties in times of adversity.

Chapter 5 – The 2×2 model perfectionism and experiences in youth sport: The moderating role of coaches and peers

The findings of study three suggested that the meaning of sport and underpinning motives vary across the four subtypes of perfectionism from the 2×2 model. In keeping with a social-cognitive approach to motivation, the social-environment (i.e., perceptions of coaches, peers, and parents) was described as playing a key role in shaping whether young people deemed prototypical of the four subtypes gained the desired outcomes from their sport involvement. Beyond the findings of study three, the manner in which perceptions of coaches and peers relate to young people's sport experiences across the four subtypes of perfectionism has yet to be empirically established. In this chapter, it is reasoned that research of this nature is necessary because it may highlight avenues for practitioners to intervene and improve the quality of young people's experiences in sport. In accord, the purpose of the final study was to examine whether perceptions of the coach-created and peer-created motivational climates moderate relationships between the four subtypes of perfectionism and outcomes that characterise young people's experiences in sport. Consistent with the previous two quantitative tests of the 2×2 model in this thesis, these outcomes include enjoyment, anxiety, friendship conflict, and intentions to drop out. An overview of motivational climates in youth sport is first presented. This is followed by a theoretical explanation of how the motivational climate is expected to influence the quality of the sport experience across the four subtypes of perfectionism. A rationale for examining this issue is then offered. This chapter concludes with a final test of the 2×2 model in relation to the experiences of youth sport participants that includes an examination of the moderating effects of the perceived coach-created and peer-created motivational climate.

5.1 Motivational climates in youth sport

From an Achievement Goal Theory perspective (see Duda & Hall, 2001 for an overview), there are two motivational climates that can be perceived by youth sport participants. The first is a task-involving climate, wherein significant others (e.g., coaches, parents, and/or peers) transmit messages that make it more likely that

young people will focus on improving and developing their competence (Duda & Ntoumanis, 2009). The second is an ego-involving climate, wherein coaches, parents, and or/peers give cues that make it more likely that young people will focus on proving or protecting their competence (Duda & Ntoumanis, 2009). In regards to youth sport involvement, it is the coach-created and peer-created motivational climates that have often been considered (Vazou, 2010). This is because coaches interact with participants in the immediate sport context and peers have been shown to replace parents as the main source of influence during adolescence (Danish, Taylor, & Fazio, 2003). Thus, these two influential social agents form the focus here.

Whether a youth sport participant perceives a task- or ego-involving climate holds different implications for their motivation as well as their cognitive, affective, and behavioural responses in sport (Alvarez, Balaguer, Castillo, & Duda, 2012). Here, we are concerned with youth sport participants' enjoyment, anxiety, friendship conflict, and intentions to drop out. As has been discussed in earlier chapters, this is because these outcomes are important indicators of the sport experience. They are also known to be influenced by perceptions of the motivational climate created by coaches and peers (Duda & Balaguer, 2007; Ntoumanis et al., 2007). The next section will provide a summary of research that pertains to task- and ego-involving motivational climates and these outcomes. First, the perceived coach motivational climate is addressed followed by the perceived peer motivational climate.

5.1.1 Motivational climates and indicators of experience in youth sport

The majority of research regarding the motivational climate in youth sport has focused on the coach-created climate. This body of research demonstrates a divergent pattern of associations for perceived task- and ego-involving climates with outcomes such as enjoyment, anxiety, friendship conflict, and intentions to drop out. In terms of a coach task-involving climate, it has been positively related to enjoyment (e.g., Boixadós, Cruz, Torregrosa, & Valiente, 2004; Weiss, Amorose, & Wilko, 2009). In accord, a coach task-involving climate has either been inversely (e.g., O'Rourke et al., 2014; Smith et al., 2006c; Smith et al., 2008) or unrelated (Vazou et al., 2006) to anxiety. In terms of peer relations, a coach task-involving climate has been positively related to adaptive friendship quality (e.g., Kipp & Weiss, 2013, 2015; Ommundsen et al., 2005; Smith et al., 2006a) and peer

acceptance (Ommundsen et al., 2005). Non-significant relationships have also been demonstrated for peer acceptance and friendship conflict (Ommundsen et al., 2005; Smith et al., 2006a). Finally, a coach task-involving climate has been inversely related to intentions to drop out of sport (Le Bars et al., 2009) and positively associated with intentions to continue sport (Atkins et al., 2015; Ntoumanis, Taylor, Thøgersen-Ntoumani, 2012).

In contrast, a coach ego-involving climate has either been inversely (Vazou et al., 2006; Weiss et al., 2009) or unrelated (Boxiadós et al., 2004; Smith et al., 2006a) to enjoyment. It has been positively related to anxiety (e.g., O'Rourke et al., 2014; Smith et al., 2006c; Vazou et al., 2006). An inverse or non-significant relationship has been found for adaptive friendship quality (e.g., Kipp & Weiss, 2013, 2015; Smith et al., 2006a) and peer acceptance (e.g., Ommundsen et al., 2005; Smith et al., 2006a). Further, it has been positively related to friendship conflict (Ommundsen et al., 2005). A non-significant relationship has been identified between an ego-involving climate and intentions to drop out (Le Bars et al., 2009) but an inverse association has been demonstrated for intentions to continue sport participation (Ntoumanis et al., 2012).

The peer-created climate has received much less empirical attention than the coach-created climate (Ntoumanis et al., 2007). However, a similar pattern of findings has emerged for enjoyment, anxiety, and future sport intentions. That is, a peer task-involving climate has been positively related to enjoyment among young people in sport (Atkins et al., 2015; Vazou et al., 2006). It has a non-significant relationship with anxiety (Vazou et al., 2006). Further, it has either been positively (Atkins et al., 2015) or unrelated (Ntoumanis et al., 2012) to intentions to continue in sport. By contrast, a peer ego-involving climate has been inversely related to enjoyment and positively related to anxiety (Vazou et al., 2006). In addition, it has been found to be unrelated to intentions to continue sport participation (Ntoumanis et al., 2012). In terms of peer relationships, qualitative research suggests that features of a peer task- or ego-involving climate may have divergent effects for friendship quality, including friendship conflict, in youth sport (see Keegan, Harwood, Spray, & Lavallee, 2009).

5.1.2 The moderating role of motivational climates in youth sport

The motivational climate is thought to act as a moderator of various relationships. In particular, if the motivational climate is perceived to be strongly task-involving or ego-involving by youth sport participants then it may be able to override their dispositional goal orientations (task and ego) (Dweck & Leggett, 1988; Roberts, 2012). This may be of particular relevance for young sport participants as they may not have firmly established their own personal criteria for success and as a consequence may be more susceptible to the influence of the climate (Roberts, 2012). Research that has employed moderated hierarchical regression has demonstrated the moderating influence of the motivational climate through interactions with dispositional goals. Studies over the past 15 years that have demonstrated such effects among young people in sport are outlined below.

Focusing on physical education (PE), as opposed to youth sport, Standage, Duda, and Ntoumanis (2003) examined goal orientations, perceived competence, and perceptions of the PE motivational climate in terms of motivational styles. Four significant two-way interactions and one significant three-way interaction emerged. Three of the significant two-way interactions were between task orientation and a task-involving climate in predicting intrinsic motivation to know, intrinsic motivation to experience simulation, and intrinsic motivation to accomplish. The remaining significant two-way interaction did not involve the motivational climate and so was not considered here. When the interactions were plotted for intrinsic motivation to know and to experience simulation, a similar pattern was evident. That is, a high task orientation and high task-involving climate was associated with the highest levels of both motivational styles. In contrast, a high task orientation and low task-involving climate was associated with the lowest levels. When task orientation was low and a task-involving climate was low, higher levels of both motivational styles occurred than when the task-involving climate was high and task orientation was low.

A different pattern of findings was identified for intrinsic motivation to accomplish. When task orientation was high and a task-involving climate was high the highest levels of intrinsic motivation to accomplish occurred. When task orientation was high and a task-involving climate was low, intrinsic motivation to accomplish was higher than when task orientation was low and a task-involving

climate was high or low. The significant three-way interaction was between ego orientation, perceived competence, and an ego-involving climate in terms of intrinsic motivation to experience stimulation. The interaction revealed that when ego orientation was high, an ego-involving climate was low, and perceived competence was high then intrinsic motivation to experience stimulation was higher than when perceived competence was low. Where an ego-involving climate was high, intrinsic motivation to experience stimulation did not differ for high or low ego orientation at high perceived competence.

In another study, Stornes and Ommundsen (2004) sought to examine the interaction between goal orientations and the perceived coach motivational climate on sportspersonship among young male handball players. One significant two-way interaction was identified between ego orientation and a task-involving climate. When plotted, a high task-involving climate was found to have a moderating effect on high ego orientation in terms of one component of sportsmanship (respect for opponents). That is, when ego orientation was high and a task-involving climate was high, higher levels of respect for opponents were observed than when a task-involving climate was low and ego orientation was high. In contrast, when ego orientation was low and a task-involving climate was high or low, levels of respect for opponents did not significantly differ.

In a study with young female volleyball players, Gano-Overway, Guivernau, Magyar, Waldron, and Ewing (2005) also examined the interaction effects of goal orientations and perceptions of the coach motivational climate on sportspersonship. There was one significant three-way interaction (task orientation by ego orientation by task-involving climate) for the respect for the game component of sportspersonship. Once plotted, the interaction revealed that when ego orientation was high or low and a task-involving climate was high, the relationship between task orientation and respect for the game was positive. In contrast, when ego orientation was high and a task-involving climate was low, there was no significant relationship between task orientation and respect for the game. In addition, where ego orientation was low and a task-involving climate was low, there was a positive relationship between task orientation and respect for the game.

Looking at psychobiosocial states, Bortoli, Bertollo, and Robazza (2009) examined two-way interactions between goal orientations and the perceived coach

motivational climate among youth sport participants. Bortoli, Bertollo, Comani, and Robazza (2011) extended this study by examining three-way interactions between goal orientations, perceived or actual competence, and the motivational climate. A number of significant two-way interactions emerged. Plots indicated that task orientation was positively associated with cognition and communication in a high task-involving climate and negatively associated with disengagement and isolation in a low task-involving climate. A task orientation was positively associated with pleasant states and cognition in a low or high ego-involving climate and positively associated with emotion and bodily reactions in a low ego-involving climate only. Ego orientation was positively associated with pleasant states and communication in a high task-involving climate. Multiple significant three-way interactions were also identified. Plots revealed that when perceived competence was low and task orientation was high, an ego-involving climate was negatively related to pleasant states and bodily reactions. Further, when perceived competence and task orientation were high, a task-involving climate was positively related to communication. A task-involving climate was also positively related to pleasant states, performance, and movement when task orientation was high and actual competence was low. An ego-involving climate was negatively related to pleasant states, cognition, and motivation when task orientation and actual competence were high. Finally, a task-involving climate was positively related to pleasant states, bodily reactions, and performance when ego orientation and actual competence were low.

Taken together, the preceding studies suggest that the perceived motivational climate can influence the relationship between dispositional goal orientations and a number of important responses to the sport experience. Consistent with achievement goal theory (see Dweck & Leggert, 1988), it would appear that the perceived motivational climate may at times be able to override dispositional goal orientations. The perceived motivational climate may also serve to reinforce dispositional goal orientations. That is, when task orientation is high and a task-involving climate is high then positive responses to the sport experience have been enhanced. Taking a lead from this research, it is possible that motivational climates may moderate other achievement-related factors, such as perfectionism.

5.2 Perfectionism, moderation, and the motivational climate in youth sport

In 2005 and 2014, Flett and Hewitt suggested a number of personal and social-environment factors may protect against the negative effects of perfectionism in sport. In particular, if athletes experience success, have a task-oriented approach to coping, are low in ego orientation, and/or have a high sense of self-efficacy then Flett and Hewitt (2005) articulated that they were more likely to be resilient. Research outside of sport has demonstrated support for the moderating influence of some of these (and related) factors on the relationship between perfectionism and psychological outcomes. For example, Dunkley et al. (2000) found support for a moderating effect of hassles and social support on the relationship between personal standards perfectionism, evaluative concerns perfectionism, and distress. Interactions with hopelessness, optimism, self-esteem, social support, and problem solving have also been found to enhance or buffer the relationships between the two dimensions of perfectionism and suicide risk (Blankstein, Lumley, & Crawford, 2007). Focusing on evaluative concerns perfectionism alone, positive future thinking has been shown to moderate its relationship with distress (O'Connor, Whyte, Fraser, Masterton, Miles, & MacHale, 2007), self-efficacy has been found to moderate its relationship with depression (Zhang & Cai, 2012), and self-efficacy and perceived control have been shown to moderate its relationships with symptoms of eating disorders (Sassaroli, Gallucci, & Ruggiero, 2008). Finally, having high task-goals has been found to protect against the negative effect of evaluative concerns perfectionism on academic self-efficacy when academic contingency of self-worth is low (Wang et al., 2012).

Research in sport has also started to address this issue. First, Appleton et al. (2009) sought to examine the moderating influence of goal progress and goal orientations on the relationship between perfectionism and athlete burnout in elite junior footballers. The findings demonstrated a significant two-way interaction between personal standards perfectionism and ego orientation for the reduced sense of accomplishment component of athlete burnout. Plots revealed that where personal standards perfectionism was low and ego orientation was high, the highest levels of reduced sense of accomplishment occurred. Where personal standards perfectionism was high and ego orientation was high, the lowest levels of reduced sense of

accomplishment occurred. Although the finding did not support the hypothesised moderation relationships, it does imply that it is important to consider the moderating role of other factors in regard to perfectionism and its relationships with psychosocial outcomes in youth sport.

In a recent study, Crocker et al. (2014) considered the moderating influence of goal progress on the relationships between the four subtypes of perfectionism from the 2×2 model and a range of desirable and undesirable outcomes among varsity athletes. Results revealed that goal progress moderated the relationships between the four subtypes of perfectionism and control appraisal and avoidance coping. Specifically, pure personal standards perfection was associated with higher control appraisal compared to non-perfectionism at high goal progress. Pure evaluative concerns perfectionism was associated with lower control appraisal compared to non-perfectionism at low goal progress. Mixed perfectionism was associated with higher control appraisal compared to pure evaluative concerns perfectionism at low goal progress and lower control appraisal compared to pure personal standards perfectionism at high goal progress. In terms of avoidance coping, the findings for pure personal standards perfectionism compared to non-perfectionism were inconclusive at low or high goal progress. Pure evaluative concerns perfectionism was associated with higher avoidance coping compared to non-perfectionism at low goal progress. Inconclusive findings emerged for avoidance coping when mixed perfectionism was compared to pure evaluative concerns perfectionism at low or high goal progress. Mixed perfectionism was associated with higher avoidance coping compared to pure personal standards perfectionism at high goal progress. The findings again suggest a need to examine the moderating role of other factors when assessing the relationship between perfectionism and outcomes in sport.

5.2.1 Perfectionism and the perceived coach and peer motivational climates in youth sport: A review of research

A handful of studies have focused on the relationships between the perceived coach or peer motivational climates and the two main dimensions of perfectionism in sport and dance (Carr & Wynon, 2003; Greblo, Barić, & Erpič, 2015; Lemyre et al., 2008; Machida, Ward, & Vealey, 2012; Nordin-Bates, Hill, Cumming, Aujla, & Redding, 2014; Ommundsen et al., 2005). Based on the findings of these studies, a coach task-involving climate has been positively related to personal standards

perfectionism (Nordin-Bates et al., 2014; Ommundsen et al., 2005) and inversely related to evaluative concerns perfectionism (Carr & Wynon, 2003; Lemyre et al., 2008; Nordin-Bates et al., 2014; Ommundsen et al., 2005). By contrast, a coach ego-involving climate has been positively related to both personal standards perfectionism and evaluative concerns perfectionism (Carr & Wynon, 2003; Lemyre et al., 2008; Nordin-Bates et al., 2014; Ommundsen et al., 2005) or evaluative concerns perfectionism only (Machida et al., 2012). In terms of a peer task-involving climate, it has been positively related to personal standards perfectionism and either inversely or unrelated to evaluative concerns perfectionism (Greblo et al., 2015). A peer ego-involving climate has been positively related to both personal standards perfectionism and evaluative concerns perfectionism (Greblo et al., 2015).

Of the aforementioned studies, two studies used canonical correlation analysis and examined additive effects (Ommundsen et al., 2005; Lemyre et al., 2008). The findings demonstrated that a maladaptive motivational profile including a low task-involving climate, high ego-involving climate, and high evaluative concerns perfectionism was associated with maladaptive friendship quality (Ommundsen et al., 2005). A similar motivational profile was also associated with symptoms of athlete burnout (Lemyre et al., 2008). In addition, an adaptive motivational profile including a high task-involving climate, low ego-involving climate, and low evaluative concerns perfectionism was associated with adaptive friendship quality (Ommundsen et al., 2005). Although such research is necessary, because it informs us of the typical associations between the motivational climate and dimensions of perfectionism, little insight into the moderating role of the motivational climate in terms of perfectionism and outcomes in sport can be gained.

5.2.2 Perfectionism and the moderating role of perceived coach and peer motivational climates in youth sport

From a theoretical perspective, the motivational climates perceived to be created by coaches and peers could have a moderating effect on the relationships between the four subtypes of perfectionism from the 2×2 model and desirable (enjoyment) and undesirable (anxiety, friendship conflict, and intentions to drop out) outcomes in youth sport. In particular, a perceived task-involving climate may serve to reinforce the relationships that pure personal standards perfectionism has demonstrated with enjoyment, anxiety, friendship conflict, and intentions to drop out

in studies one and two of this thesis. To explain, young people perceive a climate to be task-involving if they feel that cooperation, effort, and self-improvement are encouraged and rewarded (Newton, Duda, & Yin, 2000). In this way, the climate is thought to promote a self-referenced criterion for success (Standage et al., 2003). Such a criterion for success appears to be consistent with the manner in which achievement is defined for the pure personal standards perfectionism subtype. That is, this subtype is focused on high personal striving and mastery. Treasure and Roberts (1998) have suggested that when the climate is congruent with one's own personal criteria for success, more adaptive motivational outcomes may ensue. Thus, in a task-involving climate, the pure personal standards perfectionism subtype is likely to experience more adaptive responses.

In terms of pure evaluative concerns perfectionism, a perceived task-involving climate is seemingly at odds with the manner in which achievement is defined for this subtype. That is, pure evaluative concerns perfectionism involves gaining the approval of others and avoiding failure. Thus, a perceived task-involving climate is unlikely to operate in the same manner as for pure personal standards perfectionism. It is more likely that a perceived task-involving climate would override this subtype and attenuate the associations that pure evaluative concerns perfectionism has previously demonstrated with enjoyment, anxiety, friendship conflict, and intentions to drop out. Roberts (2012) explains that if task-involving criteria are more prominent in an achievement context then perceptions of the motivational climate may be a more powerful predictor of outcomes than an individual's dispositional goal orientation. Pure evaluative concerns perfectionism, as well as the other subtypes of perfectionism from the 2×2 model, may be viewed in a similar manner to dispositional goals because they involve their own distinct criteria for success and failure and operate at a dispositional level. In this way, a perceived task-involving climate may be able to buffer the negative effects of pure evaluative concerns perfectionism. As mixed perfectionism involves both high personal standards and high evaluative concerns, a perceived task-involving climate may reinforce the relations it has previously demonstrated with enjoyment and attenuate the relations it has previously demonstrated with anxiety, peer conflict, and intentions to drop out.

The moderating influence of an ego-involving climate on the relationships between the four subtypes of perfectionism and desirable and undesirable outcomes

is likely to be different to a task-involving climate. An ego-involving climate is perceived when young people feel that only superior ability is valued and mistakes are not tolerated (Newton et al., 2000). Thus, it promotes a normative criterion for success (Ntoumanis et al., 2007). Such a criterion for success appears to be incongruent with pure personal standards perfectionism. In line with Roberts' (2012) earlier explanation, if ego-involving criteria are strongly perceived the climate could serve to override this subtype and attenuate the relationships that it has previously demonstrated with enjoyment, anxiety, peer conflict, and intentions to drop out. In terms of pure evaluative concerns perfectionism, the emphasis that is placed on mistakes and comparing young people to their contemporaries in an ego-involving climate could leave this subtype particularly vulnerable (Hall et al., 2014). One of the main reasons for this is that self-worth is contingent on achievement and mistakes are viewed as failure in this subtype. As such, an ego-involving climate may exacerbate the relationships previously identified between pure evaluative concerns perfectionism and enjoyment, anxiety, friendship conflict, and intentions to drop out. Again, because mixed perfectionism involves both high personal standards and high evaluative concerns, an ego-involving climate may attenuate the relations that it has previously demonstrated with enjoyment and reinforce the relations it has demonstrated with anxiety, peer conflict, and intentions to drop out.

5.2.3 Rationale for this study

Based on the preceding overview, we currently know that the motivational climate can act as a moderating factor. In addition, perceived coach and peer motivational climates share relationships with the two main dimensions of perfectionism in sport. What research has yet to address is how such motivational climates may moderate the relations between perfectionism and outcomes in youth sport. This is problematic because the negative effects of perfectionism have been well-documented for young sport participants and currently only theoretical assertions can be made about how practitioners might be able to intervene (see Hall et al., 2014 for an example). Thus, to examine the moderating influence of the perceived coach and peer motivational climates on relations between perfectionism and outcomes in youth sport would begin to attend to this gap in the literature and provide an empirical basis for intervention.

Across all of the studies in this thesis, the detrimental effects of some of the subtypes of perfectionism from the 2×2 model have been demonstrated for desirable and undesirable outcomes in youth sport. As research has yet to examine the moderating role of the motivational climate in terms of perfectionism and outcomes in sport, it has also yet to consider the moderating effect of the motivational climate in terms of the 2×2 model. There is some evidence to suggest that relations between subtypes of perfectionism from the 2×2 model and outcomes in varsity sport can be moderated by other factors (i.e., perceived goal progress; Crocker et al., 2014). It seems appropriate, therefore, to examine the moderating effects of the perceived coach and peer motivational climates on relations between perfectionism and outcomes in youth sport in context of the 2×2 model. More specifically, to examine the moderating effects of the perceived coach and peer motivational climates on relations between subtypes of perfectionism from the 2×2 model and desirable (enjoyment) and undesirable (anxiety, friendship conflict, and intentions to drop out) outcomes in youth sport would help to provide a more complete picture of the moderating role of the motivational climate.

Finally, by focusing on outcomes that have previously been considered in this thesis the study ought to address issues of replicability and generalisability. That is, testing the 2×2 model using the same outcomes would allow us to ascertain whether the model functions in a consistent (replicable) manner. Taking into account the ongoing controversy over how the model functions for desirable and undesirable outcomes, this appears a particularly important issue to address. In terms of generalisability, this would be demonstrated if the findings of earlier studies held for a different sample of youth sport participants. Generalisability is important if research is to be applicable in the real world.

5.3 The present study

To summarise, the purpose of the final study was to examine whether perceptions of the coach-created and peer-created motivational climates moderate relationships between the four subtypes of perfectionism from the 2×2 model and outcomes that characterise young people's experiences in sport. This is because there is a potential for the motivational climate to adopt a moderating role in this regard. However, this possibility has yet to be empirically examined. By examining

this issue, this study offers insight into where practitioners might be able to intervene and promote positive experiences for youth sport participants. In addition, it acts as a final test of the 2×2 model in relation to young people's sport experiences.

5.3.1 Hypotheses

In accordance with previous findings in this thesis, it was hypothesised that, for the test of the 2×2 model, pure personal standards perfectionism would be associated with higher levels of enjoyment but lower levels of anxiety and intentions to drop out compared to non-perfectionism (hypothesis 1a). Inconclusive findings were anticipated for this contrast and peer conflict. Pure evaluative concerns perfectionism would be associated with lower levels of enjoyment but higher levels of anxiety, peer conflict, and intentions to drop out compared to non-perfectionism (hypothesis 2). Mixed perfectionism would be associated with higher levels of enjoyment but lower levels of anxiety and intentions to drop out compared to pure evaluative concerns perfectionism (hypothesis 3). Inconclusive findings were anticipated for this contrast and peer conflict. Compared to pure personal standards perfectionism, mixed perfectionism would be associated with lower levels of enjoyment but higher levels of anxiety, peer conflict, and intentions to drop out (hypothesis 4).

In terms of the moderating effects of the perceived motivational climate, it was anticipated that a task-involving climate would reinforce or buffer the relations between the four subtypes of perfectionism and desirable (enjoyment) and undesirable (anxiety, peer conflict, and intentions to drop out) outcomes in a positive manner. An ego-involving climate was anticipated to exacerbate the relations between the four subtypes of perfectionism and desirable (enjoyment) and undesirable (anxiety, peer conflict, and intentions to drop out) outcomes.

5.4 Method

5.4.1 Participants

Following institutional ethical approval (see Appendix A), 252 young sport participants ($n = 20$ males, $n = 232$ females, M age = 13.65 years, $SD = 1.14$ years, range = 11 – 16 years) were recruited from a variety of school- and community-

based sports. Participants were involved in their sport at recreational ($n = 37$), club ($n = 107$), district/county ($n = 81$), regional ($n = 22$) and national level ($n = 2$). Three participants did not report their level of involvement. On average, the sample had participated in their sport for 2.98 years ($SD = 2.04$) and trained and played for 3.00 hours per week ($SD = 2.14$). Compared to other activities in their lives, participants considered their sport involvement to be very important ($M = 7.22$, $SD = 1.69$; $1 = $ *not at all important* to $9 = $ *extremely important*).

5.4.2 Procedure

First, gatekeepers (e.g., director of sport or head coach) of school- and community-based sport groups in the North of England were contacted. This involved the distribution of a letter and subsequent discussions about the demands of the study and whether the club would be willing to be involved. For those clubs willing to participate, an information sheet regarding the study was distributed to their sport participants and parents/guardians. Where sport participants were willing to be involved, parental/guardian consent and child assent were sought and gained (see Appendix B). Youth sport participants were invited to complete a one-off multi-section questionnaire at a time convenient for the club (e.g., before or after a training session).

5.4.3 Instruments

5.4.3.1 Multidimensional perfectionism

Personal standards perfectionism and evaluative concerns perfectionism were captured using the Sport-MPS-2 (Gotwals & Dunn, 2009) and composites were formed using the same procedure outlined in chapter two.

5.4.3.2 Coach motivational climate

To assess participants' perceptions of the coach motivational climate, the Motivational Climate Scale for Youth Sports (MCSYS; Smith et al., 2008) was employed. This measure is designed for use with children and has 12 items. Of these items, six represent a task-involving climate (e.g., "The coach encouraged us to learn new skills"). The remaining six represent an ego-involving climate (e.g., "The coach paid most attention to the best players"). Responses are made on a 5-point Likert scale ($1 = $ *not at all true* to $5 = $ *very true*). The internal reliability and factorial validity of the scale have been supported by Smith et al. (2008).

5.4.3.3 Peer motivational climate

Perceptions of the peer motivational climate were measured using the Peer Motivational Climate in Youth Sport Questionnaire (PeerMCYSQ; Ntoumanis & Vazou, 2005). The scale has 21 items and five subscales that can be organised under two higher-order factors (a task-involving climate and an ego-involving climate). Items are prefixed with the phrase "On this team, most athletes…" A task-involving climate includes the improvement (e.g., "Help each other improve"), relatedness support (e.g., "Make their teammates feel valued"), and effort ("Praise their teammates who try hard") subscales. An ego-involving climate includes the intra-team competition (e.g., "Try to do better than their teammates") and the intra-team conflict (e.g., "Complain when the team doesn't win") subscales. Responses are made on a 7-point Likert scale (1 = *strongly disagree* to 7 = *strongly agree*). Ntoumanis and Vazou (2005) have demonstrated satisfactory internal reliability for the five subscales and good fit for the five-factor and higher-order models.

5.4.3.4 Enjoyment

The five item Interest-Enjoyment subscale from the Intrinsic Motivation Inventory (McAuley, Duncan, & Tammen, 1989) was used to assess enjoyment. The items are rated on a 7-point Likert scale (1 = *not at all true* to 7 = *very true*). An example item is "I enjoy playing my sport very much". Acceptable internal reliability has previously been shown for the subscale (e.g., McAuley et al., 1989).

5.4.3.5 Sport anxiety

Sport anxiety was captured by summing and then averaging the three subscales of the SAS-2 (Smith et al., 2006c). The properties of this measure are outlined in chapter three.

5.4.3.6 Friendship conflict

The friendship conflict subscale from the SFQS (Weiss & Smith, 1999) was used to measure participants' perceptions of unconstructive relationships with their best friend in sport. The properties of this measure are outlined in chapter two.

5.4.3.7 Intentions to drop out

Intentions to drop out were measured using the same four items outlined in chapter three. All instruments used in this study are displayed in Appendix C.

5.5 Results

5.5.1 Preliminary analysis

Missing value analysis identified 130 complete cases and 122 cases with missing data. Participants with item non-response exceeding 5% were removed ($n = 15$). This follows the recommendations of Tabachnick and Fidell (2007). The remaining participants with missing data ($n = 107$) had item non-response in the range of 1-5 items ($M = 1.86$, $SD = .09$). Missing data patterns relative to the number of participants with missing data revealed a high ratio of .80. As such, missing values were replaced using the mean of the non-missing items from the subscale in each individual case (see Graham et al., 2003).

In accordance with Tabachnick and Fidell (2007), there were 15 univariate outliers (standardised z-scores for subscales larger than 3.29, $p < .001$, two-tailed), which were removed. There were no multivariate outliers (Mahalanobis distance: $\chi^2_{(10)} = 29.59$, $p < .001$). The sample for the main statistical analysis comprised 222 participants ($n = 17$ males, $n = 205$ females, M age $= 13.62$, $SD = 1.14$, range $= 11$ to 16 years). To examine if there were any differences between genders and ages (early adolescence, 11 to 14 years and late adolescence, 15 to 16 years) for this sample, two separate Box's M tests were conducted. The covariance matrix was homogenous across gender, Box's M (55, 32038.40) $= 81.04$ ($p > .001$) and age, Box's M (55, 2500.97) $= 86.40$ ($p > .001$) and so the remaining analyses were conducted without controlling for either gender or age. Internal reliability was adequate for all measures (see Table 5.1).

5.5.2 Descriptive statistics and bivariate correlation coefficients

Descriptive statistics for all predictor, moderating, and criterion variables are displayed in Table 5.1. Bivariate correlation coefficients demonstrated that personal standards perfectionism had small positive correlations with a coach and peer task-involving climate, peer ego-involving climate, and anxiety. It had a medium positive correlation with enjoyment and small inverse correlation with intentions to drop out. Personal standards perfectionism was also unrelated to a coach ego-involving climate and friendship conflict. Evaluative concerns perfectionism had small positive correlations with a coach ego-involving climate and friendship conflict. It had a medium positive correlation with a peer ego-involving climate and a large

positive correlation with anxiety. Evaluative concerns perfectionism was also unrelated to a coach or peer task-involving climate, enjoyment, and intentions to drop out.

Table 5.1 Descriptive statistics and bivariate correlation coefficients between variables ($n = 222$)

	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. PSP	2.81	.75	.80									
2. ECP	4.89	1.41	.64**	.89								
3. CoachTask	4.01	.73	.13*	-.06	.85							
4. CoachEgo	2.20	.83	.04	.20**	-.45**	.79						
5. PeerTask	5.26	1.04	.18**	-.07	.54**	-.38**	.91					
6. PeerEgo	3.45	1.09	.25**	.42**	-.19**	.35**	-.21**	.81				
7. ENJOY	5.85	.83	.30**	.-05	.45**	-.35**	.49**	-.20**	.74			
8. ANX	2.05	.57	.24**	.58**	-.07	.32**	-.14*	.30**	-.20**	.90		
9. CONª	1.41	.66	.10	.21**	-.20**	.21**	-.09	.33**	-.15*	.25**	.78	
10. DROP	1.38	.65	-.21**	.01	-.26**	.15*	-.24**	.06	-.53**	.16*	.06	.83

Note. *p* < .05; **p* < .01; internal reliability alpha coefficients are shown on the diagonal; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; CoachTask = task-involving coach climate; CoachEgo = ego-involving coach climate; PeerTask = task-involving peer climate; PeerEgo = ego-involving peer climate; ENJOY = enjoyment; ANX = sport anxiety; CON = friendship conflict; DROP = intentions to drop out; [a] There were four less respondents for friendship conflict ($n = 218$). Values presented for personal standards perfectionism and evaluative concerns perfectionism are derived from raw scores.

5.5.3 Test of the hypotheses of the 2 × 2 model of perfectionism

As with the two previous quantitative tests of the hypotheses of the 2 × 2 model of perfectionism in this thesis, the procedure followed was based on guidelines outlined by Gaudreau and colleagues (Gaudreau, 2012; Gaudreau & Thompson, 2010). A separate moderated hierarchical regression was conducted for enjoyment, anxiety, friendship conflict, and intentions to drop out. In the first step, personal standards perfectionism and evaluative concerns perfectionism were entered. The interaction term for personal standards perfectionism and evaluative concerns perfectionism was entered in step two. Following non-significant interaction effects for all the criterion variables examined (see Table 5.2), the main effects were used to calculate and compare predicted values for each criterion variable across the four subtypes of perfectionism and test the model's hypotheses (see Gaudreau, 2012).

Table 5.2 Main effect models for each criterion variable ($n = 222$)

	F	df	R^2	PSP	ECP
				$\beta / B (t)$	
Enjoyment (main effect model)					
Step 1	25.22**	(2, 219)	.19	.56** / .47 (7.06)	-.41** / -.19 (-5.12)
Anxiety (main effect model)					
Step 1	62.23**	(2, 219)	.36	-.21**/ -.12 (-3.04)	.72** / .23 (10.20)
Friendship conflict (main effect model)					
Step 1	4.95**	(2, 215)[a]	.04	-.06 / -.04 (-.71)	.24** / .09 (2.81)
Intentions to drop out (main effect model)					
Step 1	9.58**	(2, 219)	.08	-.37** / -.24 (-4.37)	.25** / .09 (2.93)

Note. **$p < .01$; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism. [a] There were four less respondents for friendship conflict.

5.5.3.1 Enjoyment

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of enjoyment (B = .01, β =.03, t = .42, p = .68). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in enjoyment. Personal standards perfectionism was a significant positive predictor. Evaluative concerns perfectionism was a significant negative predictor. Predicted values for enjoyment were 5.72 for non-perfectionism, 6.66 for pure personal standards perfectionism, 5.04 for pure evaluative concerns perfectionism, and 5.98 for mixed perfectionism. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a (pure personal standards perfectionism will be associated with better outcomes than non-perfectionism; d = 1.13), 2 (pure evaluative concerns perfectionism will be associated with worse outcomes than non-perfectionism; d = -.81), 3 (pure evaluative concerns perfectionism will be associated with worse outcomes than mixed perfectionism; d = -1.13), and 4 (pure personal standards perfectionism will be associated with better outcomes than mixed perfectionism; d = .81).

5.5.3.2 Sport anxiety

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of anxiety (B = .02, β =.06, t = 1.11, p = .27). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in anxiety. Personal standards perfectionism was a significant negative predictor. Evaluative concerns perfectionism was a significant positive predictor. Predicted values for anxiety were 1.76 for non-perfectionism, 1.51 for pure personal standards perfectionism, 2.58 for pure evaluative concerns perfectionism, and 2.33 for mixed perfectionism. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a (d = -.43), 2 (d = 1.44), 3 (d = .43), and 4 (d = -1.44).

5.5.3.3 Friendship conflict

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor

of friendship conflict (B = .01, β =.03, t = .36, p = .72). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in friendship conflict. Personal standards perfectionism was a non-significant predictor. Evaluative concerns perfectionism was a significant positive predictor. Predicted values for friendship conflict were 1.29 for non-perfectionism, 1.21 for pure personal standards perfectionism, 1.61 for pure evaluative concerns perfectionism, and 1.53 for mixed perfectionism. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 2 (d = .49) and 4 (d = -.49) but not 1a (d = -.12) or 3 (d = .12).

5.5.3.4 Intentions to drop out

In the interaction effect model, the interactive term between personal standards perfectionism and evaluative concerns perfectionism was a non-significant predictor of intentions to drop out (B = -.03, β = -.08, t = -1.19, p = .23). The main effects model indicated that personal standards perfectionism and evaluative concerns perfectionism accounted for a significant proportion of the variance in friendship conflict. Personal standards perfectionism was a significant negative predictor. Evaluative concerns perfectionism was a significant positive predictor. Predicted values for intentions to drop out were 1.46 for non-perfectionism, .98 for pure personal standards perfectionism, 1.78 for pure evaluative concerns perfectionism, and 1.30 for mixed perfectionism. Based on Gaudreau's (2012) heuristic, this provided support for hypotheses 1a (d = -.74), 2 (d = .49), 3 (d = .74), and 4 (d = -.49).

5.5.4 Test for the moderating effects of the perceived motivational climate

Hierarchical multiple regressions were used to assess whether the coach motivational climate (task-involving or ego-involving) and/or peer motivational climate (task-involving or ego-involving) moderated the associations between the four subtypes of perfectionism and each of the indicators of experience examined. In the first step, personal standards perfectionism, evaluative concerns perfectionism, and the respective motivational climate (centred) were entered (main effects model). In the second step, the two-way interaction terms between personal standards perfectionism, evaluative concerns perfectionism, and the respective motivational climate were entered (two-way interaction effect model). In the final step, the three-

way interaction term between personal standards perfectionism, evaluative concerns perfectionism, and the respective motivational climate was entered (three-way interaction effect model). All significant three-way interactions were plotted and probed using regression equations outlined in Aiken and West (1991, pp. 51). The results of this analysis are displayed in Table 5.3 to Table 5.6.

5.5.4.1 The moderating effects of the perceived motivational climate

Two significant three-way interaction effects emerged to predict enjoyment and friendship conflict. In terms of enjoyment, the three-way interaction was between personal standards perfectionism, evaluative concerns perfectionism, and a coach ego-involving climate (see Table 5.4). For friendship conflict, the three-way interaction was between personal standards perfectionism, evaluative concerns perfectionism, and a coach task-involving climate (see Table 5.3). The plots for the two significant three-way interactions are displayed in Figure 5.1. There were no significant three-way interactions to predict anxiety or intentions to drop out and the peer motivational climate had no moderating effect (see Table 5.3, 5.4, 5.5, and 5.6).

As shown in figure 5.1, enjoyment was higher for the pure personal standards perfectionism, mixed perfectionism, and non-perfectionism subtypes in a low coach ego-involving climate compared to a high coach ego-involving coach climate. For the pure evaluative concerns perfectionism subtype, enjoyment was higher in a high coach ego-involving climate compared to a low coach ego-involving climate. Friendship conflict was higher for all four subtypes of perfectionism in a low coach task-involving climate compared to a high coach task-involving climate.

Table 5.3 Main and interaction effects models for a coach task-involving motivational climate ($n = 222$)

	Enjoyment β / B (t)	Anxiety β / B (t)	Drop out β / B (t)	Friendship conflict β / B (t)
Step 1 (Main effects)	$\Delta F = 33.30$**	$\Delta F = 41.30$**	$\Delta F = 10.18$**	$\Delta F = 5.87$**
	$\Delta R^2 = .31$	$\Delta R^2 = .36$	$\Delta R^2 = .12$	$\Delta R^2 = .08$
PSP	.45** / .38 (6.06)	-.21** / -.12 (-2.97)	-.31** / -.20 (-3.63)	-.01 / -.01 (-.09)
ECP	-.32** / -.15 (-4.27)	.72** / .23 (10.00)	.20* / .07 (2.33)	.20* / .07 (2.29)
CoachTask	.37** / .42 (6.35)	.00 / .00 (.04)	-.21** / -.19 (-3.25)	-.18** / -.17 (-2.72)
Step 2 (two-way interaction)	$\Delta F = 1.73$	$\Delta F = 1.39$	$\Delta F = 2.92$*	$\Delta F = .07$
	$\Delta R^2 = .02$	$\Delta R^2 = .01$	$\Delta R^2 = .03$	$\Delta R^2 = .00$
ECP × PSP	.02 / .01 (.32)	.07 / .02 (1.17)	-.07 / -.02 (-1.00)	.03 / .01 (.39)
PSP × CoachTask	-.16* / -.19 (-2.08)	.13 / .10 / (1.70)	.23* / .20 (2.55)	.01 / .01 (.10)
ECP × CoachTask	.07 / .04 (.84)	-.08 / -.03 (-1.01)	-.22* / -.10 (-2.44)	.01 / .00 (.10)
Step 3 (three-way interaction)	$\Delta F = .93$	$\Delta F = .64$	$\Delta F = .07$	**$\Delta F = 4.74$***
	$\Delta R^2 = .00$	$\Delta R^2 = .00$	$\Delta R^2 = .00$	**$\Delta R^2 = .02$**
ECP × PSP × CoachTask	.07 / .03 (.97)	.05 / .02 (.80)	-.02 / -.01 (-.26)	**.18* / .07 (2.18)**

Note. *$p < .05$; **$p < .01$; Bold = significant three-way interaction; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; CoachTask = coach task-involving motivational climate.

Table 5.4 Main and interaction effects models for a coach ego-involving motivational climate ($n = 222$)

	Enjoyment β / B (t)	Anxiety β / B (t)	Drop out β / B (t)	Friendship conflict β / B (t)
Step 1 (Main effects)	$\Delta F = 27.80^{**}$	$\Delta F = 47.73^{**}$	$\Delta F = 7.58^{**}$	$\Delta F = 5.49^{**}$
	$\Delta R^2 = .28$	$\Delta R^2 = .40$	$\Delta R^2 = .09$	$\Delta R^2 = .07$
PSP	.52** / .43 (6.83)	-.19** / -.11 (-2.70)	-.35** / -.23 (-4.16)	-.04 / -.02 (-.43)
ECP	-.32** / -.15 (-4.13)	.66** / .21 (9.41)	.21* / .08 (2.46)	.19* / .07 (2.21)
CoachEgo	-.31** / -.31 (-5.19)	.19** / .13 (3.51)	.12 / .10 (1.84)	-.17* / .14 (2.51)
Step 2 (two-way interaction)	$\Delta F = 1.33$	$\Delta F = 1.66$	$\Delta F = .61$	$\Delta F = .32$
	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .00$
ECP × PSP	.01 / .00 (.09)	.07 / .02 (1.32)	-.07 / -.02 (-1.06)	.02 / .01 (.24)
PSP × CoachEgo	.04 / .04 (.54)	-.13 / -.09 (-1.91)	-.04 / -.03 (-.49)	.07 / .06 (.86)
ECP × CoachEgo	.09 / .05 (1.22)	.08 / .03 (1.16)	-.01 / -.00 (-.06)	-.02/ -.01 (-.28)
Step 3 (three-way interaction)	**$\Delta F = 10.32^{**}$**	$\Delta F = .01$	$\Delta F = .00$	$\Delta F = .31$
	$\Delta R^2 = .03$	$\Delta R^2 = .00$	$\Delta R^2 = .00$	$\Delta R^2 = .00$
ECP × PSP × CoachEgo	**-.23** / -.10 (-3.21)**	-.01 / -.00 (-.10)	.00 / .00 (.01)	.05 / .02 (.56)

Note. *$p < .05$; **$p < .01$; Bold = significant three-way interaction; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; CoachEgo = coach ego-involving motivational climate.

Table 5.5 Main and interaction effects models for a peer task-involving motivational climate ($n = 222$)

	Enjoyment β / B (t)	Anxiety β / B (t)	Drop out β / B (t)	Friendship conflict β / B (t)
Step 1 (Main effects)	$\Delta F = 36.17$**	$\Delta F = 41.73$**	$\Delta F = 8.75$**	$\Delta F = 3.61$*
	$\Delta R^2 = .33$	$\Delta R^2 = .37$	$\Delta R^2 = .11$	$\Delta R^2 = .05$
PSP	.41** / .34 (5.39)	-.19** / -.11 (-2.64)	-.30** / -.20 (-3.47)	-.04 / -.02 (-.39)
ECP	-.28** / -.13 (-3.75)	.70** / .23 (9.65)	.19* / .07 (2.24)	.22* / .08 (2.48)
PeerTask	.40** / .32 (6.88)	-.05 / -.03 (-.91)	-.17* / -.11 (-2.57)	-.07 / -.04 (-.97)
Step 2 (two-way interaction)	$\Delta F = 2.08$	$\Delta F = .97$	$\Delta F = 2.00$	$\Delta F = 1.49$
	$\Delta R^2 = .02$	$\Delta R^2 = .01$	$\Delta R^2 = .02$	$\Delta R^2 = .02$
ECP × PSP	-.03 / -.01 (-.55)	.07 / .02 (1.22)	-.04 / -.01 (-.61)	.02 / .01 (.32)
PSP × PeerTask	-.19* / -.14 (-2.49)	.05 / .03 (.70)	.18* / .10 (2.06)	-.01 / -.00 (-.05)
ECP × PeerTask	.12 / .05 (1.63)	.02 / .01 (.26)	-.18* / -.06 (-2.05)	.14 / .05 (1.56)
Step 3 (three-way interaction)	$\Delta F = 3.04$	$\Delta F = .01$	$\Delta F = .00$	$\Delta F = .40$
	$\Delta R^2 = .01$	$\Delta R^2 = .00$	$\Delta R^2 = .00$	$\Delta R^2 = .00$
ECP × PSP × PeerTask	.12 / .04 (1.74)	-.01 / -.00 (-.11)	-.00 / -.00 (-.05)	.05 / .01 (.63)

Note. *$p < .05$; **$p < .01$; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; PeerTask = peer task-involving motivational climate.

Table 5.6 Main and interaction effects models for a peer ego-involving motivational climate ($n = 222$)

	Enjoyment β / *B* (*t*)	Anxiety β / *B* (*t*)	Drop out β / *B* (*t*)	Friendship conflict β / *B* (*t*)
Step 1 (Main effects)	$\Delta F = 20.61^{**}$	$\Delta F = 41.94^{**}$	$\Delta F = 6.56^{**}$	$\Delta F = 9.07^{**}$
	$\Delta R^2 = .22$	$\Delta R^2 = .37$	$\Delta R^2 = .08$	$\Delta R^2 = .11$
PSP	.55** / .46 (7.11)	-.21** / -.12 (-3.02)	-.37**/ -.24 (-4.35)	-.05 / -.04 (-.63)
ECP	-.32** / -.15 (-3.82)	.69** / .22 (9.17)	.22* / .08 (2.48)	.12 / .04 (1.30)
PeerEgo	-.20** / -.15 (-3.07)	.07 / .04 (1.11)	.05 / .03 (.75)	.29* / .18 (4.07)
Step 2 (two-way interaction)	$\Delta F = .70$	$\Delta F = .92$	$\Delta F = .45$	$\Delta F = .38$
	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$	$\Delta R^2 = .01$
ECP × PSP	-.03 / -.01 (-.36)	.08 / .02 (1.34)	-.08 / -.03 (-1.07)	.03 / .01 (.35)
PSP × PeerEgo	.03 / .02 (.33)	-.09 / -.04 (-1.16)	.02 / .01 (.22)	-.02 / -.01 (-.26)
ECP × PeerEgo	.08 / .03 (.91)	.04 / .01 (.58)	-.02 / -.00 (-.17)	.07 / .20 (.79)
Step 3 (three-way interaction)	$\Delta F = .34$	$\Delta F = .02$	$\Delta F = .12$	$\Delta F = .00$
	$\Delta R^2 = .00$	$\Delta R^2 = .00$	$\Delta R^2 = .00$	$\Delta R^2 = .00$
ECP × PSP * PeerEgo	.05 / .01 (.58)	.01 / .00 (.12)	.03 / .01 (.35)	.00 / -.00 (-.00)

Note. *p < .05; **p < .01; PSP = personal standards perfectionism; ECP = evaluative concerns perfectionism; PeerEgo = peer ego-involving motivational climate.

Figure 5.1 Interactive effect of personal standards perfectionism, evaluative concerns perfectionism, and the perceived motivational climate on enjoyment and friendship conflict ($n = 222$).
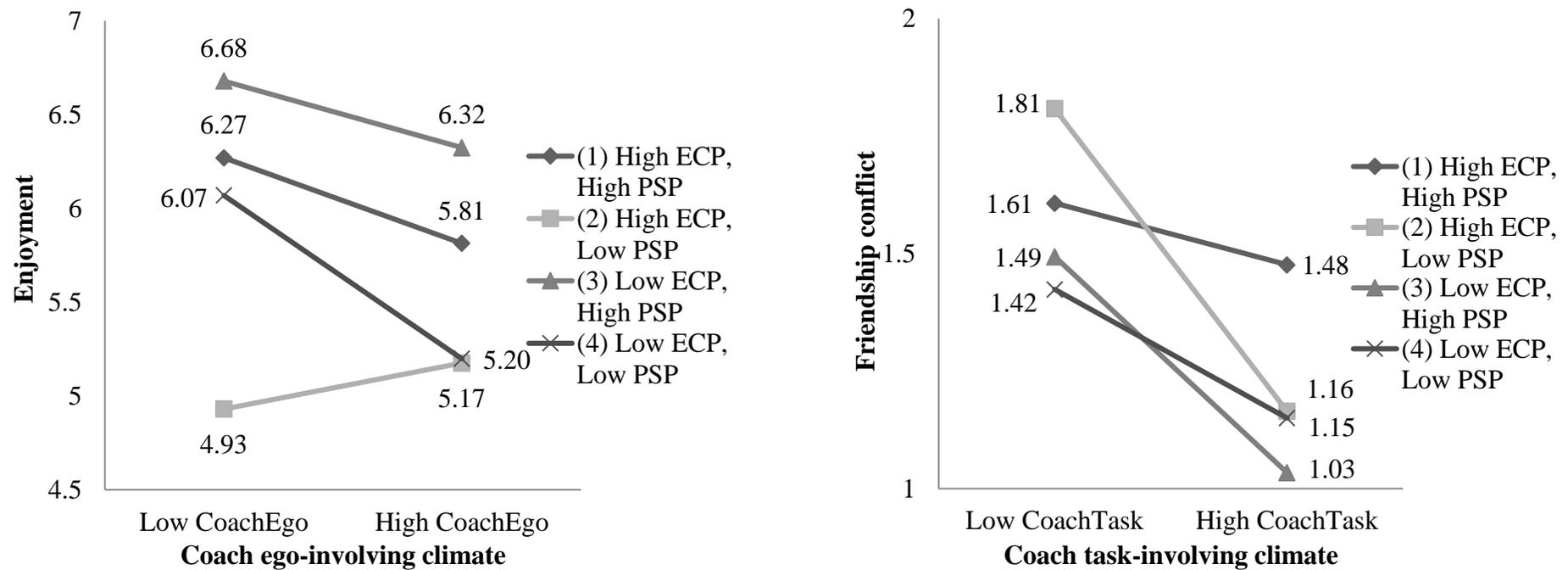
Note. High ECP, High PSP = mixed perfectionism; High ECP, Low PSP = pure evaluative concerns perfectionism; Low ECP, High PSP = pure personal standards perfectionism; Low ECP, Low PSP = non-perfectionism.

5.6 Discussion

The current study examined the effects of the four subtypes of perfectionism from the 2×2 model of perfectionism on desirable (enjoyment) and undesirable (anxiety, friendship conflict, and intentions to drop out) outcomes in youth sport. The study also included an examination of the moderating effects of the perceived coach and peer motivational climates. In doing so, the study re-examines some of the relationships identified in studies one and two of this thesis and builds directly on these two studies by providing a test of how coach and peer motivational climates might moderate such relationships. Main effects indicated that personal standards perfectionism was associated with more desirable and less undesirable outcomes in youth sport as support was largely evident for hypothesis 1a (enjoyment, anxiety, and intentions to drop out). Pure evaluative concerns perfectionism was associated with less desirable and more undesirable outcomes compared to non-perfectionism and mixed perfectionism with support for hypothesis 2 and 3 largely evident across outcomes. Mixed perfectionism was associated with less desirable and more undesirable outcomes compared to pure personal standards perfectionism as hypothesis 4 was supported for all outcomes. Three-way interaction effects indicated that a coach task-involving climate may improve the experiences of young people who differ in combinations of perfectionism dimensions in terms of friendship conflict. By contrast a coach ego-involving climate may exacerbate the negative effects of different subtypes of perfectionism in terms of enjoyment.

5.6.1 Perfectionism subtypes and indicators of experiences in youth sport

As expected, youth sport participants who are pursuing high personal standards and are not overly concerned with negative evaluations (pure personal standards perfectionism), experienced more enjoyment, less anxiety, and were not intending to drop out of their sport compared to those not pursuing high standards (non-perfectionism). This corroborates earlier findings for hypothesis 1a in this thesis. Inconclusive findings again emerged for friendship conflict when pure personal standards perfectionism was compared to non-perfectionism. This can be taken as further support for the notion that high standards alone confer neither beneficial nor harmful effects for undesirable aspects of friendship quality

(Ommundsen et al., 2005). All in all, pure personal standards perfectionism appears relatively unproblematic for youth sport participants.

When individuals with heightened concerns over meeting high standards that are not internally valued and who doubt their abilities to meet such standards (pure evaluative concerns perfectionism), were compared to non-perfectionism they experienced less enjoyment and more anxiety, friendship conflict, and intentions to drop out. This was anticipated and again corresponds with earlier findings in this thesis for hypothesis 2. When compared to those who personally adhere to the standards imposed by others (mixed perfectionism), pure evaluative concerns perfectionism also entailed lower enjoyment and higher anxiety and intentions to drop out (hypothesis 3). The same protective role of high personal standards in mixed perfectionism did not extend to friendship conflict, which again was to be expected. Taken in context of the previous examinations of the 2×2 model in this thesis, this finding suggests that pure evaluative concerns perfectionism is the most problematic subtype among youth sport participants when personal as opposed to undesirable interpersonal outcomes are considered.

Finally, mixed perfectionism involved less enjoyment and more anxiety, friendship conflict, and intentions to drop out compared to pure personal standards perfectionism. This again is consistent with previous results in this thesis for hypothesis 4. Of especial note, the finding adds further credence to the suggestion that pure personal standards perfectionism is the most adaptive subtype. By contrast, mixed perfectionism may hold some costs for youth sport participants. To delineate a subtype of perfectionism that entails more adaptive achievement striving (pure personal standards perfectionism) from a subtype that reflects perfectionism as traditionally conceived (mixed perfectionism) seems to be of importance.

5.6.2 Perfectionism subtypes, youth sport experiences, and the perceived motivational climate

In terms of the moderating effects of the motivational climate, there were again some predicted findings. That is, in a high coach task-involving climate, the associations that pure personal standards perfectionism has demonstrated with friendship conflict were reinforced. This corroborates previous findings regarding congruency between the motivational climate and an individual's dispositional goal

orientation that can result in enhanced effects (e.g., Standage et al., 2003). In addition, a high task-involving climate appeared to buffer the negative effects of pure evaluative concerns perfectionism and mixed perfectionism on friendship conflict. This is consistent with suppositions that the motivational climate may override dispositions (Roberts, 2012) and that focusing on task mastery in sport may compensate against the maladaptive cognitions and beliefs involved in perfectionism (Hall et al., 2014). It is also interesting to note that although all subtypes of perfectionism displayed lower levels of friendship conflict in a high coach task-involving climate, this effect was more pronounced for pure evaluative concerns perfectionism. While not all of the studies in thesis have demonstrated pure evaluative concerns perfectionism to be the most maladaptive subtype, the tenets of the 2×2 model infer that it is (Gaudreau & Thompson, 2010). Thus, it is encouraging that intervening and promoting a coach task-involving climate would most likely ameliorate the negative effects of this subtype.

In terms of a coach ego-involving climate, the findings were also largely as predicted. That is, in a high ego-involving climate enjoyment was lower for non-perfectionism, pure personal standards perfectionism, and mixed perfectionism. This aligns with thoughts that the motivational climate may override dispositions (Roberts, 2012) and by focusing on ego criteria individuals who are overly concerned with meeting the expectations of others may be at greater risk (Hall et al., 2014). An unexpected finding emerged for pure evaluative concerns perfectionism in a high coach ego-involving climate. Instead of exacerbating the negative effects of this subtype, a high ego-involving climate appeared to elicit higher enjoyment. While this finding might infer a matching hypothesis, wherein congruency between the criteria for success in the environment and one's personal criteria for success results in better outcomes (see Standage et al., 2003), there may be an alternate explanation. Duda (2005) has asserted that the two motivational climates are not bi-polar. As such, task-involving and ego-involving features may be prevalent in a given achievement situation and this may be contributing to higher levels of enjoyment for this subtype

One of the most unexpected findings was that neither a peer task-involving nor a peer ego-involving motivational climate had a moderating effect. Ntoumanis et al. (2012) have demonstrated the importance of considering peer as well as coach

influence in youth sport. In addition, Vazou et al. (2006) have shown that the peer climate is of greater importance than the coach climate in predicting outcomes such as enjoyment. Thus, it was anticipated that the peer motivational climate would adopt a moderating role here. One potential reason that the peer motivational climate may not have been influential in this study is because the sample consisted of children and adolescents (11 to 16 years). Chan, Lonsdale, and Fung (2011) have found evidence to suggest that the influence of peers on outcomes such as enjoyment changes across this developmental period with peers becoming more influential in older adolescence. Another reason for the lack of a moderating effect of the peer motivational climate, which may also explain the absence of interaction effects for the coach motivational climate in terms of anxiety and intentions to drop out, is because interaction effects are difficult to identify (see Roberts, 2012). This is an issue that applies more broadly with interaction effects rarely contributing to more than 3% variance in social science research (Chaplin, 1991).

5.7 Conclusion

The findings of this study provide additional evidence that subtypes of perfectionism from the 2×2 model of perfectionism relate to indicators of young people's experiences in divergent ways. The difference in findings between the four subtypes of perfectionism is seemingly contingent on whether the outcomes examined can be considered desirable or undesirable and/or personal or interpersonal. There was also some evidence to suggest that a coach task-involving climate may offer a realistic means to intervene and reinforce positive relationships between the subtypes and desirable outcomes and attenuate negative relationships with undesirable outcomes. In addition, ensuring features of a coach ego-involving climate are tempered may help to improve the overall sport experiences of young people who differ in combinations of perfectionism dimensions.

Chapter 6 – General Discussion

6.1 Purpose of this thesis

It is currently known that perfectionism influences the thoughts, feelings, and behaviours of young people in sport (see Hall et al., 2014). In particular, research that has examined the separate effects of two main dimensions of perfectionism (personal standards perfectionism and evaluative concerns perfectionism) has demonstrated that they hold different implications for young people's sport experiences. In terms of personal standards perfectionism, it appears to contribute to desirable outcomes among young sport participants. This is particularly the case when it is partialled from evaluative concerns perfectionism (see Gotwals et al., 2012). In contrast, evaluative concerns perfectionism appears to render young sport participants vulnerable to undesirable outcomes. While it is advantageous to understand the effects of perfectionism in this way, the approach is not without its limitations. Specifically, there are 'perils' associated with partialling the two dimensions of perfectionism in that it is not quite clear what the residualised variables capture (see Hill, 2014). Further, the approach neglects that the two dimensions of perfectionism coexist within individuals (see Gaudreau & Thompson, 2010). An alternative approach that has been adopted to address this latter issue involves examining the additive effects of sub-dimensions of perfectionism (see Dunn et al., 2006). However, this approach also has a notable drawback in that the interplay between the two dimensions of perfectionism is not accounted for. One approach that takes into consideration both the coexistence of the two dimensions of perfectionism and their interplay is the 2×2 model of perfectionism (Gaudreau & Thompson, 2010). The 2×2 model has recently emerged in the perfectionism literature and extant tests of the four hypotheses of the 2×2 model have provided useful insights into the divergent effects of four different within person combinations (or subtypes) of perfectionism. Given the potential advantages of adopting the 2×2 model and that it has yet to be extensively examined with respect to young people's sport experiences, the purpose of this thesis was to extend previous research by testing the 2×2 model against the backdrop of a social-cognitive perspective on youth sport experiences.

6.2 Summary of the findings

The first study adopted a quantitative method and provided an initial test of the 2×2 model by examining the influence of the model's four subtypes of perfectionism on desirable outcomes that are indicative of a more positive youth sport experience. The findings demonstrated that the four subtypes were predictive of such desirable personal (enjoyment and physical self-worth) and interpersonal (friendship quality) outcomes and this was in a manner largely consistent with the model's four hypotheses (see Table 6.1). There was an unexpected pattern of findings, however, for an undesirable interpersonal outcome (friendship conflict). The second study adopted a quantitative method and built on the first by examining the influence of the four subtypes of perfectionism on undesirable outcomes that are indicative of a more negative youth sport experience. The findings demonstrated that the four subtypes were predictive of such undesirable personal (negative and positive feelings, concentration disruption, worry, somatic anxiety, and intentions to drop out) and interpersonal (antisocial and prosocial behaviour) outcomes but a more varied pattern of findings emerged for the model's four hypotheses (see Table 6.1). In particular, the same unexpected pattern identified in the first study was evident for undesirable personal outcomes (negative feelings, worry, and somatic anxiety). There was also a lack of support for the model's hypotheses (prosocial behaviour) and some contradictory evidence (antisocial behaviour). Overall, the first two studies suggested that the 2×2 model is useful for understanding the experiences of youth sport participants.

The third study explored young people's sport experiences and the 2×2 model using qualitative data collection methods. The findings of study three demonstrated differences across the four subtypes of perfectionism in terms of the meaning of sport and the social-environment that could support or detract from young people gaining the desired outcomes from their sport involvement. This provided varying degrees of support for the model's four hypotheses and implied that the expected pattern of findings for the model's hypotheses may only emerge when youth sport participants are performing well. Having identified that factors in the social-environment play an integral role in shaping young people's sport experiences, the final study adopted a quantitative method to examine the moderating effects of perceived coach and peer motivational climates in regards to

the 2×2 model and desirable (enjoyment) and undesirable (anxiety, friendship conflict, and intentions to drop out) outcomes. The final study replicated findings for the first two studies of this thesis regarding the hypotheses of the 2×2 model (see Table 6.1). In addition, it was demonstrated that emphasising a coach task-involving motivational climate and tempering ego-involving cues may promote more positive sport experiences for young people who differ in combinations of perfectionism dimensions. Specifically, friendship conflict was lower for all four subtypes of perfectionism in a high coach task-involving climate and enjoyment was higher for three of the four subtypes in a low coach ego-involving climate. No other significant three-way interaction effects were identified.

Table 6.1 Summary of hypotheses supported, unsupported, and contradicted by the studies in the thesis

Study	Outcome measure	H1a	H2	H3	H4
Study 1	Enjoyment	✓	✓	✓	✓
	Physical self-worth	✓	✓	✓	✓
	Self-esteem enhancement and support	✓	✓	✓	✓
	Loyalty and intimacy	✓	✓	✓	✓
	Things in common [i]	○	✓	✓	○
	Companionship and pleasant play	✓	✓	✓	✓
	Conflict resolution [i]	○	✓	✓	○
	Friendship conflict	○	✓	○	✓
Study 2	*Negative feelings*	○	✓	○	✓
	Positive feelings	✓	✓	✓	✓
	Concentration disruption [i]	✓	✓	✓	✓
	Worry	○	✓	○	✓
	Somatic anxiety	○	✓	○	✓
	Antisocial behavior toward teammates [i]	○	○	†	○
	Antisocial behavior toward opponents [i]	○	○	†	✓
	Prosocial behavior toward teammates [i]	○	✓	✓	○
	Prosocial behavior toward opponents	○	○	○	○
	Intentions to drop out	✓	✓	✓	✓
Study 4	Enjoyment	✓	✓	✓	✓
	Sport anxiety	✓	✓	✓	✓
	Friendship conflict	○	✓	○	✓
	Intentions to drop out	✓	✓	✓	✓

Note. [i] = significant interaction ($p < .05$) between personal standards perfectionism and evaluative concerns perfectionism; ✓ = hypothesis supported; ○ = a lack of support for the hypothesis; † = contradictory evidence; *italics* = undesirable outcome.

6.3 Implications for the 2×2 model of perfectionism

While the 2×2 model of perfectionism (Gaudreau &Thompson, 2010) is a relatively new addition to the perfectionism literature, it has provided a number of statistical and conceptual advances that have helped to enhance our understanding of the influence of perfectionism in sport. In context of this thesis, examining the interaction between personal standards perfectionism and evaluative concerns perfectionism has shed light on the combined, rather than the separate, effects of perfectionism dimensions on young people's sport experiences. This has enabled us to better understand under what conditions perfectionism is associated with desirable or undesirable outcomes. However, because the model is still in its infancy, there are some contentious issues that remain. Of current debate is the appropriateness of the model's four hypotheses (see Gaudreau, 2013; Stoeber, 2012a), whether three or four subtypes of perfectionism ought to be differentiated (e.g., Smith et al., 2015), and the role of personal standards perfectionism in mixed perfectionism (e.g., Hall et al., 2014). In the following two sections, the implications of the findings of the four studies in this thesis are evaluated in terms of these three issues.

6.3.1 Hypothesis 1 and the role of pure personal standards perfectionism

Pure personal standards perfectionism is considered a pivotal subtype in the 2×2 model because it can help to determine if striving for high standards is adaptive (see Gaudreau & Verner-Filion, 2012). To test this assertion, the model includes three competing hypotheses on how pure personal standards perfectionism, which involves striving for high standards that are consistent with one's own values and being relatively unburdened by evaluative concerns, compares to non-perfectionism (low personal standards perfectionism and low evaluative concerns perfectionism; Gaudreau & Thompson, 2010). Consistent with the adaptive nature of a 'healthy' perfectionism subtype (see Stoeber & Otto, 2006), the first competing hypothesis of the 2×2 model asserts that pure personal standards perfectionism will be associated with better outcomes compared to non-perfectionism (hypothesis 1a). The findings of studies one, two, and four of this thesis corroborated hypothesis 1a on numerous occasions (see Table 6.1). Of note, the findings replicated studies that have examined positive affect and the 2×2 model in a variety of populations (e.g., adolescents, dancers, varsity athletes; Crocker et al., 2014; Cumming & Duda, 2012;

Damian et al., 2014), suggesting that pursuing valued high standards can also be psychologically rewarding for youth sport participants.

The findings of studies one, two, and four also provided support for hypothesis 1a across previously unexamined outcomes (i.e., enjoyment, physical self-worth, positive aspects of friendship quality, concentration disruption, and intentions to drop out). In context of extant perfectionism literature, this extends our understanding of perfectionism and friendship quality, as having high personal standards had yet to serve an important role in this regard (Ommundsen et al., 2005). These findings build on studies that have demonstrated inconclusive results for this paired contrast and physical self-perceptions (Cumming & Duda, 2012; Quested et al., 2014). Further, these findings corroborated research that has examined the additive effects of sub-dimensions of perfectionism on anxiety (Gotwals et al., 2010) and suggest that the same findings can be expected when the interplay between the two dimensions of perfectionism is accounted for. Finally, these findings provided initial insight into the adaptive effect of pure personal standards perfectionism on one of the most important outcomes that youth sport practitioners are trying to prevent, which is dropping out. Collectively, the supportive evidence demonstrated for hypothesis 1a aligns with the side of an ongoing debate that suggests striving for high standards can be adaptive for athletes (see Gotwals et al., 2012).

While the findings of this thesis provided supportive evidence for hypothesis 1a, there were a number of occasions when inconclusive findings emerged (see Table 6.1). Although it is accepted that these inconclusive findings do not confirm hypothesis 1c (i.e., pure personal standards perfectionism and non-perfectionism do not significantly differ; see Gaudreau, 2013; Stoeber, 2012a), it raised the question of why there may be no 'psychological advantage' conferred by pure personal standards perfectionism in some instances. Stoeber (2012a) pointed to a reason that might account for this when he highlighted that the hypothesis 1a comparison in the 2×2 model does not directly align with the respective comparison in the tripartite model and so adaptive effects may not replicate as consistently when examining the 2×2 model. However, in this thesis, a lack of 'psychological advantage' of pure personal standards perfectionism appeared to be due to the type of outcome considered. That is, the outcomes that conferred inconclusive findings for this contrast tended to be more undesirable in nature (e.g., negative feelings, worry, and

friendship conflict). These findings are consistent with studies that have examined the 2×2 model inside and outside of sport (e.g., depressive symptoms, negative affect, and burnout; Cumming & Duda, 2012; Douilliez & Lefèvre, 2011; Hill, 2013). Of the undesirable outcomes that produced inconclusive findings in this thesis, most can be considered stress-related variables or capture interpersonal conflict, which are key indicators of maladjustment. In 2010, Gaudreau and Thompson suggested that it might be premature to conclude that pure personal standards perfectionism "neither reduces nor increases maladjustment compared to non-perfectionism" (pp. 536). Given the findings of this thesis, it seems to be a conclusion that we are drawing closer to. That is not to say, however, that pure personal standards perfectionism is not the most adaptive subtype in the 2×2 model because the findings of this thesis demonstrated associations with more desirable and less undesirable outcomes for pure personal concerns perfectionism compared to mixed perfectionism (support for hypothesis 4; see Table 6.1).

The third competing hypothesis for this contrast asserts that pure personal standards perfectionism will be associated with worse outcomes compared to non-perfectionism (hypothesis 1b; Gaudreau & Thompson, 2010). This hypothesis stems from assertions that 'healthy' perfectionism involves approach and avoidance tendencies as well as contingent self-worth and so there is a vulnerability factor associated with striving for high standards, particularly when high standards cannot be met (Flett & Hewitt, 2006). Across studies one, two, and four of this thesis, there was no support demonstrated for this hypothesis. This is consistent with the findings of all quantitative examinations of the 2×2 model, to date. That said, there was some suggestion in the findings of the qualitative study of this thesis that hypothesis 1b may be supported when young sport participants are unable to perform to their best. This inference aligns with research that has demonstrated the negative responses of athletes with high personal standards perfectionism after experiencing failure (Hill et al., 2011). It is inconsistent, however, with a quantitative examination of the 2×2 model that demonstrated no support for hypothesis 1b when athletes experienced low goal progress (Crocker et al., 2014). Consequently, this is an issue that requires further probing to elicit under what conditions pure personal standards perfectionism may be adaptive, neutral, or maladaptive for youth sport participants. The overall implication of the findings for hypothesis 1 in this thesis align with

Gaudreau's (2013) riposte to Stoeber's (2012a) critical commentary on the 2×2 model, in that it appears necessary to retain the three competing hypotheses.

6.3.2 Hypotheses 2 and 3 and the roles of pure evaluative concerns perfectionism and mixed perfectionism

Researchers consider hypotheses 2 and 3 of the 2×2 model to be important because it is where the model departs from a tripartite model of perfectionism (see Damian et al., 2014; Stoeber, 2012a). Two points of debate have emerged in this regard. First, whether four or three subtypes of perfectionism ought to be differentiated. This relates to hypothesis 2 in the 2×2 model and the assertion that pure evaluative concerns perfectionism will be associated with worse outcomes compared to non-perfectionism (Gaudreau & Thompson, 2010). The tripartite model does not discriminate between pure evaluative concerns perfectionism and non-perfectionism and subsumes them under non-perfectionism. Second, whether high personal standards adopt a buffering role in mixed perfectionism rendering pure evaluative concerns perfectionism the most detrimental subtype. This relates to hypothesis 3 in the 2×2 model and the assertion that mixed perfectionism will be associated with better outcomes compared to pure evaluative concerns perfectionism (Gaudreau & Thompson, 2010).

Replicating previous findings for negative affect and the 2×2 model (e.g., Crocker, et al., 2014; Cumming & Duda, 2012; Damian et al, 2014), the findings in this thesis provided support for hypothesis 2. In fact, this finding was corroborated for the majority of the outcomes examined and this was particularly the case when the qualitative experiences of youth sport participants were explored in the third study. This aligns with the widely accepted belief that evaluative concerns perfectionism is maladaptive for athletes (see Stoeber, 2011). Further, it supported the position that four subtypes of perfectionism ought to be differentiated. As this finding may hold negative implications for the tripartite model, it would be advantageous for researchers to make direct comparisons between the two models, as Smith et al. (2015) have begun to address.

The issue that has been more widely debated is the role of high personal standards in mixed perfectionism. Gaudreau and Verner-Filion (2012), amongst others (e.g., Douilliez & Lefèvre, 2011), have suggested that as the high standards

that individuals are pursuing are partially internalised this should afford individuals some protection from the negative effects of evaluative concerns. Hall et al. (2014), amongst others (Quested et al., 2014; Stoeber & Otto, 2006), have contested that high personal standards coupled with evaluative concerns are unlikely to afford such a buffering effect and will more likely exacerbate negative effects due to an underlying debilitative pattern of cognition, affect, and behaviour. The findings of this thesis provide additional insight into this debate. Specifically, the position of Gaudreau and colleagues consistently received support when desirable outcomes were examined (e.g., enjoyment, positive feelings, and adaptive friendship quality). That is, mixed perfectionism was associated with higher levels of desirable outcomes compared to pure evaluative concerns perfectionism. This finding is in keeping with examinations of the 2×2 model more broadly (e.g. Damian et al., 2014; Franche et al., 2012; Gaudreau & Verner-Filion, 2012).

However, when undesirable outcomes were examined in this thesis, the findings were more mixed. There was some support for Gaudreau and colleagues' position (e.g., anxiety and intentions to drop out), inconclusive findings (negative feelings, worry, somatic anxiety, and friendship conflict) and some direct support for the position of Hall and colleagues (antisocial behaviour). The direct support for Hall and colleagues' position that high personal standards exacerbate the negative effects of evaluative concerns perfectionism in mixed perfectionism adds to the one study that has demonstrated such an effect, in context of the 2×2 model (i.e., expressive suppression, Hill & Davis, 2014). In terms of the broader perfectionism literature, the finding corroborates recent assertions that pursuing high standards may impel individuals to engage in illicit acts (Flett & Hewitt, 2014). This is an issue that has not previously been examined in terms of perfectionism in sport. If the debate over the role of high personal standards in mixed perfectionism is to be resolved, a greater understanding of some of the mechanisms that might account for contradictions in findings appears to be necessary.

The findings of the qualitative study in this thesis shed some light on the different motives that may account for finding that mixed perfectionism was associated with higher antisocial behaviour than pure evaluative concerns perfectionism. That is, young sport participants in the mixed perfectionism group described pursuing both task- and ego-goals and the latter is implicated in antisocial

behaviour (see Kavussanu, 2007). In the wider purview of the perfectionism literature, there are a number of other factors that may help tease apart whether high personal standards have a buffering or exacerbating effect. For instance, a consideration of self-efficacy as it relates to personal standards perfectionism (e.g., Seo, 2008) could help to establish whether it is feelings of efficacy in meeting standards and not the standards themselves that buffer.

6.4 Implications for youth sport experiences

The findings of the four studies in this thesis hold a number of important implications for those working with youth sport participants. First, the endorsement of high personal standards is an integral part of youth sport participation and the findings of this thesis have demonstrated that the pursuit and attainment of personally valued standards can promote psychological, emotional, and interpersonal rewards. Therefore, setting and striving for high personal standards alone could be encouraged among youth sport participants. The endorsement of high personal standards becomes more problematic when it includes doubts about abilities and evaluative concerns, as the findings in this thesis demonstrated less desirable outcomes and more undesirable outcomes for subtypes of perfectionism imbued with such concerns (i.e., pure evaluative concerns perfectionism and mixed perfectionism). Researchers have previously attested to such recommendations (e.g., Hall, 2006; Stoeber, 2011).

Drawing on a social-cognitive approach to motivation and the suggestions of Hall et al. (2014), one means of waylaying evaluative concerns could be to encourage youth sport participants to view competence in terms of personal mastery, promote cooperation, and reward effort regardless of the outcome (i.e., promote a coach task-involving climate). The beneficial effects of a coach task-involving climate are widely documented (see Harwood et al., 2015, for a review). Research concerning moderating factors and perfectionism in sport, however, have tended to focus on variables such as goal progress and goal orientations (Appleton et al., 2009; Crocker et al., 2014). The final study of this thesis provided the first empirical evidence that a coach task-involving climate may confer beneficial effects on the relationships between the four subtypes of perfectionism from the 2×2 model and an undesirable outcome in youth sport (friendship conflict). As the findings of the

final study demonstrated a pronounced effect of a high coach task-involving climate on the most maladaptive subtype of perfectionism in the 2×2 model (i.e., pure evaluative concerns perfectionism), promoting such a climate appears to offer a particularly effective means of overriding this subtype of perfectionism and reducing the negative effects of evaluative concerns.

The findings of the final study also demonstrated that tempering coach ego-involving cues may also be effective for promoting more positive experiences in youth sport. The findings of the qualitative study in this thesis appeared to only partially support this view, however, with the mixed perfectionism subtype describing aspects of a coach ego-involving climate (e.g., peer competition and comparison) as important for their sport enjoyment. In addition, there was some indication in the final study of this thesis that enjoyment increased for the pure evaluative concerns perfectionism subtype in a high coach ego-involving climate. There are alternate approaches to conceptualising the motivational climate in youth sport that may help to address this issue. In particular, empowering and disempowering coach climates (see Duda, 2013) focus on more than athlete competence and address additional psychological mechanisms (e.g., autonomy and relatedness) that are important for supporting or detracting from positive youth sport experiences. Such mechanisms were also highlighted as important by the youth sport participants in the qualitative study of this thesis. Thus, a worthwhile research extension could be to re-examine the relationships identified here in context of empowering and disempowering coach climates.

6.5 Limitations and future research directions

Although the findings of the thesis provide us with useful insights into the effects of different subtypes of perfectionism on youth sport experiences and offer some potential means to ameliorate the effects of detrimental subtypes, they should be considered in terms of the limitations of the four studies. First, three of the four studies were cross-sectional in nature. Cross-sectional research is a pervasive feature of perfectionism research in sport (see Gotwals et al., 2012). There are well-known problems associated with cross-sectional research, including that the temporal sequence of events cannot be inferred. This is particularly important in context of the moderating effects of the coach and peer motivational climates examined in the

final study of this thesis because there may be alternative ways of defining the relationships between the motivational climates and the four subtypes of perfectionism from the 2×2 model, despite the proposed associations being theoretically and empirically based. The means to address this issue is through use of longitudinal designs, as these enable temporal ordering to be established.

Research that has examined the 2×2 model has yet to employ longitudinal designs. However, there is a growing use of longitudinal designs in regards to perfectionism and athlete burnout. In particular, Madigan et al. (2015a) recently examined perfectionism and burnout in junior academy athletes at three time points across a season using a cross-lagged panel design and found that personal standards perfectionism and evaluative concerns perfectionism have divergent influences on athlete burnout over time. In dance, Nordin-Bates et al. (2014) also used a cross-lagged design and identified that perfectionism and the motivational climate may have a more reciprocal relationship with perceptions of the motivational climate reinforcing the achievement behaviours associated with perfectionism and perfectionism influencing perceptions of the motivational climate. As latent moderated structural models can be used to test the model's hypotheses (Franche et al., 2012), a cross-lagged panel design would be an appropriate means to extend insight into the relationships identified in this thesis between the four subtypes of perfectionism, the motivational climate, and outcomes indicative of the quality of youth sport experiences over time. There may be an additional benefit of employing longitudinal designs, if conducted over an extensive period of time, as it could provide insight into when pure personal standards perfectionism is adaptive, neutral, or maladaptive for youth sport participants.

Across the three cross-sectional studies, factors such as age and gender were not controlled for. In line with previous examinations of perfectionism in youth sport (e.g., Hill et al., 2010; Madigan et al., 2015a), this was because covariance matrices were found to be homogenous across age and gender in these studies. However, it should be noted that adolescence is a dynamic and broad developmental period in which many biological, physical, psychological, and behavioural changes can occur (Weiss, 2003). Thus, while including both early (11 to 14 years) and late (15 to 19 years) adolescents in the samples for the three studies enabled greater generalisability of the results, it may be advisable to replicate these studies with a

narrower age range of participants (i.e., early or late adolescents). In this way, it could be ascertained if the findings are replicable. In terms of gender differences, extant research reporting on this issue inside and outside of sport has so far demonstrated inconsistent or inconclusive findings (see Stoeber, 2012b). As such, it remains unclear as to whether gender adopts an influential role in terms of perfectionism and so re-examining the relationships identified in these studies with male or female youth sport participants only may be advantageous.

The three cross-sectional studies also included several instruments. While these instruments were selected with specific criteria in mind (e.g., contemporary use with youth sport participants, readability, and evidence of good psychometric properties), there are additional analyses that could be used to establish the validity and reliability of the instruments for the samples in these studies. Establishing the validity and reliability of instruments is important because it helps to ensure that the instrument consistently measures what it intends to (Creswell, 2009). Common ways in which validity evidence has been demonstrated in research with youth sport participants include conducting a confirmatory factor analysis to establish construct validity and examining the correlation between two factors to establish discriminant validity. In terms of reliability, acceptable internal consistency reliability was demonstrated for each of the instruments used in the three cross-sectional studies. Beyond this, test-retest reliability could be evaluated if the instruments used were administered to the same sample of youth sport participants at a different time point and high correlations between the two sets of scores emerged.

Qualitative data collection methods (focus groups and individual interviews), thematic analysis, and a median-split were employed in study three. Although this study contributed valuable insights into the experiences of youth sport participants who differ in combinations of perfectionism dimensions and added to only two qualitative accounts of perfectionists in sport (Gotwals & Spencer-Cavaliere, 2014; Hill et al., 2015), it ought to be considered that adopting such methods and analytical techniques lends itself to a more subjective interpretation of data. While measures were taken to ensure methodological rigour in this study, it would be advisable for researchers to corroborate or challenge the findings of this study among other female youth sport participants. In lieu of established criteria for deriving high and low personal standards perfectionism and evaluative concerns

perfectionism groups for this study, a median-split was used. As with other studies adopting this approach (e.g., Koivula et al., 2002), the subtypes derived may only be an approximation of the four subtypes of perfectionism. Future studies that aim to explore the 2×2 model using qualitative methods could identify individuals prototypical of the four subtypes using a recently devised self-assessment tool (see Gaudreau, 2015).

All of the studies in this thesis included school- and community-based sport participants from the North of England. This strategy was adopted to capture the breadth of youth sport participation that occurs in England (i.e., recreational to national level). However, it has recently been found that more serious levels of competitive sport are associated with higher personal standards perfectionism (Rasquinha, Dunn, & Causgrove Dunn, 2014). The participants in this thesis do not solely reflect such sport involvement. Thus, if the studies were to be replicated with academy level sport participants, for example, the results would likely differ. As such, it forms an interesting avenue for further research. Another factor that may need to be considered in future research is the moderating role of culture because differences have been identified across varying social-cultural groups in terms of perfectionism subtypes from the 2×2 model and psychological outcomes (see Franche et al., 2012).

Finally, a single sport-specific measure (Sport-MPS-2) was used to constitute the two dimensions of perfectionism across the four studies in the thesis. While the advantages of adopting this particular measure have been noted, there are a plethora of other measures that could have been used (see Stoeber & Madigan, in press, for a review). Damian et al. (2014) recently suggested that findings adopting one measure may generalise to other approaches when examining the 2×2 model. However, this has yet to be confirmed and so it is still possible that research using global measures (e.g., Gaudreau & Vener-Filion, 2012) or a combination of measures (e.g., Hill, 2013) to constitute the two dimensions of perfectionism may produce different findings. This is an issue that clearly warrants attention and in the meantime caution should be exercised when interpreting results based on differing measures.

6.6 Conclusion

Perfectionism is known to influence the thoughts, feelings, and behaviours of young people in sport. Research that has examined this issue has tended to focus on the separate effects of two main dimensions of perfectionism, namely personal standards perfectionism and evaluative concerns perfectionism, showing divergent consequences of these two dimensions in terms of young people's sport experiences. There is a notable drawback to this approach, however, as it ignores that the two dimensions of perfectionism coexist within individuals and that there is interplay between the two. This thesis has addressed this issue by testing the recently developed 2×2 model of perfectionism, which involves different within person combinations (or subtypes) of perfectionism, in terms of the experiences of youth sport participants. The findings of this thesis extend previous research by demonstrating that the four subtypes of perfectionism from the 2×2 model are predictive of desirable and undesirable outcomes that are indicative of more positive and negative youth sport experiences, respectively. This was in a manner that provided varying degrees of support for the model's hypotheses and suggested that pure personal standards perfectionism is a largely adaptive subtype, four subtypes of perfectionism ought to be differentiated and not three, and mixed perfectionism will sometimes confer more undesirable outcomes than pure evaluative concerns perfectionism. The findings of this thesis also extend previous research by providing the first exploration of the sport experiences of young people, who differ in combinations of perfectionism dimensions, from their own perspective. Based on these findings, it appears that the meaning of sport differs across the four subtypes from the 2×2 model of perfectionism and that the social-environment plays a crucial role in shaping young people's sport experiences. Finally, the findings of this thesis demonstrated a potential avenue where practitioners might be able to intervene and improve the sport experiences of young people who differ in combinations of perfectionism dimensions. This may be achieved by promoting a coach task-involving climate and tempering ego-involving cues. Overall, this thesis has made several important contributions to research examining perfectionism in youth sport and suggests that the 2×2 model is useful for understanding the experiences of youth sport participants.

List of References

Adie, J., Duda, J.L., & Ntoumanis, N. (2010). Achievement goals, competition appraisals and the well-being of elite youth soccer players across two competitive seasons. *Journal of Sport and Exercise Psychology, 32,* 555-579.

Aiken, L.S. & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Allen, J. (2003). Social motivation in youth sport. *Journal of Sport & Exercise Psychology, 25*, 551-567.

Allen, J. B. (2006). The perceived belonging in sport scale: Examining validity. *Psychology of Sport and Exercise*, *7*, 387-405.

Alvarez, M.S., Balaguer, I., Castillo, I., & Duda, J.L. (2012). The coach-created motivational climate, young athletes' well-being, and intentions to continue participation. *Journal of Clinical Sport Psychology*, *6*, 166-179.

Ames, C. (1992). Classrooms: Goals, structures and student motivation. *Journal of Educational Psychology, 84,* 261-271.

Ames, C. & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80,* 260-267.

Anshel, M.H., & Eom, H.J. (2003). Exploring the dimensions of perfectionism in sport. *International Journal of Sport Psychology, 34,* 255-271.

Appleton, P.R., Hall, H.K., & Hill, A.P. (2009). Motivational antecedents of athlete burnout: The influence of perfectionism and achievement goal orientations. *Journal of Sport and Exercise Psychology, 10,* 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,* 363-371.

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,* 129-146.

Atkins, M.R., Johnson, D.M., Force, E.C., & Petrie, T.A. (2015). Peers, parents, and coaches, oh my! The relation of the motivational climate to boys' intention to continue in sport. *Psychology of Sport and Exercise, 16,* 170-180.

Babic, M.J., Morgan, P.J., Plotnikoff, R.C., Lonsdale, C., White, R L., & Lubans, D.R. (2014). Physical activity and physical self-concept in youth: Systematic review and meta-analysis. *Sports Medicine, 44*, 1589-1601.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84,* 191-215.

Barber, B.L., Eccles, J.S., & Stone, M.R. (2001). Whatever happened to the Jock, the Brain, and the Princess? Young adult pathways linked to adolescent activity involvement and social identity. *Journal of Adolescent Research, 16,* 429-455.

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,* 1173-1182.

Bartholomew, K., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2011). Self-Determination theory and the darker side of athletic experience: The role of interpersonal control and need thwarting. *Sport and Exercise Psychology Review, 7,* 23-27.

Bauman A.E. (2004). Updating the evidence that physical activity is good for health: An epidemiological review 2000-2003. *Journal of Science and Medicine in Sport, 7,* 6-19.

Biddle, S.J.H., Gorely, T., & Stensel, D.J. (2004). Health-enhancing physical activity and sedentary behaviour in children and adolescents. *Journal of Sports Sciences, 22,* 679-701.

Biddle, S.J.H., & Wang, C.J. (2003). Motivation and self-perception profiles and links with physical activity in adolescent girls. *Journal of Adolescence, 26*, 687-701.

Biddle, S.J.H., Wang, C.J., Kavussanu, M., & Spray, C. (2003). Correlates of achievement goal orientations in physical activity: *A systematic review of research. European Journal of Sport Science, 3*, 1-20.

Bieling, P.J., Israeli, A.L., & Anthony, M.M. (2004). Is perfectionism good, bad, or both? Examining models of the perfectionism construct. *Personality and Individual Differences, 36,* 1373-1385.

Boiché, J., Plaza, M., Chalabaev, A., Guillet-Descas, E., & Sarrazin, P. (2013). Social antecedents and consequences of gender-sport stereotypes during adolescence. *Psychology of Women Quarterly*.

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*, 279-319.

Blatt, S.J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50,* 1003-1020.

Boixadós, M., Cruz, J., Torregrosa, M., & Valiente, L. (2004). Relationships among motivational climate, satisfaction, perceived ability, and fair play attitudes in young soccer players. *Journal of applied sport psychology*, *16*, 301-317.

Bortoli, L., Bertollo, M., Comani, S., & Robazza, C. (2011). Competence, achievement goals, motivational climate, and pleasant psychobiosocial states in youth sport. *Journal of Sports Sciences*, *29*, 171-180.

Bortoli, L., Bertollo, M., & Robazza, C. (2009). Dispositional goal orientations, motivational climate, and psychobiosocial states in youth sport. *Personality and Individual Differences*, *47*, 18-24.

Bratland-Sanda, S. & Sundgot-Borgen, J. (2013). Eating disorders in athletes: overview of prevalence, risk factors and recommendations for prevention and treatment. *European Journal of Sport Science, 13,* 499-508.

Bruner, M.W., Boardley, I.D., & Côté, J. (2014). Social identity and prosocial and antisocial behavior in youth sport. *Psychology of Sport and Exercise, 15*, 56-64.

Burns, D.D. (1980). The perfectionists script for self-defeat. *Psychology Today, November,* 34-51.

Çağlar, E., & Aşçı, F.H. (2010). Motivational cluster profiles of adolescent athletes: an examination of differences in physical-self perception. *Journal of sports science & medicine, 9*, 231.

Campbell, J.D. & Di Paula, A. (2002). Perfectionistic self-beliefs: Their relation to personality and goal pursuit. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 181-198). Washington, DC: American Psychological Association.

Carr, S., & Wyon, M. (2003). The impact of motivational climate on dance students achievement goals, trait anxiety, and perfectionism. *Journal of Dance Medicine and Science, 7,* 105–114.

Carpenter, P. (2001). The importance of a church youth club's sport provision to continued church involvement. *Journal of Sport and Social Issues, 25*, 283-300.

Carpenter, P. J., Scanlan, T. K., Simons, J. P., & Lobel, M. (1993). A test of the sport commitment model using structural equation modeling. *Journal of Sport and exercise Psychology, 15,* 119-119.

Chan, D.K., Lonsdale, C., & Fung, H.H. (2012). Influences of coaches, parents, and peers on the motivational patterns of child and adolescent athletes. *Scandinavian Journal of Medicine & Science in Sports*, *22*, 558-568.

Chaplin, W.F. (1991). The next generation of moderator research in personality psychology. *Journal of personality*, *59*, 143-178.

Character [Def. 2]. (2011). Concise Oxford English Dictionary. Retrieved July 4th, 2014, from https://goo.gl/vBkR59

Chen, L., Kee, Y., & Tsai, Y. (2009). An examination of the dual model of perfectionism and adolescent athlete burnout: A short-term longitudinal research. *Social Indicators Research, 91,* 189-201.

Choi, H.S., Johnson, B., & Kim, Y, (2014). Children's development through sports competition: Derivative, adjustive, generative, and maladaptive approaches. *Quest, 66,* 191-202.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cohen, J., Cohen, P., West, S.G., & Aiken, L.S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd Ed.). Mahwah, NJ: Lawrence Erlbaum.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in educ*ation (6th Ed.). London, New York: Routledge.

Conroy, D.E., & Coatsworth, J.D. (2006). Coach training as a strategy for promoting youth social development. *Sport psychologist, 20,* 128-144.

Côté, J. & Abernethy, B. (2012). A developmental approach to sport expertise. In S. Murphy (Ed.), *The Oxford Handbook of Sport and Performance Psychology* (pp. 435-447). New York: Oxford University Press.

Côté, J. & Fraser-Thomas, J. (2007). Youth involvement in sport. In P. R. E. Crocker (Ed.), *Introduction to sport psychology: A Canadian perspective* (pp. 266-294). Toronto: Pearson Prentice Hall.

Côté, J., Strachan, L., & Fraser-Thomas, J. (2008). Participation, personal development and performance through youth sport. In N. L. Holt (Ed.), *Positive youth development through sport* (pp. 34-45). London: Routledge.

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.

Crane, J., & Temple, V. (2014). A systematic review of drop out from organized sport among children and youth. *European Physical Education Review, 21*, 114-131.

Creswell, J.W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd Ed.)*.* London: Sage.

Crocker, P.R.E. (1997). A confirmatory factor analysis of the Positive and Negative Affect Schedule (PANAS) with a youth sport sample. *Journal of Sport and Exercise Psychology, 19,* 91–97.

Crocker, P.R.E., Gaudreau, P., Mosewich, A.D., & Kljajic, K. (2014). Perfectionism and the stress process in intercollegiate athletes: Examining the 2×2 model of perfectionism in sport competition. *International Journal of Sport Psychology*, *45*, 325-348.

Crocker, P.R.E., Hoar, S.D., McDonough, M., Kowalski, K.C., & Niefer, C. (2004). Emotional experiences in youth sport. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective* (pp. 197-222). Morgantown, WV: Fitness Information Technology Inc.

Cumming, J., & Duda, J.L. (2012). Profiles of perfectionism, body-related concerns, and indicators of psychological health in vocational dance students: An investigation of the 2×2 model of perfectionism. *Psychology of Sport and Exercise, 13*, 729-738.

Cumming, S.P., Smith, R.E., Smoll, F.L., Standage, M., & Grossbard, J.R. (2008). Development and validation of the achievement goal scale for youth sports. *Psychology of Sport and Exercise, 9*, 686-703.

Curran, T., Hill, A.P., Jowett, G.E., & Mallinson, S.H. (2014). The relationship between multidimensional perfectionism and passion in junior athletes. *International journal of sport psychology, 45,* 369-384.

Danish, S.J., Fazio, R., Nellen, V., & Owens, S. (2002). Teaching life skills through sport: Community-based programs to enhance adolescent development. In J. Van Raalte, & B. Brewer, (Eds.), *Exploring Sports and Exercise Psychology* (pp. 269-289). Washington DC: APA Books.

Danish, S.J., Forneris, T., Hodge, K., & Heke, I. (2004). Enhancing youth development through sport, *World Leisure, 46*, 38-49.

Danish, S.J., Taylor, T., and Fazio, R. (2003). Enhancing adolescent development through sport and leisure. In G. R. Adams and M. Berzonsky (Eds), *Handbook on Adolescence*, (pp. 92–108). Malden, MA: Blackwell.

Daley, T. (2012). *Tom Daley: My story.* London: Penguin books Ltd.

Damian, L.E., Stoeber, J., Negru, O., & Băban, A. (2014). Positive and negative affect in adolescents: An investigation of the 2×2 model of perfectionism. *Cognition, Brain, Behavior. An Interdisciplinary Journal, 18,* 1-16.

D'Arripe-Longueville, F., Pantaléon, N., & Smith, A. L. (2006). Personal and situational predictors of sportspersonship in young athletes. *International Journal of Sport Psychology, 37*, 38-57.

De Knop, P., Engström, L. M., Skirstad, B., & Weiss, M. (1996). *Worldwide trends in youth sport.* Champaign, IL: Human Kinetics.

Department for Culture Media and Sport (2015). Taking Part 2013/14: Annual child report. Retrieved from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/355852/Taking_Part_Year_9_2013_14_Child_Report.pdf.

DiBartolo, P.M., Frost, R.O., Chang, P., LaSota, M., & Grills, A.E. (2004). Shedding light on the relationship between personal standards and psychopathology: The case for contingent self-worth. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *22*, 237-250.

Diener, E. et al. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicator Research, 97,* 143-156.

DiFiori, J., Benjamin, H., MD, Brenner, J., Gregory, A., Neeru Jayanthi, Landry, G., et al. (2014). Overuse Injuries and Burnout in Youth Sports: A Position

Statement from the American Medical Society for Sports Medicine. *Clinical Journal of Sports Medicine, 24,* 3-20.

Douilliez, C., & Lefèvre, F. (2011). Interactive effect of perfectionism dimensions on depressive symptoms: A reply to Gaudreau and Thompson (2010). *Personality and Individual Differences, 50,* 1147-1151.

Duda, J.L. (1996). Maximizing motivation in sport and physical education among children and adolescents: The case for greater task involvement. *Quest, 48,* 290-302.

Duda, J.L. (2001). Achievement goal research in sport: Pushing the boundaries and clarifying some misunderstandings. In G. C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 129-182). Champaign, IL: Human Kinetics Publishers.

Duda, J.L. (2005). Motivation in sport: The relevance of competence and achievement goals. In A. J. Elliott & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 318-335). New York: Guildford Publications.

Duda, J.L. (2013). The conceptual and empirical foundations of Empowering Coaching™: Setting the stage for the PAPA project. *International Journal of Sport and Exercise Psychology*, *11*, 311-318.

Duda, J.L., & Balaguer, I. (2007). Coach-created motivational climate. In S. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 117-130). Champaign, IL: Human Kinetics.

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: Wiley.

Duda, J.L. & Ntoumanis, N. (2009). After-school sport for children: Implications of a task-involving motivational climate. In J. L. Mahoney, J. Eccles, & R. Larson (Eds.), *Afterschool activities: Contexts of development* (pp. 311-331). New Jersey: Lawrence Erlbaum Publishers.

Duda, J.L., Olson, L.K., & Templin, T.J. (1991). The relationship of task and ego orientation to sportsmanship attitudes and the perceived legitimacy of injurious acts. *Research quarterly for exercise and sport*, *62*, 79-87.

Dunkley, D.M., Blankstein, K.R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping and

perceived social support as mediators and moderators. *Journal of Counseling Psychology, 47,* 437-453.

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,* 376-395.

Dunn, J.G.H., Causgrove Dunn, J., Gotwals, J.K., Vallance, J.K.H., Craft, J.M., & Syrotuik, D.G. (2006). Establishing construct validity evidence for the sport multidimensional perfectionism scale. *Psychology of Sport and Exercise, 7,* 57-79.

Dunn, J.G.H., Craft, J.M., Causgrove Dunn, J., & Gotwals, J.K. (2011). Comparing a domain-specific and global measure of perfectionism in competitive female figure skaters. *Journal of Sport Behavior, 34*, 25-46.

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.

Dweck, C.S. (1986) Motivational processes affecting learning. *American Psychologist, 41,* 1040-1048.

Dweck, C.S., & Leggett, E.L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95,* 265-273.

Dworkin, J., & Larson, R. (2006). Adolescents' negative experiences in organized youth activities. *Journal of Youth Development, 1,* 1-19.

Eccles, J.S. & Barber, B.L. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Journal of Adolescent Research, 14,* 10-43.

Ellis, A. (1962). *Reason and emotion in psychotherapy.* New York: Lyle Stuart.

Elison, J., & Partridge, J. (2012). Relationships between shame-coping, fear of failure, and perfectionism in college athletes. *Journal of Sport Behavior, 35*, 19-39.

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. 33-63). Washington, DC: American Psychological Association.

Flett, G.L., & Hewitt, P.L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett & P. L. Hewitt

(Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5-31). Washington, DC: American Psychological Association.

Flett, G.L., & Hewitt, P.L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science, 14,* 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,* 472-495.

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,* 395-407.

Fox, K.R., & Corbin, C.B. (1989). The physical self-perception profile: Development and preliminary validation. *Journal of Sport & Exercise Psychology, 11,* 408-430.

Franche, V., Gaudreau, P., & Miranda, D. (2012). The 2×2 model of perfectionism: A comparison across Asian Canadians and European Canadians. *Journal of Counseling Psychology, 59,* 567-574.

Fraser-Thomas, J. & Côté, J. (2009). Understanding adolescents' positive and negative developmental experiences in sport. *The Sport Psychologist, 23,* 3-23.

Fraser-Thomas, J., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education and Sport Pedagogy, 10,* 19-40.

Fraser-Thomas, J., Côté, J., & Deakin, J., (2008). Understanding dropout and prolonged engagement in adolescent competitive sport. *Psychology of Sport and Exercise, 9*, 645-662.

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,* 119-126.

Frost, R.O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 5,* 449-468.

Gano-Overway, L.A., Guivernau, M., Magyar, T.M., Waldron, J.J., & Ewing, M.E. (2005). Achievement goal perspectives, perceptions of the motivational climate, and sportspersonship: Individual and team effects. *Psychology of sport and exercise*, *6*, 215-232.

Gaudreau, P. (2012). A methodological note on the interactive and main effects of dualistic personality dimensions: An example using the 2×2 model of perfectionism. *Personality and Individual Differences, 52*, 26-31.

Gaudreau, P. (2013). The 2×2 model of perfectionism: Commenting the critical comments and suggestions of Stoeber (2012). *Personality and Individual Differences, 55*, 351-355.

Gaudreau, P. (2015). Self-assessment of the four subtypes of perfectionism in the 2×2 model of perfectionism. *Personality and Individual Differences, 84,* 52-62.

Gaudreau, P., & Antl, S. (2008). Athletes' broad dimensions of perfectionism: Examining change in life-satisfaction and the mediating role of motivation and coping. *Journal of Sport and Exercise Psychology, 30,* 356-382.

Gaudreau, P., & Thompson, A. (2010). Testing a 2×2 model of dispositional perfectionism. *Personality and Individual Differences, 48,* 532-537.

Gaudreau, P., & Verner-Filion, J. (2012). Dispositional perfectionism and well-being: A test of the 2×2 model of perfectionism in the sport domain. *Sport, Exercise, and Performance Psychology, 1*, 29-43.

Goodger, K., Gorely, T., Lavallee, D., & Harwood, C. (2007). Burnout in sport: A systematic review. *The Sport Psychologist, 21*, 127–151.

Gotwals, J.K. & Dunn, J.G.H. (2009). A multi-method multi-analytic approach to establish internal construct validity evidence: The Sport Multidimensional Perfectionism Scale 2. *Measurement in Physical Education and Exercise Science, 13,* 71-92.

Gotwals, J.K., Dunn, J.G.H., & Wayment, H.A. (2003). An examination of perfectionism and self-esteem in intercollegiate athletes. *Journal of Sport Behavior, 26,* 17-37.

Gotwals, J.K., Dunn, J.G.H., Causgrove Dunn, J., & Gamache, V. (2010). Establishing validity evidence for the Sport Multidimensional Perfectionism Scale-2 in intercollegiate sport. *Psychology of Sport and Exercise, 11*, 423-432.

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.H., & Stoll, O. (2012). Are perfectionistic strivings in sport adaptive? A systematic review of confirmatory, contradictory, and mixed evidence. *Canadian Psychology, 53,* 263-279.

Goudas, M. (2010). Prologue: A review of life skills teaching is sport and physical education. *Hellenic Journal of Psychology, 7,* 241-258.

Gould, D. & Carson, S. (2008) Life skills development through sport: Current status and future directions. *International Review of Sport and Exercise Psychology, 1,* 58-78.

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.

Graham, S. & Weiner, B. (1996). Theories and principles of motivation. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 63-84). New York: Macmillan.

Greblo, Z., Barić, R., & Erpič, S.C. (2015). Perfectionistic Strivings and Perfectionistic Concerns in Athletes: The Role of Peer Motivational Climate. *Current Psychology*, 1-12.

Greenbaum, S. (1988). *School bully and victimization* (Resource Paper). Malibu, CA: National School Safety Center.

Grossbard, J.R., Cumming, S.P., Standage, M., Smith, R.E., & Smoll, FL. (2007). Social desirability and relations between goal orientations and competitive trait anxiety in young athletes. *Psychology of Sport and Exercise, 8*, 491-505.

Guest, G., Namey, E.E., & Mitchell, M.L. (2012). *Collecting qualitative data: A field manual for applied research*. London: Sage.

Guillet, E., Sarrazin, P., Fontayne, P., & Brustad, R.J. (2006). Understanding female sport attrition in a stereotypical male sport within the framework of Eccles's Expectancy–Value model. *Psychology of Women Quarterly*, *30*, 358-368.

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.), *Essential processes for attaining peak performance* (pp. 178-211). Oxford, UK: Meyer and Meyer.

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*, 216-228.

Hall, H.K., Hill, A.P., & Appleton, P.R. (2013) Perfectionism: Its development and its influence on emerging talent in youth sport. In Lidor, R. & Côté, J. (Eds.), *Conditions of children's talent development in sport* (pp. 117-137). West Virginia University: Fitness Information Technology.

Hall, H.K., Jowett, G.E., & Hill, A.P. (2014). Perfectionism: The role of personality in shaping an athlete's sporting experience. In A. G. Papaioannou, D. Hackfort (Eds.) *Routledge companion to sport and exercise psychology: Global perspectives and fundamental concepts* (pp. 152-168). London: Routledge.

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,* 194-217.

Hamachek, D.E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15,* 27-33.

Hamidi, S., & Besharat, M. A. (2010). Perfectionism and competitive anxiety in athletes. *Procedia-Social and Behavioral Sciences, 5,* 813-817.

Hansen, D., Larson, R., & Dworkin, J. (2003).What adolescents learn in organized youth activities: A survey of self-reported developmental experiences. *Journal of Research on Adolescence, 13,* 25-56.

Harter, S. (1978). Effectance motivation reconsidered: Toward a developmental model. *Human Development, 1,* 661-669.

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: motivational and informational components. *Developmental psychology, 17*, 300-312.

Harter, S. (1985). *Manual for the self-perception profile for children*. University of Denver.

Harter, S. (1988). *Manual for the self-perception profile for adolescents*. University of Denver.

Harter, S. (1993). Causes and consequences of low self-esteem in children and adolescents. In R. F. Baumeister (Ed.), *Self-esteem: The puzzle of low self-regard* (pp. 87-116). New York: Plenum.

Harter, S. (1999). *The construction of the self: A developmental perspective*. Guilford Press.

Harter, S. (2012). *The construction of the self. Developmental and sociocultural foundations.* New York: Guilford Press

Harwood, C.G., Keegan, R.J., Smith, J.M., & Raine, A.S. (2015). A systematic review of the intrapersonal correlates of motivational climate perceptions in sport and physical activity. *Psychology of Sport and Exercise, 18*, 9-25.

Harwood, C.G., Spray, C.M., Keegan, R. (2008). Achievement goal theories in sport. In T. Horn (Ed.), *Advances in sport psychology* (pp. 157-185). Champaign, IL: Human Kinetics.

Heary, C.M. & Hennessy, E. (2002). The use of focus group interviews in pediatric health care research. *Journal of Pediatric Psychology, 27*, 47–57.

Hennessy, E. & Heary, C. (2005). Exploring children's views through focus groups. In S. Greene and D. M. Hogan (Eds.), *Researching children's experiences: Approaches and methods* (pp. 236-252). London: Sage.

Herman, K. M., Sabiston, C. M., Mathieu, M. E., Tremblay, A., & Paradis, G. (2014). Sedentary behavior in a cohort of 8-to 10-year-old children at elevated risk of obesity. *Preventive medicine*, *60*, 115-120.

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,* 456-470.

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*, 18-29.

Hill, A. P. (2014). Perfectionistic strivings and the perils of partialling. International *Journal of Sport and Exercise Psychology, 12,* 302-315.

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,* 715-736.

Hill, A.P., Hall, H.K., & Appleton, P.R. (2011). The relationship between multidimensional perfectionism and contingencies of self-worth. *Personality and individual differences, 50*, 238-242.

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,* 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*, 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*, 189-207.

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, 4,* 237-253.

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*, 156-172.

Hodgkinson, M. (2009). Serena Williams's suspended US Open ban brings tennis into disrepute. Retrieved from: http://www.telegraph.co.uk/sport/tennis/williamssisters/6701977/Serena-Williamss-suspended-US-Open-ban-brings-tennis-into-disrepute.html

Holland, M.J., Woodcock, C., Cumming, J., & Duda, J.L. (2010). Mental qualities and employed mental techniques of young elite team sport athletes. *Journal of Clinical Sport Psychology*, *4*, 19-38.

Hollender, M.H. (1965). Perfectionism. *Comprehensive Psychiatry, 6,* 94-103.

Holt, N.L., & Neely, K.C. (2011). Positive youth development through sport: a review. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte, 6,* 299-316.

Hoppe, M.J., Wells, E.A., Morrison, D.M., Gillmore, M.R., & Wilsdon, A. (1995). Using focus groups to discuss sensitive topics with children. *Evaluation Review, 19*, 102-114.

Hull, C.L. (1951). *Essentials of behaviour*. New Haven, Connecticut: Yale University Press.

Jaakkola, T., Ntoumanis, N., & Liukkonen, J. (2015). Motivational climate, goal orientation, perceived sport ability, and enjoyment within Finnish junior ice hockey players. *Scandinavian journal of medicine & science in sports.*

Janssen, I., & LeBlanc, A.G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. International *Journal of Behavioural Nutrition and Physical Activity, 7,* 1-16.

Johnson, B. & Christensen, L. (2004). *Educational Research: Quantitative, Qualitative, and Mixed Approaches* (2nd Ed.). Boston, MA: Pearson Education, Inc.

Jones, R.J.A., Polman, R.C.J., & Peters, D.M. (2009). Physical self-perceptions of adolescents in years 8, 9 and 10 in independent schools, state comprehensive schools, and specialist sports colleges in England. *Physical Education and Sport Pedagogy, 14,* 109-124.

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,* 48-61.

Kanters, M.A., & Casper, J. (2008). Supported or Pressure? An Examination of Agreement among Parents and Children on Parent's Role in Youth Sports. *Journal of sport behavior, 31*, 64-80.

Kavussanu, M. (2006). Motivational predictors of prosocial and antisocial behaviour in football. *Journal of Sports Sciences, 24*, 575-588.

Kavussanu, M. (2007). Morality in sport. In S. Jowett & D.E. Lavallee (Eds.), *Social psychology in sport* (pp. 265–278). Champaign, IL: Human Kinetics.

Kavussanu, M. (2007). The effects of goal orientations on global self-esteem and physical self-worth in physical education students. *Hellenic Journal of Psychology, 4*, 111-132.

Kavussanu, M. (2012). Moral behaviour in sport. In S. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 364-383). Oxford: Oxford University Press.

Kavussanu, M., & Boardley, I. D. (2009). The prosocial and antisocial behavior in sport scale. *Journal of Sport and Exercise Psychology, 31*, 97-117.

Kavussanu, M., Seal, A.R., & Phillips, D.R. (2006). Observed prosocial and antisocial behaviours in male soccer teams: Age differences across adolescence

and the role of motivational variables. *Journal of Applied Sport Psychology, 18,* 326-344.

Kavussanu, M., Stanger, N., & Boardley, I. D. (2013). The Prosocial and Antisocial Behaviour in Sport Scale: Further evidence for construct validity and reliability. *Journal of sports sciences*, *31*, 1208-1221.

Kaye, M.P., Conroy, D.E., & Fifer, A.M. (2008). Individual differences in incompetence avoidance: A comparison of multiple dimensions of perfectionism and fear of failure. *Journal of Sport and Exercise Psychology, 30,* 110-132.

Keegan, R.J., Harwood, C.G., Spray, C.M., & Lavallee, D.E. (2009). A qualitative investigation exploring the motivational climate in early career sports participants: Coach, parent and peer influences on sport motivation. *Psychology of sport and exercise*, *10*, 361-372.

Keegan, R., Spray, C., Harwood, C., & Lavallee, D. (2010). The motivational atmosphere in youth sport: Coach, parent, and peer influences on motivation in specializing sport participants. *Journal of applied sport psychology*, *22*, 87-105.

Kimiecik, J.C., & Harris, A.T. (1996). What is enjoyment? A conceptual/definitional analysis with implications for sport and exercise psychology. *Journal of Sport and Exercise Psychology, 18*, 247-263.

Kipp, L.E., & Weiss, M.R. (2013). Social influences, psychological need satisfaction, and well-being among female adolescent gymnasts. *Sport, Exercise, and Performance Psychology, 2*, 62-75.

Kipp, L.E., & Weiss, M.R. (2015). Social Predictors of Psychological Need Satisfaction and Well-Being among Female Adolescent Gymnasts: A Longitudinal Analysis. *Exercise, and Performance Psychology, 4,* 153-169.

Kitzinger, J., (2005) Focus group research: Using group dynamics to explore perceptions, experiences and understandings. In I. Holloway (Ed.) *Qualitative Research in Health Care* (pp. 56-69). Maidenhead: Open University Press

Koivula, N., Hassmén, P., & Fallby, J. (2002). Self-esteem and perfectionism in elite athletes: Effects on competitive anxiety and confidence. *Personality and Individual Differences, 32,* 865-875.

Krueger, R.A, and Casey, M.A. (2000). *Focus Groups: A Practical Guide for Applied Research* (3rd Ed.) Thousand Oaks, CA: Sage.

Larson, R.W., & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin, 125,* 701-736.

Latham, G.P. & Locke, E.A. (2007). New developments in and directions for goal-setting research. *European Psychologist, 12*, 290-300.

Le Bars, H., Gernigon, C., & Ninot, G. (2009). Personal and contextual determinants of elite young athletes' persistence or dropping out over time. *Scandinavian Journal of Medicine and Science in Sports, 19*, 274-285.

Lemyre, P.-N., Hall, H.K., & Roberts, G.C. (2008). A social cognitive approach to burnout in athletes. *Scandinavian Journal of Medicine and Science in Sports, 18,* 221-234.

Lemyre, P.-N., Treasure, D., & Roberts, G.C. (2006). Influence of variability in motivation and affect on elite athlete burnout susceptibility. *Journal of Sport and Exercise Psychology, 28,* 32-48.

Lerner, R.M., Lerner, J.V., Almerigi, J., Theokas, C., Phelps, E., Gestsdóttir, S., et al. (2005). Positive youth development, participation in community youth development programs, and community contributions of fifth-grade adolescents: Findings from the first wave of the 4-H Study of Positive Youth Development. *Journal of Early Adolescence, 25,* 17-71.

Li, X., Hou, Z. J., Chi, H.Y., Liu, J., & Hager, M.J. (2014). The mediating role of coping in the relationship between subtypes of perfectionism and job burnout: A test of the 2×2 model of perfectionism with employees in China. *Personality and Individual Differences, 58,* 65-70.

Linver, M.R., Roth, J.L., & Brooks-Gunn, J. (2009). Patterns of Adolescents' Participation in Organized Activities: Are Sports Best When Combined with Other Activities? *Developmental Psychology, 45*, 354-367.

Lisha, N.E. & Sussman, S. (2010). Relationship of high school and college sports participation with alcohol, tobacco, and illicit drug use: *A review. Addictive Behaviors 35,* 399-407.

Lubans, D.R., Morgan, P.J., & McCormack, A. (2011). Adolescents and school sport: The relationship between beliefs, social support and physical self-perception. *Physical Education & Sport Pedagogy, 16*, 237-250.

Lynam, D.R., Hoyle, R.H., & Newman, J.P. (2006). The perils of partialling cautionary tales from aggression and psychopathy. *Assessment*, *13*, 328-341.

Machida, M., Ward, M.R., & Vealey, R.S. (2012). Predictors of sources of self-confidence in collegiate athletes. *International Journal of Sport and Exercise Psychology*, *10*, 172-185.

Madigan, D. J., Stoeber, J., & Passfield, L. (2015a). Perfectionism and burnout in junior athletes: A three-month longitudinal study. *Journal of Sport and Exercise Psychology, 37,* 305-315.

Madigan, D. J., Stoeber, J., & Passfield, L. (2015b). Perfectionism and attitudes towards doping in junior athletes. *Journal of Sports Sciences,* 1-7.

Maehr, M.L. & Braskamp, L.A. (1986). *The motivation factor: A theory of personal investment.* Lexington, MA: Lexington Books.

Mahoney, J. & Cairns, R. (1997). Do extracurricular activities protect against early school dropout? *Developmental Psychology, 33,* 241-253.

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, S.H., Hill, A.P., Hall, H.K., & Gotwals, J.K. (2014). The 2×2 model of perfectionism and school- and community-based sport participation. *Psychology in the Schools, 9,* 972-985.

Marsh, H.W. & Kleitman, S. (2003). School athletic participation: Mostly gain with little pain. *Journal of Sport and Exercise Psychology, 25,* 205-228.

Martin, E., Gould, D., Ewing, M (2015). Youth's perceptions of rule-breaking and antisocial behaviours: Gender, developmental level, and competitive level differences. *International Journal of Sport and Exercise Psychology*, 1-16

McArdle, S. (2010). Exploring domain specific perfectionism. *Journal of Personality, 78,* 493-508.

McArdle, S. & Duda, J.L. (2004). Exploring social-contextual correlates of perfectionism in adolescents: A multivariate perspective. *Cognitive Therapy and Research, 28,* 765-788.

McArdle, S. & Duda, J.L. (2008). Exploring the etiology of the indices and correlates of perfectionism in young athletes. *Social Development, 17,* 980-997.

McAuley, E., Duncan, T., & Tammen, V. V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research quarterly for exercise and sport*, *60*(1), 48-58.

McCarthy, P.J. (2011). Enhancing positive emotions in sport. In D. Lavallee, J. Thatcher, & M. V. Jones, *Coping and Emotion in Sport* (pp. 167-193). London: Routledge.

McCarthy, P.J. & Jones, M.V. (2005). Enjoyment in youth sport: Creating a feel good factor. In A. V. Clarke, *Psychology of moods*, (pp. 157-180). New York: Nova Science Publishers.

McCarthy, P.J., & Jones, M.V. (2007). A qualitative study of sport enjoyment in the sampling years. *Sport Psychologist*, *21*, 400-416.

McCarthy, P.J., Jones, M.V., & Clark-Carter, D. (2008). Understanding enjoyment in youth sport: A developmental perspective. *Psychology of Sport and Exercise*, *9*, 142-156.

McMahon, S. & Bleur, J. (2013). Sports-based Programmes and Reducing Youth Violence and Crime. Retrieved from: https://www.london.gov.uk/sites/default/files/Project%20Oracle%20Synthesis%20Study%2002-2013%20Sport%20interventions%20HQ.pdf.

Merkel, D. & Molony, J. (2012). Medical sports injuries in the youth athlete: Emergency management. *International Journal of Sports Physical Therapy, 7*, 242-251.

Mitchelson, J.K. & Burns, L.R. (1998). Career mothers and perfectionism: Stress at work and at home. *Personality and Individual Differences, 25,* 477-486.

Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd Ed.). Thousand Oaks, CA: Sage

Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd Ed.). Thousand Oaks, CA: Sage.

Morris, R.L., & Kavussanu, M. (2009). The role of approach-avoidance versus task and ego goals in enjoyment and cognitive anxiety in youth sport. *International Journal of Sport and Exercise Psychology, 7*, 185-202.

Mouratidis, A., & Michou, A. (2011). Perfectionism, self-determined motivation, and coping among adolescent athletes. *Psychology of Sport and Exercise, 12*, 355-367.

Newton, M., Duda, J.L., & Yin, Z. (2000). Examination of the psychometric properties of the Perceived Motivational Climate in Sport Questionnaire-2 in a sample of female athletes. *Journal of Sports Sciences*, *18*, 275-290.

Nicholls, J. (1984). Conceptions of ability and achievement motivation. In R. Ames & C. Ames (Eds.), *Research on motivation in education: Student motivation* (pp. 39-73). New York: Academic Press.

Nicholls, J. (1989). *The competitive ethos and democratic education.* Cambridge, MA: Harvard University Press.

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 & Exercise Psychology*, *36*, 382-391.

Ntoumanis, N., Taylor, I.M., & Thøgersen-Ntoumani, C. (2012). A longitudinal examination of coach and peer motivational climates in youth sport: Implications for moral attitudes, well-being, and behavioural investment. *Developmental psychology*, *48*, 213.

Ntoumanis, N., & Vazou, S. (2005). Peer motivational climate in youth sport: Measurement development and validation. *Journal of Sport and Exercise Psychology*, *27*, 432-455.

Ntoumanis, N., Vazou, S., & Duda, J.L. (2007). Peer-created motivational climate. In S. Jowett & D. Lavallee (Eds.) *Social psychology in sport* (pp. 145-156). Champaign, IL: Human Kinetics.

Ommundsen, Y., Roberts, G.C., Lemyre, P.-N., & Miller, B.W. (2005). Peer relationships in adolescent competitive soccer: Associations to perceived motivational climate, achievement goals and perfectionism. *Journal of Sports Sciences, 23,* 977-989.

O'Connor, R.C., Whyte, M.C., Fraser, L., Masterton, G., Miles, J., & MacHale, S. (2007). Predicting short-term outcome in well-being following suicidal behaviour: The conjoint effects of social perfectionism and positive future thinking. *Behaviour research and therapy*, *45*, 1543-1555.

O'Rourke, D.J., Smith, R.E., Smoll, F.L., & Cumming, S.P. (2014). Relations of Parent-and Coach-Initiated Motivational Climates to Young Athletes' Self-Esteem, Performance Anxiety, and Autonomous Motivation: Who Is More Influential?. *Journal of Applied Sport Psychology, 26*, 395-408.

O'Sullivan, M. & MacPhail, A. (2010) *Young people's voices in physical education and youth sport.* London: Routledge.

Overman, J. (2014). *The youth sports crisis: Out-of-control adults, helpless kids.* US: Prager

Pacht, A.R. (1984). Reflections on perfection. *American Psychologist, 39,* 386-390.

Parker, W.D. (1997). An empirical typology of perfectionism in academically talented children. *American Educational Research Journal*, *34*, 545-562.

Patton, M.Q. (2002). *Qualitative research and evaluation methods* (3rd Ed.). Thousand Oaks, CA: Sage.

Petrie, T.A., & Greenleaf, C. (2012). Eating disorders in sport. In S. Murphy (Ed.), *Handbook of sport and performance psychology* (pp. 635-659). NY: Oxford University Press.

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*, 964-975.

Quested, E., & Duda, J.L. (2010). Exploring the social-environmental determinants of well- and ill-being in dancers: A test of basic needs theory. *Journal of Sport and Exercise Psychology, 32*, 39-60.

Quested, E., & Duda, J.L. (2011). Enhancing children's sport experiences and personal development: A motivational perspective. In R. Bailey & I. Stafford (Eds.), *Coaching children in sport* (pp. 123-138). London, Routledge.

Quested, E., Cumming, J., & Duda, J.L. (2014). Profiles of perfectionism, motivation, and self-evaluations among dancers: An extended analysis of Cumming and Duda (2012). *International Journal of Sport Psychology, 45*, 349-368.

Quested, E. et al. (2013). Intentions to drop-out of youth soccer: A test of the basic needs theory among European youth from five countries. *International Journal of Sport and Exercise Psychology, 11*, 395-407.

Rasquinha, A., Dunn, J.G.H., & Causgrove Dunn, J. (2014). Relationships between perfectionistic strivings, perfectionistic concerns, and competitive sport level. *Psychology of Sport and Exercise, 15,* 659-667.

Rhéaume, J., Freeston, M.H., Ladouceur, R., Bouchard, C., Gallant, L., Talbot, F., & Vallieres, A. (2000). Functional and dysfunctional perfectionists: Are they different on compulsive-like behaviors. *Behaviour Research and Therapy, 38,* 119-128.

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,* 39-58.

Rice, K.G., Richardson, C.M., & Tueller, S. (2014). The Short Form of the Revised Almost Perfect Scale. *Journal of personality assessment, 96*, 368-379.

Riley, A., & Smith, A.L. (2011). Perceived coach-athlete and peer relationships of young athletes and self-determined motivation for sport. *International Journal of Sport Psychology, 42*, 115.

Roberts, G.C. (1992). Motivation in sport and exercise: Conceptual constraints and convergence. In G. C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 3-30). Champaign, IL: Human Kinetics.

Roberts, G.C. (2001). Understanding the dynamics of motivation in physical activity: The influence of achievement goals on motivational processes. In G. C. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 1-50). Champaign, IL: Human Kinetics Publishers.

Roberts, G.C. (2012). Motivation in sport and exercise from an achievement goal theory perspective: After 30 years, where are we? In G. C. Roberts & D. Treasure (Eds.), *Advances in motivation in sport and exercise* (pp. 5-58). Champaign, IL: Human Kinetics Publishers.

Roberts, G.C., Treasure, D.C., & Conroy, D.E. (2007). The dynamics of motivation in sport: The influence of achievement goals on motivation processes. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (pp. 3-30). New York: Wiley.

Robertson-Wilson, J., Baker, J., Derbyshire, E., & Côté, J. (2003). Childhood physical activity involvement in active and inactive female adults. *Avante, 9,* 1-8.

R.W. Hill., Huelsman, T. J., Furr, R. M., Kibler, J., Vicente, B. B., & Kennedy, C. (2004). *A new measure of perfectionism: The Perfectionism Inventory. Journal of personality assessment, 82*, 80-91.

Sagar, S.S., Boardley, I.D., & Kavussanu, M. (2011). Fear of failure and student athletes' interpersonal antisocial behaviour in education and sport. *British journal of educational psychology*, *81*, 391-408.

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,* 602-627.

Sage, L. & Kavussanu, M. (2007). The effects of goal involvement on moral behavior in an experimentally manipulated competitive setting. *Journal of Sport and Exercise Psychology 21,* 417-437.

Sage, L. & Kavussanu, M. (2008). Goal orientations, motivational climate, and prosocial and antisocial behaviour in youth football: Exploring their temporal stability and reciprocal relationships. *Journal of Sports Sciences, 26*, 717-732.

Sage, L., Kavussanu, M., & Duda, J. (2006). Goal orientations and moral identity as predictors of prosocial and antisocial functioning in male association football players. *Journal of Sports Sciences*, *24*, 455-466.

Sarrazin, P., Vallerand, R., Guillet, E., Pelletier, L., & Cury, F. (2002). Motivation and dropout in female handballers: A 21-month prospective study.*European Journal of Social Psychology*, *32*, 395-418.

Sassaroli, S., Gallucci, M., & Ruggiero, G.M. (2008). Low perception of control as a cognitive factor of eating disorders. Its independent effects on measures of eating disorders and its interactive effects with perfectionism and self-esteem. *Journal of behavior therapy and experimental psychiatry*, *39*, 467-488.

Scanlan, T.K., Babkes, M.L., & Scanlan, L.A. (2005). Participation in sport: A developmental glimpse at emotion. In J.L. Mahoney, R.W. Larson, & J.S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 275-309). Mahwah, NJ: Lawrence Erlbaum.

Scanlan, T.K., Carpenter, P.J., Schmidt, G.W., Simons, J.P., & Keeler, B. (1993). An introduction to the Sport Commitment Model. *Journal of Sport and Exercise Psychology, 15,* 1-15.

Scanlan, T.K., & Simons, J.P. (1992). The construct of sport enjoyment. In G. C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 199–215). Champaign, IL: Human Kinetics.

Schuler, P.A. (2000). Perfectionism and gifted adolescents. *Prufrock Journal*, *11*, 183-196.

Seo, E.H. (2008). Self-efficacy as a mediator in the relationship between self-oriented perfectionism and academic procrastination. *Social Behavior and Personality: An International Journal*, *36*, 753-764.

Shafran, R., Cooper, Z., & Fairburn, C.G. (2002). Clinical perfectionism: A cognitive-behavioural analysis. *Behaviour Research and Therapy, 40,* 773-791.

Shields, D.L. & Bredemeier, B.L. (1995). *Character development and physical activity.* Champaign, IL: Human Kinetics.

Shields, D.L. & Bredemeier, B.L. (2007). Advances in sport mortality research. In G. Tenenbaum & R. C. Eklund (Eds.), *Handbook of sport psychology* (pp.662-684). New York: John Wiley.

Shields, D. L., Bredemeier, B. L., La Voi, N. M., & Power, F. C. (2005). The sport behaviour of youth, parents, and coaches: The good, the bad, and the ugly. *Journal of Research in Character Education, 3*, 43-59.

Slaney, R.B., & Ashby, J.S. (1996). Perfectionists: Study of a criterion group. *Journal of Counseling & Development*, *74*, 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*, 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,* 130-145.

Smith, A.L. (1999). Perceptions of peer relationships and physical activity participation in early adolescence. *Journal of Sport & Exercise Psychology, 21*, 329-350.

Smith, A.L. (2007). Youth peer relationships in sport. In S.J. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 41-54). Champaign, IL: Human Kinetics.

Smith, A.L., Balaguer, I., & Duda, J.L. (2006a). Goal orientation profile differences on perceived motivational climate, perceived peer relationships, and motivation-related responses of youth athletes. *Journal of Sport Sciences, 24,* 1315-1327.

Smith, A.L., & D'Arripe-Longueville (2014). Peer relationships and the youth sport experience. In A. G. Papaioannou, D. Hackfort (Eds.) *Routledge companion to sport and exercise psychology: Global perspectives and fundamental concepts* (pp. 199-213). London: Routledge.

Smith, A.L., Ullrich-French, S., Walker, E., & Hurley, K. S. (2006b). Peer relationship profiles and motivation in youth sport. *Journal of Sport and Exercise Psychology, 28*, 362.

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, R.E., & Smoll, F.L. (1990). Sport performance anxiety. In H. Leitenberg (Ed.), *Handbook of social and evaluation anxiety* (pp. 417-454). US: Springer.

Smith, R.E., Cumming, S.P., & Smoll, F.L. (2008). Development and validation of the motivational climate scale for youth sports. *Journal of Applied Sport Psychology*, *20*, 116-136.

Smith, R.E., Smoll, F.L., Cumming, S.P., & Grossbard, J.R. (2006c). Measurement of multidimensional sport performance anxiety in children and adults: The Sport Anxiety Scale-2. *Journal of Sport and Exercise Psychology, 28*, 479-501.

Smoll, F.L. & Smith, R.E. (2002). *Children and youth in sports: A biopsychosocial perspective* (2nd Ed.). Dubuque: Kendall/Hunt Publishers.

Sparkes, A.C. & Smith, B. (2014). *Qualitative research methods in sport, exercise, and health: From process to product.* London: Routledge.

Speirs Neumeister, K.L. (2004a). Factors influencing the development of perfectionism in gifted college students. *Gifted Child Quarterly*, *48*, 259-274.

Speirs Neumeister, K.L. (2004b). Understanding the relationship between perfectionism and achievement motivation in gifted college students. *Gifted child quarterly*, *48*, 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*, 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*, 11.

Speirs Neumeister, K.L., Williams, K.K., & Cross, T.L. (2009). Gifted high-school students' perspectives on the development of perfectionism. *Roeper Review*, *31*, 198-206.

Spence, K.W. (1956). *Behavior theory and conditioning.* New Haven, Connecticut: Yale University Press.

Sport England (2015). Who plays sport?: Active people survey. Retrieved from: http://www.sportengland.org/research/who-plays-sport/

Standage, M., Duda, J.L., & Ntoumanis, N. (2003). A model of contextual motivation in physical education: Using constructs from self-determination and achievement goal theories to predict physical activity intentions. *Journal of educational psychology*, *95*, 97.

Standage, M., Duda, J., & Pensgaard, A. (2005). The effect of competitive outcome and task-involving, ego-involving, and cooperative structures on the psychological well-being of individuals engaged in a co-ordination task: A self-determination approach. *Motivation and Emotion, 29,* 41-68.

Standage, M. & Treasure, D. (2002). Relationship among achievement goal orientations and multidimensional situational motivation in physical education. *British Journal of Educational Psychology, 72,* 87-103.

Stoeber, J. (2011). The dual nature of perfectionism in sports: Relationships with emotion, motivation, and performance. *International Review of Sport and Exercise Psychology, 4,* 128-145.

Stoeber, J. (2012a). The 2 × 2 model of perfectionism: A critical comment and some suggestions. *Personality and Individual Differences, 53,* 541-545.

Stoeber, J. (2012b). Perfectionism and performance. In S. M. Murphy (Ed.), *Oxford handbook of sport and performance psychology* (pp. 294-306). New York: Oxford University Press.

Stoeber, J. (2014). How other-oriented perfectionism differs from self-oriented and socially prescribed perfectionism. *Journal of Psychopathology and Behavioral Assessment, 36*, 329-338.

Stoeber, J., & Becker, C. (2008). Perfectionism, achievement motives, and attribution of success and failure in female soccer players. *International Journal of Psychology, 43,* 980-987.

Stoeber, J., & Childs, J. (2011). Perfectionism. In R. J. R. Levesque (Ed.), *Encyclopedia of adolescence* (pp. 2053-2059). New York: Springer.

Stoeber, J., & Madigan, D.J. (in press). Measuring perfectionism in sport, dance, and exercise: Review, critique, recommendations. In A.P. Hill (Ed.), *Perfectionism in sport, dance and exercise*. London: Routledge.

Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10,* 295-319.

Stoeber, J., Otto, K., & Stoll, O. (2006). Multidimensional Inventory of Perfectionism (MIPS): English version. *Unpublished manuscript,* School of Psychology, University of Kent, UK.

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,* 959-969.

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*, 530-535.

Stoeber, J., Stoll, O., Pescheck, E., & Otto, K. (2008). Perfectionism and achievement goals in athletes: Relations with approach and avoidance orientations in mastery and performance goals. *Psychology of Sport and Exercise, 9,* 102-121.

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,* 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,* 211-245.

Stoll, O., Lau, A., & Stoeber, J. (2008). Perfectionism and performance in a new basketball training task: Does striving for perfection enhance or undermine performance? *Psychology of Sport and Exercise, 9,* 620-629.

Stornes, T., & Ommundsen, Y. (2004). Achievement goals, motivational climate and sportspersonship: A study of young handball players. *Scandinavian Journal of Educational Research, 48,* 205-221.

Stuntz, C. P., & Weiss, M. R. (2009). Achievement goal orientations and motivational outcomes in youth sport: The role of social orientations. *Psychology of Sport and Exercise, 10*, 255-262.

Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics*. Boston: Allyn and Bacon.

The Culture, Media, and Sport Committee (2014). Women and sport: First report of session 2014-2015. Retrieved from: http://www.publications.parliament.uk/pa/cm201415/cmselect/cmcumeds/513/513.pdf.

Tracy, S.J. (2010) Qualitative Quality: Eight 'Big-Tent' Criteria for Excellent Qualitative Research. *Qualitative Inquiry, 16*, 837-851.

Treasure, D.C. & Roberts, G.C. (1995). Applications of achievement goal theory to physical education: Implications for enhancing motivation. *Quest, 47,* 475-489.

Treasure, D.C., & Roberts, G.C. (1998). Relationship between female adolescents' achievement goal orientations, perceptions of the motivational climate, belief about success and sources of satisfaction in basketball. *International Journal of Sport Psychology*, *29*, 211-230.

Tremblay, M.S., LeBlanc, A.G., Kho, M.E., Saunders, T.J., Larouche, R., Colley, R. C., et al. (2011). Systematic review of sedentary behaviour and health indicators in school-aged children and youth. *International Journal of Behavioural Nutrition and Physical Activity*, *8*, 98.

Trudeau, F. & Shephard, R.J. (2008). Physical education, school physical activity, school sports and academic performance. *International Journal of Behavioural Nutrition and Physical Activity, 5,* 1-12.

Ullrich-French, S., McDonough, M.H., & Smith, A.L. (2012). Social connection and psychological outcomes in a physical activity-based youth development setting. *Research quarterly for exercise and sport, 83*, 431-441.

Ullrich-French, S., & Smith, A.L. (2006). Perceptions of relationships with parents and peers in youth sport: Independent and combined prediction of motivational outcomes. *Psychology of sport and exercise, 7*, 193-214.

Ullrich-French, S., & Smith, A.L. (2009). Social and motivational predictors of continued youth sport participation. *Psychology of Sport and Exercise, 10*, 87-95.

Vansteenkiste, M., Mouratidis, A., & Lens, W. (2010). Detaching reasons from aims: Fair play and well-being in soccer as a function of pursuing performance-approach goals for autonomous or controlling reasons. *Journal of Sport & Exercise Psychology, 32*, 217-242.

Vallance, J.K.H., Dunn, J.G.H. & Causgrove Dunn, J.L. (2006). Perfectionism, anger and situation criticality in competitive youth ice hockey. *Journal of Sport and Exercise Psychology, 28,* 383-406.

Vazou, S. (2010). Variations in the perceptions of peer and coach motivational climate. *Research quarterly for exercise and sport*, *81*, 199-211.

Vazou, S., Ntoumanis, N., & Duda, J.L. (2005). Peer motivational climate in youth sport: A qualitative inquiry. *Psychology of Sport and Exercise, 6*, 497-516.

Vazou, S., Ntoumanis, N., & Duda, J.L. (2006). Predicting young athletes' motivational indices as a function of their perceptions of the coach-and peer-created climate. *Psychology of sport and exercise, 7*, 215-233.

Wang, K.T., Fu, C.C., & Rice, K.G. (2012). Perfectionism in gifted students: moderating effects of goal orientation and contingent self-worth. *School Psychology Quarterly*, *27*, 96-108.

Wankel, L.M. (1997). The social psychology of physical activity. *Physical activity in human experience: Interdisciplinary perspectives*, 93-126.

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, *54*, 1063-1070.

Weiner, B. (1986). *An Attributional Theory of Motivation and Emotion,* Springer Verlag: New York.

Weiss, M.R. (2000). Motivating kids in physical activity. *The President's Council on Physical Fitness and Sports Research Digest, 3,* 1-8.

Weiss, M.R. (2003). *Developmental sport and exercise psychology: A lifespan perspective.* Morgantown, WV: Fitness Information Technology

Weiss, M.R. (2008). "Field of Dreams": Sport as a context for youth development. *Research Quarterly for Exercise and Sport, 79,* 434-449.

Weiss, M.R. (2013). Back to the future: Research trends in youth motivation and physical activity. *Pediatric Exercise Science, 25,* 561-572.

Weiss, M.R., Amorose, A.J., & Wilko, A.M. (2009). Coaching behaviors, motivational climate, and psychosocial outcomes among female adolescent athletes. *Pediatric exercise science*, *21*, 475.

Weiss, M.R., Kimmel, L.A., & Smith, A.L. (2001). Determinants of sport commitment among junior tennis players: Enjoyment as a mediating variable. *Pediatric Exercise Science, 13*, 131-144.

Weiss, M.R., Kipp, L.E., & Bolter, N.D. (2012). Training for life: Optimizing positive youth development through sport and physical activity. In S.M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 448-475). New York: Oxford University Press.

Weiss, M.R., & Smith, A.L. (1999). Quality of youth sport friendships: Measurement, development and validation. *Journal of Sport and Exercise Psychology, 21*, 145-166.

Weiss, M.R., & Stuntz, C.P. (2004). A little friendly competition: Peer relationships and psychosocial development in youth sport and physical activity contexts: A lifespan perspective. In M. R. Weiss (Ed.), *Developmental sport and exercise psychology: A lifespan perspective*. (pp. 165-196). Morgantown, WV: Fitness Information Technology.

Weissman, A.N., & Beck, A.T. (1978). *Development and validation of the Dysfunctional Attitude Scale: A preliminary investigation.* Paper presented at the Annual Meeting of the American Educational Research Association.

White, A. & Rowe, N. (1996). England: Youth sport in Europe. In P. De Knop, L. M. Engstroem, B. Skirstad, & M. R. Weiss (Eds.), *Worldwide trends in youth sport* (pp. 115-125). Champaign: Human Kinetics.

White, S.A., Duda, J.L., & Hart, S. (1992). An exploratory examination of the parent-initiated motivational climate questionnaire. *Perceptual and Motor Skills*, *75*, 875-880.

Whitehead, J.R. (1995). A study of children's physical self-perceptions using an adapted physical self-perception profile questionnaire. *Pediatric Exercise Science, 7,* 132-151.

WTA (2015). Serena Williams Biography. Retrieved from: http://www.wtatennis.com/players/player/9044/title/serena-williams

Zhang, B., & Cai, T. (2012). Moderating effects of self-efficacy of self-efficacy in the relations of perfectionism and depression. *Studia Psychologica*, *54*, 15-21.

Appendix A

Confirmation of ethical approval

A.1 Study 1 ethics approval letter

York St John
University

Sarah H. Mallinson
PhD Student

Lord Mayor's Walk
York YO31 7EX
T: 01904 624624
F: 01904 612512
www.yorksj.ac.uk

Dr Simon Rouse
Chair of Research Ethics
Direct Line 876901
e-mail: s.rouse@yorksj.ac.uk

24 February 2012

Dear Sarah

RE: Multidimensional perfectionism and youth sport experiences: (i) A

quantitative analysis

REF: UC/24/2/12/SM

We can confirm that your ethics research re-submission is now is approved. We note the linkage to the previous research approval (REF: UC/22/6/11/GJ) and your recognition of the low risk nature of the research.

Yours sincerely

Cc
Dr. Andrew P. Hill; Prof. Howard K. Hall; Mr. Andrew Buckton

A.2 Study 2 ethics approval letter

York St John
University

Sarah H. Mallinson
PhD Student

Lord Mayor's Walk
York YO31 7EX
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27 March 2013

Dr Simon Rouse
Chair of Research Ethics
Direct Line 876901
e-mail: s.rouse@yorksj.ac.uk

Dear Sarah

RE: Multidimensional perfectionism and negative youth sport
experiences: A further test of the 2 x 2 model of perfectionism.

REF: UC/27/3/13/SM

We can confirm that your ethics research proposal is approved without
alterations.

Yours sincerely

Cc Dr. Andrew P. Hill; Prof. Howard K. Hall

A Church of England Foundation 1841
A Company Registered in England with Exempt Charitable Status
Company No: 4498683

A.3 Study 3 ethics approval letter

York St John University

Sarah H. Mallinson
PhD Student

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www.yorksj.ac.uk

18 March 2014

Dr Simon Rouse
Chair of Research Ethics
Direct Line 876901
e-mail: s.rouse@yorksj.ac.uk

Dear Sarah

RE: **Multidimensional perfectionism and youth sport experiences: A**

qualitative approach.

REF: UC/18/3/14/SM

We can confirm that your ethics research proposal is approved. Your proposal
covers, in a very comprehensive and clear way, all the key aspects needed when
researching with children.

Yours sincerely

Cc Prof. Howard K. Hall

A Church of England Foundation 1841
A Company Registered in England with Exempt Charitable Status
Company No: 4498683

A.4 Study 4 ethics approval letter

York St John
University

Sarah H. Mallinson
PhD Student

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22 July 2013

Dr Simon Rouse
Chair of Research Ethics
Direct Line 876901
e-mail: s.rouse@yorksj.ac.uk

Dear Sarah

RE: The moderating role of perceptions of significant others on the relationship

between multidimensional perfectionism and youth sport experiences.

REF: UC/22/7/13/SM

I can confirm that these conditions have been met (2/9/13)

We can confirm that your ethics research proposal is approved if these minor alterations
are completed:

- As regards the storage of hard copy questionnaires we couldn't see any details as
  to where will these be physically kept and who will have access to them?

- In Section H of the questionnaire – what is the purpose of the participant naming
  their 'best sport friend' on the questionnaire?

- Appendix 5 (letter to Parent/Guardian) – committee name is wrong, as it should
  be Research Ethics **Sub** Committee - it helps distinguish between the RESC and
  Faculty RECs

Yours sincerely

Cc Prof. Howard K. Hall

Appendix B

Study information sheets and verbal assent/informed consent

B.1 Gatekeeper letter template

Sarah Mallinson, MSc, BSc (Hons)

Doctoral Student

Faculty of Health and Life Sciences

York St John University

Lord Mayor's Walk

York

YO31 7EX

[Contact name]

[Contact address]

[Date]

Dear *[Contact name]*

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 young people's experiences of sport. In particular, my current study intends to examine how certain sport related factors (e.g., athlete personality, coaches, parents, and peers) impact and may serve to improve the overall quality of young people's sport experiences. I would like to invite the youth sport participants at your club/school to participate in this study.

What would be required?

An opt-out consent form would be distributed to the parents/guardians of potential participants. Youth sport participants (aged 11-18 years) would then be asked if they would like to complete a short questionnaire. The questionnaire takes participants approximately 20 minutes to complete. This would take place at time and location convenient for the club/school (e.g., the start of a 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 a written summary for the club/school and will contribute towards a greater understanding of the cognitive, behavioural, and emotional experiences of young people involved in sport.

Further contact details:

If you are interested in this study and would like to further discuss participation, please contact me (Sarah Mallinson) on 01904 876238 or you can e-mail s.mallinson@yorksj.ac.uk.

Many thanks for your time so far and I look forward to your reply.

Kind regards
Sarah

B.2 Participant information sheet template

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 3 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/teacher.

If you have any questions about taking part in this survey please contact Sarah Mallinson on 01904 876239 or you can e-mail s.mallinson@yorksj.ac.uk.

We are very thankful for your help with this project.

Best wishes

Sarah

B.3 Participant verbal assent template

"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 and how these sport experiences can be made better.

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 *[or at an alternate time, if necessary]* 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/teacher."

B.4 Participant information sheet and written assent template

Dear Athlete

We would like you to help us with a piece of research looking at the characteristics of youth athletes and the thoughts and feelings that youth athletes have about playing their sport. This is the final part of a multi-stage project that we would like to invite you to participate in.

We hope that the information gained from all parts of this project will help us better understand the characteristics and experiences of youth athletes. In order to take part we would like you to attend a 45-60 minute group discussion/individual interview on **<Insert Date, Time, and Venue Here>**. During the group discussion/interview, you will be asked questions like what do you like/dislike about participating in your sport?'

Your participation in the group discussion/interview is completely voluntary. You will be able to answer as many or few questions as you like and you can withdraw from participation at any time without anything bad happening. Your responses will be kept safely at York St John University for 5 years and then they will be erased. Your responses will only be seen by the research team involved unless we believe you are at risk of harm. You will not be named in any of the work arising from the project.

If you would like to take part, please sign the bottom of this form and return it to Sarah Mallinson prior to the group discussion/interview.

If you have any questions about taking part in the group discussion/interview please contact me on 01904 876239 or you can e-mail s.mallinson@yorksj.ac.uk.

We are very thankful for your help with this project.
Best wishes
Sarah

'I understand the above information and freely give my consent to participate in this project.'

Signature: ....   Date: ....

Print name:………………………………………………………………

B.5 Participant debrief sheet

Faculty of Health and Life Sciences

Participant Debrief

Title of the study: Perfectionism and youth sport experiences.

Thank you for taking the time to participate in this study.

The purpose of this study was to gain an understanding of the experiences of young people when participating in sport. We are very interested in understanding how some characteristics of young people (e.g., high levels of achievement striving) have an effect on sport experiences.

If you are having any difficulties associated with your sport participation or feel that taking part in this study has badly influenced you in any way, the researcher and your coach/teacher are available to talk to you. Childline is also available to contact via Freephone Telephone Number: 0800 1111.

If you have any other questions about your participation in this study or would like to withdraw your participation, you or your parent/guardian can contact me (Sarah Mallinson) via E-mail s.mallinson@yorksj.ac.uk or Tel. 01904 876239.

B.6 Parent information sheet and opt-out consent template

Dear Parent/Guardian

Your child's sports club/school 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 (Dr Andrew Hill and Prof Howard Hall). 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 3 years.

If you are **not** willing to allow your child to take part in this research project, please contact Sarah Mallinson (Tel: 01904 876239; E-mail s.mallinson@yorksj.ac.uk) or you can inform your child or their coach/teacher 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
Sarah Mallinson

B.7 Parent information sheet and written consent template

Dear Parent/Guardian,

We would like to request the participation of your child in a 45-60 minute group discussion/individual interview about their experiences of sport on **\<Insert Date, Time, and Venue Here\>.** This forms the final part of a wider research project aimed at understanding the characteristics of youth athletes and their experiences of participating in sport. It is hoped that the information gained will help increase the knowledge base regarding motivation and youth athletes' experiences in sport and we consider the risks to be minimal. This project has received full support from the Research Ethics Sub-Committee at York St John University.

During the group discussion/interview, your child will be asked questions such as 'what do you like/dislike participating in your sport?' Your child's participation is completely voluntary and they will be free to choose the level of discussion that they engage in and can withdraw from participation at any time. The responses that your child might provide will be treated confidentially (only seen by myself and the research project supervisors: Dr Andrew Hill and Prof Howard Hall). Your child will not be named in any of the verbal or written work arising from the study. All audio and written data collected will be securely stored at York St John University and destroyed upon completion of the project (anticipated within 5 years).

If you are willing to let your child participate in the group discussion/interview on **\<Insert Date, Time, Venue Here\>,** please sign the bottom of this consent form and return it to Sarah Mallinson prior to the group discussion/interview using the pre-paid return envelope provided or bring it to the group discussion/interview.

If you have any questions regarding your child's participation please do not hesitate to contact me on 01904 876239 or you can e-mail s.mallinson@yorksj.ac.uk.

Kind Regards
Sarah Mallinson

'I understand the above information and freely give my consent for my child to participate in this project.'

Signature: ....   Date: ....

Print name:…………….…………………………………………………………

Appendix C

Instruments used across the four studies

C.1 Multidimensional perfectionism

Listed below are a number of statements that identify how athletes view certain aspects of their competitive experiences in sport. Please read each of the statements carefully, and indicate the extent to which you personally agree or disagree with each statement.

Strongly Disagree ①	Disagree ②	Neither Agree or Disagree ③	Agree ④	Strongly Agree ⑤

1. If I do not set the highest standards for myself in my sport, I am likely to end up a second-rate player. ① ② ③ ④ ⑤
2. Even if I fail slightly in competition, for me, it is as bad as being a complete failure. ① ② ③ ④ ⑤
3. I usually feel uncertain as to whether or not my training effectively prepares me for competition. ① ② ③ ④ ⑤
4. My parents set very high standards for me in my sport. ① ② ③ ④ ⑤
5. On the day of competition I have a routine that I try to follow. ① ② ③ ④ ⑤
6. I feel like my coach criticizes me for doing things less than perfectly in competition. ① ② ③ ④ ⑤
7. In competition, I never feel like I can quite meet my parents' expectations. ① ② ③ ④ ⑤
8. I hate being less than the best at things in my sport. ① ② ③ ④ ⑤
9. I have and follow a pre-competitive routine. ① ② ③ ④ ⑤
10. If I fail in competition, I feel like a failure as a person. ① ② ③ ④ ⑤
11. Only outstanding performance during competition is good enough in my family. ① ② ③ ④ ⑤
12. I usually feel unsure about the adequacy of my pre-competition practices. ① ② ③ ④ ⑤
13. Only outstanding performance in competition is good enough for my coach. ① ② ③ ④ ⑤
14. I rarely feel that my training fully prepares me for competition. ① ② ③ ④ ⑤
15. My parents have always had higher expectations for my future in sport than I have. ① ② ③ ④ ⑤
16. The fewer mistakes I make in competition, the more people will like me. ① ② ③ ④ ⑤
17. It is important to me that I be thoroughly competent in everything I do in my sport. ① ② ③ ④ ⑤

18. I follow pre-planned steps to prepare myself for competition.	①	②	③	④	⑤
19. I feel like I am criticized by my parents for doing things less than perfectly in competition.	①	②	③	④	⑤
20. Prior to competition, I rarely feel satisfied with my training.	①	②	③	④	⑤
21. I think I expect higher performance and greater results in my daily sport-training than most players.	①	②	③	④	⑤
22. I feel like I can never quite live up to my coach's standards.	①	②	③	④	⑤
23. I feel that other players generally accept lower standards for themselves in sport than I do.	①	②	③	④	⑤
24. I should be upset if I make a mistake in competition.	①	②	③	④	⑤
25. In competition, I never feel like I can quite live up to my parents' standards.	①	②	③	④	⑤
26. My coach sets very high standards for me in competition.	①	②	③	④	⑤
27. I follow a routine to get myself into a good mind-set going into competition.	①	②	③	④	⑤
28. If a team-mate or opponent (who plays a similar position to me) plays better than me during competition, then I feel like I failed to some degree.	①	②	③	④	⑤
29. My parents expect excellence from me in my sport.	①	②	③	④	⑤
30. My coach expects excellence from me at all times: both in training and competition.	①	②	③	④	⑤
31. I rarely feel that I have trained enough in preparation for a competition.	①	②	③	④	⑤
32. If I do not do well all the time in competition, I feel that people will not respect me as an athlete.	①	②	③	④	⑤
33. I have extremely high goals for myself in my sport.	①	②	③	④	⑤
34. I develop plans that dictate how I want to perform during competition.	①	②	③	④	⑤
35. I feel like my coach never tries to fully understand the mistakes I sometimes make.	①	②	③	④	⑤
36. I set higher achievement goals than most athletes who play my sport.	①	②	③	④	⑤
37. I usually have trouble deciding when I have practiced enough heading into a competition.	①	②	③	④	⑤
38. I feel like my parents never try to fully understand the mistakes I make in competition.	①	②	③	④	⑤
39. People will probably think less of me if I make mistakes in competition.	①	②	③	④	⑤
40. My parents want me to be better than all other players who play my sport.	①	②	③	④	⑤
41. I set plans that highlight the strategies I want to use when I compete.	①	②	③	④	⑤
42. If I play well but only make one obvious mistake in the entire game, I still feel disappointed with my performance.	①	②	③	④	⑤

C.2 Enjoyment

For the following questions, please think about how you have felt about participating in your sport this season.

	Not at all ①	A little ②	Sort of ③	Pretty much ④	Very much ⑤
1. Do you *enjoy* playing your sport?	①	②	③	④	⑤
2. Are you *happy* playing your sport?	①	②	③	④	⑤
3. Do you have *fun* playing your sport?	①	②	③	④	⑤
4. Do you *like* playing your sport?	①	②	③	④	⑤

C.3 Physical self-worth

The pairs of statements below talk about two kinds of kids, and we would like to know which of these kids you are most like. For each pair of statements, you need to decide whether you are more like the kids on the left side (of the **BUT**) or the kids on the right side. Once you have selected the statement that is most like you, please indicate whether it is sort of true for you, or really true for you by shading a number. **For each pair of sentences you only need to shade one number**. Sometimes the number will be on one side of the page, other times it will be on the other side of the page.

Really true	Sort of true	What am I like?			Sort of true	Really true
④	③	Some kids are proud of themselves physically	**BUT**	Other kids don't have much to be proud of physically	②	①
④	③	Some kids are happy with how they are and what they can do physically	**BUT**	Other kids are unhappy with how they are and what they can do physically	②	①
①	②	Some kids don't feel very confident about themselves physically	**BUT**	Other kids feel really good about themselves physically	③	④
④	③	Some kids have a positive feeling about themselves physically	**BUT**	Other kids feel somewhat negative about themselves physically	②	①
①	②	Some kids wish that they could feel better about themselves physically	**BUT**	Other kids always seem to feel good about themselves physically	③	④
④	③	Some kids are very satisfied with themselves physically	**BUT**	Other kids are often dissatisfied with themselves physically	②	①

C.4 Sport friendship quality

For the following questions, please respond with one person in mind, your best sport friend. Before completing the questions, please write the name of your best sport friend in the space below:

_____

	Not at all true				**Really true**
	①	②	③	④	⑤

1. My friend gives me a second chance to perform a skill. ① ② ③ ④ ⑤
2. My friend and I praise each other for doing sports well. ① ② ③ ④ ⑤
3. After I make mistakes, my friend encourages me. ① ② ③ ④ ⑤
4. My friend has confidence in me during sports. ① ② ③ ④ ⑤
5. My friend and I can talk about anything. ① ② ③ ④ ⑤
6. My friend and I stick up for each other in sports. ① ② ③ ④ ⑤
7. My friend looks out for me. ① ② ③ ④ ⑤
8. My friend and I tell each other secrets. ① ② ③ ④ ⑤
9. My friend and I have common interests. ① ② ③ ④ ⑤
10. My friend and I do similar things. ① ② ③ ④ ⑤
11. My friend and I have similar values. ① ② ③ ④ ⑤
12. My friend and I think the same way. ① ② ③ ④ ⑤
13. My friend and I do fun things. ① ② ③ ④ ⑤
14. I like to play with my friend. ① ② ③ ④ ⑤
15. My friend and I play well together. ① ② ③ ④ ⑤
16. My friend and I spend time together. ① ② ③ ④ ⑤
17. My friend and I make up easily when we have a fight. ① ② ③ ④ ⑤
18. My friend and I try to work things out when we disagree. ① ② ③ ④ ⑤
19. When we argue, my friend and I talk about how to reach a solution. ① ② ③ ④ ⑤
20. My friend and I get mad at each other. ① ② ③ ④ ⑤
21. My friend and I fight. ① ② ③ ④ ⑤
22. My friend and I have arguments. ① ② ③ ④ ⑤

C.5 Negative and positive feelings

Please think about what you have been doing and experiencing in your sport **during the past four weeks**. Then report how much you experienced each of the following feelings, using the scale below.

	Very rarely or Never	Rarely	Sometimes	Often	Very often or Always
	①	②	③	④	⑤

		Very rarely or Never	Rarely	Sometimes	Often	Very often or Always
1.	Positive	①	②	③	④	⑤
2.	Negative	①	②	③	④	⑤
3.	Good	①	②	③	④	⑤
4.	Bad	①	②	③	④	⑤
5.	Pleasant	①	②	③	④	⑤
6.	Unpleasant	①	②	③	④	⑤
7.	Happy	①	②	③	④	⑤
8.	Sad	①	②	③	④	⑤
9.	Afraid	①	②	③	④	⑤
10.	Joyful	①	②	③	④	⑤
11.	Angry	①	②	③	④	⑤
12.	Contented	①	②	③	④	⑤

C.6 Sport anxiety

Many athletes get tense or nervous before or during meets, tournaments or matches. This happens even to professional athletes. Please read each question. Then, choose the number that says how you **usually** feel before or while you compete in sports. There are no right or wrong answers. Please be as truthful as you can.

Not at all	A little bit	Pretty much	Very much
①	②	③	④

Before or while I compete in my sport:

		Not at all	A little bit	Pretty much	Very much
1.	It is hard to concentrate on the game.	①	②	③	④
2.	My body feels tense.	①	②	③	④
3.	I worry that I won't play well.	①	②	③	④
4.	It is hard for me to focus on what I am supposed to do.	①	②	③	④
5.	I worry that I will let others down.	①	②	③	④
6.	I feel tense in my stomach.	①	②	③	④
7.	I lose focus on the game.	①	②	③	④
8.	I worry that I will not play my best.	①	②	③	④
9.	I worry that I will play badly.	①	②	③	④
10.	My muscles feel shaky.	①	②	③	④
11.	I worry that I will mess up during the game.	①	②	③	④
12.	My stomach feels upset.	①	②	③	④
13.	I cannot think clearly during the game.	①	②	③	④
14.	My muscles feel tight because I am nervous.	①	②	③	④
15.	I have a hard time focusing on what my coach tells me to do.	①	②	③	④

C.7 Antisocial and prosocial behaviour

Please indicate how often you have engaged in each of the following behaviours during your sport this season.

	Never ①	Rarely ②	Sometimes ③	Often ④	Very often ⑤
1. Encouraged a teammate.	①	②	③	④	⑤
2. Congratulated a teammate for good play.	①	②	③	④	⑤
3. Gave positive feedback to a teammate.	①	②	③	④	⑤
4. Gave constructive feedback to a teammate.	①	②	③	④	⑤
5. Helped an injured opponent.	①	②	③	④	⑤
6. Asked to stop play when an opponent was injured.	①	②	③	④	⑤
7. Helped an opponent off the floor.	①	②	③	④	⑤
8. Verbally abused a teammate.	①	②	③	④	⑤
9. Swore at a teammate.	①	②	③	④	⑤
10. Argued with a teammate.	①	②	③	④	⑤
11. Criticised a teammate.	①	②	③	④	⑤
12. Showed frustration at a teammate's poor play.	①	②	③	④	⑤
13. Tried to injure an opponent.	①	②	③	④	⑤
14. Tried to wind up an opponent.	①	②	③	④	⑤
15. Deliberately fouled an opponent.	①	②	③	④	⑤
16. Intentionally distracted an opponent.	①	②	③	④	⑤
17. Retaliated after a bad foul.	①	②	③	④	⑤
18. Intentionally broke the rules of the game.	①	②	③	④	⑤
19. Physically intimidated an opponent.	①	②	③	④	⑤
20. Criticised an opponent.	①	②	③	④	⑤

C.8 Intentions to drop out

Below are some statements relating to **whether you intend to play your sport next season**. When providing your answers, consider how you feel at the moment. Remember, no one other than the researchers will see your answers.

	Strongly disagree ①	Disagree ②	Neutral ③	Agree ④	Strongly agree ⑤
1. I intend to drop out of my sport at the end of this season.	①	②	③	④	⑤
2. I plan to play my sport next season.	①	②	③	④	⑤
3. I am thinking of quitting my sport.	①	②	③	④	⑤
4. I would like to play my sport next season.	①	②	③	④	⑤

C.9 Interest/Enjoyment

For the following questions, please think about how you feel about participating in your sport and choose the number that best shows how you feel. There are no right or wrong answers.

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
①	②	③	④	⑤	⑥	⑦

1. I enjoy playing my sport very much.
   ① ② ③ ④ ⑤ ⑥ ⑦

2. Playing my sport is fun.
   ① ② ③ ④ ⑤ ⑥ ⑦

3. I would describe my sport as very interesting.
   ① ② ③ ④ ⑤ ⑥ ⑦

4. While playing my sport, I am thinking about how much I enjoy it.
   ① ② ③ ④ ⑤ ⑥ ⑦

5. Playing my sport does not hold my attention.
   ① ② ③ ④ ⑤ ⑥ ⑦

C.10 Coach motivational climate

The following list describes what coaches say or do to the players that they coach. Please read the following statements carefully and when giving your answers, think about what your **<u>main coach</u>** for this season normally says or does.

Not at all true		Somewhat true		Very true
①	②	③	④	⑤

1. The coach made players feel good when they improved a skill.	①	②	③	④	⑤
2. The coach encouraged us to learn new skills.	①	②	③	④	⑤
3. The coach told players to help each other get better.	①	②	③	④	⑤
4. The coach told us that trying our best was the most important thing.	①	②	③	④	⑤
5. Coach said that teammates should help each other improve their skills.	①	②	③	④	⑤
6. Coach said that all of us were important to the team's success.	①	②	③	④	⑤
7. Winning games was the most important thing for the coach.	①	②	③	④	⑤
8. The coach spent less time with the players who weren't as good.	①	②	③	④	⑤
9. The coach told us which players on the team were best.	①	②	③	④	⑤
10. The coach paid most attention to the best players.	①	②	③	④	⑤
11. Players were taken out of games if they made a mistake.	①	②	③	④	⑤
12. Coach told us to try to be better than our teammates.	①	②	③	④	⑤

C.11 Peer motivational climate

Please select the **<u>main team</u>** that you play for and answer the following questions thinking about the environment in this team and the relationships among your teammates.

Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
①	②	③	④	⑤	⑥	⑦

On this team, most athletes….

1. Help each other improve. ① ② ③ ④ ⑤ ⑥ ⑦
2. Encourage each other to outplay their teammates. ① ② ③ ④ ⑤ ⑥ ⑦
3. Offer to help their teammates develop new skills. ① ② ③ ④ ⑤ ⑥ ⑦
4. Care more about the opinion of the most able teammates. ① ② ③ ④ ⑤ ⑥ ⑦
5. Make their teammates feel valued. ① ② ③ ④ ⑤ ⑥ ⑦
6. Work together to improve the skills they don't do well. ① ② ③ ④ ⑤ ⑥ ⑦
7. Make negative comments that put their teammates down. ① ② ③ ④ ⑤ ⑥ ⑦
8. Try to do better than their teammates. ① ② ③ ④ ⑤ ⑥ ⑦
9. Criticise their teammates when they make mistakes. ① ② ③ ④ ⑤ ⑥ ⑦
10. Teach their teammates new things. ① ② ③ ④ ⑤ ⑥ ⑦
11. Encourage their teammates to try their hardest. ① ② ③ ④ ⑤ ⑥ ⑦
12. Look pleased when they do better than their teammates. ① ② ③ ④ ⑤ ⑥ ⑦
13. Make their teammates feel accepted. ① ② ③ ④ ⑤ ⑥ ⑦
14. Want to be with the most able teammates. ① ② ③ ④ ⑤ ⑥ ⑦
15. Praise their teammates who try hard. ① ② ③ ④ ⑤ ⑥ ⑦
16. Complain when their team doesn't win. ① ② ③ ④ ⑤ ⑥ ⑦
17. Are pleased when their teammates try hard. ① ② ③ ④ ⑤ ⑥ ⑦
18. Care about everyone's opinion. ① ② ③ ④ ⑤ ⑥ ⑦
19. Set an example on giving forth maximum effort. ① ② ③ ④ ⑤ ⑥ ⑦
20. Laugh at their teammates when they make mistakes. ① ② ③ ④ ⑤ ⑥ ⑦
21. Encourage their teammates to keep trying after they make a mistake. ① ② ③ ④ ⑤ ⑥ ⑦

Appendix D

Focus group and individual interview questions

D.1 Focus group questioning route

To start us off, please tell us your name and the name of the sport you participate in most often.

How did you get into playing your sport (i.e., the one that you participate in most often)?

> How old were you?

> Who introduced you?

Think back to when you first started playing your sport. After the first session, what did you think about your sport?

1) Think about participating in your sport now. What is it about your sport that you really like?

2) Can you give me an example of a time recently, in training, when you really liked participating in your sport?

> What was it about that which you liked?

3) Can you give me an example of a time recently, during competition, when you really liked participating in your sport?

> What was it about that which you liked?

4) Can you give me any more examples of times when you have really liked participating in your sport?

> What was it about that which you liked?

5) Let's talk about the potential other side of your sport participation. What do you least like about your sport?

6) Can you give me an example of a time recently, in training, when you disliked participating in your sport?

> What was it about that which you disliked?

7) Can you give me an example of a time recently, during competition, when you disliked participating in your sport?

    What was it about that which you disliked?

8) Can you give me any more examples of times when you have disliked participating in your sport?

    What was it about that which you disliked?

9) I am also interested in who, if anyone, influences how much you like participating in your sport or not?

    What things can your coach do or say that influences how much you like participating in your sport or not?

    What things can your parent(s)/guardian(s) do or say…?

    What things can your peers/teammates do or say…?

    Is there anyone else who is influential?

10) What, if anything, would make you like your sport more?

11) Looking to the next school year/season, how do you see yourself continuing with your sport?

If you were to sum up your thoughts and feelings about participating in your sport, in one sentence, what would you say?

Before we draw our discussion to an end, let's summarise the key points.

    Does this summary sound complete?

    Do you have any changes or additions?

Finally, we wanted you to help us better understand the experiences of young people who participate in sport.

    Have we missed anything?

    Is there anything that you came here wanting to say that you didn't get chance to say?

D.2 Individual interview schedule

To start us off, please tell me your name and the name of the sport you participate in most often.

How did you get into playing your sport (i.e., the one that you participate in most often)?

> How old were you?
>
> Who introduced you?

Think back to when you first started playing your sport. After the first session, what did you think about your sport?

1) Think about participating in your sport now. What motivates you to participate in your sport?

> Can you give me any examples?
>
> Are there any other things that motivate you to want to participate?

2) Describe what a typical 'good training session' looks like to you.

> What would a training session where you feel good afterwards look like to you?
>
> Can you describe the kind of thoughts and feelings you experience after a good training session?

3) Describe what a typical 'good game/competition' looks like to you.

> What would a game/competition where you feel good afterwards look like to you?
>
> Can you describe the kind of thoughts and feelings you experience after a good game/competition?

4) Let's talk about the potential other side of your sport participation. What makes you not want to participate in your sport?

> Can you give me any examples?
>
> Are there any other things that make you not want to participate?

5) Describe what a typical 'bad training session' looks like to you.

What would a training session where you feel bad afterwards look like to you?

Can you describe the kind of thoughts and feelings you experience after a bad training session?

6) Describe what a typical 'bad game/competition' looks like to you.

What would a game/competition where you feel bad afterwards look like to you?

Can you describe the kind of thoughts and feelings you experience after a bad game/competition?

7) What makes the difference between feeling good/bad about your sport participation?

8) How do you think you got your ideas of good/bad sport participation?

Where or who do you think you got your ideas from?

If you were to sum up what participating in your sport means to you, in one sentence, what would you say?

Before we draw our interview to an end, let's summarise the key points.

Does this summary sound complete?

Is there anything else you would like to add or clarify?

Finally, I wanted you to help me understand the experiences of young people who participate in sport better.

Have I missed anything?

Is there anything else you think I should know about your sport participation?

D.3 Follow-up questions and prompts for focus groups and interviews

Clarification probes:

What do you mean by…?

If you were to simplify… what would you say?

Is there another way you could explain…?

Would you explain further…?

Elaboration probes:

Could you describe… in a little more detail?

Would you elaborate on…?

Could you say more about…?

Would you give me an example of what you mean?

Is there anything else?

I don't understand…

Detail-oriented probes (when, what, who, how, and why questions):

When did that happen?

What was your involvement?

Who else was involved?