The proposed effect of religiosity and spirituality on levels of self-efficacy: An exploratory study

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

Research into trauma, adversity, and psychological disorders has shown that religion/spirituality are significant contributors towards enhanced psychological wellbeing. However, little is known about how religion/spirituality enhance wellbeing in those experiencing adversity. The aim of this research was to explore how religion/spirituality improve the wellbeing of individuals by studying the relationship between religion/spirituality and self-efficacy, as self-efficacy is associated with favourable treatment outcomes. It was hypothesised that religion/spirituality may lead to positive outcomes for individuals by enhancing their self-efficacy. It was also hypothesised that the relationship between religion/spirituality and self-efficacy would be moderated by Locus of Control, Cognitive Appraisal and Appraisal Accuracy. This present research used a quantitative approach and utilised a collection of scales to measure each of the above-mentioned variables. These scales included: the General Self-efficacy Scale (Schwarzer & Jerusalem, 1995), the Spirituality Self-Rating Scale (Galanter et al., 2007), the Centrality of Religiosity Scale-5 (CRS-5) by Hubber and Huber (2012), which will measure the extent to which participants are religious, the abbreviated Locus of Control Scale by Valecha and Ostrom (1974), based on Rotter (1966) Locus of Control Scale, the Perceived Stress Scale as a measure of Cognitive Appraisal by Cohen, Kamarck, and Mermelstein (1983) and the Cognitive Appraisal Accuracy Vignette (Sauser, Evans, & Champion, 1979). The participants who took part in this research were a sample of 87 students from Leeds Trinity University. The multiple regression analysis did not produce a statistically significant model which suggests the lack of a relationship between religion/spirituality and self-efficacy. Explanations for the results are discussed. In

conclusion, the research may be alluding to the fact that it may be variables within religion/spirituality such as religious hope, which lead to enhanced wellbeing, within religious/spiritual individuals; rather than through the interaction between religion/spirituality and self-efficacy. Thus, this insinuates that religion/spirituality may independently enhance wellbeing within religious/spiritual individuals. It is recommended that future research focusses on studying factors such as religious hope and faith as these factors may enhance the psychological wellbeing of religious/spiritual individuals.

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Chapter One Introduction

Introduction

Much literature has shown that religion/spirituality enhances the wellbeing and treatment outcomes of those who have experienced trauma or substance abuse disorder (Boden, 2015; Corless et al., 2012; Salem & Ali, 2008). The terms religion and spirituality are widely used synonymously within the literature, referring to an individual's relationship and belief in a sacred being or higher power (Mattis, 2000). However, other researchers note that these variables are separate but intertwined. (Hill et al., 2000). This view of religion and spirituality is held even to this day (Florence et al., 2019).

Additionally, previous research has shown a link between religion/spirituality and self-efficacy (Abdel-Khalek & Lester, 2017; Batool & Nawaz, 2016; Israel-Cohen et al., 2016; Pérez & Rex Smith, 2015). The literature has also established a link between self-efficacy and positive treatment outcomes (Corless et al., 2012; Tommasi et al., 2018).

The literature suggests that religion/spirituality may enhance wellbeing by first increasing individual self-efficacy. Nonetheless, this relationship seemed quite complex, therefore within this present study, it was hypothesised that there would be a relationship between religion/spirituality and self-efficacy but that this may be moderated by Locus of Control Cognitive Appraisal and Cognitive Appraisal Accuracy. These hypotheses were developed because the literature had shown that Locus of Control (Kim & Lee, 2018; Náfrádi, Nakamoto, & Schulz, 2017) and Cognitive Appraisal (Hanley et al., 2015; Welch, Hulley, & Beauchamp, 2010) were associated with self-efficacy and positive psychological wellbeing. However, to date,

there has not been any research which has studied the possible moderators of the relationship between religion/spirituality and self-efficacy, in a bid to understand how religion/spirituality improve the individual wellbeing.

The present study used a quantitative approach as it complemented the time-restricted nature of the research; utilising a collection of questionnaires to measure religion, spirituality, General Self-efficacy, Cognitive Appraisal and Cognitive Appraisal Accuracy. These scales included: the General Self-efficacy Scale (Schwarzer & Jerusalem, 1995), the Spirituality Self-Rating Scale (Galanter et al., 2007), the Centrality of Religiosity Scale-5 (CRS-5) by Huber and Huber (2012), which measured the extent to which participants are religious, the abbreviated Locus of Control Scale by Valecha and Ostrom (1974), based on Rotter (1966) Locus of Control Scale, the Perceived Stress Scale as a measure of Cognitive Appraisal by Cohen et al. (1983) and the Cognitive Appraisal Accuracy Vignette (Sauser, Evans, & Champion, 1979). After ethical approval had been obtained, a sample of 87 undergraduate students from Leeds Trinity University took part in this research.

The multiple regression analysis did not produce a significant model, which led to the acceptance of the null hypothesis. The results were contrary to previous findings which found a significant relationship between religion/spirituality and Self-efficacy (Abdel-Khalek & Lester, 2017; Batool & Nawaz, 2016; Israel-Cohen et al., 2016). These results may have been due to some of the limitations associated with the study. However, upon further interpretation, the results seemed to suggest that it may be the factors within religion/spirituality, such as religious hope which enhance wellbeing within religious/spiritual individuals (Salifu Yendork & Somhlaba, 2017;

Sremac, 2014) and thus lead to better treatment outcomes (Agyekum & Newbold, 2016; Chokkanathan, 2013; Freeze & DiTommaso, 2014; Rosmarin et al., 2013). The implications of these findings include the further substantiation of the Biopsychosociospiritual model of medicine which may lead more psychological practitioners to consider religion/spirituality as a factor when treating patients. Additionally, this research adds to the understanding of how religion/spirituality aids wellbeing by alluding to its direct and independent effects rather than through an interaction between religion/spirituality and self-efficacy. Further research would benefit from studying such variables as religious hope and faith as this may provide understanding as to which variables within religion/spirituality enhance psychological wellbeing in religious/spiritual individuals.

This present research was the first part of a two-part study. The second study would have investigated the factors within religion/spirituality which enhance wellbeing for religious/spiritual individuals. If it had not been for the pandemic and the subsequent lockdown, the second part of this research would have been carried out. This study would have employed a mixed-method approach which would have allowed for greater depth of insight. Furthermore, this study would have involved participants from a local organisation which supports people who are recovering from substance misuse disorder, as this is a group whom literature has shown to benefit from religion/spirituality.

Chapter Two Literature review

Literature review

Literature review summary

The first sections of this literature review chapter focusses on introducing the reader to Self-efficacy. Research which illustrates the psychological benefits of having high levels of self-efficacy will also be highlighted, with much of it showing how self-efficacy provides a buffer against the negative effects of experiencing adversity. Thus, highlighting the need for research into factors which may increase individual self-efficacy.

The second section of this literature review chapter explores the concept of Locus of Control. Literature citing the benefits of both internal and external Locus of Control shall be cited, with internal Locus of Control being said to be overall more beneficial for one's psychological wellbeing. However, external Locus of Control is cited to be more beneficial during times of extreme adversity. Literature which illustrates the complex relationship between Locus of Control, Self-efficacy and religion/spirituality were explored, thus leading to the hypothesis that there is a relationship between these variables.

The third section of this literature review chapter introduces the reader to Cognitive Appraisal, the benefits of positive appraisal and the cyclic nature of the relationship between Cognitive Appraisal and Self-efficacy. The relationship between appraisal and religiosity/spirituality is also discussed, with much literature highlighting how religion/spirituality may lead to positive appraisal and improved mental health. Cognitive Appraisal Accuracy is also considered. This section concludes by using

the literature to lead to a hypothesis which states that the relationship between religion/spirituality and self-efficacy may be moderated by Cognitive Appraisal and Appraisal Accuracy. The final section of this literature review chapter focused on religion and spirituality. These concepts are separate but intertwined and are also related to synonymously within the literature. The psychological benefits of religion/spirituality were also explored. The relationship between religion/spirituality and self-efficacy were discussed. The amalgamation of the knowledge gained from this literature review then led to the hypothesis that there would be a relationship between self-efficacy and religion, which is moderated by Locus of Control, Cognitive Appraisal and Appraisal Accuracy.

Chapter 2.1 Self-efficacy: theoretical origins and current psychological benefits

Within this section of the literature review self-efficacy, a concept coined by Bandura (1977) is introduced. Self-efficacy is also discussed in relation to its motivational effects and its benefits for mental health. This is also illustrated by literature which shows a relationship between low levels of self-efficacy and learned helplessness, which is developed through prolonged exposure to extreme adversity. Low self-efficacy and feelings of helplessness were found in the literature to lead to impaired psychological wellbeing. The literature within this section also shows how healthy levels of self-efficacy provide a buffer against the negative effects of prolonged adversity on mental health. With the benefits of high levels of self-efficacy having been illustrated, the chapter concluded by stating the importance of researching the factors which may increase self-efficacy, as shall be done within this research.

Self-efficacy refers to one's belief in their capabilities to complete all tasks required to achieve a particular goal (Abdel-Khalek & Lester, 2017; Bandura, 1977; Chesnut, 2017). According to Bandura (1977), the theory of self-efficacy unifies all theories of psychological behaviour change. It states that any psychological intervention intended to produce behaviour change increase an individual's level of self-efficacy. Experiencing events which can be subjectively seen as threatening, but are relatively safe, enables individuals to master the activity gradually and further enhance their self-efficacy (Bandura, 1977). An example of such a therapeutic approach which incrementally increases self-efficacy is a Cognitive behavioural approach termed

Graded Exposure, which is used to aid in the reduction of such things as social anxiety by supporting clients through incrementally more challenging social situations to build their confidence or self-efficacy in such situations and thus reduce their anxiety (Furnham, Wilson, Chapman, & Persuad, 2013). The similarities found between this therapeutic approach and Bandura's theory of self-efficacy strengthens the credibility of Bandura's theory and its claim that it unifies theories of behaviour change.

Furthermore, Bandura (1977) states that a person's self-efficacy is said to be determined by four factors, these are: performance accomplishments, (a reminder of previous success); vicarious experience (demonstration); verbal persuasion and physiological state (Bandura, 1977; Bailey, Lombardi, Cordova, & Sinatra, 2017). Bandura (1977) argues that the more reliable the experiential state/practice, the more self-efficacy will be increased. He states that the way in which one appraises their experiences is also quite important, as tasks which require more effort and ability make people feel as though they are more able and thus increase self-efficacy when compared to tasks within which they have much help and/or a task which is very easy (Bandura, 1977).

Self-efficacy is also said to influence the effort a person puts into the challenging activities set before them and how long they will persist with them. The higher the self-efficacy, the more effort and persistence that will be exhibited (Bandura, 1977, 1982). An additive definition and understanding of self-efficacy are also provided by contemporary researchers (Luszczynska et al., 2005; Sekerdej & Szwed, 2021). These contemporary researchers highlight how self-efficacy involves an individual's belief that they can handle new and challenging tasks especially when experiencing adverse environmental conditions. This suggests that's self-efficacy may have its

greatest influence on goal attainment and behaviour change when individuals are experiencing adversity.

However, self-efficacy is not the only factor influencing behaviour; amongst others, adequate skill and an incentive are also needed for self-efficacy to predict behaviour accurately. This consideration by Bandura (1977) is a strength of his theory as it is not deterministic but also considers the other factors which influence behaviour change, thus allowing for them to be accounted for when attempting to initiate behaviour change.

Moreover, the self-efficacy gained in one situation can become generalised to similar situations or even some dissimilar situations. For example, those who had received treatment for their fear of one type of snake had increased self-efficacy when faced with other reptiles which may have brought them fear in the past (Bandura, Blanchard, & Ritter, 1969). Additionally, this loss of a phobia increased individuals' general confidence and made them feel more capable of dealing with other challenges with which they would be faced in the future. This strengthens the view that increasing individual self-efficacy in one area of their lives allows their self-efficacy to increase and become generalised to other areas of their lives.

Similarly, Ilkhchi, Poursharifi, and Alilo (2011) found that Cognitive Behavioural Group Therapy decreased anxiety as well as increasing self-efficacy within adolescent females with anxiety. In addition to this, they also found that the adolescent females had increased levels of assertiveness, which suggests that the increase in self-efficacy initiated by the therapy may also have increased general self-confidence allowing individuals to be assertive and confident in a wide range of situations. This highlights the importance of improving one's self-efficacy, even in

specific situations as this confidence or self-efficacy will become generalised to other situations. This allows for a greater chance of goal attainment in life as increased self-efficacy is linked to goal attainment, such as reductions in substance misuse (Corless, et al., 2012).

Illustrating the importance of self-efficacy

Bandura highlights the importance of one's self-efficacy as he states that those with too high self-efficacy may hinder their performance by lack of preparation due to over confidence. Too low levels of self-efficacy are just as hindering as they make individuals focus more on their perceived inadequacies within their personality and less on the tasks required of them to reach their goal (Bandura, 1982). Healthy levels of self-efficacy lead to the reduced likelihood of a physiological stress response. However, a physiological stress response does not always impair ability. For example, an actor's increased heart rate before a play is appraised as a common occurrence. Their self-efficacy, which is likely to be high allows them to perform to the required standard (Bandura, 1977). This suggests that self-efficacy is a stronger predictor of action than a person's physiological response.

Moreover, when highlighting the importance of one's self-efficacy, Bandura argues that self-efficacy also serves as a factor which determines one's level of motivation and thus their likelihood of attempting the task. If the individual perceives their effort to be futile because of low self-efficacy, they are likely to refrain from even attempting the activity. However, if the futility is perceived to be because of harsh environments and if the individual has high self-efficacy, they are likely going to attempt to change the environment and thus attempt the activity (Bandura, 1977,

1982, 1983). This further suggests that self-efficacy also influences a person's motivation and likelihood that they will attempt a potentially beneficial activity, smoking cessation, for example.

Low levels of self-efficacy are also said to have a negative impact on one's mental health; for example, anxiety and depression can be caused by low self-efficacy especially if the goal to be attained is highly valued, thus leading to intense self-deprecation. The anxiety then comes if the goal to be achieved affects one's life significantly. For example, if the goal to be attained is a job, then lack of self-efficacy regarding this will lead to much worry about one's financial situation (Bandura, 1982). Moreover, as stated before, low self-efficacy leads to lack of motivation (Bandura, 1977, 1982, 1983) and an increased likelihood of failing to even attempt the tasks at hand, which leads to self-devaluation and depression.

If for example, the search for employment feels futile, then the financial instability brought forth by lack of employment will then cause anxiety, thus highlighting the circular nature of the consequences of low self-efficacy. After a while, this feeling of futility caused by low self-efficacy turns into learned helplessness; this is a term coined by Seligman and Maier (1967) who argue that this is a phenomenon whereby an individual neglects to attempt to change a negative situation due to the belief that their efforts have no impact on the outcome. This belief, as stated above, may have been because of the negative consequences of low self-efficacy. This illustrates the grave impact that low self-efficacy can have on one's mental health.

Low self-efficacy and Learned Helplessness

In order to investigate the psychological phenomenon, learned helplessness, Seligman and Maier (1967) conducted a study using dogs. They put the dogs in electrified cages with levers which for some when pressed, would allow them to escape the electrified cage but for others, pressing the lever did not allow them to escape the cage. When all the dogs were tested seven days later, the dogs whom, in the first part of the investigation had been in cages which allowed escape from the shocks, were more likely to press the lever and escape. Interestingly, those who had not been able to escape despite pressing the lever did not even try to press the lever during the second test. They just sat there and endured the shocks from the electrified side of the cage. Seligman and Maier (1967) argued that this was because the dogs had learned that their efforts had no impact on the environment, they were in. Despite all that was learned from this study, the unethical nature of the investigation must be highlighted as much harm would have been experienced by the animals used in the investigation. Nonetheless, recent neurological studies of learned helplessness have located the neural pathway associated with this phenomenon; this pathway shows that constant exposure to aversive situations such as constant failure in an important area of one's life, leads to the activation of the learned helplessness neural pathway, which makes individuals prone to passivity and inactivity, due to their propensity to exhibit learned helplessness (Maier & Seligman, 2016).

Moreover, it was not clear how applicable to humans Seligman and Maier (1967)'s research would be so Hiroto and Seligman (1975) conducted a study using human subjects to see if learned helplessness could be found within humans. They conducted an experiment where people were exposed to loud and unpleasant

noises. Some of the groups were provided with a button which would end the noise if pressed four times; however, the others were left with a button which did not end the noise. In the second part of the experiment, both groups now had to undertake a cognitive task to free themselves from the noise. Those who had been in the inescapable group were found to have done significantly worse. This suggests that the inescapability of the first task led them to feel the situation was futile which may have led to them to exert less effort than those who had escaped, thus highlighting learned helplessness in humans. Hiroto and Seligman (1975) also argue that this is an acquired trait from situations in which a person's efforts have had no effect. Their study also illustrates how the feeling of helplessness becomes generalised to the cognitive task after having been acquired in the first condition of the research. With this having been a laboratory study, it was not clear if learned helplessness could be seen in the real world. However, research into student teachers' mathematical self-efficacy showed that those who had continued failure in maths underwent a gradual reduction in their self-efficacy which led to eventual learned helplessness (Gürefe & Bakalım, 2018), thus strengthening the notion that learned helplessness is a phenomenon experienced through repeated failure and feelings of futility. It could also be inferred from this research that that increased self-efficacy could lead to a reduction in an individual's feelings of learned helplessness, thus further highlighting the impact that self-efficacy has on one's mental health and general wellbeing.

Additionally, research has shown that learned helplessness leads to the same cognitive deficits and maladaptive thought processes as those seen in individuals with depression in the laboratory (Klein, Fencil-Morse, & Seligman, 1976) and in the real world (Gürefe & Bakalım, 2018), which suggests that learned helplessness if not treated can lead to clinical depression and a general reduction in psychological

wellbeing. This is supported by research which has shown that passive responses to adversities such as work-based conflict, caused by feelings of hopelessness, led to reduced psychological well-being (Dijkstra, van Dierendonck, & Evers, 2005). Furthermore, feelings of helplessness were also found to be detrimental to the wellbeing of Chinese cancer survivors as these feelings increased their fear of remission (Liao, Yeung, Wong, Warmoth, & Lu, 2017), thus strengthening the notion that low levels of self-efficacy are detrimental to one's psychological wellbeing as they lead to feelings of helplessness which in turn make individuals prone to mental health disorders.

Self-efficacy: A moderator and a mediator

Within a population of Italian adolescents, it was found that emotion-based self-efficacy which is defined by Kirk, Schutte and Hine (2008) as an individual's belief of their ability to regulate both negative and positive emotions; was associated with better well-being and even mediated the negative effects which personality traits such as psychopathy and neuroticism would have had on their well-being (Tommasi et al., 2018). This highlights the significant positive effect self-efficacy has on an individual's mental state. This also suggests that self-efficacy may act as a buffer against the negative effects of certain personality traits. Amongst a population of Polish teachers', it was found that self-efficacy was related to a subsect of job burnout (perceived lack of accomplishment).

The higher the individuals' self-efficacy, the less likely they would be to feel a sense of lack of accomplishment. Conversely low levels of self-efficacy seemed to work to inhibit feelings of accomplishment (Zawadzka, Kościelniak, & Zalewska, 2018).

Furthermore, these above researchers also found that self-efficacy moderated the relationship between neuroticism and perceived lack of accomplishment. This suggests that for those who were neurotic, higher levels of self-efficacy buffered the effects of neuroticism on perceived lack of accomplishment. The fact that these two studies used such different populations and found similar findings strengthens the notion of self-efficacy as a moderator of the negative effects of certain personality traits, thus protecting individual well-being.

The terms mediator and moderator within the above literature seem to be used synonymously. However, it is arguably important to distinguish between these two terms to allow the researcher and their readers to understand the relationships between variables fully. A moderator is said to be a variable which influences the magnitude and direction of the relationship between predictor or independent variables and dependent or outcome variables (Barron & Kenny, 1986; Helm & Mark, 2012). This suggests that the moderator must not be because the independent variable, nor must it be a precursor of the dependent variable. However, a mediator must because of the independent variable and must also be the precursor of the dependent variable (Barron & Kenny, 1986). In other words, moderation affects the direction and strength of the relationship between two variables; however, mediators explain the relationship between the two variables.

An example of a relationship characterised by mediation would be that seen in research by Li, Eschenauer, and Persaud, (2018), who found that self-efficacy along with resilience and social support seeking were said to be mediators of stress and problem solving, as stress (the independent variable) predicted such mediators as self-efficacy, these mediators were then precursors of problem-solving behaviours (the dependent variable). These findings also suggest that mediators such as self-

efficacy motivate and empower people to engage in problem-solving, this may lead to an internal locus of control and positive cognitive appraisal. The active problem-solving behaviours may also lead to increased chances of goal attainment e.g., quitting smoking. However, self-efficacy is amongst many other variables involved in increasing chances of behaviour change. Thus, the researcher aims to stray from a deterministic and simplistic view of the matter by acknowledging the complexity of the relationships between such variables.

As illustrated above, lower levels of self-efficacy lead to learned helplessness which predisposes individuals to mental illness. During the development of such mental illnesses as depression or anxiety, a large number of stress hormones (cortisol) are released, due to the exposure to prolonged periods of stressful events. This increase in stress hormones then reduces the functioning of one's immune system, leaving them vulnerable to disease and with reduced physical wellbeing (Ogłodek, Szota, Just, Moś, & Araszkiewicz, 2014). In addition to this, research by Barsell, Everhart, Miadich, and Trujillo (2018) has also found that within a population of young adults with chronic health problems such as asthma, self-efficacy was associated with better maintenance of the health condition and better general physical health as it promotes healthier lifestyle choices within the individual. Barsell, Everhart, Miadich, and Trujillo (2018) also found that greater self-efficacy was also associated with a decreased likelihood of such risky behaviours as substance use; similar findings were also obtained by Corless, et al. (2012). This suggests that increased self-efficacy leads to better maintenance of one's health and a reduction in risk-taking when it comes to one's health which promotes greater physical wellbeing. The above literature also highlights the significant impact self-efficacy has on one's physical as well as psychological wellbeing.

Summary

Bandura's theory of self-efficacy which aims to unify all theories of behaviour change is corroborated by readily used therapies such as Cognitive Behavioural Therapy as these therapies show a direct increase in one's self-efficacy while attempting to produce behaviour change. Low levels of self-efficacy are said to be detrimental to one's mental health as they lead to feelings of helplessness, which if experienced over a long period of time, may lead to passivity inactivity and compromised mental health due to the self-deprecation and worry caused by feelings of helplessness. In addition to this, low levels of self-efficacy, directly and indirectly impact one's physical health, as they impair the immune system and may also lead to increased chances of risk-taking with one's health. Self-efficacy is also said to be imperative in behaviour change and in the initiation of action as it leads to motivation and persistence. Additionally, self-efficacy is highly beneficial as when increased in one specific area of an individual's life it becomes generalised to other parts of their lives and gives them a greater sense of confidence when faced with challenges. Furthermore, self-efficacy is said to protect one's wellbeing by providing a buffer against the negative effects of such things as work-related stress or even more stable personality traits such as psychopathy and neuroticism; this highlights the countless benefits associated with increased self-efficacy.

In conclusion, the above literature illustrates the detrimental effects that low levels of self-efficacy can have on an individual's physical and psychological wellbeing. It also highlights how imperative it is that therapists aim to increase individual self-efficacy as it has many benefits which include but are not restricted to: the increased efficacy in dealing with a wide range of challenges, improved psychological and physical wellbeing and protection from the negative effects of stress. This research will

investigate the variables which may increase individual self-efficacy as much research has indicated the positive benefits of having increased self-efficacy.

Chapter 2.2 Locus of Control: Potential moderator between religion and self-efficacy

This section of literature review is centred on Locus of Control, a concept by Rotter (1966). Literature which shows the benefits of internal Locus of Control is discussed. Internal Locus of Control is associated with better life choices such as eating healthily and engaging in one's academic tasks even when they are extremely challenging. External Locus of Control was, however, found to be beneficial for the mental health of those in extremely adverse situations. Relationships between internal Locus of Control and self-efficacy will also be illustrated, as well as the relationship between external Locus of Control and religion/spirituality. The illustration of the complex nature of the relationship between Locus of Control and religion/spirituality and Locus of Control self-efficacy led the researcher to hypothesize that there would be a relationship between all three variables, possibly a moderated relationship.

The seminal paper by Rotter (1966) first introduces the concept of Locus of Control (LOC) in the context of the reinforcement, which one gets following the attainment of such things as skills and knowledge. There are differing perceptions of control and the degree to which they influenced the skill attainment. These were termed internal if an individual believes that the skill acquisition was predominantly influenced by their attributes or external if the skill acquisition is mostly influenced by external factors such as luck or chance (Buddelmeyer & Powdthavee, 2016). Rotter's definition of LOC is still held more than five decades after the term was coined,

(Fournier, 2016), suggesting the validity and reliability of this psychological phenomenon.

There has been research into the impact of the type of LOC on life satisfaction - this research has found that within a student population, a higher degree of internal LOC was associated with greater life satisfaction and reduced levels of stress compared with those with higher degrees of external LOC (Karaman, Nelson, & Vela, 2018). This suggests that an internal LOC may be more psychologically beneficial to individuals than an external LOC.

Similarly, within the North American population, Latina/o adolescents with increased health-related internal LOC were more likely to have a healthy Body Mass Index (BMI) implying that they are a healthy weight (Radcliff et al., 2018). This suggests that an internal LOC allows adolescents to feel more in control of their health and so leads them to make healthier choices when it comes to their diet. Therefore, it makes them less likely to develop health problems such as type 2 diabetes, which is associated with obesity. Nonetheless, it is important to recognise the correlational nature of this research, as correlations do not suggest the presence of causal relationships (Verhulst, Eaves, & Hatemi, 2011).

Within a population of academically gifted adolescents, academic achievement was not significantly linked with LOC or self-efficacy. However, when assessing students of the same age who were not gifted, it was found that there was a significant correlation between academic achievement and LOC and self-efficacy, with LOC being a stronger predictor of academic achievement than self-efficacy. More specifically, internal LOC was associated with better academic achievement than external. This suggests that within those of average intelligence, an internal LOC will

increase chances of academic achievement (Korkmaz, Ilhan, & Bardakci, 2018). This further highlights the benefits of internal LOC for particular populations, such as children of average intelligence.

Literature has also shown the importance of an individual's type of LOC, more specifically, internal LOC. For example, within a population of 240 students, feelings of helplessness/learned helplessness were found to significantly predict the occurrence of procrastination. However, having high levels of internal LOC then moderated the relationship between hopelessness and procrastination, meaning hopelessness became a weaker predictor of procrastination (Prihadi et al., 2018). This implies that internal LOC empowers students, even during challenging academic times, and makes them feel in control of their success, which makes it less likely that they will procrastinate. This made it more likely that they will succeed academically. Furthermore, this research implies that internal LOC may also be a factor involved in motivating students to engage with their work fully.

Moreover, external LOC at age 16 was found within a 26-year long longitudinal study, to have been significantly associated with binge drinking. This meant that at age 42 participants who believed in fate, chance or a Higher Power were more likely to engage in risky behaviours such as binge drinking on a regular basis (Cheng & Furnham, 2019). This suggests that it may be more beneficial for one to have an internal Locus of Control than external, as external LOC may lead individuals to become more likely to engage in risky behaviours.

Pregnant women from low economic backgrounds, who had experienced hardship which meant they struggled to feed themselves, were found to have significantly lower levels of internal LOC in relation to child obesity. This made it more likely that

their children would become obese, as they did not feel confident that they will have the finances to allow them to buy healthy foods such as fruit and vegetables for their children (Gross, Mendelsohn, Gross, Scheinmann, & Messito, 2016). This implies that such hardships may decrease one's internal LOC, making it less likely that they will take more control of their health. Nonetheless, it would be simplistic and deterministic to accept that internal LOC alone would lead to childhood obesity, especially as this was a correlational study, which is not able to make causal inferences (Verhulst et al., 2011).

Interestingly, pregnant mothers, who exhibited external LOC, were found to bear children with lower mathematical and scientific abilities. These were said to have been due to the children being exposed to external LOC, which was learnt (Golding et al., 2019). Nonetheless, the tests used to measure academic ability were laboratory-based measures, which may not be reflective of children's actual abilities. Furthermore, this is quite deterministic, as there are other biological, psychological and sociological factors affecting children's abilities, as suggested by the Biopsychosociospiritual model of psychology/medicine (Fahlgren, Nima, Archer, & Garcia, 2015). This implies that this study was quite simplistic and deterministic in its approach.

Additionally, within populations of pilots, internal LOC was associated with increased safety and precautionary behaviours such as the avoidance of hazards. Those with external LOC assumed that accidents occurred because of fate and viewed aeroplane accidents as events, which could not be avoided (Dave, Mesarosova, Siegling, Tremblay, & Saklofske, 2019). This indicates that for those in high-risk occupations, an internal LOC is likely to lead to better and safer practices. However,

this study did not directly measure the safety behaviours of the pilots tested, which may bring into question the validity of these findings.

Furthermore, within a population of battlefield exposed soldiers, external LOC was found to be linked with symptoms of Post-Traumatic Stress Disorder (PTSD). External LOC was more specifically associated with symptoms such as numbness and emotional avoidance. In other words, those who felt they had very little control over the traumatic events, which they experienced, were more likely to engage in a conscious effort to block out reminders of those events (Smith et al., 2018). These results suggest that for those who have gone through trauma, treatment should aim to identify the individual's LOC and if it is external, aim to provide them with treatment approaches which give them a greater sense of agency and autonomy, thus ensuring they have an internal LOC, which may provide a buffer against symptoms of PTSD.

In a longitudinal study of adolescents at age 12 and age 18, it was found that external LOC and poor social communication skills were associated with psychotic experiences and symptoms of depression, with external LOC being more significantly associated with the more serious psychiatric disorder, psychosis (Sullivan, Thompson, Kounali, Lewis, & Zammit, 2017). Explanations for this strong association between psychosis and external LOC was that external LOC makes one more likely to blame others for the events in their lives, especially the negative ones. This makes paranoia and delusions more likely to occur, thus leading to psychosis. This implies that having high external LOC can be quite damaging to one's psychological make-up, as it leaves them vulnerable to serious psychiatric disorders such as schizophrenia.

Similarly, amongst a population of university students, it was found that internal LOC had a negative correlation with symptoms of depression and anxiety, while external LOC was associated negatively with solution-focused coping styles, which involve focusing on finding a solution to the problem while effectively managing emotional states, thus allowing individuals to effectively solve their problems or overcome their challenges (Kurtović, Vuković, & Gajić, 2018). This suggests that internal LOC may be more beneficial to one's wellbeing, as it makes it less likely that they will experience symptoms of depression or anxiety and will be able to cope better with the challenges they face; whereas external LOC may cause students to feel more overwhelmed and out of control during stressful situations. The perceived lack of control can lead to much worry, which could develop into symptoms of anxiety (Kurtović, Vuković, & Gajić, 2018). However, since this was a correlational study, the researcher cannot conclude with confidence that external LOC can lead to poor mental health as correlation does not imply causation (Verhulst et al., 2011).

Nonetheless, a study using more precise and robust analyses (hierarchical regression analyses) also found that external LOC had a direct and positive relationship with depression; these findings were obtained from a population of 304 adults from Sagordha City in Pakistan (Niazi & Adil, 2017). This supports the findings by Kurtović, Vuković, and Gajić (2018) and further strengthens the notion that external LOC leads to symptoms of depression and thus diminished psychological wellbeing.

Moreover, research has shown that for Indian managerial staff, external LOC was negatively associated with job satisfaction which meant that external LOC made it more likely that the managerial staff would be dissatisfied by their occupation. This was said to be due to the reduced ability to control one's emotions during

challenging circumstances caused by external LOC, thus making it more difficult to deal with the challenges which may occur at work (Singh, Singh, & Gupta, 2018). This further suggests that having an external LOC may be damaging to one's psychological wellbeing, while an internal LOC may be able to enhance one's wellbeing by increasing job satisfaction and the ability to deal with challenges. However, there are multiple factors which influence one's job satisfaction; thus making it deterministic to conclude that external LOC alone could lead to job dissatisfaction.

Additionally, the positive impact of internal LOC was highlighted by research into the study of life satisfaction of undergraduate students. The findings showed that students with internal LOC experienced lower levels of academic stress and were significantly more satisfied with their lives than their counterparts, who had external LOC. More specifically, internal LOC works as a moderator or partial buffer against the stressors of university life, which could lead to dissatisfaction with one's life. This further highlights the benefit of developing an internal LOC, as it may have a positive effect on individual psychological wellbeing by providing a buffer against stressors (Karaman et al., 2018).

Contrastingly, the negative effects of abusive supervisors were mitigated by external LOC, as the employees did not attribute the negative experiences to their personal character, but to external environmental factors. Comparatively, those with internal LOC attributed the ill-treatment to their personal attributes and may have blamed themselves for the ill-treatment, thus leading to reduced productivity and innovation (Wang et al., 2019). This suggests that during adverse situations where individuals may feel they lack control, an external LOC may act as a buffer against the negative effects of adversity.

Locus of Control and self-efficacy

A meta-analysis of adherence to medication showed that increased internal LOC and increased self-efficacy were both associated with adherence to medication. The research also showed that internal LOC and self-efficacy worked together to empower patients during their treatment, making them more likely to adhere to treatment. Interestingly, empowerment was less about the patient having increased control, but was more associated with an ability to share control with their Doctor (Náfrádi et al., 2017). These findings suggest a link between LOC and self-efficacy and suggests that extremely high levels of internal LOC may not be as beneficial for one's wellbeing as moderate levels. These results are also arguably very reliable as there are numerous studies within this meta-analysis producing such results.

Additionally, Kim and Lee (2018) found that internal LOC, career decision-making related self-efficacy and engagement with an individual's work were all linked to positive adaptation to their career. Interestingly, internal LOC was positively associated with increased self-efficacy. In addition to this, self-efficacy was associated with increased occupational adaptability. Moreover, self-efficacy was also seen to moderate the relationship between internal LOC and occupational adaptability (Kim & Lee, 2018). This suggests that internal LOC may lead to increased self-efficacy and therefore, occupational adaptability. Furthermore, this research also shows the benefits of having internal LOC, as it leads to such positive attributes, which motivate one to fully engage with any challenges they may face.

Furthermore, a study of the psychological wellbeing of elderly females from China found that both internal/dual LOC and self-efficacy were associated with better mental health. Interestingly, self-efficacy was a stronger predictor of the elderly

females' mental states (Wu, Tang, & Kwok, 2004). This suggests that for this population, belief in one's capabilities is more integral to their mental health than the amount of control they perceived that they had. However, the generalisability of these findings is perhaps limited, as the impact of LOC and self-efficacy on mental health was only studied within a population of elderly women from China. Thus, the results may not be applicable to other populations.

Within the literature, LOC and self-efficacy have been seen as predictors of health outcomes, with findings illustrating that those with higher external LOC and lower levels of self-efficacy were more likely to have increased stress levels and illness during their final exams. In addition to this, higher levels of internal LOC and self-efficacy were associated with less stress and illness (Roddenberry & Renk, 2010). This suggests that internal LOC and high self-efficacy may work together to provide a protective barrier against life's stressors. This further suggests the link between LOC and self-efficacy and how these two factors may work together to benefit one's physical and psychological health.

In addition to this, the benefit of internal LOC, especially in relation to health behaviours was assessed amongst university students. Findings indicated that internal LOC increases the chances that individuals will engage in healthy behaviours such as consuming fruit and vegetables and exercising. This relationship was also moderated by self-efficacy and social support. This means, that if one had internal LOC, social support and high levels of self-efficacy, they would be more likely to engage in positive health behaviours such as physical exercise (Marr & Wilcox, 2015). This illustrates how internal LOC and self-efficacy work to enhance individual wellbeing.

Locus of Control and Religiosity/Spirituality

A study into the non-adherence to medication, which suppresses the immune system after kidney transplant, found that patients who did not adhere to their post-surgery treatment, were those whose levels of internal LOC, religiosity/spirituality and self-efficacy were low. Religion/spirituality was measured using the Duke University Religion Index (Silva et al., 2016), which measures one's involvement and commitment to organised religious activities as well as their private religious/spiritual practices. This suggests that the researchers viewed religion and spirituality as synonymous. Interestingly, there were no significant differences between those who were more organisationally religious and those who were more intrinsically religious/spiritual (Silva et al., 2016). This is noteworthy because religion and spirituality are seen as variables that are separate but intertwined (Hill et al., 2000), suggesting that they might have slightly different effects on such things as one's adherence to medication. Furthermore, these findings suggest that high levels of self-efficacy, religiosity/spirituality and internal LOC increase chances of people adhering to their medication. This also highlights the potential relationship between religion and LOC.

A study whose participants were residents of New Zealand, hypothesised that religious practices, which led to an increased internal LOC, would be associated with greater wellbeing than those, which focus on developing an external LOC. They found that religious orientations, which fostered views of a God as one who had complete control over his people, was associated with reduced wellbeing. Whereas those who had a more spiritual, personal and intrinsic approach to religion and aimed to gain meaning and fulfilment from religion, exhibited heightened levels of wellbeing (Osborne, Milojev, & Sibley, 2016). This was because this pursuit-based

approach to religion fostered a sense of responsibility and an internal LOC, while also acknowledging God's control (external LOC). This suggests that a more intrinsic or spiritual approach to religion may be more beneficial to one's wellbeing.

Within a population of North American university students, research was conducted to investigate the effect of a God based external LOC on the student's engagement in risky behaviours such as high levels of alcohol consumption and unprotected sex (Moore, 2014). Within this cross-sectional study, questionnaires were used to measure the above variables, with social desirability having been taken account for by a scale used to measure the extent to which one may be susceptible to the social desirability bias. This makes their results more valid and reliable. They found that an external or God based LOC was associated with less alcohol consumption and engagement in risky sexual behaviours (Moore, 2014). This could have been because those who are religious believe that God supports them to make the right choices in regard to these risky behaviours, despite being faced with much peer pressure. This highlights how having an external LOC related to religion, can lead to a reduction in students' engagement with risky behaviours.

Moreover, research by Anderson, Hattie, and Hamilton (2005) has found that there is a cluster of participants with low internal and external LOC and another cluster with high internal and external LOC. This suggests, that just because one has high internal LOC, this does not mean they will have low external LOC. This research was looking into student engagement and motivation and found that due to the multidimensional nature of LOC, it meant that for most students, both internal and external factors (personality and school environment) influenced student's motivation and engagement. They also argue that it may be more beneficial to have less extreme Loci of Control (Anderson et al., 2005). This suggests that having both

internal and external LOC may be beneficial to individuals, especially when related to religion as this interact with one's Locus of Control in diverse ways. However, there has not been much research into this multidimensional Locus of Control, implying the need for such research to establish whether Locus of Control truly is multidimensional.

Summary

In conclusion, LOC, first coined by Rotter (1966), remains a well-researched phenomenon even to this day. Researchers have, for some time been investigating which type of LOC (internal or external) would be most beneficial to individuals. For example, researchers such as Prihadi et al. (2018) highlight that internal LOC may be more beneficial, as it was found to lead students to engage more with their studies. Cheng and Furnham (2019) shared this view, as the findings from their longitudinal study revealed that external LOC was associated with more engagement in risky behaviours such as binge drinking. However, it was found that external LOC may provide a buffer during times of adversity, where one may lack all control (Wang et al., 2019).

Furthermore, the literature shows how internal LOC and self-efficacy are linked to positive outcomes such as career adaptability and adherence to important medicines (Kim & Lee, 2018; Náfrádi et al., 2017). This also highlights the relationship between LOC and self-efficacy, with Marr and Wilcox (2015) highlighting how internal LOC and self-efficacy work in conjunction with one another to motivate people to make healthy life choices (Marr & Wilcox, 2015). In addition to this, the benefits of external LOC were highlighted by Moore (2014), who found that external LOC was beneficial

to individuals who were religious, as the two variables worked together to motivate individuals to take less risks with their health and helped them avoid such things as binge drinking. Finally, this research also illustrates the complex relationship between LOC, self-efficacy and religion. This is linked to the first of this thesis' hypothesis which states that there is a link between religion/spirituality and self-efficacy, which is moderated by the type of LOC.

Chapter 2.3 Cognitive Appraisal of experiences: Its influence on and relationship with self-efficacy

This section of the literature review introduces the concept of Cognitive Appraisal by Lazarus (1963). Literature showing a relationship between positive Cognitive Appraisal and self-efficacy will be discussed, with particular attention being given to the cyclic nature of this relationship. Religion/spirituality is also said to be linked to positive Cognitive Appraisal, which is linked to reduced stress. This section concludes by highlighting the complex relationship between Cognitive Appraisal, religion/spirituality and self-efficacy. The researcher then uses the knowledge gained from this literature search to hypothesise that the relationship between religion/spirituality and self-efficacy would be moderated by Cognitive Appraisal and Appraisal Accuracy.

As stated in chapter 2.2, there are factors which influence the magnitude to which one's self-efficacy can be increased. Cognitive Appraisal is said to be one such factor which affects the increase of one's self-efficacy (Bandura, 1977, 1982). Cognitive Appraisal refers to the process by which a person interprets events which they perceive to be stressful. This interpretation can be positive or negative, depending on how much the event impacts their wellbeing and whether they feel they have the skills needed to cope with the event. This then determines their emotional reaction to the event and includes the individual's interpretation of the cause of the event (Campbell, Johnson, & Zernicke, 2013; Fournier, 2018; Lazarus & Alfert, 1964). Cognitive Appraisal Accuracy can also be assessed, to find out if the

interpretation being used by an individual is accurate. The operational definition of Cognitive Appraisal Accuracy within this study was whether an individual's perceived stress score on the Cognitive Appraisal Vignettes deviated significantly from the norm of the sample. If their score deviated significantly, then their appraisal was deemed inaccurate. Please refer to section 3.4 for the exact parameters used to determine this.

Cognitive Appraisal a determinant of emotion: A historical account

Within an investigation of how well beliefs could influence a person's stress response, which was induced by an arguably frightening and disturbing film; Lazarus and Alfert (1964) found that when compared, the groups whose beliefs had been altered by scientific information, making them believe that the characters who were going through a horrific experience did not feel much pain, had significantly less of a stress response than the control group who did not have this information. This implied a person's beliefs and attitudes regarding certain events inform their interpretation of that particular event and thus the emotional reaction they have to it (Speisman, Lazarus, Mordkoff, & Davison, 1964). This further suggests the notion that the way in which one cognitively appraises an event, determines the emotional reaction.

This particular view of emotion was innovative in its time, as it had for so long been believed that the stimulus directly and independently influenced one's emotional reaction (Breedlove & Watson, 2013). However, this phenomenon (Cognitive Appraisal) illustrates the importance and influence of one's interpretation of the event (Lazarus,1963). This suggests that those who appraise challenging or threatening

experiences positively may be short-circuiting their biological stress response and hence end up finding the situation less threatening and easier to tackle. This view was echoed by Bandura (1977), who argued that how an individual appraises physiological arousal in challenging situations is important as the same physiological state, can be debilitating or energising dependent on appraisal. During tasks which were perceived to be impossible by an individual, if the task was appraised as impossible due to unfavourable environmental conditions (positively), then individuals are likely to attempt to change the environment and thus improve their chances of succeeding at the task. However, if the individual feels the situation is futile and appraises the situation negatively, attributing the futility to a perceived lack of capability, then the individual is likely to fail to even attempt the activity (Bandura, 1982; Chan & Mak, 2016). This suggests the importance of Cognitive Appraisal in eliciting action and generally motivating people to attempt challenging tasks.

Furthermore, Breedlove and Watson (2013) support this view that stimuli do not lead to emotions and emotional reactions on their own, as suggested by Lazarus (1963). They highlight well-established theories of emotion, such as Schachter's cognitive attribution (1962), which states that a stimulus is cognitively appraised or evaluated. This evaluation is said to be the determinant of the emotion expressed; the autonomic reactions such as increased heart rate then work to amplify the emotion.

Schachter and Singer (1962) argue that when an individual is physically aroused but has no explanation to couple the arousal with, they are likely to cognitively assess the situation, to determine the appropriate emotional reaction. Schachter and Singer (1962) also argue, that this means that if a person's beliefs and attitudes, which they use to cognitively appraise events, are manipulated, then it is also possible therefore to influence their emotional reaction. Critics of Schachter and Singer's (1962) theory

state, that there may be an undue emphasis on the role of arousal; they argue that its most likely, that a person cognitively appraises an event, then the arousal may then work to moderate the relationship between appraisal and emotion. In other words, once an event has been evaluated, the levels of arousal influence the magnitude to which an emotion is experienced (Reisenzein, 1983). Despite the criticism given to the theory by Schachter and Singer (1962), it is clear that Cognitive Appraisal has a significant effect on the expression of emotion. This also further implies how crucial Cognitive Appraisal is in motivating people to elicit action, as it is argued that an individual's emotional reaction to life events is dependent upon their interpretation of this event.

When applied to such things as substance misuse, the importance of Cognitive Appraisal can be seen. If an event such as an argument with a loved one leaves an individual in recovery feeling as though they need drugs to escape the distressing feelings; they could evaluate the situation and see that the only reason they are drawn to the drug again is because they are emotionally vulnerable, and not because their body is craving the drug. This evaluation/appraisal is likely to motivate them to seek emotional support and therefore reduce the likelihood of relapse. However, if they appraise the situation more negatively and fail to consider the effects that their relationship breakdown has had on their emotional state, they will perceive themselves to be craving the drug. This may lead them to just relapse, as in that type of situation they are less likely to seek support, to help them deal with the true source of their problems (Chan & Mak, 2016).

Moreover, the treatment of Social Anxiety Disorder (SAD) also highlights the importance of Cognitive Appraisal, as when treating SAD using Cognitive Behavioural Therapy (CBT), beliefs held about social situations are altered in the

process of cognitive restructuring (Goldin et al., 2012). This means that if the treatment is successful, their beliefs about social situations will be altered. This means when the individual evaluates/appraises the situation, they will have a more positive emotional reaction to it (Heimberg, Brozovich, & Rapee, 2010). This implies that the treatment of SAD using CBT involves cognitive restructuring, which then leads to a decrease in negative thoughts and appraisals of social situations.

In patients with Social Anxiety Disorder, researchers have found lower levels of self-efficacy related to cognitive reappraisal (Werner et al., 2011). This is the belief that an individual has the capability to reappraise or re-evaluate a situation, in order that they can regulate or control their emotional reaction (Goldin et al., 2009). Werner et al. (2011) also found self-efficacy related to cognitive reappraisal to be a moderator of the effect of CBT on anxiety symptoms. The improvements to self-efficacy and anxiety symptoms were sustained after a year. This illustrates how these two variables (self-efficacy and Cognitive Appraisal) work together to enhance one's wellbeing. This further suggests an association between these two variables. This also implies, that the more positively an individual appraises a challenging event, the more efficacious they feel when asked to deal with the challenge and thus increase their wellbeing by reducing such things as anxiety-related symptoms.

The association between Self-Efficacy and Cognitive Appraisal

As well as Werner et al. (2011) highlighting the association between Self-Efficacy and Cognitive Appraisal. Research into females who engaged in quite low levels of physical activity also illustrated this link. These participants were asked to engage in high-intensity sessions of exercise and were split into two conditions: one where the

women knew the duration of the exercise and one group where they did not. They also measured self-efficacy to see if this also had a significant influence on the emotions expressed and felt. The mood in both groups declined and became progressively more negative. However, for those in the group who knew the duration of the task, their mood did remain the same after the mid-point of the exercise.

In contrast, for those in the group who did not know the duration of the task, emotions did continue to become more and more negative until the task ended (Welch et al., 2010). The researchers argued that this illustrates that during intense exercise/situations, Cognitive Appraisal does play a significant part in regulating the emotions experienced and the level to which these emotions are expressed. Self-efficacy was also found by Welch et al. (2010) to influence the emotions expressed during the exercise. Higher levels of self-efficacy towards the end of the exercise were seen in those who knew the duration of the task and consequently this certainty allowed them to have more positive affective states than those who did not know the duration of the exercise task.

As explained by Bandura (1977), if a person does not know what is required of them, their self-efficacy decreases, and if they are certain of the task requirements, the self-efficacy increases. Lastly, Welch et al. (2010) found that self-efficacy and Cognitive Appraisal work together to explain a significantly large proportion of variance seen in the expression of emotion during exercise. Welch et al. (2010) argue that the more one re-appraises their self-efficacy or confidence during a task, the more positive they will feel during the task. This implies that appraisal and self-efficacy may have a cyclic relationship, in which re-appraisal increases self-efficacy, which then leads to more positive appraisal and so on and so forth.

Similarly, Hanley et al. (2015) found that mindfulness led individuals to positively re-appraise negative events such as exam failures. This positive re-appraisal was then associated with increased academic self-efficacy. As shown by Corless et al. (2012), increased self-efficacy is likely to increase the likelihood of goal attainment. Additionally, religion has been found to be associated with positive appraisal styles. For instance, DeAngelis and Ellison (2017) conducted research into the way religion/spirituality influences how one appraises events. They operationalised religion/spirituality a multi-faceted variable which incorporated both religiosity and spirituality. They measured people's religiosity/spirituality using multiple single-item scales which measured one's religious attendance, frequency of prayer, religious/spiritual coping and perception of social support. DeAngelis and Ellison (2017) found that religion gave people experiencing significant adversity a sense that God is in control and was looking out for their best interests. Additionally, this perception, that religious people had, allowed them to positively reappraise adverse situations. This suggests that they would also experience more positive emotions during adverse situations. Furthermore, this research also suggests that religions such as Christianity also develop within individuals a transcendent viewpoint, which looks beyond suffering in the present day and looks ahead to eternal happiness (Sremac, 2014). Thus, belief in divine control during adversity is said to act as a buffer against the stress experienced during adverse life events. DeAngelis and Ellison (2017) also found, that not even positive socio-economic factors such as social support and household income provided this buffering effect.

Although questionnaire-based measures of stress may not have produced as valid a data set as a measure of adrenaline, it would have been quite unethical to investigate so invasively within a population of those going through adversity so

close to the incident, as it may have caused undue distress (British Psychological Society, 2018). Nevertheless, the findings by DeAngelis and Ellison (2017) suggest that religion or belief in a divine power is a significant contributor, which leads individuals to positively reappraise stressful situations. This is likely to then lead to increased self-efficacy, because positive appraisal has been shown to lead to increased self-efficacy (Hanley et al., 2015; Welch et al., 2010).

Additionally, religious surrender (denying the self of personal desires to pursue a divine purpose) has been found to lead to decreases in depression (Clements & Ermakova, 2012) and stress levels (Gall, 2006). With stress being the precursor to depression as seen within the Learned Helplessness Model of depression by Gürefe and Bakalım (2018), it could be suggested, that religious surrender leads to reduced stress through positive appraisal, which inhibits the development of depressive symptoms and increases one's self-efficacy, as seen in research by Hanley et al. (2015) and Welch et al. (2010). For those in stressful occupations, higher levels of self-efficacy allowed workers to consider their skills, positively appraise them and therefore exercise some control over challenging situations. This is turn buffered the effects of the perceived stressful events on the individual, allowing them to become more resilient and to gain greater satisfaction from their occupation. These findings by Prati, Pietrantoni, and Cicognani (2010) are important due to the arguably cyclic nature of the relationship between positive appraisal and self-efficacy, as high levels of self-efficacy lead to positive appraisal, which leads to an increase in one's self-efficacy once more (Welch et al., 2010).

Furthermore, high levels of self-efficacy related to academia within adolescents were associated with decreased stress levels. This was because self-efficacy provided a buffer against stress. This occurred by allowing pre-conscious cognitive appraisal,

which lessened the perception of such events as exams from being interpreted as severely stressful (Filtness, 2013). This provides an explanation as to how self-efficacy and reduced stress are linked and more importantly, further highlights the relationship between self-efficacy and appraisal.

With the relationship between self-efficacy and appraisal having been established, it is important to see if the positive appraisal, which results in high levels of self-efficacy, is accurate. Krackow and Rudolph (2008) found that depressed youth, particularly those who had experienced much adversity previously in early life, had inaccurate appraisals of stressful situations - interpreting them as more negative than they objectively were. This was significantly different from those, who did not have symptoms of depression. These findings support the vulnerabilities stress models of depression, which highlight that depression comes from biases in appraisal and adverse environmental conditions. This also highlights that experiencing stressors in early life can lead an individual to have an inaccurate negative appraisal. Fascinatingly, depression and mental illness have however, been found to be contributors of rather than consequences of negative cognitive appraisals (Pomerantz & Rudolph, 2003).

Furthermore, a longitudinal study found that children who had higher scores on a depression symptomology scale had significantly more negative views of themselves. They also significantly underestimated their educational abilities, with an increase in depressive symptoms predicting negative self-appraisal. This further strengthens the notion that mental illnesses, such as depression are associated with inaccurate negative cognitive appraisals (McGrath & Repetti, 2002). However, what is not clear is the applicability of this research to other situations outside of academia. Øvretveit, Leviton, and Parry (2011) note the difficulty researchers and

clinicians have when attempting to implement interventions which were found to be effective in specific environments. They argue that further research in other environments is required to ascertain the generalisability of such findings. This suggests that the findings by McGrath and Repetti (2002) may have limited applicability as it was conducted in an educational setting and thus may not be as generalisable to other settings or populations.

Interestingly, Krueger et al. (2011) found that Cognitive Appraisal accuracy and overestimation of one's abilities were strongly associated. Conversely, Cognitive Appraisal Accuracy and underestimation were not significantly associated. This suggests that those who underestimate their abilities have more inaccurate appraisals of their abilities than those who overestimate. This may also suggest that those who overestimate their abilities do so only slightly, as when their abilities were objectively measured, their ability and appraisal were significantly more closely matched when compared with those who underestimated. Moreover, it could be argued, that low self-esteem or depressive symptoms could lead to negative appraisal styles, which are significantly inaccurate; this on its own being a cognitive deficit. These inaccurate negative appraisals could then lead to a decrease in self-efficacy or an inability to recognise one's increase in self-efficacy.

In summary, Cognitive Appraisal was found to be significantly associated with the expression of emotion and was also found to influence one's levels of motivation leading them to take action, especially during adverse situations. The literature also highlighted the association between self-efficacy and Cognitive Appraisal and their unique cyclic relationship. The literature also illustrates how appraisal is a moderator between self-efficacy and stress, as self-efficacy leads to positive pre-conscious cognitive appraisal, which leads to reduced stress and better physical and

psychological wellbeing. This reduction in stress may then also lead to increased self-efficacy, thus further highlighting the cyclic nature of this relationship.

Finally, those with mental health problems such as depression seem to develop negative and inaccurate appraisal styles. Remarkably, those who overestimate their abilities had more accurate appraisal than those who underestimate, implying that underestimation of one's abilities is damaging and more significantly less accurate. Nonetheless, the lack of research in the area of Cognitive Appraisal accuracy also highlights a need to investigate into this variable. Such things as religious surrender and a general belief in a Divine Being were said to reduce stress due to more positive appraisal, which then leads to increased self-efficacy as illustrated by the literature.

Chapter 2.4 Religion and Spirituality: Their influence on wellbeing and self-efficacy

This section of the literature review introduces the concepts of religion and spirituality and highlights how these two concepts are separate but intertwined. This section then showcases literature which demonstrates how beneficial religiosity/spirituality is to one's physical and psychological wellbeing. Literature into the benefit of religion/spirituality in the context of recovery from substance misuse is considered, with further consideration being given to whether religion or God is really needed during recovery. Furthermore, the association between religion/spirituality and self-efficacy was discussed. The literature reviewed within this section then led to the hypothesis that there would be a relationship between religion/spirituality and self-efficacy, which would be moderated by Locus of Control, Cognitive Appraisal and Cognitive Appraisal Accuracy as stated in the first three sections of the introductory chapter.

Religion/spirituality are terms which are at times used synonymously within the literature, referring to an individual's belief in a sacred being or higher power, with which they have a relationship, (Mattis, 2000). However, other researchers note the complexity of the relationship between these two variables and state that these variables are separate but intertwined. The similarity between the two is that both involve a search for a sacred being and the feelings associated with this. The only way religion then differs from spirituality is that within religion there are validated rituals used in the search for the sacred, and there is also a search for things which

are not sacred such as health, wellbeing and belonging (Hill et al., 2000). This view of religion and spirituality being separate but interlinked is held even to this day; with researchers further arguing that while religion may lead to ritualistic behaviours based on culture, spirituality, on the other hand, is more associated with a search for experiences beyond the physical realms. This may not be linked to religion as it may be more concerned with one's connection to nature (Florence et al., 2019; Owen, 2014).

Research into religion/spirituality indicated that there were no differences in the psychological benefits gained when different types of religions and spirituality were compared. Religion and spirituality were viewed synonymously. The way they were operationalised meant they were described as peculiar beliefs one may have, their scales measured to what extent people believed in such things as, God, the human soul and reincarnation. Another significant finding from this research was those beliefs which led to increased understanding of the world and of an individual's own being were psychologically beneficial. These psychological benefits included reduced stress, increased positive emotional states and life satisfaction (Boden, 2015). This suggests that any belief one may have whether religious or spiritual may have a positive impact on their mental health, further justifying the synonymous use of the terms religion and spirituality within the literature.

Additionally, a meta-analysis into the effects of religion/spirituality following adversity was conducted, looking into the effects of religion on one's wellbeing. This meta-analysis found that any disaster or traumatic event led people to increase their interaction with the Divine as they found comfort and meaning in this (Aten et al., 2019). Furthermore, this research found that there is also the possibility for negative religious coping to take place, where an individual's faith is shaken as they may see

the Divine as having allowed the suffering. Nonetheless, this research found that positive religious coping, which led individuals to make sense of and cope with the disaster was significantly more prevalent than negative religious coping (Aten et al., 2019). This suggests that religion and spirituality have quite positive effects on people's mental health as it allows people to cope with adversity by providing meaning and comfort. The results found within this meta-analysis can be said to be very reliable as multiple studies produced these findings, which were amalgamated by Aten et al. (2019).

A demographic which seems fairly unresearched when it comes to religion/spirituality is children. Such research was therefore conducted to investigate the reasons why parents enrolled their children into recreational activities which were religious. The findings indicated that this was because they wanted their children to socialise with children from the same faith background and they wanted the religious teaching to build their children's character and identity; making them into individuals of noble character, with good self-esteem and strength. Additionally, parents reported that they observed multiple benefits to their children's character during attendance to religious activities, these included: increased respect and kindness towards others and the development of good citizenship, developed through voluntary activities. These outcomes were said to carry into adulthood (Barnet & Weber, 2009).

Moreover, religion/spirituality was found in a meta-analysis to be beneficial to those experiencing kidney failure as religion/spirituality were found to have enhanced quality of life. More specifically, the religion/spirituality offered individuals a resource which strengthens their feelings of hope, reduced symptoms of depression, reduced incidents of suicide and led to better and longer-lasting kidney function (Bravin et al., 2019). This meta-analysis highlights the multiple benefits religion/spirituality have on

one's psychological and physical wellbeing and general quality of life. It could be suggested that the strengthened hope provided by religion/spirituality fosters better mental health which then allowed the patients to better manage pain levels and led to better adherence to treatment and medication following the transplant.

Nonetheless, research into such subjects as religion/spirituality is vulnerable to response biases as are any self-report measures (Rosenthal, 1976). de Oliveira Maraldi (2019) argue that this is an area worth investigating as these biases could be affecting the validity and generalisability of the findings in this area of research. Within their research, de Oliveira Maraldi (2019) found that much of the research into religion/spirituality and mental health had been affected by social desirability bias. This suggests that more socially desirable/positive responses may have been given and negative socially undesirable response may have been avoided. This was at times even unconscious, thus providing a slightly inaccurate account of participants' religion/spirituality and mental health. What is yet to be found out is whether this effect significantly affects the results. Lastly, de Oliveira Maraldi (2019) argues that the first step to dealing with this is to acknowledge the presence of such biases, then one can work towards reducing them. This can be done by such things as adding scales to measure the extent to which participants' responses were influenced by such biases.

Spirituality without religion in the context of recovery from substance misuse

Some criticism has however been pointed towards organised religion. It can be viewed as condemnatory and moralistic, so some may choose to live as spiritual but not religious, as stated by Davie (1994). Some have also wondered whether the

ritualistic nature fostered by religion may lead to mental health conditions such as Obsessive-Compulsive Disorder (OCD) (Loewenthal, 2018). This may be an additional reason why some identify as spiritual but not religious.

Quakers self-identify as a group who are spiritual but not religious (Quakers in Britain (n.d.). They believe that there is a Higher Power or Divine Being with which they have a connection, but they do not necessarily call this God. Some say they do not have much belief in God. They favour individual spiritual relationships with God and may even combine their Quaker beliefs with other religions such as Buddhism. A very interesting and important part of Quakerism is the circle of silence with which every Quaker meeting begins. They use this as an opportunity to listen for wisdom from the “Divine Power”. This is also a chance for the Quakers to experience their connection with the Divine (Quakers in Britain, n.d.)

Quakerism speaks much of the importance of engaging in all things in moderation and at times, encouraging abstinence from such things as alcohol (Chambers, 2015). Research into Quakerism and substance misuse found that the more spiritual a person was and the more they attended the weekly Quaker gatherings, the less alcohol they consumed and the less likely they would be to misuse substances such as alcohol. This was despite the non-judgement culture fostered by Quakerism which reduces shame and guilt for those who may have substance misuse disorder. The results also showed that moderation and abstinence were important because it kept their minds clear and focused, allowing them to keep their spiritual connection to the divine and protected them from substance misuse. Interestingly the more spiritually engaged they were in prayer and meditation, the less alcohol they consumed. This demonstrates the protective effects of spirituality, especially with regards to substance misuse (Chambers, 2015).

Moreover, there have been substance misuse recovery programs created specifically for Native Americans, which focus on how the community can help an individual recover. Remarkably, the once they have completed their treatment programme, clients within the recovery programme become traditional-healers and many will carry on as a traditional-healers for others in recovery, thus creating a supportive community for those in recovery (Owen, 2014). Their adaptations of the 12 Step Program is made available in some Native American languages; with those which are in English substituting words such as God for ‘The Great Spirit’ in order to reflect the cultural and spiritual practices of this people group. Where the western 12 Step Program, amongst other aims, uses prayer and meditation to become closer to God and allow his will to be done, Native Americans would be aiming to use prayer ritual and shared silence to experience equality with others in their community, the earth and all its inhabitants and thus reach harmonious balance with the universe (Owen, 2014).

In addition to this, Kurtz and White (2015) state that Alcoholics Anonymous (A.A) has historically found itself diversifying with more variations of it being created due to the fact that some of the beliefs held by A.A may not be those held by the individual in recovery. For example, an Atheist joining a Christian led A.A group. Another reason for diversification may be that others may have different views of what recovery is and so create a group which focuses on developing the kind of recovery they believe in.

For those who are not religious, the secular definition of spirituality is used, which states that spirituality is a thoughtful process by which one is transformed through the attempt to answer the questions to which there are no answers (Solomon, 2002). Interestingly, Solomon argues that spirituality is also self-actualising, meaning belief

in it brings it into existence, much like a self-fulfilling prophecy. Kurtz and White (2015) also argue that spirituality can be seen as the deepest part of an individual's being, from which individuals derive the meaning of their existence.

Spirituality in A.A can be vertical or outward, where individuals create a mutual connection with one another and also horizontal or upwards where one looks to a greater power than themselves (Kurtz & White, 2015). In regards to the 12 Step Program, spirituality also refers to the notion of transcendence, looking beyond one's self and looking up at an existence greater than ourselves. Ultimately not being self-centred and looking to something greater than ourselves for strength and wisdom. This may be in a religious or secular context. However, although there is an argument for a secular spirituality, the importance of the horizontal or upward connection to greater power and the notion of transcendence implies that greater benefits may be gained in a spiritual and religious setting (Kurtz & White, 2015), further implying a need for a Higher Power/God.

Religion a necessity?

Regardless of religious affiliation, according to Sandoz (2012), there are four agreed paths to God: the path of devotion, where one lives worshipfully and in awe of God. The second is the path of understanding, where through scripture, an individual gets to a sudden realisation which leads them to ask questions relating to the purpose of life. The third path is that of service without expectation of reward, where one's service and identity become one. The last path is of meditation, which include a spiritual mindfulness which leads to greater awareness of one's self (Sandoz, 2014). Although Sandoz (2014) cites Chopra (2012) for the source of these four steps to

God, these four steps are also outlined in the Bhagavad Gita, thus suggesting that Chopra (2012) may have discovered these four steps in the Hindu scriptures.

Interestingly, Kurtz (1979) suggests that those with substance misuse disorders may have misunderstood their spiritual need for God as a craving for substances such as alcohol, thus suggesting a great need for God in all humanity. He argues that this is why the first few steps in the 12 Step Program involve building a spiritual connection with God/a Higher Power. The spiritual experiences of those in recovery have led to peace and tranquillity, which individuals very much need if they are to stay on the path of recovery. All that is required of the individual in recovery is to strengthen their spiritual connection to God through the four daily paths to God outlined by Sandoz (2014). This further strengthens the view that one may have an inherent need for God, one can be a secular spiritualist, however, if Kurtz (1979) is correct, those with substance misuse disorders may go on to look for another substance or activity in a misguided attempt to satisfy their spiritual need for God.

This view is supported by Falcone (2016), who wrote a book on the many misinterpretations of the 12 Steps. In relation to God and spirituality, he found that a large misconception was that one did not need God (a Higher Power greater than one's self) in their spiritual walk. He highlights the Greek translation for Agnostic which is without knowledge or meaning, suggesting that a lack of belief in God may lead to one perceiving their life to be without meaning, which may lead to psychological disorders such as substance misuse disorder. This further implies a great spiritual need for God.

This notion is further supported by Leavey, Loewenthal, and King (2016) who conducted research amongst religious leaders from Christian, Jewish and Muslim

faiths. The religious leaders were interviewed so they could give their insights into what causes mental health problems. Biomedical reasons and substance misuse were not mentioned much by the clergy as main causes of mental illness. The lack of belief in God (secularism) seemed to have been attributed by all to be a cause of mental illness, with an Anglican Minister highlighting that in India God is at the centre of individual and community life so people always feel connected and hardly ever feel isolated as they see the role they play in society (Leavey et al., 2016). This further strengthens the notion that individuals may have a spiritual need for God and that the lack of a connection to God may lead to numerous problems in one's life. However, as stated by de Oliveira Maraldi (2019) such research finding can be influenced by social desirability bias, this may then undermine the validity of the findings by Leavey et al. (2016).

Nevertheless, with this knowledge, spirituality and religion could be redefined, with spirituality being one's recognition of their feelings of incompleteness or inadequacy without God, religion can then be defined as a collective expression of this feeling of incompleteness (Nelson, 2004). Nelson (2014) goes on to argue that God, however he may be perceived by individuals, is the reason and solution for feelings of incompleteness.

This view is very much in line with the Biopsychosociospiritual model of medicine (Fahlgren et al., 2015). The Biopsychosociospiritual model of medicine which has also been adopted into the study of psychological phenomena was developed following the recognition that the Biopsychosocial model had been deemed to neglect to address spiritual causes of illness, especially in mental illnesses such as substance misuse disorders. This approach is said to provide a more holistic and person-centred treatment (Fahlgren et al., 2015). It is, however, argued that the

quantitative way in which spirituality is studied caters more for secular researchers, which would not be problematic if this arguably secular way of looking at spirituality was not ignoring the qualitative narratives which may hold the knowledge needed to understand spiritual causes and treatments for illness (Bishop, 2009). This highlights the need to qualitatively delve deeper into religion and spirituality in order to find out what is within them, which leads people to such positive things as better mental health (Boden, 2015). Nonetheless, that is not to say that all are ignoring the religious/spiritual narrative when approaching illnesses from a Biopsychosociospiritual approach. A rehabilitation program which fully addressed religiosity and spirituality in Saudi Arabia, which involved daily teaching and spiritual guidance was found to have been very effective at combatting substance misuse, with the authors also stating that similar research has yielded positive results in preventing mental health disorders and maintaining recovery (Salem & Ali, 2008).

Religion/spirituality in relation to self-efficacy

Literature within the field of psychology has illustrated countless times the link between self-efficacy and religion/spirituality (Abdel-Khalek & Lester, 2017; Batool & Nawaz, 2016; Israel-Cohen et al., 2016; Pérez & Rex Smith, 2015). For instance, research into Pakistani amputees showed that having low levels of self-efficacy, social support and religiosity were associated with lower levels of wellbeing, thus implying that having increased levels self-efficacy and religiosity and social support would be predictive of better mental health. This suggests that religion/spirituality and self-efficacy work together to enhance one's wellbeing (Batool & Nawaz, 2016). Additionally, within a population of Jewish Israeli soldiers, being religious/spiritual

was associated with reduced symptoms of post-traumatic stress disorder. Being religious/spiritual also allowed the soldiers to have a greater belief in their capabilities to survive and overcome the adverse environmental conditions, which suggests that religion enhances individual wellbeing through first enhancing one's self-efficacy (Israel-Cohen et al., 2016).

Similarly, research into the wellbeing of individuals undergoing cancer treatment found that being religious and spiritual helped individuals to better cope with their illness by first allowing them to attend to the aspects of their illness which they felt capable of managing. The second way in which religion/spirituality helped them cope was by allowing them to leave all the aspects of their illness, which they knew they could not control in God's hands. This, in turn, further enhanced their belief in their capabilities to cope with their illness. This further suggests that religion enhances individual wellbeing by enhancing the individual's self-efficacy (Pérez & Rex Smith, 2015).

Bigdeloo and Bozorgi (2016) attempted to come up with an explanation for this process whereby religion increases one's self-efficacy, they speculated that religiosity/spirituality allows individuals to cognitively appraise events, even devastating ones in a more positive way, thus increasing their belief in their capabilities to cope with and survive the event. This suggests that religion/spirituality leads to positive appraisal which then leads to an increase in self-efficacy. This view is supported by research which has highlighted that positive appraisal does lead to increased self-efficacy (Hanley et al., 2015; Welch et al., 2010). This further suggests that religion may potentially increase one's self-efficacy through first increasing their ability to positively appraise even the most devastating of events. Moreover, DeAngelis and Ellison (2017) add further support for this view as they

found that belief in the control exerted by God or another Divine Being leads individuals to positively appraise adverse events, thus increasing individual self-efficacy. This then suggests that as well as increasing one's self-efficacy, religion also provides a buffer against the stress caused by adversity through positive appraisal.

In conclusion, religion and spirituality are phenomena which are separate but intertwined. These phenomena have been found to enhance individual mental and physical health. Interestingly, within the UK, many identify as spiritual but not religious. When looking at spirituality in relation to recovery from substance misuse, the research highlighted that treatment programmes were diversifying by having secular rehabilitation programmes as well as those which are congruent with a diverse range of cultures such as Quaker or Native American culture. However, the great reliance and emphasis on having a connection with God/a higher power within the 12 Step Program imply that those in recovery may have an inherent spiritual need for God. Kurtz (1979) support this view arguing that people misinterpret their spiritual need for God with yearnings for substances such as for alcohol. This view is shared by multiple researchers (Falcone, 2016; Leavey et al., 2016). This spiritual need for God is echoed in the Biopsychosociospiritual model of medicine. Salem and Ali (2008) used this approach and found that it yielded very positive results for those in their recovery programme, thus supporting the view that individuals in recovery may have a spiritual need for God, which all may have within themselves.

Lastly, much research has also illustrated a positive correlation between religion/spirituality and self-efficacy, with some suggesting that religion and spirituality may increase self-efficacy by allowing individuals to positively appraise adverse life events, thus allowing them to feel they can cope with and carry out all

tasks required of them in order to triumph over adverse situations. This led to the development of hypotheses mentioned below.

Hypotheses

1) The first hypothesis stated that there would be a link between religion/spirituality and self-efficacy.
2) The second hypothesis stated that there would be a relationship between Locus of Control, Self-efficacy, and religiosity/spirituality.
3) The third hypothesis stated that Cognitive Appraisal, Appraisal Accuracy as well as Locus of Control would moderate the relationship between religion and self-efficacy.

Chapter Three Method

Method

Chapter 3.1 Design

The design of this quantitative study was questionnaire-based. The study used well-established questionnaires delivered at one time-point. Self-efficacy was the outcome variable, and religiosity/spirituality were the predictor variables with LOC, Cognitive Appraisal and Cognitive Appraisal Accuracy being potential moderators in the model.

Chapter 3.2 Analysis

This data was tested for normality using the Kolmogorov-Smirnov test. Once it was established that the data were normally distributed, the means and standard deviations were examined, then the inferential analyses were conducted. Cronbach's alpha tests were also be conducted to find out the internal reliability of the measures. The first inferential tests that were conducted were Pearson correlations. Following this, a multiple regression analysis was conducted in order to explain the variance produced by the hypothesised model.

Chapter 3.3 Participants

In order to recruit participants, the researcher used a poster which they put up around the Leeds Trinity University campus. Those who were interested then contacted the researcher, who gave further details regarding the study. If at this point, they were still interested, then an appointment would be made for them to meet the researcher at the university to take part in the research. This study had an exclusion-criteria of those under 18. Those who were not fluent in English were also excluded as the measures were fairly long, which may have caused distress to those who struggle to comprehend English confidently. Difficulty in comprehension may

have also significantly impacted upon the quality of the data. This study had an opportunistic sample of 87 participants from Leeds Trinity University. This research also had a predominantly female sample (42 female, six male and 39 who preferred for their gender to remain undisclosed). Their ages ranged from 18 to 42 (M = 21.6, SD = 0.90).

Chapter 3.4 Materials

This quantitative study utilised questionnaires which were well established, validated, and reliable. These scales included:

The General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). This is a 10-item scale whose objective is to decipher the extent to which one feels they have it within them to carry out the required tasks to accomplish their goals. This scale contained questions such as “I can remain calm when facing difficulties because I can rely on my coping abilities”. The responses were on a four-point Likert scale ranging from 1 = not at all true to 4 = exactly true. Scores on the scale range from 10-40. With high scores indicating high levels of self-efficacy. This scale had an acceptable level of internal reliability; its Cronbach’s alpha value ranged from .76 to .90 (Schwarzer & Jerusalem, 1995).

Table 1: The General Self-Efficacy Scale

Please indicate to which extent this is true.

Statement	**1 = Not at all true**	**2 = Hardly true**	**3 = Moderately true**	**4 = Exactly true**
1) I can always manage to solve difficult problems if I try hard enough.				
2) If someone opposes me, I can find the means and ways to get what I want.				
3) It is easy for me to stick to my aims and accomplish my goals.				
4) I am confident that I could deal efficiently with unexpected events.				
5) Thanks to my resourcefulness, I know how to handle unforeseen situations.				
6) I can solve most problems if I invest the necessary effort.				
7) I can remain calm when facing difficulties because I can rely on my coping abilities.				
8) When I am confronted with a problem, I can usually find several solutions.				
9) If I am in trouble, I can usually think of a solution.				
10) I can usually handle whatever comes my way.				

The Spirituality Self-Rating Scale (Galanter et al., 2007). This scale was comprised of six items concerned with individual spirituality, and the responses to these items are on a five-point scale 1 = strongly agree and 5 = strongly disagree. This scale had questions such as “the prayers or spiritual thoughts that I say when I am alone are as important to me as those said by me during services or spiritual gatherings”. The

scores on this scale ranged from 6-30. However, scores had to be reversed as low scores indicated a high level of spirituality, while a high score indicated a low level of spirituality. The internal reliability of this scale was satisfactory, as the Cronbach's alpha coefficient ranged from .82 to .91 (Galanter et al., 2007)

Table 2: Spirituality Self-Rating Scale

Below is a list of statements. Using the following rating scale, indicate the number that best indicates your agreement with the statement.

Statement	**Strongly agree (1)**	**(2)**	**(3)**	**(4)**	**Strongly disagree (5)**
1. It is important for me to spend time in private spiritual thought and meditation.					
2. I try hard to live my life according to my religious belief.					
3. The prayers or spiritual thoughts that I say when I am alone are as important to me as those said by me during services or spiritual gatherings.					
4. I enjoy reading about my spirituality and/or my religion.					
5. Spirituality helps to keep my life balanced and steady in the same ways as my citizenship, friendships, and other memberships do.					
6. My whole approach to life is based on my spirituality.					

The Centrality of Religiosity Scale-5 (CRS-5) by Hubber and Huber (2012), which measures the extent to which participants are religious. This scale contained five items which were on a five-point frequency scale, where 1 = never and 5 = very

often. This scale contained questions such as “How often do you take part in religious services?”. The scores on this scale ranged from 5 to 25. Low scores indicated low levels of religiosity, while high scores indicated high levels of religiosity. The bands within which the scores fall are as follows: 5 to 10 indicates lack of religiosity, 11 to 19 indicates that an individual is religious, and 20 to 25 indicates that an individual is highly religious. The internal reliability of this scale was more than adequate, with a Cronbach’s alpha *a* coefficient of .85 (Hubber & Huber, 2012),

Table 3: Centrality of Religiosity Scale (CRS-5)

Statement	Responses
1. How often do you think about religious issues?	1. Very often 2. Often 3. Occasionally 4. Rarely 5. Never
2. To what extent do you believe that God or something divine exists?	1. Very often 2. Often 3. Occasionally 4. Rarely 5. Never
3. How often do you take part in religious services?	A. Several times a day B. Once a day C. More than once a week D. Once a week E. One to three times a month F. A few times a year G. Less than a few times a year H. Never
4. How often do you pray?	A. Several times a day B. Once a day C. More than once a week D. Once a week E. Once to three times a month F. A few times a year G. Less than a few times a year H. Never
5. How often do you experience situations in which you have the feeling that God or something divine intervenes in your life?	1. Very often 2. Often 3. Occasionally 4. Rarely 5. Never

The abbreviated Locus of Control Scale by Valecha and Ostrom (1974), based on Rotter (1966) Locus of Control scale; this scale was concerned with measuring the extent to which individuals feel they are in control of their lives. This scale had 11 items which required participants to pick between two statements, the statement they agree with the most. Then the participants were required to state whether their chosen statement was slightly closer to their opinion or much closer to their opinion. Each item contained two statements which participants had to choose from, such as, “a. Many of the unhappy things in people's lives are partly due to bad luck” and “b. People's misfortunes result from the mistakes they make”. Scores on this scale ranged from 11 to 44. High scores on this scale indicated an External Locus of Control and low scores were indicative of an Internal Locus of Control. The internal reliability of this scale was almost satisfactory as the Cronbach’s alpha value was .66 (Valecha & Ostrom 1974).

Table 4: The Abbreviated Locus of Control Scale

Please circle the statements you agree with most (*only choosing between a or b*) and tick whether the statement is slightly close to your opinion or much closer to your opinion.	**Slightly closer**	**Much closer**
1. a. Many of the unhappy things in people's lives are partly due to bad luck. b. People's misfortunes result from the mistakes they make.		
2. a. In the long run people get the respect they deserve in this world. b. Unfortunately, an individual's worth often passes unrecognised no matter how hard he tries.		
3. a. Without the right breaks one cannot be an effective leader. b. Capable people who fail to become leaders have not taken advantage of their opportunities.		
4. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it. b. Getting a good job depends mainly on being in the right place at the right time.		
5. a. When I make plans, I am almost certain that I can make them work. b. It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.		
6. a. In my case getting what I want has little or nothing to do with luck. b. Many times we might just as well decide what to do by flipping a coin.		
7. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first. b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.		
8. a. Most people don't realise the extent to which their lives are controlled by accidental happenings. b. There really is no such thing as "luck".		
9. a. In the long run the bad things that happen to us are balanced by the good ones. b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.		
10. a. Many times I feel that I have little influence over the things that happen to me. b. It is impossible for me to believe that chance or luck plays an important role in my life.		
11. a. What happens to me is my own doing. b. Sometimes I feel that I don't have enough control over the direction my life is taking.		

The Perceived Stress Scale is a measure of perceived stress used as a measure of Cognitive Appraisal by Cohen et al. (1983). Although this is a measure of perceived stress, Cohen et al. (1983) used this scale to measure how individuals appraised and explained the happenings in their lives. It is a ten-item scale on a five-point Likert scale where 0 = never and 4 = very often. This scale contained items such as “In the last month, how often have you felt nervous and stressed?”. This scale had scored ranging from 0 to 40. High scores on this scale indicated high levels of perceived stress, and low scores indicated low levels of perceived stress . The scores for this scale fall within certain bands, 0 to 13 indicates low perceived stress, 14 to 26 indicates moderate perceived stress, and 27 to 40 indicates high levels of perceived stress. Low levels of perceived stress were then interpreted as positive cognitive appraisal, while high levels of perceived stress were interpreted as negative cognitive appraisal. This measure had a very satisfactory internal reliability as it had a Cronbach’s alpha *a* value of between .73 and 84 (Lesage, Berjot, & Deschamps, 2012).

Table 5: Perceived Stress Scale

Please indicate how often you have felt the things mentioned below in the last month.

Statement	Never = 0	Almost never = 1	Sometimes = 2	Fairly often = 3	Very often =4
1. In the last month, how often have you been upset because of something that happened unexpectedly?					
2. In the last month, how often have you felt that you were unable to control the important things in your life?					
3. In the last month, how often have you felt nervous and "stressed"?					
4. In the last month, how often have you felt confident about your ability to handle your personal problems?					
5. In the last month, how often have you felt that things were going your way?					
6. In the last month, how often have you found that you could not cope with all the things that you had to do?					
7. In the last month, how often have you been able to control irritations in your life?					
8. In the last month, how often have you felt that you were on top of things?					
9. In the last month, how often have you been angered because of things that were outside of your control?					
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?					

The Cognitive Appraisal Accuracy Vignettes by Sauser et al. (1979), were comprised of five items which measure individual perceived stress. This scale had items such as "the professor openly criticizes students for asking questions in class" and asked

participants to rate how stressful this would be for them on a Likert type scale where 1 = very little to no stress and 3 = highly stressful. This scale had scores ranging from 5 to 15. Low scores indicated high perceived stress, while high scores indicated low levels of perceived stress. To determine the accuracy of each participant's perceived stress score, a standard deviation score of the whole sample was calculated, if the participant's score did not fall within two standard deviations, then it would be deemed that their stress perception was not accurate. This meant that Cognitive Appraisal Accuracy was operationally defined as perceived stress scores which fell within two standard deviations of the sample's mean on the Cognitive Accuracy Vignettes.

Table 6: Cognitive Appraisal Accuracy Vignettes

Please indicate to which extent you would find each incidence stated below to be stressful.

Incident	**Very little to no stress**	**A moderate amount of stress**	**Highly stressful**
1. This professor openly criticises students for asking questions in class.			
2. This professor often mentions changes that have occurred since the textbook was published.			
3. This professor announced his office hours so that students could see him if they needed to.			
4. The professor lectures very rapidly.			
5. This professor moved the due date of a major paper up a week so that he would not be rushed at the end of the quarter, thus his students were rushed instead.			

Moreover, all these scales were chosen as they were found to be high in internal and external reliability and had been well established and widely used. Additionally, these scales were also freely available, which made them very cost-effective. Since there is a fairly large number of measures being used within the study, it seemed imperative to use some short forms such as the Centrality of Religiosity Scale-5 (CRS-5) by Hubber and Huber (2012), as these reduced the time participants would have to spend completing the collection of questionnaires, thus reducing the mental burden put upon the participants.

Nonetheless, the researcher was aware of the consequences of using such short forms as they at times reduce precision and a slight decrease in internal reliability of the scales, (Kruyen, Emons, & Sijtsma, 2013). However, the researcher was aware that they would have to balance the need for precision and efficiency during data collection. They felt they did so by ensuring they used some complete forms instead of short forms, where possible. An example of this is the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). The short forms used were picked carefully to ensure they adhered to the recommendations given by Smith, McCarthy, and Anderson (2000), who argue that if care is taken when short forms are created then it is justifiable to use such short forms to save time during data collection. Smith et al. (2000) also state that so long as researchers do such things as independently conducting Cronbach's alpha analyses to find the internal reliability of the short form, then they are likely going to create an arguably robust measure. Thus, justifying the use of such measures when necessary. Furthermore, the scales measuring religion/spirituality were chosen following a literature search for short forms which had been previously developed and tested within published research studies; for

example, the Spirituality Self-Rating Scale (Galanter et al., 2007). This allowed the researcher to be sure of the internal reliability and validity of the chosen scales.

Additionally, demographic information (gender and age) was also collected as research has shown that age and gender moderate the effect of religion on Locus of Control (Fiori, Brown, Cortina, & Antonucci, 2006), age and gender have also been said to affect levels of Locus of Control, as research has also shown that Locus of Control increases until age 40 and decreases steadily between ages 50 and 70 then peaks again. In addition to this, males were found to have greater levels of perceived control (Specht, Egloff, & Schmukle, 2013) which may be due to societal gender inequality and females' awareness of the patriarchal nature of society. This suggested the need to control for those demographic factors in order to obtain valid and reliable results by accounting for covariates which may influence the relationship between the predictor variables.

Chapter 3.5 Ethics

Before participants took part in this study, an ethics application was submitted to Leeds Trinity University's School of Social and Health Sciences Ethics Committee. This application outlined all the measures the researcher would take to ensure that their research complied with the Code of Ethics by the British Psychological Society (2018). An example of the measures taken to ensure this compliance was, ensuring the participants had the chance to provide fully informed consent before they took part, by avoiding any deceit and providing them with a comprehensive information sheet and a consent form. After the Ethics Committee had reviewed the ethics application, they provided ethical approval which allowed the research to be conducted. The ethics code for this research was SSHS/2019/004.

Chapter 3.6 Procedure

Participants were recruited from Leeds Trinity University. Posters were put up around the campus in order to advertise the study. The participants then contacted the researcher independent of this medium to express an interest in taking part in the study. Following this, participants were met by the researcher on the Leeds Trinity University campus. They were also given an information sheet which informed them of the aims of the research. Following this, they all completed a consent form and then completed the questions outlined within the questionnaires stated above. After taking part in the study, the participants received a verbal debrief and a paper copy of this to take away. Participants were given a participant number which was on their information sheet. They were made aware that they can use this number to withdraw from the study at any point up to two weeks after taking part. Completion of the questionnaires took 20 minutes.

Chapter Four Results

Results

Hypotheses

4) The first hypothesis stated that there would be a link between religion/spirituality and self-efficacy.
5) The second hypothesis stated that there would be a relationship between Locus of Control, Self-efficacy, and religiosity/spirituality.
6) The third hypothesis stated that Cognitive Appraisal, Appraisal Accuracy as well as Locus of Control would moderate the relationship between religion and self-efficacy.

The total score obtained by each participant on every measure/questionnaire was recorded. According to the Kolmogorov-Smirnov Tests of normality, all variables were normally distributed as all the statistics from this normality test were not significant ($p>.05$). In other words, all variables had significance values greater than .05. This meant the researchers could proceed to the use of parametric tests such as Regression analyses, as having normally distributed data significantly reduces the likelihood of type one errors (the rejection of a correct null hypothesis) occurring (Glass, Peckham, & Sanders, 1972; Nimon, 2012).

Descriptive statistics

Descriptive statistics of the entire sample's mean scores on all six scales are seen within table 1.

Table 7: Descriptive statistics of the whole sample's questionnaire scores including the participants' Mean scores and Standard Deviations

Scale	**Mean**	**Standard deviation**
Spirituality Self-Rating Scale	12.67	8.45
Centrality of Religiosity Scale (CRS-5)	11.38	8.19
General Self-Efficacy Scale	30.02	3.89
Locus of Control Scale	22.98	7.48
Cognitive Appraisal Scale (Perceived Stress Scale)	21.84	3.58
Cognitive Appraisal Accuracy Scale	6.44	1.45

Table one illustrates the resulting means and standard deviations of the measures from the sample of undergraduate students who took part in the research. The Spirituality Self-Rating Scale had a mean score of (M = 12.67, SD = 8.45), thus showing that participants within this study reported low to moderate levels of spirituality, this suggests that they were not particularly spiritual as a sample. The Centrality of Religiosity Scale (CRS-5) had a mean score of (M = 11.38, SD = 8.19). This suggests that the respondents within this study had fairly low levels of religiosity and thus are less likely to be part of any organised religion. Interestingly the General Self-Efficacy Scale had a mean score of (M = 30.02, SD = 3.89), this suggests that the participants within this study had fairly high levels of self-efficacy. The Locus of Control Scale had a mean score of (M = 22.98, SD = 7.48), this suggests that the

respondents within this study had scores which indicated a tendency towards having an external Locus of Control. This implies that as a sample they are more likely to lay blame on outside factors for the happenings in their life.

The Cognitive Appraisal Scale (Perceived Stress Scale) had a mean score of (M = 21.84, SD = 3.58). This suggests that the sample had a moderate level of perceived stress and thus appraised events fairly positively. Finally, the Cognitive Appraisal Accuracy Scale had a mean score of (M = 6.44, SD = 1.45). This suggests that the respondents perceived the events in the vignettes to be moderately stressful. Upon visual inspection of each participant's score in relation to the mean and standard deviation, the sample illustrated accurate cognitive appraisals. This implies that the participants within this study had the ability to accurately appraise situations.

Reliability analyses

A reliability analysis was conducted, this investigated the internal consistency of the General Self-efficacy Scale which had 10 items. The Cronbach's alpha value (*a* = .82) indicates that the scale had an acceptable reliability/internal consistency of above .70 (Soto & John, 2017). This suggested that all items were worth keeping in the scale as the items if deleted data for all items suggested that the alpha value would be lowered by deleting any of the items.

An additional reliability analysis was conducted to deduce the internal reliability of the Centrality of Religion Scale. Again, the Cronbach's alpha value (*a* = .77) demonstrated that the scale had an acceptable internal consistency. The items if

deleted column also highlighted that all items were worth keeping as all showed that if they were deleted the alpha level would be reduced.

A further reliability analysis was conducted to find out the internal reliability of the Spirituality Self-rating Scale. The Cronbach's alpha value highlighted that this scale had a more than satisfactory alpha level of (*a* = .96). The items if deleted column did indicate that the deletion of item one would increase the alpha level to (*a* =.97).
The Locus of Control measure (short form) also had its internal reliability investigated. The Cronbach's alpha value (*a* = .59) suggest that the measure did not have adequate internal reliability as the acceptable level of internal reliability is .70 (Soto & John, 2017). The items if deleted measure did also reveal that if six items were removed, the internal reliability would increase and become (*a* =.60), nonetheless this would still not be an acceptable alpha value.

A reliability analysis was also conducted on the Perceived Stress/ Cognitive Appraisal Scale. The Cronbach's alpha value for this scale was not adequate (*a* = .51). The items if deleted column also revealed that removing several items would increase the alpha value. However, removing item 4 caused the biggest increased in alpha value of .65. Nonetheless, the scale would still fail to reach the acceptable alpha value, suggesting that this scale lacks significantly in internal reliability.
The internal reliability of the Cognitive Appraisal Accuracy scale/vignettes was also tested. This revealed that this scale has an acceptable Cronbach's alpha value (*a* = .76). The items if deleted data also revealed that if the second item was removed the alpha value would increase to .79.

Inferential analyses

Table 8: Pearson Correlation Matrix

		Age	Gender	Spirituality Self-Ratting scale	Centrality of Religion Scale	General Self-efficacy Scale	Appraisal Accuracy Scale	Locus of Control Scale	Cognitive Appraisal Scale
Age	Pearson Correlation	_							
	Sig (two-tailed)								
	N								
Gender	Pearson Correlation	.156	_						
	Sig (two-tailed)	.296							
	N	47	4						
Spirituality Self-Ratting Scale	Pearson Correlation	.277	.319*	_					
	Sig (two-tailed)	.059	.027						
	N	47	48						
Centrality of Religion scale	Pearson Correlation	.162	.300*	.768**	_				
	Sig (two-tailed)	.277	.038	.000					
	N	47	48	87					
General Self-efficacy scale	Pearson Correlation	.344*	.097	.037	.045	_			
	Sig (two-tailed)	.018	.511	.731	.680				
	N	47	48	87	87				

Appraisal Accuracy Scale	Pearson Correlation	.339*	.320*	.117	.221*	.374**	_		
	Sig (two-tailed)	.020	.027	.283	.041	.000			
	N	47	48	86	86	86			
Locus of Control Scale	Pearson Correlation	.086	-.008	.053	.104	-.028	-.128	_	
	Sig (two-tailed)	.575	.959	.632	.342	.798	.244		
	N	45	46	85	85	85	84		
Cognitive Appraisal Scale	Pearson Correlation	.066	-.103	-.186	-.266*	.008	-.393**	.247*	_
	Sig (two-tailed)	.658	.486	.084	.013	.941	.000	.023	
	N	47	48	87	87	87	86	85	

**Correlation is significant at the 0.05 level (2-tailed).*

***Correlation is significant at the 0.01 level (2-tailed).*

A two-tailed Pearson's correlational analysis revealed that self-efficacy and age have a positive but weak correlation $r(87) = 0.34$, $p<.05$, this implies that as individuals get older their levels of self-efficacy might also increase. In addition to this, Religiosity was also positively correlated with Spirituality $r(87) = 0.77$, $p<.001$, this suggests a very strong relationship between Religiosity and Spirituality. Interestingly a negative but weak correlation was found between Religiosity and Cognitive Appraisal $r(87) = -0.27$, $p<.05$, this suggests that religiosity may lead to negative cognitive appraisal pattens. Furthermore, a weak positive correlation was found between Locus of Control and Cognitive appraisal $r(87) = 0.25$, $p<.05$, thus suggesting that external LoC may lead to increased positive appraisal.

Further 1 tailed Pearson correlations revealed additional correlations. A weak positive correlation was found between Spirituality and Age $r(87) = 0.28$, $p<.05$. This suggests that the older one gets the more spiritual they are likely to be. A weak negative correlation was also found between Spirituality and Cognitive appraisal $r(87) = -0.19$, $p<.05$. Additionally, a weak positive correlation was found between Spirituality and Cognitive Appraisal Accuracy $r(87) = 0.28$, $p<.05$. This suggests that spirituality may lead to more negative appraisal, but this may be a more accurate appraisal. Moreover, a weak positive correlation was found between Cognitive appraisal and LoC $r(87) = 0.25$, $p<.05$. This suggests that the more positive a person's Cognitive appraisal is, the more external their LoC is likely to be.

A Multiple Regression analysis was conducted to investigate whether the predictor variables (Religiosity and Spirituality) did influence levels of self-efficacy. The regression model created was not significant $F(2.84) = .08$, $p = .92$. Adjusted $R^2 = .02$. The regression coefficients for Religiosity and Spirituality are outlined in Table 2. Since the regression model is not significant, it could be suggested that Religiosity and Spirituality are not significant predictors of self-efficacy.

Table 9: *B coefficients and accompanying p values for Religiosity and Spirituality*

Predictor variables	**Regression coefficients (B)**	***p value***
Religiosity	0.01	0.97
Spirituality	0.04	0.82

All the assumptions required to allow a regression analysis to be conducted were met. After assessing all the outliers, Cooks distance values revealed that none of the outliers had a significant undue effect on the regression model as all the Cooks distance values were all under 1 and thus acceptable. The assumption of homoscedasticity was also met. The residuals were also independent of each other as shown by the Durbin and Watson value which was close to 2 (1.78). The Variance Inflation Factor VIF value is 2.41, and the tolerance value is 0.41, indicating that there were no issues in regard to multicollinearity.

Chapter Five Discussion and Conclusion

Discussion

Introduction to section

Within this discussion section, the main findings are outlined and then possible explanations for these findings will be presented. These explanations will be related to both methodological approach and theory. The implications of these findings, limitations and strengths are also discussed. Conclusions are reached based on the findings and interpretations of these findings. Further research is recommended, focussing on the factors within religion/spirituality which lead to better mental health for those who have experienced adversity or trauma.

The main aim of this research was to explore the relationship between self-efficacy and religiosity/spirituality in order to determine whether there could also have been other variables acting as moderators of this relationship. These potential moderators were hypothesised to be Locus of Control, Cognitive Appraisal and Cognitive Appraisal Accuracy. The results of this exploratory investigation found a statistically non-significant multiple regression model, implying that there may not be a relationship between self-efficacy and religiosity and that Locus of Control, Cognitive Appraisal and Cognitive Appraisal Accuracy may not moderate these variables. This did not support the third/principle hypothesis but was in support of the null hypothesis.

The second hypothesis stated that there would be a positive correlation between Self-efficacy and Locus of Control. However, the results indicated that there was an non-significant correlation between these two variables and thus did not support the hypothesis. These results differ from previous findings as Náfrádi et al. (2017) found

that amongst those who had undergone organ transplants, better adherence to medication was found amongst those who had an increased levels of both self-efficacy and Locus of Control, thus suggesting a positive correlation between self-efficacy and Locus of Control. Support for this comes from research into those who were going through a change in their careers; this population revealed a positive correlation between Self-efficacy and Locus of Control (Kim & Lee, 2018). However, with these relationships being correlational and not causal, it would be difficult to conclude that there is truly a relationship between Self-efficacy and Locus of Control. As seen in research on personality and political views, when the causal relationship was investigated, it was found to have been as a result of an additional variable such as genetics (Verhulst, et al., 2011). Therefore, the results of this research which oppose the previous findings, may be pointing towards a potential lack of relationship between Self-efficacy and Locus of Control.

Nonetheless, an additional explanation of these results might be the inadequacy of internal reliability of the Locus of Control scale as it was (a = .59) which is below the acceptable Cronbach's alpha value of .70 (Soto & John, 2017); this reduced reliability may have been due to the use of the short form of the Locus of Control scale. This reduced reliability limits the precision of the scale and thus chances of finding effects between variables (Soto & John, 2017). This suggests that the relationship may have been present but undetected due to reduced internal reliability. Soto and John (2017) do, however, acknowledge the difficulty that researchers have when weighing up the time-saving benefits of short forms versus the need for increased reliability and precision.

Moreover, this research had contrary findings to those of previous research as previous research suggested that Cognitive Appraisal may have moderated the relationship between Self-efficacy and religion/spirituality. Religion was said to lead to positive appraisal (DeAngelis & Ellison, 2017); positive appraisal was then found to increase one's Self-efficacy (Hanley et al., 2015; Welch et al., 2010). However, this present study found that there was no relationship between Cognitive Appraisal and Self-efficacy.

Additionally, religion/spirituality was found within this present study, to be negatively correlated with appraisal but was positively associated with cognitive Appraisal Accuracy. This suggests that religion/spirituality may lead to slightly more negative but accurate appraisal, thus leading to the partial acceptance of the second hypothesis as there does seem to be an association between religion/spirituality, Cognitive Appraisal and Cognitive Appraisal Accuracy. Alternatively, it could be argued that these opposing findings could have been as a result of the inadequate internal reliability of the Cognitive Appraisal measure (*a* = .51), as this may have made it harder to reveal the relationship between Cognitive Appraisal and Self-efficacy and thus the moderation of the relationship between Self-efficacy and religion/spirituality (Soto & John, 2017).

An interesting finding from this research was the lack of a relationship between self-efficacy and religiosity/spirituality. This opposes past research which found a positive correlation between these variables (Abdel-Khalek & Lester, 2017; Israel-Cohen et al., 2016; Pérez & Rex Smith, 2015) who found a positive correlation between self-efficacy and religiosity. Similarly, Batool and Nawaz (2016) found that increased social support, religiosity and self-efficacy led to increased wellbeing for a population

of amputees, thus suggesting an association between religion/spirituality and self-efficacy.

However, there is the possibility that the above-mentioned variables worked independently to increase the amputee's wellbeing. This suggests that religion/spirituality may be an independent and significant predictor of wellbeing. Research which may support this is that conducted by Pérez and Rex Smith (2015) which found that religion increased the wellbeing and mental health of those undergoing cancer treatment by allowing them to recognise the aspects of their condition they were in control of but also have faith that their God would take care of the aspects of their treatment they could not control. This, therefore, allowed them to feel more able to cope with their illness. This suggests that it may not have been self-efficacy that made them have a more positive view of their treatment outcome but something within religion itself. This may be why the Biopsychosocial Model of medicine was added to, in order to include spirituality, thus making it the Biopsychosociospiritual model (Fahlgren et al., 2015). This suggests that spirituality/religion is an important facet of individual wellbeing and should be taken into consideration by those seeking to provide holistic treatments.

The importance of religion/spirituality is highlighted by research into those undergoing treatment for their misuse of alcohol through Alcoholics Anonymous. Although there is the choice to engage in spirituality alone, McClure (2019) found that all their participants valued both religion and spirituality and saw them as very significant contributors to their recovery and sobriety. This suggests that region/spirituality is integral to one's recovery from substance misuse disorder. The acceptance of the commitment to religion/spirituality also implies that certain ailments may be due to the neglect of one's spiritual needs. More importantly, this

research indicates a link between recovery and religion/spirituality which suggests a need for further research which studies the nature of this relationship.
Furthermore, similar research into those with substance misuse disorders explored the spiritual journey of those in recovery and found that although in the past there may have been an absence of spiritualty in their lives, it had now become integral to their experience and journey of recovery. Interestingly a majority of the men who participated in the study first blamed God for their problems but through their attendance of Alcoholics Anonymous, ended up taking responsibility for their actions and subsequently saw God as the source of all that was good in their lives (Sharp, 2019). This suggests that religion/spirituality is integral in the lives of those undergoing recovery from substance misuse disorder.

Religion has also been seen to be useful for those experiencing adversity as it fostered hope and resilience during challenging times (Salifu Yendork & Somhlaba, 2017). Religion/spirituality was said to also produce more positive emotions in individuals who were in therapy following the experience of adverse situations when compared to those who were not religious (Agyekum & Newbold, 2016; Chokkanathan, 2013; Freeze & DiTommaso, 2014; Rosmarin et al., 2013). This suggests that religion is not only good for the wellbeing of those with substance misuse disorder, but its benefits may extend to all experiencing any kind of trauma or challenge in their life. The way by which religion/spirituality increases such things as wellbeing is said to be through the hope provided by faith which comes from religion/spirituality. As stated by Sremac (2014), hope provides the possibility of a better future and motivation to change adverse situations; this hope of a better future can be provided by a transcendent view-point that looks beyond one’s adversity and

looks to the promise of a better future provided by God, who is viewed to be in control. This hope-filled transcendent view point was also seen in research by Kurtz and White (2015), who argue that those undergoing treatment for substance misuse gain a transcendent view point from religion/spirituality which allows them to look beyond themselves and their challenges and thus focus on the hope provided by religion/spirituality. It could be suggested that this type of perspective could keep those in recovery from relapsing when they face challenges on their journey to recovery and also may provide a barrier against the negative effects of adversity on their mental health. This further suggests that it may be factors within religion/spirituality itself which enable recovery from substance misuse and benefit one's psychological wellbeing.

Contrastingly, a meta-analysis by Aten et al. (2019) found that there is the possibility to negative religious coping following adversity, such as an individual experiencing the stress of questioning their faith as they perceive God as having allowed the calamity to come upon them. This suggests that religion/spirituality can also have a negative effect on individual wellbeing.

Similarly, a study conducted using older adults (those over 50 years old) found that negative religious coping such as feeling punished or abandoned by God was associated with increased depression and anxiety amongst their participants (O'Brien et al., 2019). Further suggesting the negative effect religion/spirituality can have on individual wellbeing. However, O'Brien et al. (2019) also found that positive religious coping provided a buffer against the effects of negative religious coping. This suggests that negative religious/spiritual coping can have a negative effect on individual wellbeing. However, positive religious coping may then counteract these negative effects.

Furthermore, the final finding from the multiple regression analysis, which found a statistically non-significant regression model which led to the acceptance of the 3rd null hypothesis stating the lack of a relationship between Self-efficacy and religion. These findings are contrary to previous findings which highlight the relationship between Self-efficacy and religion/spirituality (Abdel-Khalek & Lester, 2017; Batool & Nawaz, 2016; Israel-Cohen et al., 2016; Pérez & Rex Smith, 2015), a link between religion/spirituality and Locus of Control (More, 2014; Osborne et al., 2016) and a positive correlation between religion/spirituality and Cognitive Appraisal (DeAngelis & Ellison, 2017). These opposing findings of this present study, showing a non-significant regression model may have been due to the unsatisfactory internal reliability of some of the measures used, making it difficult to reveal the relationships between the variables (Soto & John, 2017). An example of this is the internal reliability of the Spirituality Self-Ratting Scale whose Cronbach's alpha value was *a* = .96. According to Tavakol and Dennick (2011), this level is too high, as they argue that acceptable alpha values are those between 0.70 and 0.95. This suggests that one or two of the items in the scale may be synonymous with each other and therefore were redundant.

Alternatively, if the research had not been so time-restricted different methods may have been employed in order to conduct this exploratory research. An example being semi-structured interviews which are said to be a very good way of investigating human experience as they provide a greater depth of understanding when compared with quantitative methods (Blandford, 2013).

Additionally, qualitative approaches such as semi-structured interviews may have been useful within this research as they are particularly useful when researching phenomenon on which little is understood, and thus make them particularly useful

when conducting such exploratory research (Saks & Allsop, 2013). Postmodern feminists also argue that the search for objective generalisable findings which quantitative research prides itself on is flawed as it neglects to highlight how findings can be a partial and situated explanations of phenomena. To accept these findings as truth could silence the voices of those in cultures of groups which are lesser researched (Riger, 2003; Symon, Cassell, & Johnson, 2018). This suggests that all research findings may be situated within a particular context and culture. In regards to the findings of this research, it may mean that the phenomenon being investigated may be absent within the group of university students studied but may be present in populations those who have gone through adverse situations, such as those recovering from substance misuse as shown by Corless et al. (2012). This notion is supported by previous research into religion/spirituality and wellbeing as it seems to focus on those recovering from substance misuse (Chambers, 2015; Corless et al., 2012; Owen, 2014; Salem & Ali, 2008).

Additionally, this view is further supported by Kurtz (1979) and Falcone (2016) who argued strongly that those with substance misuse disorder may have a great need for God and that their substance misuse may be a misguided attempt to fill the emptiness they feel as a result of this disconnection from God. This also supports the Biopsycosociospiritual model of medicine, as it is implied that an individual's spirituality ought to be taken into consideration when treating psychological disorders such as substance misuse disorder (Fahlgren, Nima, Archer, & Garcia, 2015). This suggests that further research would benefit from being conducted in such a client group to further investigate the relationship between religion/spirituality and adversity/recovery.

Implications

There are a notable number of implications that come as a result of the findings of this research. They will be outlined within this section. The first notable implication is that relating to those who may be going through challenges such as compromised mental health or substance misuse. The findings of this research and previous literature (Chambers, 2015; Falcone 2016; Kurtz, 1979) imply that religion/spirituality are integral to the recovery of those experiencing adversity which further substantiates the Biopsychosociospiritual model of medicine which highlights how the previous models of medicine have neglected one's spiritual self during treatment. Encouraging more practitioners to engage with the spiritual side of an individual may lead to more holistic and effective treatment programmes. Moreover, it may be useful to educate practitioners on the importance of addressing one's spirituality during treatment. This approach has already been advocated for by a good number of clinicians (Oxhandler, Parrish, Torres, & Achenbaum, 2015).

Additionally, this research found that the short forms of the Locus of Control scales and the Perceived Stress/Cognitive Appraisal did not have adequate levels of internal consistency. An implication of this may be that researchers may avoid the use of these short forms in the future to ensure that the reliability and validity of their results. This research may also lead to the improvement of these short forms to ensure their reliability in future studies, thus providing more robust short measures of Locus of Control and Cognitive appraisal. An additional implication related to this could be that more researchers may feel more confident using the short forms of the Spirituality Self-Rating Scale and the Centrality of Religion Scale, as they had very good internal consistency. Thus, leading to the increased use of these measures in

research which may need shortened versions of scales in order to reduce the time burden put upon participants.

Furthermore, an additional implication of this research is that it may lead more psychological researchers to use qualitative methods as well as quantitative ones when researching the effects of religion/spirituality on recovery from psychological trauma. This being because this research has alluded to the need for the use of qualitative methods such as semi-structured interviews as they are said to be very effective in assisting researchers to understand human experiences. This view is supported by researchers such as Blandford (2013). Using such mixed methods would allow research to be exploratory in regard to theories, using the qualitative methods and would also allow for the confirmation or rejection of such theories using the quantitative methods (Levy, 2011).

Strengths, limitations, and areas of future research

This research has a number of notable strengths, the first being the novel nature of this research. A careful examination of the literature illustrated that there had not been any previous research, to date which has investigated how religion/spirituality may increase psychological wellbeing through studying the relationship between religion/spirituality and self-efficacy. Neither has there been research which has researched the factors which may potentially moderate this relationship. This research may not only spark interest in the religious/spiritual factors which enhance wellbeing but provides additional understanding into this. An additional strength of this research is the use of a number of shortened versions of a number of measures such as the Spirituality Self-Rating Scale and the Centrality of Religion Scale. This is because they did not only provide exceptional levels of internal consistency, but they

also shortened the amount of time each participant would need to spend completing the collection of questionnaires. This reduced likelihood of participants failing to complete the collection questionnaires. This also made the research more ethical as the attempt to shorten the amount of time spent on the collection of measures meant that participants did not feel needlessly tired after completing the questionnaires and thus ensured that harm such as eye strain did not come to the participants.

A limitation of this research could be the sole use of quantitative research. Although, the quantitative methods provided confirmatory findings, a mixed-method approach which included semi-structured interviews, would have allowed for greater understanding of the relationship between religion/spirituality and self-efficacy (Levy, 2011). Future research would benefit from adopting such an approach when researching phenomena which have to do with human experiences, as this is likely to lead the researchers to obtain findings which provide them with greater depth of insight. An additional limitation of this study could be the use of a predominantly female sample. This potentially means the research findings have a gender bias. This suggests that the results may not be generalisable to males. Future research would benefit from using a sample of participant with an equal number of male and female participants to ensure that the research findings have increased generalisability. A further limitation of this research could be the use of the two shortened measures (Locus of Control and Cognitive Appraisal Scales) as these were found to have inadequate internal consistency/ reliability.

This lack of internal consistency may have reduced the precision of the measures which were used, thus limiting the likelihood of finding the hypothesised main effects (Soto & John, 2017). Future research may benefit from the use of more robust

measures of Locus of Control and Cognitive Appraisal, thus decreasing the chances of a type two error occurring (the acceptance of a false null hypothesis).

Furthermore, future researchers would benefit from studying the benefits of religion/spirituality on those who have experienced adversity as this research and previous literature seem to suggest that religion/spirituality is particularly beneficial to such populations (DeAngelis & Ellison,2017; Israel-Cohen et al., 2016).

It is worth noting that this researcher had planned a two-part follow-up study which addressed some of the afore mentioned limitations of the first investigation and aimed to use a mixed-method approach to study the potential effects of religion/spirituality on the self-efficacy of those who have experienced adversity. The use of a mixed-method approach would have been advantageous as the qualitative approaches would allow the researcher to gain a greater understanding of the participants experiences as stated by Blandford (2013). The quantitative aspect of the research would complement the qualitative as it allows for confirmation or rejection of the proposed theory (Levy, 2011). The quantitative part of this second study would have used the measures used in study one, as seen in tables 1 to 6, for consistency. The semi-structured interview proposed to be used, would have utilised the interview schedule outlined below:

Opening questions

Indented questions are probing questions.

- What do religion and spirituality mean to you?
    - Do you believe these terms are distinct or the same?
- How do you feel about religion?
- What are your views on spirituality?
- Can you please share what your religious/spiritual views are?

- What are your views on how religion/spirituality influence your life?

Core questions

- How do your religious/spiritual beliefs influence your self-confidence?
- What are your views on how your religious/spiritual beliefs influence your beliefs in your abilities to cope with challenges?
    - To what extent do your religious/spiritual views influence your confidence in your ability to cope with challenges?
- What are your views on how your religious/spiritual views influence the way in which you evaluate challenging situations?
    - What are your views on how accurately your religious views allow you to evaluate challenging situations?
- What are your views on how your religious/spiritual views influence how much control you feel you exert over what happens to you?
    - To what extent do your religious and spiritual views influence your perception of the amount of control you have over your life?

Closing question

- Before we come to the end of our session, is there anything you would like to add?

Participants would have been recruited from a Leeds based recovery service called Spacious Places. This organisation's management had already given organisational consent for the researcher to recruit participants from their organisation. It was agreed that the researcher would advertise the research verbally at the end of one of the 12-Step meetings. Service users would then be made aware they would be more than welcome to complete the questionnaires anonymously once they have read the information sheet. Participants would have also been told they are invited to take

part in a further semi-structured interview once they have completed the scales. It would have been made clear that only four participants are needed for the semi-structured interview, meaning participation would be on a first-come-first-serve basis. The researcher would then notify the group of once they have the four required participants. The inclusion criteria for the qualitative part of the research would be those who identify as religious and/or spiritual and those who are towards the end of the 12 month long 12-Step program. These individuals would have a more complete view of how their religiosity/spirituality has impacted their self-efficacy and thus recovery. Anyone who had spent 11 months or more on the recovery program would qualify.

The analysis which would have been performed on the quantitative data would be a multiple regression analysis, if the tests of normality indicate that the data is normally distributed. The qualitative data would have been analysed using thematic analysis as it is easy for those who are new to qualitative research to use, making it accessible and easy to execute effectively (Braun & Clarke, 2006). It is also a very flexible approach to analysing qualitative data as it is not specific to any theoretical framework (Braun & Clarke, 2006; Malik & Coulson 2008).

The findings from this research would have been novel in that they would have unveiled what it is within religion and spirituality which increases self-efficacy and thus chances of recovery from substance misuse. With this knowledge, those who treat individuals who have substance misuse disorder, would incorporate these specific components of religion and spirituality into their treatment programs and thus increase chances of recovery. This being because research has shown high levels of self-efficacy to be associated with decreases in chances of relapse (Corless et al., 2012; Giordano et al., 2016).

Conclusion

This research aimed to explore how religion/spirituality enhance wellbeing by studying the relationship between self-efficacy and religiosity/spirituality. Although this research did not find a relationship between these variables, the findings did allude to the direct and positive effect that religion/spirituality may have on wellbeing. An implication of this research is that it further substantiates the validity of the Biopsychosociospiritual model of medicine as religiosity/spirituality were said to be important for maintaining psychological wellbeing. This research may also add to the understanding of religion/spirituality as phenomena, in regard to their benefits to wellbeing, as this research alludes to the fact that these phenomena may independently aid individual wellbeing during times of adversity.

Moreover, the interpretations of the findings from this research led the researcher to gain a greater appreciation of religiosity/spirituality and its potential positive effect on those experiencing adverse life events. Additionally, this research alludes to the potential direct effect religion/spirituality have on wellbeing for those who are religious/spiritual, such as the development of faith, resilience, and hope. These factors may lead to the benefits religious/spiritual individuals experience when engaging in religiosity/spirituality. This implies that future researchers would do well to further study the factors within religion/spirituality, such as hope and faith which may enhance the wellbeing of religious/spiritual individuals.

References

Abdel-Khalek, A. M., & Lester, D. (2017). The association between religiosity, generalized self-efficacy, mental health, and happiness in Arab college students. *Personality and Individual Differences, 109*, 12-16. doi:10.1016/j.paid.2016.12.010

Agyekum, B., & Newbold, B. K. (2016). Religion/spirituality, therapeutic landscape and immigrant mental well-being amongst African immigrants to Canada. *Mental Health, Religion & Culture, 19*(5), 674-685. doi:10.1080/13674676.2016.1225292

Anderson, A., Hattie, J., & Hamilton, R. J. (2005). Locus of control, self-efficacy, and motivation in different schools: Is moderation the key to success? *Educational Psychology, 25*(5), 517-535. doi:10.1080/01443410500046754

Aten, J. D., Smith, W. R., Davis, E. B., Van Tongeren, D. R., Hook, J. N., Davis, D. E., Shannonhouse, L., DeBlaere, C., Ranter, J., O'Grady, K., & Hill, P. C. (2019). The psychological study of religion and spirituality in a disastter context: A systematic review. *Psychological Trauma: Theory, Research, Practice, and Policy, 11*(6), 597-613. doi:10.1037/tra0000431

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215. doi:10.1037/0033-295X.84.2.191

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122-147. doi:10.1037/0003-066X.37.2.122

Bandura, A., & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology, 45*(5), 1017-1028. doi:10.1037/0022-3514.45.5.1017

Bandura, A., Blanchard, E., & Ritter, B. (1969.). Relative efficacy of desensitization and modeling approaches for inducing behavioral, affective, and attitudinal changes. *Journal of Personality and Social Psychology, 13*(3), 173-199. doi:10.1037/h0028276

Barnett, L. A., & Weber, J. J. (2009). Teaching children about religion, spirituality, themselves, and others: The role of faith-based recreational activities. *Leisure/Loisir: Journal of the Canadian Association for Leisure Studies, 33*(1), 147-178. doi:10.1080/14927713.2009.9651434

Baron, R. M., & Kenny, D. N. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. Retrieved February 08, 2018, from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.169.4836&rep=rep1&type=pdf

Batool, S., & Nawaz, S. (2016). Factors affecting disability-related depression in patients with lost limbs: A mediational model. *Journal of Religion & Health, 55*(4), 1381-1393. doi:10.1007/s10943-015-0098-2

Bigdeloo, M., & Bozorgi, Z. D. (2016). Relationship between the religious attitude, self-efficacy, and life satisfaction in high school teachers of Mahshahr city. *International Education Studies, 9*(9), 58-66. doi:10.5539/ies.v9n9p58

Bishop, J. P. (2009). Biopsychosociospiritual medicine and other political schemes. *Christian Bioethics, 15*(3), 254–276. doi:10.1093/cb/cbp017

Blandford, A. (2013). Semi-structured qualitative studies. In S. Mads, & R. F. Dam, *The encyclopedia of human-computer interaction.* Aarhus, Denmark: The

Interaction Design Foundation. Retrieved November 14, 2019, from https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/semi-structured-qualitative-studies

Boden, M. T. (2015). Supernatural beliefs: Considered adaptive and associated with psychological benefits. *Personality and Individual Differences, 86*, 227-231. doi:10.1016/j.paid.2015.06.023

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. doi:10.1191/1478088706qp063oa

Bravin, A., Trettene, A., Andrade, L., & Popim, R. (2019). Benefits of spirituality and/or religiosity in patients with chronic kidney disease: An integrative review. *Revista Brasileira de Enfermagem, 72*(2), 541-551. doi:10.1590/0034-7167-2018-0051

British Psychological Society. (2018). *Code of ethics and conduct.* Leicester: The British Psychological Society.

Brreedlove, M. S., & Watson, N. V. (2013). *Biological psychology: An introduction to behavioral, cognitive, and clinical neuroscience .* Sunderland, MA, US: Sinauer Associates.

Buddelmeyer, H., & Powdthavee, N. (2016). Can having internal locus of control insure against negative shocks? Psychological evidence from panel data. *Journal of Economic Behavior and Organization, 122*, 88-109. doi:10.1016/j.jebo.2015.11.014

Campbell, T., Johnson, J., & Zernicke, K. (2013). Cognitive appraisal. In M. D. Gellman, & J. R. Turner, *Encyclopedia of behavioral medicine.* New York: Springer. doi:10.1007/978-1-4419-1005-9_1115

Chambers, H. (2015). Spirituality and quaker approaches to substance use and addiction. *Religions, 6*(2), 385-403. doi:10.3390/rel6020385

Chan, R., & Mak, W. (2016). Common sense model of mental illness: Understanding the impact of cognitive and emotional representations of mental illness on recovery through the mediation of self-stigma. *Psychiatry Research, 246*(30), 16-24. doi:10.1016/j.psychres.2016.09.013

Cheng, H., & Furnham, A. (2019). Teenage locus of control, psychological distress, educational qualifications and occupational prestige as well as gender as independent predictors of adult binge drinking. *Alcohol, 78*, 103-109. doi:10.1016/j.alcohol.2018.08.008

Chesnut, S. (2017). On the measurement of preservice teacher commitment: Examining the relationship between four operational definitions and self-efficacy beliefs. *Teaching and Teacher Education, 68*, 170-180. doi:10.1016/j.tate.2017.09.003

Chopra, D. (2012). *God: A Story of Revelation.* New York: HarperCollins.

Clements, A., & Ermakova, A. (2012). Surrender to God and stress: A possible link between religiosity and health. *Psychology of Religion and Spirituality, 4*(2), 93–107. doi:10.1037/a0025109

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*(24), 385-396. doi:10.2307/2136404

Corless, I. B., Wantland, D., Kirksey, K. M., Nicholas, P. K., Human, S., Arudo, J., . . . Holzemer, W. L. (2012). Exploring the contribution of general self-efficacy to the use of self-care symptom management strategies by people living with HIV infection. *AIDS Patient Care & STDs, 26*(6), 335-343. doi:10.1089/apc.2011.0404

Dave, H. P., Mesarosova, K., Siegling, A. B., Tremblay, P. F., Saklofske, D. H., & . (2019). Assessing locus of control in pilots: Psychometric evaluation of a self-report measure. *Aviation Psychology and Applied Human Factors, 9*(1), 24-30. doi:10.1027/2192-0923/a000153

Davie, G. (1994). *Religion in Britain since 1945: Believing without belonging.* Oxford: Blackwell.

de Oliveira Maraldi, E. (2018). Response bias in research on religion, spirituality and mental health: A critical review of the literature and methodological recommendations. *Journal of Religion and Health*. doi:10.1007/s10943-018-0639-6

DeAngelis , R., & Ellison, C. (2017). Kept in His care: The role of perceived divine control in positive reappraisal coping. *Religions, 8*(13), 1-15. doi:10.3390/rel8080133

Dijkstra, M., van Dierendonck, D., & Evers, A. (2005). Responding to conflict at work and individual well-being: The mediating role of flight behaviour and feelings of helplessness. *European Journal of Work and Organizational Psychology, 14*(2), 119-135. doi:10.1080/13594320444000254

Fahlgren, E., Nima, A. A., Archer, T., & Garcia, D. (2015). Person-centered osteopathic practice: Patients' personality (body, mind, and soul) and health (ill-being and well-being). *Peer J, 3*, e1349. doi:10.7717/peerj.1349

Falcone, D. (2016). *The 20 most misunderstood, misinterpreted, mistakes: Of the big book of alcoholics anonymous.* Bloomington USA: AuthorHouse. Retrieved October 24, 2019, from https://books.google.co.uk/books?id=0bKsCwAAQBAJ&pg=PT44&lpg=PT44&dq=Alcoholism+a+misinterpretation+of+their+spiritual+need+for+god&source=bl&ots=7mJxmFuiYr&sig=ACfU3U16S5AwD3tCixqGtQOXXq88tTGg7w&hl=en&sa=X&ved=2ahUKEwj3y7Cb2LTlAhVhqHEKHdUDA3oQ6AEwDXoECAg

Filtness, T. (2013). Buffering preconscious stressor appraisal: The protective role of self-efficacy. *(PhD Thesis Brunel University*. Retrieved May 30th, 2019, from https://bura.brunel.ac.uk/handle/2438/7638

Fiori, K., Brown, E., Cortina, K., & Antonucci, T. (2006). Locus of control as a mediator of the relationship between religiosity and life satisfaction: age, race, and gender differences. *Mental Health, Religion & Culture, 9*(3), 239-263. doi:10.1080/13694670600615482

Florence, H. J., McKenzie-Green, B., & Tudor, K. (2019). Deciding what belongs: How psychotherapists in New Zealand attend to religion and/or spirituality in psychotherapy. *Counselling and Psychotherapy Research, 19*(3), 329-337. doi:10.1002/capr.12220

Fournier, G. (2016). Locus of control. *Psych Central*. Retrieved April 27, 2018, from https://psychcentral.com/encyclopedia/locus-of-control/

Fournier, G. (2018). Cognitive appraisal theory. *Psych Central*. Retrieved 04 19, 2018, from https://psychcentral.com/encyclopedia/cognitive-appraisal-theory/

Freeze, T. A., & DiTommaso, E. (2014). An examination of attachment, religiousness, spirituality and well-being in a Baptist faith sample. *Mental Health, Religion & Culture, 17*(7), 690-702. doi:10.1080/13674676.2014.899569

Galanter, M., Dermatis, H., Bunt, G., Williams, C., Trujillo, M., & Steinke, P. (2007). Assessment of spirituality and its relevance to addiction treatment. *Journal of Substance Abuse Treatment, 33*, 257-264. doi:10.1016/j.jsat.2006.06.014

Gall, T. (2006). Spirituality and coping with life stress among adult survivors of childhood sexual abuse. *Child Abuse & Neglect, 30*(7), 829-844. doi:10.1016/j.chiabu.2006.01.003

Giordano, A. L., Prosek, E. A., Loseu, S., Bevly, C. M., Stamman, J., Molina, C. E., . . . Calzada, R. M. (2016). Self-efficacy among adults in substance abuse treatment: The role of religious coping. *Journal of Addictions & Offender Counseling, 37*(1), 35-48. doi:10.1002/jaoc.12014

Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of Educational Research, 42*(3), 237–288. doi:10.3102/00346543042003237

Goldin, P. R., Manber-Ball, T., Werner, K., Heimberg, R., & Gross, J. J. (2009). Neural mechanisms of cognitive reappraisal of negative self-beliefs in social anxiety disorder. *Biological Psychiatry, 66*(12), 1091–1099. doi:10.1016/j.biopsych.2009.07.014

Goldin, P., Ziv, M., Jazaieri, H., Werner, K., Kraemer, H., Heimberg, R., & Gross, J. (2012). Cognitive reappraisal self-efficacy mediates the effects of individual cognitive-behavioral therapy for social anxiety disorder. *Journal of Consulting and Clinical Psychology, 80*(6), 1034-1041. doi:10.1037/a0028555

Golding, J., Gregory, S., Ellis, G., Nunes, T., Bryan, P., Iles-Caven, Y., & Nowicki, S. (2019). Maternal prenatal external locus of control and reduced mathematical and science abilities in their offspring: A longitudinal birth cohort study. *Frontiers in Psychology, 10*, 1-8. doi:10.3389/fpsyg.2019.00194

Gross, R. S., Mendelsohn, A. L., Gross, M. B., Scheinmann, R., & Messito, M. J. (2016). Material hardship and internal locus of control over the prevention of child obesity in low-income hispanic pregnant women. *Academic Pediatrics, 16*(5), 468-474. doi:10.1016/j.acap.2016.02.003

Gürefe, N., & Bakalım, O. (2018). Mathematics anxiety, perceived mathematics self-efficacy and learned helplessness in mathematics in faculty of education students. *International Online Journal of Educational Sciences, 10*(3), 147-161. doi:10.15345/iojes.2018.03.010

Hanley, A., Palejwala, M., Hanley, R., Canto, A., & Garland, E. (2015). A failure in mind: dispositional mindfulness and positive reappraisal as predictors of academic self-efficacy following failure. *Personality and Individual Differences, 86*, 332-337. doi:10.1016/j.paid.2015.06.033

Heimberg, R. G., Brozovich, F. A., & Rapee, R. M. (2010). A cognitive behavioral model of social anxiety disorder: Update and extension. In S. G. Hofmann, & P. M. DiBartolo, *Social anxiety: clinical, developmental, and social perspectives (2nd ed)* (pp. 395-422). Amsterdam; Boston: Elsevier. doi:10.1016/B978-0-12-375096-9.00015-8

Helm, R., & Mark, A. (2012). Analysis and evaluation of moderator effects in regression models - state of art, alternatives and empirical example. *Review of Managerial Science, 6*(4), 307–332. doi:10.1007/s11846-010-0057-y

Hill, P. C., Pargament, K. I., Hood, R. W., McCullough, M. E., Swyers, J. P., Larson, D. B., & Zinnbauer, B. (2000). Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour, 30*(1), 51-77. doi:10.1111/1468-5914.00119

Hiroto, D. S., & Seligman, M. E. (1975). Generality of learned helplessness in man. *Journal of Personality and Social Psychology, 31*(2), 311-327. doi:10.1037/h0076270

Holt, J. D. (2015). A Latter-Day Saint approach to addiction: Aetiology, consequences and treatment in a theological context. *Religions, 6*(1), 1-13. doi:10.3390/rel6010001

Huber, S., & Huber, O. W. (2012). The Centrality of Religiosity Scale. *Religions, 3*, 710-724. doi:10.3390/rel3030710

Israel-Cohen, Y., Kaplan, O., Noy, S., & Kashy-Rosenbaum, G. (2016). Religiosity as a moderator of self-efficacy and social support in predicting traumatic stress among combat soldiers. *Journal of Religion and Health, 55*(4), 1160-1171. doi:10.1007/s10943-016-0187-x

Karaman, M., Nelson, K., & Vela, J. (2018). The mediation effects of achievement motivation and locus of control between academic stress and life satisfaction in undergraduate students. *British Journal of Guidance & Counselling,, 46*(4), 375-384. doi:10.1080/03069885.2017.1346233

Kim, N. R., & Lee, K. H. (2018). The effect of internal locus of control on career adaptability: The mediating role of career decision-making self-efficacy and occupational engagement. *Journal of Employment Counseling, 55*(1), 2-15. doi:10.1002/joec. 12069

Kirk, B. A., Schutte, N. S., & Hine, D. W. (2008). Development and preliminary validation of an Emotional Self-efficacy Scale. *Personality and Individual Differences, 45*(5), 432-436. doi:10.1016/j.paid.2008.06.010

Klein, D. C., Fencil-Morse, E., & Seligman, M. (1976). Learned helplessness, depression, and the attribution of failure. *Journal of Personality and Social Psychology, 33*(5), 508-516. doi:10.1037/0022-3514.33.5.508

Korkmaz, O., Ilhan, T., & Bardakci, S. (2018). An investigation of self-efficacy, locus of control, and academic procrastination as predictors of academic achievement in students diagnosed as gifted and non-gifted. *European Journal of Education Studies, 4*(7), 173-192. doi:10.5281/zenodo.1253354

Krackow, E., & Rudolph, K. D. (2008). Life stress and the accuracy of cognitive appraisals in depressed youth. *Journal of Clinical Child and Adolescent Psychology, 37*(2), 376-385. doi:10.1080/15374410801955797

Krueger, C. E., Rosen, H. J., Taylor, H. G., Espy, K. A., Schatz, J., Rey-Casserly, C., & Kramer, H. J. (2011). Know thyself: Real-world behavioral correlates of self-appraisal accuracy. *The Clinical Neuropsychologist, 25*(5), 741-756. doi:10.1080/13854046.2011.569759

Kruyen, P. M., Emons, W. H., & Sijtsma, K. (2013). On the shortcomings of shortened tests: A literature review. *International Journal of Testing, 13*(3), 223-248. doi:10.1080/15305058.2012.703734

Kurtović, A., Vuković, I., & Gajić, M. (2018). The effect of locus of control on university students' mental health: Possible mediation through self-esteem and coping. *Journal of Psychology, 152*(6), 341-357. doi:10.1080/00223980.2018.1463962

Kurtz, E. (1979). *Not God: A history of alcoholics anonymous.* Center City: Hazelden Educational Services. Retrieved October 22, 2019, from https://books.google.co.uk/books?hl=en&lr=&id=8hDXDQAAQBAJ&oi=fnd&pg=PT13&dq=Ernie+Kurtz.+Not+God:+A+History+of+Alcoholics+Anonymous.+Center+City&ots=klXAoEXO3A&sig=sYA3_Mgz0lgmvONB4SYtGxF_6R0&redir_esc=y#v=onepage&q=Ernie%20Kurtz.%20Not%20God%3A%20A%20Hi

Kurtz, E., & White, W. L. (20215). Recovery spirituality. *Religions, 6*(1), 58-81. doi:10.3390/rel6010058

Lazarus, R., & Alfert, E. (1964). Short-circuiting of threat by experimentally altering cognitive appraisal. *The Journal of Abnormal and Social Psychology, 69*(2), 195-205. doi:10.1037/h0044635

Lazarus, S. (1963). A laboratory approach to the dynamics of psychological stress. *Administrative Science Quarterly, 8*(2), 192-213. doi:10.2307/2390899

Leavey, G., Loewenthal, K., & King, M. (2016). Locating the social origins of mental illness: The explanatory models of mental illness among clergy from different ethnic and faith backgrounds. *Journal of Religion and Health, 55*(5), 1607-1622. doi:10.1007/s10943-016-0191-1

Lesage, F., Berjot, S., & Deschamps, F. (2012). Psychometric properties of the French versions of the Perceived Stress Scale. *International Journal of Occupational Medicine and Environmental Health, 25*, 178–184. doi:10.2478/S13382-012-0024-8

Levy, B. (2011). Fostering cautious political efficacy through civic advocacy projects: A mixed methods case study of an innovative high school class. *Theory & Research in Social Education, 39*(2), 238-277. doi: 10.1080/00933104.2011.10473454

Li, M., Eschenauer, R., & Persaud, V. (2018). Between avoidance and problem solving: Resilience, self-efficacy, and social support seeking. *Journal of Counseling & Development, 96*(2), 132-143. doi:10.1002/jcad.12187

Liao, K. Y., Yeung, N., Wong, C., Warmoth, K., & Lu, Q. (2017). Fear of cancer recurrence and physical well-being among Chinese cancer survivors: The role of conscientiousness, positive reappraisal and hopelessness. *Support Care Cancer, 25*(4), 1141–1149. doi:10.1007/s00520-016-3504-8

Loewenthal, K. (2018). The OCD - religion package: Might it relate to the rise of spirituality? *Mental Health, Religion & Culture, 21*(2), 123-130. doi:10.1080/13674676.2018.1447554

Luszczynska, A., Gutiérrez-Doña, B., & Schwarzer, B. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal of Psychology, 40*(2), 80-89. doi:10.1080/00207590444000041

Maier, S. F., & Seligman, M. (2016). Learned helplessness at fifty: Insights from neuroscience. *Psychological Review, 123*(4), 349-367. doi:10.1037/rev0000033

Malik, S. H., & Coulson, N. (2008). The male experience ofinfertility: a thematic analysis of an online infertility support groupbulletin board. *Journal of Reproductive and Infant Psychology, 26*(1), 18–30. doi:10.1080/02646830701759777

Marr, J., & Wilcox, S. (2015). Self-efficacy and social support mediate the relationship between internal health locus of control and health behaviors in college student. *American Journal of Health Education, 46*(3), 122-131. doi:10.1080/19325037.2015.1023477

Mattis, J. S. (2000). African american women's definitions of spirituality and religiosity. *Journal of Black Psychology, 26*(1), 101-122. doi:10.1177/0095798400026001006

McClure, P. (2020). Recovering theism: Three biographical case studies in Alcoholics Anonymous. *Implicit Religion, 22*(2), 122–139. doi:10.1558/imre.37830

McGrath, E. P., & Repetti, R. L. (2002). A longitudinal study of children's depressive symptoms, self-perceptions, and cognitive distortions about the self. *Journal of Abnormal Psychology, 111*(1), 77-88. doi:10.1037/0021-843X.111.1.77

Moore, E. W. (2014). Assessing God locus of control as a factor in college students' alcohol use and sexual behavior. *Journal of American College Health, 62*(8), 578-587. doi:10.1080/07448481.2014.947994

Náfrádi, L., Nakamoto, K., & Schulz, P. J. (2017). Is patient empowerment the key to promote adherence? A systematic review of the relationship between self-efficacy, health locus of control and medication adherence. *Public Library of Science one, 12*(10), e0186458. doi:10.1371/journal.pone.0186458

Nelson, J. B. (2004). *Thirst: God and the alcoholic experience.* Louisville, Kentucky, USA: Westminster John Knox Press. Retrieved October 24, 2019, from https://books.google.co.uk/books?hl=en&lr=&id=ZqCqN2kYsgsC&oi=fnd&pg=PP11&dq=Alcoholism+a+misinterpretation+of+their+spiritual+need+for+god&ots=_-vfwBYDCa&sig=RlbHvQ7bfGUxC4fFZTBHu1fhrYE&redir_esc=y#v=onepage&q=Alcoholism%20a%20misinterpretation%20of%20th

Niazi, S., & Adil, A. (2017). Role of mindfulness and psychological wellbeing between external locus of control and depression: A moderated mediation model. *Peshawar Journal of Psychology and Behavioral Sciences, 3*(1), 1-19. doi:10.32879/pjpbs.2017.3.1.1-19

Nimon, K. F. (2012). Statistical assumptions of substantive analyses across the general linear model: A mini-review. *Frontiers in Psychology, 3*, 322. doi:10.3389/fpsyg.2012.00322

O'Brien, B., Shrestha, S., Stanley, M., Pargament, K., Cummings, J., Kunik, M., Fletcher, T., Cortes, J., Ramsey, D., & Amspoker, A. (2019). Positive and negative religious coping as predictors of distress among minority older adults. *International Journal of Geriatric Psychiatry, 34*, 54-59. doi:10.1002/gps.4983

Osborne, D., Milojev, P., & Sibley, C. G. (2016). Examining the indirect effects of religious orientations on well-being through personal locus of control. *European Journal of Social Psychology, 46*(4), 492-505. doi:10.1002/ejsp.2182

Øvretveit, J., Leviton, L., & Parry, G. (2011). Increasing the generalisability of improvement research with an improvement replication programme. *BMJ Quality and Safety, 20*, 87-91. doi:10.1136/bmjqs.2010.046342

Owen, S. (2014). Walking in balance: Native American recovery programme. *Religions, 5*(4), 1037-1049. doi:10.3390/rel5041037

Oxhandler, H. K., Parrish, D. E., Torres, L. R., & Achenbaum, A. W. (2015). The Integration of clients' religion and spirituality in social work practice: A national survey. *Social Work, 60*(3), 219-237. doi:10.1093/sw/swv018

Pérez, J., & Rex Smith , A. (2015). Intrinsic religiousness and well-being among cancer patients: The mediating role of control-related religious coping and self-efficacy for coping with cancer. *Journal of Behavioral Medicine, 38*(2), 183-193. doi:10.1007/s10865-014-9593-2

Pomerantz, E., & Rudolph, K. (2003). What ensues from emotional distress: Implications for competence estimation. *Child Development, 74*(2), 329-345. doi:10.1111/1467-8624.7402001

Prati, G., Pietrantoni, L., & Cicognani, E. (2010). Self-efficacy moderates the relationship between stress appraisal and quality of life among rescue

workers. *Anxiety, Stress, & Coping, 23*(4), 463-470. doi:10.1080/10615800903431699

Prihadi, K., Tan, C., Tan, R., Yong, P. L., Yong, J., Tinagaran, S., & Yeow, J. (2018). Procrastination and learned-helplessness among university students: The mediation effect of internal locus of control. *Electronic Journal of Research in Educational Psychology, 16*(46), 579-595. doi:10.25115/ejrep.v16i46.2236

Quakers in Britain. (n.d.). *Our faith*. Retrieved October 18, 2019, from Quakers in Britain: https://www.quaker.org.uk/about-quakers/our-faith

Radcliff, Z., Al Ghriwati, N., Derlan, C., Velazquez, E., Halfond, R., & Corona, R. (2018). The relationship between Latina/o youth's internal health locus of control, cultural factors, and body mass index. *Journal of Latina/o Psychology, 6*(3), 190-203. doi:10.1037/lat0000093

Reisenzein, R. (1983). The Schachter theory of emotion: Two decades later. *Psychological Bulletin, 94*(2), 239-264. Retrieved March 07, 2019, from file:///C:/Users/Nicole%20Kumbani/Downloads/Reisenzein1983_Schachter_Theory.pdf

Riger, S. (2003). Epistemological debates, feminist voices: Science, social values, and the study of women. In W. Pickren, & D. Dewsbury, *Evolving perspectives on the history of psychology.* Washington: American Psychological Association.

Roddenberry, A., & Renk, K. (2010). Locus of control and self-efficacy: Potential mediators of stress, illness, and utilization of health services in college students. *Child Psychiatry And Human Development, 41*(4), 353-370. doi:10.1007/s10578-010-0173-6

Rosenthal, R. (1976). *Experimenter effects in behavioral research.* Oxford, England: Irvington. Retrieved October 29, 2019, from https://psycnet.apa.org/record/1977-04700-000

Rosmarin, D. H., Bigda-Peyton, J. S., Kertz, S. J., Smith, N., Rauch, S. L., & Björgvinsson, T. (2013). A test of faith in God and treatment: The relationship of belief in God to psychiatric treatment outcomes. *Journal of Affective Disorders, 146*(3), 441-446. doi:10.1016/j.jad.2012.08.030

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1), 1-28. Retrieved April 22, 2018, from https://pdfs.semanticscholar.org/161c/b7ac92d7571042bb11ebdaaa1175be8079f8.pdf

Salem, M. O., & Ali, M. M. (2008). Psycho-spiritual strategies in treating addiction patients: Experience at Al-Amal hospital, Saudi Arabia. *Journal of the Islamic Medical Association of North America, 40*(4). doi:10.5915/40-4-4434

Salifu Yendork, J., & Somhlaba, N. (2017). 'I am happy because of God': Religion and spirituality for well-being in Ghanaian orphanage-placed children. *Psychology of Religion and Spirituality, 9*(1), 32-39. doi:10.1037/rel0000094

Sandoz, J. (2014). Finding God through the spirituality of the 12 steps of Alcoholics Anonymous. *Religions, 5*(4), 948-960. doi:10.3390/rel5040948

Sask, M., & Allsop, J. (2013). *Researching health: Qualitative, quantitative and mixed methods.* London: Sage Publishing.

Sauser, W. I., Evans, K. L., & Champion, L. C. (1979). *Two hundred and fifty scaled incidents of college classroom teaching behavior.* New Orleans, LA: Paper presented at the meeting of the Southeastern Psychological Association. Retrieved April 30, 2018, from https://eric.ed.gov/?id=ED174934#?

Schachter, S., & Singer, J. (1962). Cognitive, social, and physiological determinants of emotional state. *Psychological Review, 69*(5), 379-399. doi:10.1037/h0046234

Schwarzer, R., & Jerusalem , M. (1995). Generalized Self-efficacy Scale. In J. Weinman , S. Wright, & M. Johnson , *Measures in health psychology: A user's portfolio, Causal and control beliefs* (pp. 35-37). Windsor England: NFER-NELSON.

Sekerdej, M., & Szwed, P. (2021). Perceived self-efficacy facilitates critical reflection on one's own group. *Personality and Individual Differences, 168*(1). doi:10.1016/j.paid.2020.110302

Seligman, M. E., & Maier, S. F. (1967). Failure to escape traumatic shock. *Journal of Experimental Psychology: General, 74*(1), 1-9. doi:10.1037/h0024514

Sharp, E. (2019). In/visible recoveries: Display events, stigma and spirituality in a therapeutic community in northern Mexico. *Implicit Religion, 22*(2), 140-160. doi:10.1558/imre.37987

Silva, A. N., Moratelli, L., Tavares, P. L., Marsicano, E. O., Pinhati, R. R., Colugnati, F. A., Lucchetti, G., & Sanders-Pinheiro, H. (2016). Self-efficacy beliefs, locus of control, religiosity and non-adherence to immunosuppressive medications in kidney transplant patients. *Nephrology, 21*, 938-943. doi:10.1111/nep.12695

Singh, A. P., Singh, A. K., & Gupta, V. K. (2018). Role of life events stress and locus of control (external) in job satisfaction: An empirical evidence. *Indian Journal of Positive Psychology, 9*(1), 69-73. doi:10.15614/ijpp.v9i01.11745

Smith, G. T., McCarthy , D. M., & Anderson, K. G. (2000). On the sines of the short form. *American Psychological Association, 12*(1), 102-11. doi:10.1037//1040-3590.12.1.102

Smith, N., Sippel, L. M., Presseau, C., Rozek, D., Mota, N., Gordon, C., Horvath, M., & Harpaz-Rotem, I. (2018). Locus of control in US combat veterans: Unique associations with posttraumatic stress disorder 5-factor model symptom clusters. *Psychiatry Research, 268*, 152-156. doi:10.1016/j.psychres.2018.07.015

Solomon, R. C. (2002). *Spirituality for the skeptic: The thoughtful love of life.* New York: Oxford University Press. Retrieved October 21, 2019, from https://books.google.co.uk/books?hl=en&lr=&id=4G7eaqVoDp8C&oi=fnd&pg=PR7&ots=kJ0ltvI6CR&sig=FMdHGzQ-KiI5B7qTvZ45xPAg4VQ&redir_esc=y#v=onepage&q&f=false

Soto, C., & John, O. (2017). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality, 68*, 68-81. doi:10.1016/j.jrp.2017.02.004

Specht, J., Egloff, B., & Schmukle, S. (2013). Everything under control: The effects of age, gender, and education on trajectories of perceived control in a nationally representative German sample. *Developmental Psychology, 49*(2), 353-364. doi:10.1037/a0028243

Speisman, J., Lazarus, R., Mordkoff, A., & Davison, L. (1964). Experimental reduction of stress based on ego-defense theory. *The Journal of Abnormal and Social Psychology, 68*(3), 367-380. doi:10.1037/h0048936

Sremac, S. (2014). Faith, hope and love: A narrative theological analysis of recovering drug addicts' conversion testimonies. *Practical Theology, 7*(1), 34-49. doi:10.1179/1756073X13Z.00000000027

Sullivan, S. A., Thompson, A., Kounali, D., Lewis, G., & Zammit, S. (2017). The longitudinal association between external locus of control, social cognition and adolescent psychopathology. *Social Psychiatry And Psychiatric Epidemiology, 52*(6), 643-655. doi:10.1007/s00127-017-1359-z

Symon, G., Cassell, C., & Johnson, P. (2018). Evaluative practices in qualitative management research: A critical review. *International Journal of Management Reviews, 20*, 134–154. doi:10.1111/ijmr.12120

Tavakol, M., & Dennick, R. (2011). Making Sense of Cronbach's Alpha. *International Journal of Medical Education, 2*, 53-55. doi:10.5116/ijme.4dfb.8dfd

Tommasi, M., Grassi, P., Balsamo, M., Picconi, L., Furnham, A., & Saggino, A. (2018). Correlations between personality, affective and filial self-efficacy beliefs, and psychological well-being in a sample of Italian adolescents. *Psychological Reports, 12*(1), 59-78. doi:10.1177/0033294117720698

Valecha, G. K., & Ostrom, T. M. (1974). An abbreviated measure of internal-external locus of control. *Journal of Personality Assessment, 38*(4), 369-376. doi:10.1080/00223891.1974.10119987

Verhulst, B., Eaves, L., & Hatemi, P. (2011). Correlation not causation: The relationship between personality traits and political ideologies. *American Journal of Political Science, 56*(1), 34-51. doi:10.1111/j.1540-5907.2011.00568.x

Wang, D., Li, X., Zhou, M., Maguire, P., Zong, Z., & Hu, Y. (2019). Effects of abusive supervision on employees' innovative behavior: The role of job insecurity and locus of control. *Scandinavian Journal of Psychology, 60*(2), 152-159. doi:10.1111/sjop.12510

Welch, A., Hulley, A., & Beauchamp, M. (2010). Affect and self-efficacy responses during moderate-intensity exercise among low-active women: The effect of cognitive appraisal. *Journal of Sport & Exercise Psychology, 32*(2), 154-176. doi:10.1123/jsep.32.2.154

Werner, K. H., Goldin, P. R., Ball, T. M., Heimberg, R. G., & Gross, J. J. (2011). Assessing emotion regulation in social anxiety disorder: The Emotion Regulation Interview. *Journal of Psychopathology and Behavioral Assessment, 33*(3), 346 –354. doi:10.1007/s10862-011-9225-x

Wu, A. M., Tang, C. S., & Kwok, T. C. (2004). Self-efficacy, health locus of control, and psychological distress in elderly Chinese women with chronic illnesses. *Aging & Mental Health, 8*(1), 21-28. doi:10.1080/13607860310001613293

Zawadzka, A., Kościelniak, M., & Zalewska, A. (2018). The big five and burnout among teachers: The moderating and mediating role of self-efficacy. *Polish Psychological Bulletin, 49*(2), 149–157. doi:10.24425/119482