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Acceptance and prayer intervention for adolescents with anxiety symptoms

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Abstract

Prevention programs are increasingly being sought for adolescents with anxiety in order to reduce the high prevalence rate of both anxiety and depressive disorders. Historically, empirically-validated interventions have not been used in combination with spiritually-based therapies (Jackson, 2020). This can mean that clients are left with their faith unaddressed in the therapeutic setting. Disturbances in an individual's faith can contribute to psychological distress (Ellison, Bradshaw, Flannelly, & Galek, 2014). This study aimed to address this gap in literature by incorporating prayer into an acceptance and commitment therapy-based therapeutic model. To test the hypothesis that anxiety in adolescents can be reduced by the introduction of acceptance-based coping skills, together with an acceptance-based prayer, a brief open trial intervention with a single group, in pre-test, post-test method was adopted. The results were analyzed using a mixed methods approach including paired-samples t-tests for the quantitative analysis, and interpretative phenomenological analysis (IPA) following a semi-structured interview. The results showed a large effect (d = 2.58) in the direction of the hypothesis: anxiety in adolescents decreased with the introduction of acceptance and prayer. Secondary analysis also revealed significant reductions in depression (d = 1.98) and psychological inflexibility (d = 1.28). However, there was no difference in the resultant levels of mindfulness (d = -0.33). These results suggest that an acceptance-based brief intervention, together with prayer, may be helpful for adolescents with anxiety. However, further larger studies are warranted and should include randomization and a control group in order to confirm these findings.

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Chapter One: Introduction

Prevention programmes are increasingly being sought for adolescents with anxiety in order to reduce the high prevalence rate of both anxiety and depressive disorders. This research has investigated the efficacy of acceptance and prayer for adolescents with mild to moderate anxiety as a brief intervention with a single group, in pre-test, post-test method. Historically, empirically-validated interventions have not been used in combination with spiritually-based therapies. This means that clients are left with their faith unaddressed in the therapeutic setting. Disturbances in an individual's faith can often contribute to, as well as be the source of, their distress. This study aimed to address this gap in literature by incorporating prayer into an Acceptance and Commitment Therapy-based therapeutic model. Within the available research, I start by outlining; 1) What healthy development in adolescence looks like, 2) What anxiety in adolescence looks like, 3) The development of anxiety in adolescents, 4) What has been found to be successful in the prevention of anxiety in adolescents, along with, 5) The factors that affect treatment.

Background to the problem

What does healthy development look like in adolescents?

Healthy development in adolescence relies upon the ability to establish and sustain social and emotional practices. The highest basic needs in adolescence are independence, competency and connection (Doré et al., 2020). Biological, social, intellectual, and spiritual elements need to develop in a phase-like fashion in order to transition through normative pathways and not into a psychopathological trajectory (Kerig & Ludlow). Supportive environments such as school, home life and parental care (Mónaco, Schoeps, & Montoya-Castilla, 2019), along with their wider social community, contribute greatly to the health and wellbeing of adolescents. Anxiety can significantly impair social and emotional practices through avoidant coping mechanisms and internalizing behaviours. Supportive family,

friendship and community involvement are likely to greatly contribute to the success of preventative treatments.

There is a good deal of evidence for the strong association between physical and mental health (Biddle & Asare, 2011; Costigan, Lubans, Lonsdale, Sanders, & del Pozo Cruz, 2019). Adolescence is a time of immense growth, both biologically and mentally, and healthy habits in the form of quality sleep, exercise, and a healthy diet, make a tremendous difference to their ability to effectively cope with the demands that growth has upon them. It has been reported that the better-quality sleep an adolescent has, the less the likelihood of a mood disorder forming (Dong, Martinez, Buysse, & Harvey, 2019). Also, a recent study with 1223 Australian secondary school students found that vigorous physical exercise was associated with higher levels of positive affectivity and lower levels of negative affectivity (Costigan et al., 2019). This association was especially strong in females which is an interesting finding considering females are disproportionally represented in the anxiety disorders data (Lewinsohn, Gotlib, Lewinsohn, Seeley, & Allen, 1998).

Equally important is the need to nourish the body with optimal vitamins and minerals. Esteban-Gonzalo et al. (2019) demonstrated that adolescents who consumed the Mediterranean diet (high in fish, white meat, fruit, vegetables, nuts, legumes and olive oil) experienced lower negative affectivity, elevated levels of positive affectivity and increased wellbeing. New Zealand data confirmed this association in a study with 4249 ethnically diverse adolescents from low socioeconomic families, where eating a healthy diet (which included “eating breakfast, a mid-morning snack and lunch at home; eating fruits and vegetables; and eating dinner as a family” was significantly connected to better emotional health ($p<0.001$) (Kulkarni, Swinburn, & Utter, 2015, p. 79). The results of the latter study most likely involve significant increases in family connection which would impact emotional health. It is also feasible that parents who have a conviction that good dietary practices are

important, may see great benefit in family connection. However, the results show that maintaining healthy food practices contribute to increased mental health. The adolescent's ability to maintain good physical habits puts them in a good position to be able to respond to the demands of developing into an adult more effectively.

Adolescence is a time of identity formation and psychological wellbeing and involves the ability to socially connect with others. Adolescents quite naturally transition from spending time with family to spending more time with peers, and acquire a desire for autonomy (Shanahan, McHale, Crouter, & Osgood, 2007). Spending time with peers often includes time spent on social media and with the vast increase in technology, time spent on social media has become inherent in nearly every teen's life (McMillan & Morrison, 2006). However, evidence demonstrates that those who spend less than two hours per day, compared with those who spent five to seven hours per day, on social media, were 44% less likely to experience low mood (Hartas, 2019). Adolescents who acquire interpersonal relationship skills, or the ability to relate and communicate well with others, have a greater perceived sense of connection (Arbeit, Hershberg, Rubin, DeSouza, & Lerner, 2016). These skills have also been found to be protective against risk-taking activities and psychological distress in this age group (Lombardi, Coley, Sims, Lynch, & Mahalik, 2019). A recent study also highlighted the importance of social connection when it investigated social norms and connectedness in adolescents within a family, friendship and school context. The results revealed; (a) Mother and daughter connectedness reduced substance use in females, (b) The higher the connection between fathers and sons, the less depression the son experienced, and, (c) Connectedness within female friendships can be a risk factor for female adolescent depression (Lombardi et al., 2019, p.91). Social relatedness is a critical element of health and wellbeing in adolescence and identity formation is dependent upon them. Anxiety naturally produces withdrawal from others, often due to the fear of negative evaluation, especially in

the adolescent age group. Anxiety reduction and preventative programmes can help to reduce withdrawal behaviour and enhance connection during a highly instrumental development phase.

Another critical developmental stage in adolescence is that of executive functions or higher-level cognitive processing. This involves the ability to sustain, working memory, reaction restriction, reaction assessment, prolonged attention, problem solving and the ability to facilitate cognitive flexibility (Han et al., 2016; Larsen & Luna, 2018). Although the neurobiological execution that stimulates these changes is not particularly well-understood, neuroscience has well-established data that it involves the maturing of multiple areas of the brain culminating with engagement in the pre-frontal cortex (Giedd, 2004). Emotional dysregulation (which will be discussed further in later chapters) is well known to inhibit the effective processing of areas that contribute to executive functions, namely the limbic system and frontal brain regions (Ahmed, Bittencourt-Hewitt, & Sebastian, 2015; Geronimi, Patterson, & Woodruff-Borden, 2016; Holler, Kavanaugh, & Cook, 2014). In contrast, emotional regulation is the ability to recognize emotions, recognize and assess the need for emotional management, and the ability to choose an effective coping strategy as situations arise (Ahmed et al., 2015). The ability to respond in this way to emotions requires the maturation of various top-level brain operations, such as executive functions (Kesek, Zelazo, & Lewis, 2009), intellective and metacognitive skills (Ahmed et al., 2015).

The adolescent developing brain is known to be especially vulnerable to psychological stress due to the huge developmental changes that are occurring (Lockhart, Sawa, & Niwa, 2018). It is especially importance to reduce the stress load at this critical time period as chronic psychological distress can become pathological and precipitate lasting impairment in adulthood (Lockhart et al., 2018). Emotional health is the ability to discern and be sensitive to emotions, be able to name and articulate them, as well as manage and

adjust emotions accordingly (Mónaco et al., 2019). In sum, it is clear that adolescent wellbeing and social development are dependent upon the ability to regulate emotions (Morrish, Chin, Rickard, Sigley-Taylor, & Vella-Brodrick, 2019) and there is need to reduce the psychological load on the developing brain in order to achieve these areas of growth.

Acceptance of thoughts and emotions is greatly linked to reduced psychological distress. The proficiency in which an individual can accept internal emotional experiences has been linked to more robust adjustment in adolescence (Morrish et al., 2019). A meta-analytic review involving 25,711 children and adolescents from 185 studies, revealed that anxious youths are limited in their ability to express (r =-0.15), understand (r =-0.20), and have reduced awareness (r =-0.28) of their emotions (Mathews, Koehn, Abtahi, & Kerns, 2016). Anxious youth also acknowledge having a diminished sense of emotional competency (r =-0.36). Particularly noteworthy in these results is the lack of acceptance of emotions (r =-0.49), which produced the largest effect size (Mathews et al., 2016). Acceptance, in this study, was defined as "the ability to accept one's own emotional experiences without reacting negatively to emotional experiences or attempting to suppress or stifle emotions" (Mathews et al., 2016, p.12). The study highlighted that empirical evidence points to the need to give children and adolescents the skills to effectively manage their emotions and it may be that initially accepting them facilitates other emotional regulation practices. As can be repeatedly seen all other health domains are affected by the ability to handle emotions in an effective manner. Acceptance of all emotional experience is a principle element in adolescent health. It has been proposed to underpin the emergence and continuance of anxiety and suggested to be of great value in accentuating this element in preventative programmes (Mathews et al., 2016).

Spiritual health has been linked to a variety of health outcomes (Cronjé et al., 2017). Spiritual wellbeing is therefore considered a protective factor against behavioural and

psychological dysfunction and this has been well-supported in the empirical literature in reference to the adolescent population (McCann & Webb, 2012; Michaelson et al., 2016; Raftopoulos & Bates, 2011). Religious attendance and spirituality have been found to significantly reduce the risk of unhealthy behaviours in adolescence, such as substance use (Malinakova et al., 2019; Scott, Munson, McMillen, & Ollie, 2006), lower rates of suicide (Koenig, 2009), lower rates of early and extra-marital sexual activity (Bridges & Moore, 2002; Koenig, 2001) and lessen the likelihood of carrying weapons, get into fights, drink and drive (Wallace Jr & Forman, 1998). Religious attendance has also been associated with higher levels of academic achievement and community service (Olson & Metzger, 2019). These findings may be explained by the discovery that religiousness is correlated with self-regulatory processes in a recent longitudinal study (Hardy, Baldwin, Herd, & Kim-Spoon, 2019). This study involved 500 adolescents and their parents and analyzed the adolescent data from ages 11 through to 22. The data showed that the less religiousness decreased, the more self-regulation increased. The authors concluded that religious development and the formation of self-regulatory processes are inherently connected as self-regulation prognosticated later religiousness. This strong association between self-regulation and religiousness was suggested to be due to a number of factors including: 1) Socialization and the way a family functions predicts how an individual family will react, 2) Parenting practices as parental religiousness may greatly enhance parenting practices which teach self-regulatory skills, 3) Personality attributes such as consciousness as this inherent quality thrive in a rule-based community, 4) Religious behaviour such as prayer, Christian Bible reading, financial giving as well as fasting, may help to produce futuristic thinking, and finally, 5) The great strength and leadership that can be obtained from having a relationship with the transcendent may facilitate self-regulation. Another study involving 15, 15-16-year-old Australian youths qualitatively showed spirituality promotes resilience (Raftopoulos & Bates,

2011). Through their relationships with God, resilience was mediated by a sense of reassurance, feeling cared for, and a perception of safety (Raftopoulos & Bates, 2011). However, there are significant gaps in the literature with regards to spiritually-enhanced interventions. Research which looks to address anxiety in adolescents by incorporating prayer and faith-based disciplines was difficult to find in non-religious journals. Spirituality, and its health, is an important component of wellbeing and greatly assists in effective coping strategies, such as self-regulation, in the lives of adolescents.

Statement of the problem

Anxiety disorders are highly prevalent in adolescents and the vast majority of those who suffer will not receive treatment (Fisak, Richard, & Mann, 2011). Anxiety disorders are also strongly associated with subsequent depressive disorders. If a reduction in anxiety is achieved, it is highly likely the incidence of depression in adolescents will also reduce. Accessible preventative strategies for anxiety in adolescents is a desperate need.

Significance of this project

This study will address gaps in the literature for the inclusion of empirically-validated therapies together with spiritually based preventive programmes. It will also build upon the more recently established work of ACT for anxiety in adolescence with the incorporation of prayer as an adjunctive therapy. Furthermore, future studies could help to provide clinicians with a greater array of spiritually-sensitive therapy approaches.

Chapter Two: Literature Review

Anxiety in adolescents

Definition and symptomology

Anxiety disorders are defined by the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5, American Psychiatric Association, 2013) as excessive anxiety and worry, which exist more days than not for a period of at least six months and are present in daily events or activities. It has also been described as ‘‘an unpleasant emotional state or condition that is characterized by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the autonomic nervous system’’ (Leppin, Schwarzer, Belz, Jerusalem, & Quast, 1987). Anxiety disorders develop when adolescents adopt maladaptive defence mechanisms and coping strategies and symptoms exceed the level in which they are able to control (Kerig & Ludlow). At that stage in its development, anxiety will start to impair an individual’s ability to perform as they normally would in most domains in life (Beesdo, Knappe, & Pine, 2009). Children and adolescents with anxiety internally express their distress and will commonly display this by physically withdrawing from others (Kerig & Ludlow). They regularly display excessive avoidance of a feared object, undue anger, frustration, irritability, and tearfulness (WHO, 2020). Physical symptoms in children with anxiety are extremely common, and more often than not, they will display stomach aches/nausea, tension and insomnia. Psychological symptoms include rumination/chronic worry, compulsions, and depression (Kerig & Ludlow). However, there are differences in symptoms between the types of disorders and the nature of growth and development in children, making diagnosis and consideration of contributing factors complex. In children and adolescents, normal, age-appropriate fear is differentiated from anxiety disorders by the level of intensity, adaptiveness, persistence and whether the individual has voluntary control of the anxiety (Kerig & Ludlow). It is common for them to have difficulty communicating thoughts

and feelings, if they recognize the association (Beesdo et al., 2009). In children and adolescents, the difficulty to recognize and communicate this distress requires teacher and parent reports, or behavioural assessment (Beesdo et al., 2009).

Epidemiology and comorbidity

Anxiety disorders are highly prevalent in adolescents. Worldwide figures show anxiety to be the sixth leading cause of ill health for adolescents aged 10-14 years (WHO, 2020). Anxiety disorders increase significantly during the time of adolescence with a lifetime prevalence of 32.4% (Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012) compared with 20% pre-adolescence (Chavira, Stein, Bailey, & Stein, 2004). New Zealand data shows a similar picture with one in five developing an anxiety disorder before the age of 19 (Ministry of Health, 2016). Approximately 50 per cent of mental illness starts before the age of 14 (WHO, 2020) and the vast majority of those who suffer will not receive treatment (Fisak et al., 2011) making easily accessible, preventative strategies, a desperate need. These figures are likely to be highly conservative as diagnosis usually occurs in a small proportion of those who suffer (Beesdo et al., 2009; Chavira et al., 2004). Also, the greater the severity, the higher the rate of diagnostic stability (Beesdo et al., 2009), meaning that symptoms that are more impairing tend to be more chronic in nature (Beesdo et al., 2009).

Many empirical studies have confirmed adolescence as being a time of greatly increased risk for anxiety, other psychological disorders and associated physical disorders (Beesdo et al., 2009; Kessler et al., 2012; Mathews et al., 2016; Woodward & Fergusson, 2001). Anxiety disorders are associated with significant comorbid psychopathology, especially depressive disorders (Boelens, Reeves, Replogle, & Koenig, 2012). Compared to depressive disorders, anxiety disorders are often the first to form (Beesdo et al., 2009). Essau (2003) discovered that as many as 72 per cent of those who suffered from both anxiety and depressive disorders had anxiety as the predominant symptom before depression. Other studies show one or more

co-occurring psychological disorder rates were as high as 65% – 95 % (Kovacs & Devlin, 1998). Essau (2003) also discovered that those with anxiety disorders displayed comorbidity rates of 58 per cent for all depressive disorders, 51 per cent for somatoform disorders and 22 per cent for substance use disorders. More recent work by the same author, with adolescents with anxiety disorders, found comorbidity rates of 64 per cent for major depression and 28 per cent for substance use disorders (Essau, Lewinsohn, Lim, Moon-ho, & Rohde, 2018). Physical conditions in adolescents with anxiety were also apparent including: migraines (Dindo, Recober, Haddad, & Calarge, 2017), physical disability and chronic illness (Balázs et al., 2018). This evidence suggests that there are points at which potential treatment may be of more benefit in the reduction of the triggers of anxiety than at other times, due to maturation processes in children and adolescents.

However, empirical literature is clear on the complexity around identification of 'subclinical' anxiety symptom thresholds and how symptomatology is reported (Beesdo et al., 2009). It has been considered that investigating a lifespan look at any psychopathological occurrences may be of more value than a specified duration, such as in the last month or during a 12-month period, as diagnostic systems suggest (Beesdo et al., 2009). Developmental variations in understanding, language and feeling-based awareness must be thought through and considered wisely when looking at all other precipitators of anxiety disorders in adolescence.

In sum, anxiety disorders and depressive disorders are very common in adolescence and if untreated, an adolescent who experiences unmanageable anxiety, will highly likely develop depression, and potentially, a chronic condition. This ongoing nature of impairment will cause disturbance in their relationships, education, work and recreational activities (Beesdo et al., 2009). It can also interfere significantly with social relationships/acceptance amongst peers, academic performance (Mathews et al., 2016), as well as contribute to

increased aggression, increased depression (Grover, Ginsburg, & Ialongo, 2007), and even with early parenthood (Woodward & Fergusson, 2001).

Risk factors for anxiety disorders in adolescents

Adolescence is a time of significant growth physically, intellectually, emotionally and socially. This immense growth can leave adolescents vulnerable to a range of risk factors in the development of anxiety which can make development depart from the expected course in these domains become awry. Autonomy is one of the main psychosocial goals of adolescence and has been found to provide self-esteem, perceived peer acceptance and peer support (Parveen, 2019). However, it has been well documented that both boys and girls commonly have a drop in self-esteem during adolescence (Davis, Kerr, & Kurpius, 2003). One possible contributor is that adolescents are more impacted by emotions with increased limbic reactivity (Casey, Heller, Gee, & Cohen, 2019). Another study discussed the drop in self-esteem in relation to prosocial behaviour. The association is especially true for females and explanations around this are suggestive of societal influence and social pressures (Fu, Padilla-Walker, & Brown, 2017). Some other suggestions that have been put forward for lowering of self-esteem during adolescence include social media usage (Woods & Scott, 2016), and authoritarian or neglectful parenting style (Riquelme, García, & Serra, 2018). There is a high possibility that many factors contribute to effect levels of self-esteem, just as they do for the emergence of anxiety.

Development is complex and the stage of adolescence comes with a host of milestones including social and emotional development which form and shape identity, values, and beliefs (Kerig & Ludlow). Psychologist, Erik Erikson, developed the Social-emotional Development Theory (Erikson, 1958, 1963) which outlines personality advancing over a series of sequential psychosocial steps (Marcia, 1980). Erikson suggests that if these

steps are interrupted (by distress or trauma) then healthy development does not occur and psychopathology forms (Marcia, 1966).

The development of anxiety disorders is sophisticated by nature and involves a multitude of interwoven variables in its etiology (Beesdo et al., 2009). Demographic, family-genetic, temperament, neurobiologic, environmental and spiritual factors have been found to serve as potential risk and protective factors that lead to either a disordered developmental pathway, or are an enhancement of wellbeing (Beesdo et al., 2009; Hawks, Hull, Thalman, & Richins, 1995; Kerig & Ludlow, 2012). Twin and family studies consistently show genetic contributions in anxiety disorders (Hettema, Neale, & Kendler, 2001; Johnson, Cohen, Kasen, & Brook, 2008; Merikangas, Avenevoli, Dierker, & Grillon, 1999). Children of parents with an anxiety disorder are at a significantly raised risk of developing one themselves, and a distinctive liability exists when both parents display psychopathology (Johnson et al., 2008). A prospective longitudinal study, with 1037 males and females were followed to age 32, with the data revealing a specific familial risk in those with generalized anxiety disorder (Moffitt et al., 2007). Other studies have shown that children of parents with an anxiety disorder were seven times more likely to develop an anxiety disorder than children of parents without an anxiety disorder (Turner, Beidel, & Costello, 1987). However, findings from a meta-analysis found the actual genetic component transmission rates to be small at around 30% to 40% (Hettema et al., 2001). Therefore, there is a vast amount of variance that is attributable to factors other than genetic contributions, and these are generally considered to be environmental factors, or all contexts in which the individual is exposed to (Hettema, Prescott, Myers, Neale, & Kendler, 2005). Genetic and environmental pathways, and the influence that they exert upon each another, add to the complexity around clear risk factors involved in the development of anxiety in adolescents (Drake & Ginsburg, 2012). It is clear that even if an underlying vulnerability exists, there is still a significant proportion of

protective and ameliorating influences that can contribute to the manifestation of normative developmental processes.

An array of family and environmental factors have been found to be associated with the emergence of anxiety in adolescence including insecure attachment to caregivers in infancy (Drake & Ginsburg, 2012), difficult childhood (Kessler, Davis, & Kendler, 1997), trauma (Perkonigg, Kessler, Storz, & Wittchen, 2000), unsuitable punishment, and stressors that serve as triggers (Kerig & Ludlow). The quality of a parent/child relationship can either increase or reduce the effects of a predisposed vulnerability to anxiety (Bögels & Phares, 2008). Therefore, not all children with a predisposition to anxiety will go on to develop a disorder and there is significant evidence to suggest that the quality and stability of the bond with the caregiver mediates the connection between anxiety, depression and social withdrawal (Gullone & Taffe, 2012). This relationship is transactional in its contribution as children who are biologically predisposed to hyperarousal have a reduced tolerance for social stimulation and may be difficult to soothe (Rubin, Coplan, & Bowker, 2009), which can add strain to the attachment relationship. The ability to accept defeat in the face of adversity has been found to be necessary for growth and those who had a secure attachment to caregivers, were able to accept defeat without a feeling of powerlessness or loss of hope, compared with those with a fearful attachment style (Sturman, 2019).

Parenting styles which display a lack of warmth, higher levels of criticism and rejection, along with anxious modelling, play a role in the development of child anxiety disorders, especially in those who have a temperamental sensitivity (Drake & Ginsburg, 2012). (Kendler, Myers, & Prescott, 2000) investigated the effects of high levels of coldness and authoritarianism in a study with 1033 female adult twin pairs and found that they were at an increased risk of nearly all disorders. In a recent meta-analysis of parenting programmes for primary aged children, child anxiety with an increase in positive parenting, increased

connection and decreased unfavorable parent-child communication (Spencer, Topham, & King, 2019).

Another parenting study involving 359 parents, and 332 adolescents aimed to reduce the incidence of depression and anxiety in the adolescents through a web-based programme, Partners in Parenting (PiP). This study involved up to nine personalized interactive modules online as well as a weekly phone call. After 12-months, follow up results revealed a significantly increased enhancement in parenting (d=0.51; 95% CI 0.30 to 0.72). However, it was interesting to note that these changes were not recognized by the adolescents and no significant effects were found in parenting, anxiety or depression (Yap et al., 2019). However, a NZ-based study found benefits in a parenting programme, MyTeen, a text messaging programme (Chu et al., 2019). The aim of the programme was to support parents of adolescents with parenting skills and mental health education. It was found to be of benefit in enabling both early identification of potential mental health concerns, and parental sensitivity. It may be that through the use of parent education and support programmes, adolescent mental health concerns can be identified and addressed sooner, which may decrease the level of psychopathology in teens.

Being female routinely shows in the literature as a risk factor for the ontogenesis of anxiety disorders (Beesdo et al., 2009). Girls are twice as likely to develop an anxiety disorder by the age of six compared with males, and this sex distinction rises with age (Beesdo et al., 2009). There is general agreeance that this differentiation was due to genetic influences, rather than socially constructed (Lewinsohn et al., 1998). Sex differences are clear in the proportionate figures of females versus males with anxiety disorders. It may be worthwhile designing more sex-specific preventative programmes to account for the differing way that females and males process information, and that appeal, as well as speak intimately to female audiences.

Much data suggests that personality features high on the list of risk factors that contribute to the development of anxiety (Beesdo et al., 2009; Kerig & Ludlow, 2012; Liu & Bell, 2019). Personality, or temperament, is one's own characteristic way of functioning, whether that be in thought, feelings or behaviours (Kazdin, 2000). With the odd exception (Beck & Jackson, 2020), most research suggests that personality traits are fairly consistent throughout an individual's lifetime (Rothbart, 2011). Various models have been used to explain the association between personality and anxiety, including the Integrative Developmental Psychopathology Model (Vasey & Dadds, 2001) which outlines temperament, or more specifically the trait of behavioural inhibition as a predisposing influence. Behavioural inhibition (Rothbart & Bates, 2007) is said to be the stable tendency to respond to threat with fear and withdrawal in novel circumstances (Beesdo et al., 2009). Behavioural inhibition has been found to be reasonably stable (Bourdon et al., 2019), is strongly associated with anxiety in the 10% of children whose inhibition is relatively fixed and severe (Turner, Beidel, & Wolff, 1996) and is a predictor of anxiety in adolescence (Hudson, Murayama, Meteyard, Morris, & Dodd, 2019).

Another main focus of adolescent development is that of spiritual health and it has a strong association of buffering against anxiety (Cronjé et al., 2017). Spiritual despondency has been described as discouragement in relation to the spiritual life of the individual which equals feelings of discouragement, dejection, and burn out (Piper, 1988). Spiritual despondency is a risk factor in the development of anxiety (Kézdy, Martos, Boland, & Horváth-Szabó, 2011). It has long since been established that facilitating purpose and meaning in an adolescent's life is protective from psychological distress as it helps to shape identity (Frankl, 1979; Grimwade & Cook, 2019; Marcia, 1966). Spiritual factors are said to play a significant part in identity formation (Steiner, Zaske, Durand, Molloy, & Arteta, 2017) and are highly dependent upon connection with others, particularly in females (Goldstein,

2010). A large study with 4000 adolescents which was performed by the Higher Education Research Institute (2004) found that over 90% of the students agreed with the statement that "all life is interconnected" and over three quarters (77%) acknowledged that we are all "spiritual beings" (Astin, Astin, & Lindholm, 2004, p.2). NZ data from the Faith and Belief in New Zealand (2018) study found that 22% of Generation Z (18 to 23 year olds) identify with Christianity and found that more than half (52 per cent) believe that spirituality is valuable for their general physical and mental health (McCrindle, 2018). Clearly, more than the vast majority of adolescents feel the need for a spiritual connection.

Adolescents are said to be in the synthetical-conventional stage of faith development, which lacks third person perspective (Fowler & Dell, 2006). Third person perspective enables an individual to view the perspective of both self and others and is dependent upon the views of important others for clearness and validation of their own identity (Fowler & Dell, 2006). In essence, it appears that to enhance identity formation in adolescents, connection with significant others and God are important elements and one that needs to be strongly considered for adolescent health and wellbeing. Davis et al. (2003) reported that greater spiritual, religious and existential wellbeing led to lessor amounts of anxiety in 45 female and male at-risk high school students. The study revealed that spirituality and religiosity may moderate or affect the strength of anxiety in adolescents. Females had higher anxiety which, when analyzed, was consistent with lower expectations for a meaningful life. There was a significant negative relationship with existential wellbeing and trait anxiety for both males and females. Those with lower trait anxiety were found to be much more positive about their future, that their lives were developing positively and that their lives had meaning and purpose. In addition, religious doubt has been found to be associated with higher levels of anxiety in sample of 15-25-year olds (Kézdy et al., 2011).

In sum, purposeful and meaningful existence is a determinant of health and wellbeing in adolescence and directly affects their level of anxiety. Female adolescents are particularly vulnerable in this area displaying high anxiety related to lower future hope for a meaningful life. It is important to look at ways to create purpose and meaning in the lives of adolescents and to identify potential barriers, such as religious doubt. Spiritual despondency is a risk factor in adolescents and its identification can help to inform prevention programmes.

Depression in adolescence

Definition and symptomology

Depression can be a symptom which is displayed as a drop in mood as a normal response to a particular stressor or life event (Kerig & Ludlow, 2012). It can also be thought of as a syndrome where multiple symptoms co-occur, such as sadness, loneliness or worry, but it doesn't generally cause major distress or impairment (Kerig & Ludlow, 2012). However, depression as a disorder, such as major depressive disorder or 'clinical depression', can be distinguished from a symptom or syndrome by the manifestation of persistent interference in everyday life (Psycom, 2020). The latter is the type of depression that this study will be focusing on. The DSM-5 (Association., 2013) defines major depression disorder as featuring five or more symptoms during a two-week interval, with one symptom being depressed mood or loss of pleasure, which causes significant impairment to functioning or distress. These symptoms include having a depressed mood every day, diminished interested or pleasure, weight loss and appetite changes, a slowing down of thought and/or physical movement, fatigue, feelings of worthlessness or guilt, impairment in concentration or decisiveness, or recurrent thoughts of death or suicide (Psycom, 2020). A New Zealand study revealed some of the most common symptoms of adolescent depression in a clinical sample of 121 adolescents attending an outpatient mental health unit (Crowe, Ward, Dunnachie, & Roberts, 2006). The symptoms typically experienced were irritability, insomnia, fatigue, lack

of concentration, difficulty making decisions, social withdrawal and feelings of loneliness (Crowe et al., 2006; Kerig & Ludlow, 2012).

Epidemiology and comorbidity

Depression can occur at any age, even as young as infancy (Kerig & Ludlow, 2012; Stevanovic, Jancic, & Lakic, 2011). However, depression rates increase substantially during the adolescent phase with the mean age being 15 years (Kerig & Ludlow, 2012). The onset of major depression can occur quickly with recurrence probable, as lifetime prevalence rates have been found to be in the range of 15 to 20 per cent for adolescents (Kerig & Ludlow, 2012). NZ data reveals very similar rates with one in five adolescents experiencing depression by the age of 18 (Mental Health Foundation, 2020). There also appear to be significant sex differences in incidence rates with males and females between the ages of 12 and 17, showing rates of 13.6 per cent for males, and 36.1 among females (Breslau et al., 2017).

Depression has a high chronicity rate which can have major ongoing psychological and physical health effects. Adolescent depression is associated with adult depression and adolescents with depression have been found to have a 2.78 greater chance of this continuing on into adulthood (D. Johnson, Dupuis, Piche, Clayborne, & Colman, 2018). It has been found that 40 to 70 per cent of depressed adolescents have another comorbid condition, the most predominant being anxiety which usually precedes depression (Kerig & Ludlow, 2012). Results from the Dunedin Longitudinal Study, New Zealand, which involved 1037 participants, revealed that adult obesity is associated with adolescent depression, but only in females (Richardson et al., 2003). Other associated conditions with adolescent depression include suicidality in adulthood (D. Johnson et al., 2018), high rates of disruptive behaviour disorders, such as anger and aggression, especially amongst boys (Kerig & Ludlow, 2012), eating disorders, especially amongst girls, and substance abuse (Kerig & Ludlow, 2012).

Risk factors for depression in adolescents

There have been many risk factors found to be associated with adolescent depression. A large study involving 95,856 participants found being female, an older adolescent, from single-mother households, having lesser authoritarian caregivers and adverse school events were significantly associated with adolescent depression (Lu, 2019). Other factors that have been found to be associated with adolescent depression are maternal prenatal stress (Maxwell, Fineberg, Drabick, Murphy, & Ellman, 2018), and culture and adversity associated with low socioeconomic status (Kerig & Ludlow, 2012). However, other studies have stressed that the presence of depression is due to multi-causal factors and therefore identifying individual risk factors may not be beneficial (Gunlicks-Stoessel et al., 2019)

NZ data suggests that intergenerational patterns of behaviour are risk factors for depression. A study of 950 11-year-olds, and 931 14-year-old Pacific Island youths living in NZ were found to be at high risk of depression if they were involved in bullying and gang behaviour, parental domestic violence (Paterson, et al., 2008) and belonged to single parenting families (Costello et al., 2008). In contrast, positive parenting practices, such as emotional warmth and authoritative discipline, have been found to be highly protective against youth depression (Paterson et al., 2018).

The effectiveness of anxiety prevention programmes in children and adolescents

Many group-based anxiety prevention therapies have been found to be very impactful for adolescents. The effects that are noted have had significant implications on every area of their lives and continue on to impact their future (Estrada et al., 2019). There is also a strong long-term economic argument for investing in prevention programmes for child and youth mental health in terms of future productivity (Farrell & Barrett, 2007). Currently, nine per cent of the New Zealand's total health budget is allocated to mental health (World Health Organisation, 2018). Without intervention, children with anxiety continue to suffer well into

adulthood with multiple life domains being affected (Donovan & Spence, 2000) at a huge cost to New Zealand's already overburdened health system.

Prevention programmes using cognitive behavioural strategies for anxiety in adolescents have been shown to be somewhat efficacious. A meta-analytic review of previous prevention programmes, from 1970 through to 2009, targeting anxiety in children and adolescents revealed a significant effect, albeit small (d = 0.18) (Fisak et al., 2011). This effect size was felt to be consistent with most other reviews in youth prevention studies. In the review, the programme's effectiveness increased if a mental health professional ran the programme (versus a lay person). The FRIENDS programme was also found to be highly effective (Barrett, Farrell, Ollendick, & Dadds, 2006; Schleider, Abel, & Weisz, 2019) and the beneficial effects of this programme were still evident at the three year follow-up (Barrett et al., 2006). Even small effect sizes were felt to be meaningful as they provide the possibility of leading intervention groups into beneficial pathways as they learn to incorporate the knowledge and therefore grow and adapt in new ways (Fisak et al., 2011).

More recent work reaffirmed the small effect sizes for children and adolescent anxiety preventative programmes. Hugh-Jones, Beckett, Tumelty, and Mallikarjun (2020) performed a meta-analysis looking at RCT prevention programmes with symptomatic five to eighteen year-old children and adolescents from 1994 through to 2019. They found that the small beneficial effects ($g = -0.28$, CI $= -0.50, -0.05$, $k = 18$) were maintained up to the 1-year follow-up ($g = -0.24$, CI $= -0.48, 0.00$, $k = 4$). These results are also paralleled by (Neil & Christensen, 2009) with the overall effect size of studies from 1987 to 2008 ranging from 0.20–0.76 (small to moderate). Caution was recommended in both meta-analyses regarding the high risk of bias and inconsistency of data ($I^2 = 78\%$). However, conclusive evidence lay in the ability to show meaningful results in the lives of those adolescents who experienced a

reduction in symptoms and targeted interventions with longer term follow up encouraged by the authors.

However, other studies in youth demonstrate significant amelioration of anxiety symptoms pre to post intervention. In a very recent study investigating the efficacy of the transdiagnostic EMOTION programme, the results revealed that the intervention group displayed twice the amelioration of symptoms than the control group. The study involved 873 eight to twelve-year-old Norwegian children across 36 schools who were considered high risk for emotional problems. The intervention involved a cognitive-behavioural-based modality targeting anxious and depressive symptomology, utilizing the components of thought identification, emotional regulation strategies, problem solving and coping skills. Anxiety symptoms were reduced by 17.4% and 19.7% (contingent upon on gender and age group), compared with 7% and 8% (contingent upon on gender and age group) for the control condition (Martinsen et al., 2019). This study lends further support to preventative school-based strategies targeting adolescents exhibiting anxiety symptoms.

Long term efficacy of youth anxiety prevention programmes is still in its infancy but those that discovered long term results have been able to show the mechanism of action. One study showed anxiety reduction was maintained over at least a six-month period in a single session of growth mindset psychoeducation with 96 12-15-year-old children. The authors revealed that the mechanism of action was found to be a sense of perceived control and this was advised to be a target for preventative programmes for internalizing behaviour (Schleider et al., 2019). High attrition rates have also been found to be a moderator of effect sizes in prevention programmes which may have significantly influenced the results of previous studies (Ahlen, Lenhard, & Ghaderi, 2019). In sum, prevention programmes for youth anxiety have been found to produce good results, with some evidence of longer-term benefit to developmental trajectories. However, it would be of great value to incorporate ways to

increase adherence. Study design should include personally fulfilling and meaningful content geared towards the targeted population.

Prevention programmes aimed at adolescents have the added benefit of enhanced cognitive processing which may be a key feature in the programmes' success, compared with programmes aimed at younger children. There have been mixed results with regards to long-term efficacy rates. Dadds et al. (1999) revealed that a 20% amelioration rate at two-year follow-up study of 128 seven- to fourteen-year-old children. However, a study looking into the efficacy of The Aussie Optimism: Programme-Positive Thinking Skills (AOP-PTS) programme involving 370 eight to nine year-olds produced no significant long-term effects (at 42 and 54 months post-intervention) (Johnstone, Rooney, Hassan, & Kane, 2014). The authors felt that, despite justification for treatment at this age, cognitively-based programmes may have been too complicated in nature (Johnstone et al., 2014). The present study is aimed at adolescents, not only to address their specific developmental hurdles, but also to make the most of their developmental growth and enhanced ability to process emotional and cognitive difficulties.

There are several factors that have been found beneficial in prevention programmes targeting anxiety in adolescents. Prevention programmes in schools seem to have differing effects on clinical and non-clinical samples (Frydenberg, 2018). Of particular importance is identifying risk and protective factors, including parental anxiety, parenting behaviours, and stressful life events (Fisak et al., 2011), as well as the value of highlighting and working from a place of the child's strengths (Farrell & Barrett, 2007). Importantly for adolescents is that reeducation about interconnectedness as being socially connected, has been found to improve self-confidence and wellbeing (Estrada et al., 2019). However, sufficient identification can be an issue in child anxiety as the vast majority don't seek or receive clinical treatment (Donovan & Spence, 2000). This has been found to be due to a combination of factors

including teachers overlooking the issue due to the often obedient, submissive or withdrawn nature of an anxious child (Donovan & Spence, 2000), as well as the parent's common belief that it is a stage that the child will grow out of and therefore the significance of the suffering is underrated (Donovan & Spence, 2000). Involving parents, especially in the preadolescent phase, has been found to increase the success of treatment (Rapee, 2012).

Emotional regulation strategies have been found to be especially beneficial for adolescents. A longitudinal study investigating anxiety sensitivity and attentional bias found that disengagement from negative cognitions reduces anxiety in adolescents (Ho, Dai, Mak, & Liu, 2018) and provides further evidence for the introduction of acceptance-based strategies. Additionally, as outlined earlier, the evidence from a meta-analysis revealed that adolescents with anxiety are less effective at understanding (r = -0.20) and accepting their emotions (r = -0.49) and exhibit a greatly likelihood of adopting unhealthy coping strategies (r = 0.34) (Mathews et al., 2016). The vast majority of studies that have been trialled previously have focused on cognitive-behavioural techniques (78%) (Ho et al., 2018). Acceptance strategies are beneficial as they help to facilitate emotional regulation.

Acceptance and Commitment Therapy for anxiety

Acceptance and Commitment Therapy (ACT) has been found to be particularly effective in the treatment of anxiety disorders (Swain, Hancock, Hainsworth, & Bowman, 2013). Acceptance of thoughts, feelings, urges, and physical feelings is one of the initial components of ACT and has been found to be a particularly potent element of the therapy (Swain, Hancock, Hainsworth, & Bowman, 2015). Acceptance may serve not only as a moderator of psychological flexibility but also as an exposure technique (Bluett, Homan, Morrison, Levin, & Twohig, 2014). Acceptance is an emotional regulation strategy and studies in the adolescent population show that anxiety is connected to emotional dysregulation (Schneider, Arch, Landy, & Hankin, 2018). The theory that underpins ACT is

the Relational Frame Theory which takes the view that "trying to change difficult thoughts and feelings as a means of coping can be counter-productive, but new, powerful alternatives are available, including acceptance, mindfulness, cognitive defusion" (Association for Contextual Behavioural Science, 2017).

Since 2012, there has been a wealth of empirical research on ACT for various forms of anxiety in adolescent populations, including OCD (Armstrong, Morrison, & Twohig, 2013), anxiety and OCD (Bluett et al., 2014), subclinical anxiety and depression (Burckhardt, Manicavasagar, Batterham, Hadzi-Pavlovic, & Shand, 2017), text anxiety (Cunha & Paiva, 2012), generalized anxiety disorder (Demehri, Saeedmanesh, & Jala, 2018), social anxiety (Esmaeili, Amiri, Abedi, & Molavi, 2018; Hazavei & RobatMili, 2019), improving general mental health symptoms (Kallapiran, Koo, Kirubakaran, & Hancock, 2015), trichotillomania (E. B. Lee et al., 2020), interpersonal anxiety (G. Lee & Son, 2019), anxiety associated with stuttering (Saeedmanesh & Babaie, 2017), and clinical levels of anxiety (Schneider et al., 2018; Semple & Lee, 2008; Swain et al., 2013; Swain, Hancock, Hainsworth, & Bowman, 2014; Vøllestad, Nielsen, & Nielsen, 2012).

ACT has been found to be useful in both subclinical and clinical anxiety symptomology. Research that most closely aligns with this research involves a feasibility study for a prevention programme performed with 48 adolescents (aged 14-16 years) (Burckhardt et al., 2017). The participants were recruited from a private school in Sydney, Australia, and exhibited subclinical anxiety and/or depressive symptoms. ACT was delivered in a group format in the school setting and results produced moderate to large effect size differences when compared to the control condition. The control condition was 'pastoral care' on social justice and cyber-safety. Despite the study not having enough participants to power a significant result (The Depression Anxiety and Stress Scale - anxiety, $p = .88$), the between group and mean differences from baseline to post-intervention showed benefits in the ACT

condition. A case study involving one adolescent with anxiety assigned to ACT and another assigned to treatment as usual showed great improvements in internalizing symptoms (Harrington, 2017).

Other evidence supports ACT in the use of preventative programmes for adolescents with clinical forms of anxiety, showing medium to large effect scores from baseline to follow-up (Rowan, Vijaya, Philip, Dusan, & Fiona, 2017). A case study involving three adolescents, two 12-year-old children and one 13-year-old, with Obsessive Compulsive Disorder (OCD) displayed a 40% drop in self-reported compulsions from pre to post following an 8-week protocol for treating childhood OCD. This result was maintained at the three-month follow-up (Armstrong et al., 2013). The authors noted that more parental involvement may affect the results of the study due to the inherent facilitation of behaviour that occurs, most often unknowingly, within families. Other studies support this conclusive work around acceptance processes and anxiety. Four hundred and forty-nine adolescents with test anxiety were found to have low levels of acceptance and mindfulness in comparison to those with little evidence of test anxiety (Cunha & Paiva, 2012). More recent work has also shown ACT has been successfully utilized in adolescents with social anxiety. Thirty adolescents who underwent eight 90-minute sessions, significantly improved their psychological flexibility and behavioural inhibition ($p < 0.001$), compared with the control group. These improvements were maintained at 1-month follow-up (Hazavei & RobatMili, 2019). In sum, adolescents with clinically anxious symptoms seem to greatly benefit from ACT and its component parts.

ACT has been found to be comparable to other treatments for anxiety in adolescents. A meta-analysis of mindfulness-based therapies involving 1454 participants from 11 studies, found ACT's efficacy was similar to that of other behavioural therapies in the management of anxiety (ES = 0.02, 95% CI: −0.32, 0.37) (Kallapiran et al., 2015). Bluett et al. (2014) also

investigated ACT for anxiety and OCD in their meta-analysis and discovered ACT's efficacy is as effective as CBT. This review analyzed 49 articles for the connection between anxiety and psychological flexibility, assessed by the Acceptance and Action Questionnaire (AAQ and AAQ-II). Thus, a lower level of acceptance predicted higher levels of anxiety and disorder impairment. Evidence strongly implies that ACT is as beneficial for anxiety in the adolescent population as other leading psychotherapies.

Despite ACT's empirical validation in the treatment of anxiety disorders, there are still a percentage of individuals who do not respond to treatment. Some studies have found an individual's faith is an often-overlooked area in the therapeutic setting (Boelens et al., 2012) and that adolescents desire their faith to be addressed in therapy (Ní Raghallaigh, 2011). Consequently, there are still large gaps in the area of spiritually-enhanced interventions paired with empirically-supported secular therapies directed at adolescences with subclinical anxiety.

Acceptance and Commitment Therapy and Christianity

ACT processes and philosophy have been deemed generally acceptable and compatible with Christian theology (Aten & Schruba, 2016; Bazley & Pakenham, 2019; Rosales & Tan, 2016). However, there remains some caution around the role of thoughts and the use of acceptance and the use of terminology such as values and how mindfulness is utilized (Knabb, 2016; Rosales & Tan, 2016). Mindfulness has been likened to the practice of quietness in the presence of God which the biblical Desert Fathers termed *hesychia* (Aten & Schruba, 2016). The conflictual difficulty that is held with the acceptance element of the ACT approach by Christianity, is in dealing with distressing thoughts. Rather than purely accepting whatever enters the mind, biblical instruction encourages believers to "be transformed by the renewing of your mind" (Romans 12:1-2, New International Version). Another biblical reference in this regard is in 2 Corinthians 10:5 (New International Version)

which says to "take captive every thought to make it obedient to Christ" (2 Corinthians 10:5). Rosales and Tan (2016) suggest that the concept of acceptance of thoughts may have to be "applied to a broader array of thoughts that give particular meaning to Christians' lives" (Rosales & Tan, 2016, p.273).

In a therapeutic setting, there is need to be cognizant of a Christian's reservation around the use of acceptance and mindfulness, as well as the terminology involved. Christians can be encouraged to release their thoughts into Jesus' care with prayer. Prayer has also been suggested to be akin to open, present-moment attention, or the use of mindfulness, when practiced in a contemplative style (Knabb, 2016). The release of disturbing thoughts, along with the contemplative style of prayer, are the two aspects of prayer that this research is incorporating into the therapeutic intervention.

Prayer

Defining prayer is a perplexing process. In practice, prayer can be standardized by following a specific prayer, contemplative, or heartfelt and spontaneous. It can occur alone, in small intimate groups, or in large crowds. Prayer can be God-centered, focused on thanksgiving, acknowledging the creator, or it can be individually-centered. Like any form of communication, prayer can be motivated by a variety of felt emotions, desires or needs. Prayer has been stated to be multifaceted including deliberate acts of articulation, inspiration and understanding (Ladd & Spilka, 2013). The Oxford Dictionary defines prayer as "a solemn request for help or expression of thanks addressed to God" (Oxford University Press, 2020). Prayer has also been described as "thoughts, attitudes, and actions designed to express or experience connection to the sacred" (McCullough & Larson, 1999). Neurobiologically, prayer has been found to have particular effects on brain activity investigated through techniques such as electroencephalography, structural neuroimaging (MRI), and functional neuroimaging (fMRI, PET) (Rim et al., 2019). Increased activity occurs in the following

brain regions as a response to prayer: medial frontal cortex, orbitofrontal cortex, precuneus, posterior cingulate cortex, default mode network, and caudate (Rim et al., 2019). According to some research, prayer is divergent from meditation and mindfulness in its neurobiological expression (Rim et al., 2019; Svob, Wang, Weissman, Wickramaratne, & Posner, 2016). The underlying assumption, with gathered support in this research, is that prayer is: a desired act, the acknowledgement of need, a method of giving up control, a focus on the present moment, as well as having an underlying core belief that answers to prayer can and are supernaturally answered.

The Serenity Prayer

The Serenity Prayer (Appendix 1) was written by an American theologian by the name of Reinhold Niebuhr in 1932-33 and first published in 1951 (Shapiro, 2014). It has been extensively used in 12-step programmes, such as Alcoholics Anonymous, with slight adaptations to the original (Hazeldean Betty Ford Foundation, 2020). The objective of the prayer in its original form was for courage to change, followed by acceptance of what cannot be changed, and finally, insight to know the difference between the two (Littleton, 2008). The Serenity Prayer has been successfully widely used for conditions ranging from: stress management (Campbell, 2015), mastery-enhancing treatments (Reich, 2015), treatment for addictions (Ferentzy, Skinner, & Antze, 2010), self-care for dementia patients' caregivers (Sistler & Washington, 1999), recovery from mental illness (Fallot, 1998), integration in standard psychotherapy (Connors, Toscova, & Tonigan, 1999), to change management in leadership (Harle, 2005). Living in the present moment is certainly less stress-inducing that worrying about future foreboding. Despite the encouraging results in the divergent populations, none of the studies utilized an adolescent population. However, the Serenity Prayer has been felt to integrate well into a classroom environment due to its simplicity and acceptability (Campbell, 2015). This research is a direct response to the gap in literature for

use of the Serenity Prayer in the adolescent population, as well as operating in alliance with ACT, to facilitate acceptance processes (Brillhart, 2017).

What are the results of other prayer specific to anxiety?

Prayer-based interventions have been difficult to directly compare with each other due to the differing methodologies between them. The majority of research on prayer and anxiety utilizes a clinical, adult population and is therefore not generalizable to adolescents (Boelens et al., 2012). However, a significant reduction in symptomatology was achieved in most studies (Boelens et al., 2012; Cassell, 2018; Garcia-Klemas, 2019; J. Irene Harris, Schoneman, & Carrera, 2002). The function of prayer has been suggested to be protective from psychological distress in some individuals and results in stress reduction (Peterman, LaBelle, & Steinberg, 2014). This finding was also supported by (Boelens et al., 2012), who found participants who received prayer (in six weekly, one-hour prayer sessions) had a statistically significant reduction in anxiety and depression and more optimism compared to baseline ($p < 0.01$ in all cases). These results were maintained at one-year follow-up. This effect was hypothesized to be due to the replacement of negative thought patterns. With the daily discipline of reading patterns of scripture and praying, this practice “may enable clients to maintain their spiritual health” (Boelens et al., 2012). Therefore, future research may benefit from looking at the adoption of healthy coping mechanisms as the participants response to prayer.

The literature is generally very supportive of all prayer types. Garcia-Klemas (2019) compared centering prayer (contemplative mediation focused on God) with intercessory prayer (being prayed for by another/others) and found no significant differences between the two approaches, but both types of prayer produced significant effects in reducing stress levels. However, evidence did support further anxiety reductions in God-centred prayer compared with ego-centred prayer (Francis & Penny, 2016; Levy, 2017), one-on-one prayer,

and individual prayer (Boelens et al., 2012). O'Laoire (1997) also found no difference between directed or non-directed prayer, but both significantly improved ($p<.01$ to $p<.0001$) on all eleven pre and post measures, including anxiety levels. Additionally, a meta-analysis involving 10,115 participants, looking at the efficacy of prayer on mental health including anxiety, found a statistically significant result (d = 0.66) (Thompson, 2008). One study with adolescents found that prayer produced a cyclical change response which led to identity formation which produced emotional change facilitating the skill of willingness to cope (Ehrmantraut, 2015). Literature strongly supports most prayer types as being effective at reducing anxiety but one-on-one or individual prayer may be more beneficial.

Mindfulness-based prevention programmes have also received support for anxiety reduction in children (Potek, 2012). However, a study comparing meditation and prayer found that adults who meditated had no significant differences in anxiety symptoms, whereas, those who prayed and attended a worship service had reductions in anxiety (Bartkowski, Acevedo, & Van Loggerenberg, 2017). Other studies revealed that prayer frequency was found to be associated with a larger degree of purpose in life for a UK-based adolescent population (Francis & Penny, 2016). Also, a belief that God personally intervenes in one's life was strongly negatively correlated with anxiety as was church attendance (Petersen & Roy, 1985). One study where the population closely aligns with this research is that involving ten participants and the impact of Christian prayer on reducing anxious symptoms. Groover (2020) discovered that 100% of the participants experienced a reduction in anxiety following prayer and 80% of them utilised a conversational communication style when praying. One final study performed with 199 young adults from a Texas-based national longitudinal study outlined correlations between prayer, scripture readings and the mental health measures (George, 2019). An RCT was performed and participants were randomized to the following groups: 1) control group – no prayer or scripture, 2) common thanksgiving

prayer, 3) common peace/confidence prayer, 4) personal thanksgiving prayer, 5) personal peace/confident prayer, and, 6) scripture reading. The results reported that all of the psychological measures had statistically significant results for increases in happiness, peace/harmony, decreases in stress, depression, struggle, and distress, compared to the control group. These results strongly support prayer being effective for both the increase in positive emotions as well as the decrease in negative emotions.

How does prayer work? What are the mechanisms of change?

Prayer can help reduce anxiety through the mechanisms of adopting a healthier coping mechanism, providing purpose, giving over control, and having an increased sense of connectedness, both to God and others, as well as the replacement of disturbing thought content with life-enhancing thoughts. George (2019), in the study that was reported above, revealed that the largest results of prayer originated from personal prayer and centred on "themes of casting one's burdens onto Jesus, accepting the peace He gives, focusing on Christ, and remembering His presence in times of fear" (George, 2019, p. 31). The themes of giving over responsibility, acceptance and being aware of Jesus' presence in the moment, are all aspects that have been included within this research study as there is evidence that they may be active change processes.

Through the daily disciplines of prayer and scripture reading, negative thoughts and cognitive distortions can be replaced with biblical truths. From a cognitive-behavioural perspective, direct replacement of thought occurs through what is known as cognitive restructuring processes. In the scriptural book of John, Jesus commented that, "If you hold to my teaching….then you will know the truth and the truth will set you free" (John 8:32). Those who experience anxiety are prone to catastrophising, or viewing a situation much worse than it is, and Christian Bible reading and prayer may help to keep these thoughts in perspective. However, this does take time and practice for those who have a proclivity for

worst-case-scenario thinking as prayer involves both cognitive and affective elements of oneself. A study investigated the effect of six one-hour weekly person-to-person prayer sessions on depressive and anxious symptoms. Positive results at one-month and one-year follow-up revealed significantly less depression and anxious and increased levels of optimism were experienced compared to baseline ($p < 0.01$ in all cases). These results were hypothesized to be due to replacing negative cognitions through the daily discipline of prayer and Scripture reading (Boelens et al., 2012). It was interesting to note that when asked to recall a memory that had previously been prayed about, the participants no longer felt the same level of psychological distress associated with the memory. Although this preliminary evidence is very supportive in the use of prayer for anxiety symptoms, it should be noted that the study involved an adult and female-only population; therefore, the results cannot be generalized to males or adolescents. The participants' activities during the one-year post-intervention period were not monitored or assessed at the one-year follow-up. Therefore, despite being initially encouraging, the results cannot rule out other extraneous variables being causative or greatly influential in symptom reduction.

Evidence is largely suggestive of prayer being an immensely useful tool promoting healthy coping mechanisms (Cassell, 2018; J. Irene Harris et al., 2002). Some other suggestions for how prayer could change anxiety symptoms included self-induced neuroplasticity of immediate and positive reinforcement (Schwartz, Stapp, & Beauregard, 2005), and, prayer may influence the subconscious emotion appraisal system by the reappraisal of negative thoughts (Kandel, 2006). Prayer has also been suggested as a decentring process by changing from an inward focus to a spiritual content-based focus (Teasdale et al., 2000). Through the daily disciplines of prayer and Scripture reading, negative thoughts and/or cognitive distortions can be replaced with more truthful and

productive thinking. This may produce habitual pattern changes in thinking and behaving when under stress or experiencing anxiety.

Research that most closely aligns with this explorative study in an adolescent population also supported prayer in reducing anxiety symptoms. Three urban adolescents between the ages of 13 and 16 with subsyndromal anxiety participated in a prayer wheel intervention tool which significantly reduced anxiety symptoms (Cassell, 2018). The results were suggestive of the increase in coping skills as the mechanism involved in the change in anxiety levels. By increasing coping skills, an enhanced awareness of the ability to control aspects of our lives is achieved.

The act of praying has shown to be associated with, and motivated by, the belief that God can and will take control over the lives of those who pray (Jeppsen, Pössel, Black, Bjerg, & Wooldridge, 2015). Living with uncertainty is inescapable and inherent in our daily lives. Personality research shows that those who believe aspects of their lives are out of their personal control tend to exhibit higher levels of anxiety (Hovenkamp-Hermelink et al., 2019), along with intolerance of uncertainty (Song & Li, 2019). In contrast, those who had a personal close relationship with God were found to experience a sense that God was in control which enhanced mental health (Jeppsen et al., 2015). Therefore, it is likely that prayer would contribute to bring about anxiety reduction through the mechanism of replaced control (Zarzycka, Liszewski, & Marzel, 2019).

Although prayer can come in many forms, this study looks at devotional, heartfelt meditation which involves focusing attention and prayer on a particular Scripture with the goal of developing closeness and connection with God (Garzon, 2013). Studies have found that this type of prayer is particularly associated with reduced anxiety, muscle tension and negative thoughts (Carlson, Bacaseta, & Simanton, 1988). However, it is unclear whether the results are due to the innate value of the prayer or the process of tranquility itself. Obviously,

there is the possibility that the prayers were actually answered or a supernaturally-enabled sense of peace and restoration was achieved through the prayer intervention, which cannot be confirmed or denied.

Prayer has been found to be very useful in the adolescent developmental stage of identity and purpose. Adolescents face many developmental milestones that seem to culminate in an intense stage of life (Davis et al., 2003). Spiritually and religion contribute greatly to mental health in at-risk adolescents as it gives their lives purpose and meaning, along with some sense of control over their own destination in life (Davis et al., 2003). It has long been established that purpose in life is a foundational element in psychological wellbeing in all persons (Frankl, 1979). Specific to adolescents, a study involving 10,792 13-15-year olds revealed that prayer frequency is strongly associated with an enhanced sense of purpose in life, even when compared to other religious activities such as church affiliation and attendance (Francis & Penny, 2016). The authors suggest that higher levels of prayer facilitate adolescents having a stronger sense of purpose in life.

There have also been negative associations with prayer found in adolescents. One study found that when avoidant students were under stress, prayer was not comforting (Byrd & Boe, 2001). This finding is able to be made sense of in light of the attachment theory (Ainsworth, Blehar, Waters, & Wall, 2015). If an individual has a secure attachment style, contentment in intimacy occurs and stress may decrease with closeness; the opposite is therefore true for an individual who is avoidant. Adolescents with avoidant attachment style may find that the sense of intimacy in prayer exacerbates stress. Another study found obligatory prayer (prayer that was a requirement) was associated with a negative psychological outcome, namely reduced optimism (Whittington & Scher, 2010). Some forms of prayer may heighten stress in some particularly vulnerable individuals, such as those with insecure attachment styles of connection with others.

Factors that negatively affect prayer in adolescents

All relationships are complex and when there is the perception of disharmony within a relationship, it can provide an immense source of stress and unease (Jeppsen et al., 2015). Clearly, it is the same with one's relationship with God. Studies have shown that if an individual has a sense of dissociation with God, prayer can be a displeasing experience with many negative feelings attached (Braam et al., 2008; Jeppsen et al., 2015).

Feelings are not always a reliable indicator of reality (Casper, 2001). Scripture teaches that it is of great importance that we challenge our thoughts and the beliefs that we are often falsely live under (Strong, 2007). The identification, challenge and restructuring of thoughts is a foundational component in the gold-standard psychotherapy, that is cognitive-behavioural therapy. For those who profess to having a Christian faith, having thoughts that do not line up with the word of God, can produce mood disruptions. Instrumental in faith is the element of trust and how past relational experiences can skew how God is perceived (Montaldo, 2016). Peterman et al. (2014) found that youth who had greater attendance in religious activities experienced greater levels of anxiety. This relationship was found to be mediated by guilt (self-reported) and suggested to be motivated by an urge to live a life of devotion including the desire to restore any fragmented relationships. Underlying emotions such as guilt and anxiety, along with thoughts that do not align with biblical teaching can interfere with an adolescent's ability to feel connected to God. It is important to address these factors in order to help restore faith and the individual's prayer life.

Lack of trust in relationships is highly detrimental to the longevity of the relationship. It seems that this is the case with faith in God also. Jeppsen et al. (2015) in their study entitled 'Closeness and Control: Exploring the Relationship Between Prayer and Mental Health', explored motivation for prayer behaviour with 330 praying (predominantly Christian) adults online. The authors found that closeness to God (compared with God-

mediated control) was the primary mediator involved in the relationship between prayer and mental health (*r* = .50). Studies have shown that petitionary, or solemn request, type of prayer is associated with a reduction in mental health problems (Poloma & Gallup, 1991; Poloma & Pendleton, 1989). In one study, 430 participants were recruited online to compare six different prayer types (adoration, confession, thanksgiving, supplication, reception, and obligatory prayer). The results showed that three types of prayer were associated with more positive emotions including adoration, thanksgiving, and reception. These prayers were identified as being more focused on God and less on oneself (Whittington & Scher, 2010). This may be due to the lack of personalization of prayer or lack of conviction about prayer being answered.

Negative associations with prayer and faith-related activities have been revealed in the literature. Peterman et al. (2014) investigated the connection between anxiety in a large sample of adolescents (N = 952) and their church attendance, along with the importance of their faith. The authors found that the more time that was spent in religious activities, including church attendance and youth group, the greater the predicted anxiety (*r* = .08, *p* = .02) and belonging to a youth group (*r* = .07, *p* = .05). This relationship was mediated by self-reported guilt (Peterman et al., 2014). Having guilt, or any negative emotion, as the motivator for behaviour would most likely be detrimental to the longevity and productiveness of the behaviour. Other results have found that some may experience spiritual discontentment related to prayer and this was found to be associated with worse psychological outcomes (Ano & Vasconcelles, 2005; Schindler & Hope, 2016)). Spiritual discontentment could come from a multitude of underlying factors such as religious doubts (Kézdy et al., 2011), insecure attachment (Pössel, Black, Bjerg, Jeppsen, & Wooldridge, 2014), and struggles with oneself, others and God (Cassell, 2018; Montaldo, 2016; Pargament, 2011).

Insecure attachment greatly affects the way God is viewed. The empirical evidence is resolute in how insecure attachment with our parental caregivers affects prayer (Cassell, 2018; J Irene Harris, Schoneman, & Carrera, 2005; Montaldo, 2016; Schindler & Hope, 2016). Kirkpatrick (1992) expanded upon Bowlby's (1969) Attachment Theory (Bowlby, 1969) to include attachment to God and it provides a theoretical way for understanding religious faith and its expression. Ellison et al. (2014) investigated data from the 2010 Baylor Religion Survey of 1511 participants on how often people prayed and when this was related to anxiety symptoms, as well as whether an insecure attachment relationship with God affected the results. The authors found that prayer reduced anxiety in those who had a secure relationship with God. The reverse was true for those with an insecure attachment to God; anxiety increased in response to time spent praying. Formative life experiences, both with parental caregivers and with God, help to build either a secure or non-secure attachment base. As humans, according to Scripture we were made for connection with God and others (Genesis 1: 26-27, Genesis 2:18, New International Version). The foundational level of relationship affects how trust, communication, expression of need and rest within the security of the attachment is formed. A relationship with God can either be a great source of comfort or it can provoke anxiety depending upon how we perceive the sense of closeness.

In sum, this research seeks to investigate the theory that by increasing the coping skills of cognitive defusion, acceptance, and mindfulness through proven methods, and including release of burden/'giving-over' prayer, anxiety will be markedly reduced from pre-intervention measures.

Chapter Three: Focus Group

The effect of the Covid-19 pandemic upon recruitment and process

The planning and process of this research occurred during the Covid-19 pandemic outbreak. This meant that additional considerations were planned for with regards to how the study would be undertaken with the strict social distancing that was required in Alert Level 2 and 3. Fortunately, when the time came to proceed with the intervention, New Zealand was by that stage in Alert Level 1 which did not require any additional adjustments. At Alert level 1, the NZ government informed the people of NZ that "everyone can return to work, school, sports and domestic travel, and you can get together with as many people as you want" (New Zealand Government, 2020), versus Alert Level 2 which limited groups to a maximum of 100 people and required 1-metre physical distancing in workplaces.

Recruitment

The recruitment of participants was difficult due to the upheaval of the pandemic and a vast district-wide search was advertised. Advertising for focus group participants was commenced and a flyer was distributed to a local church youth group, the senior students at the school of the intervention via the school secretary's email, and a local Facebook community page. The advertising and subsequent meeting for this focus group occurred during the Covid-19 pandemic when the country was in Level 4 lockdown. This meant that the only option for participation was via an online portal. A focus group met online in order to comply with the social distancing standards at the time it was held.

Six adolescents aged between 14 and 20 made contact with the lead researcher to express interest in participating in the focus group. The lead researcher sent consent forms which were signed and returned by four out of six participants. The other two participants did not have access to a printer and subsequently sent emails stating that they had read the consent form and consented to online participation. This form of consent was accepted

considering printer cartridges and accessories were not accessible during the lockdown period.

Procedure

The intervention tool was emailed to the participants on the morning of the focus group meeting date. The participants were asked to read through the intervention tool before meeting online (Zoom meeting) at 4pm. Zoom was used for a meeting with the focus group participants. However, all students had been working online previous to the focus group for their school or university work. This method of information and opinion sharing may have been hindered by the limitations of virtual communication. Some participants may have found this method intimidating, confronting, and/or distracting from the content covered. This may have meant that valuable insights were missed that could have otherwise been more easily elicited in a more naturalized setting. Also, all but one participant knew one another, which may have affected thoughts being shared by this one individual. In addition, Zoom only allowed a 40-minute session which created a time pressure. Although this time period may well have been adequate within a face-to-face setting, it felt rushed and logistically more difficult to listen and answer questions effectively. Despite these difficulties, it was valuable to be able to meet in some form during these unprecedented circumstances.

All but one participant, read the entire intervention tool and watched most of the videos that were embedded within the document before the focus group met online. The feedback given at the focus group meeting was found to be useful and insightful by the lead researcher. The questions centered on the terminology, usability, straightforwardness/layout/flow, and content.

The following comments were made about the content of the text and the videos: “Initial thoughts – pretty good job with outlining ideas”, “Didn’t know what cognitive defusion meant but did understand it eventually”, “It’s quite complex but it became clear as

each section built upon each other", "Videos were really good, and helped explain a lot", "Layout is appropriate for the content", "Nice balance between participation and reading", "'My coping strategies was excellent for internalization of material. Maybe more practical ways on how to apply it to yourself would be helpful", "Videos include a good amount of alternating ways of learning". Regarding the Prayer, a comment included, "really liked it. A good reminder to give it over to God, knowing I can't do it alone". Most felt that the "reasonably happy" wording in the prayer was inappropriate due to the nature of the study. Another comment was, "Videos were helpful but one felt demeaning, the unwelcome guest".

There were some differing views about the content, with one individual wanting to "integrate more faith into the main content", whereas others felt that faith-based material could be "incorporated into the personal session". Also, some felt that the two questions at the end of every session were too repetitive, while others felt that they "might be useful for seeing which session was more helpful". The participants were thanked and made aware that their input had been very valuable, and the session ended at the end of the 40-minute timeframe. Each participant was then sent a $20 gift card as a thank you for participating in the focus group.

Adaptation of the intervention tool

The purpose of the focus group was formed in order to help develop the intervention tool 'acceptance and prayer for adolescents with anxiety symptoms'. This tool was initially aimed at adult populations and was entitled 'A Toolkit Based on the Principles of Acceptance and Commitment Therapy' (Jenkins & Ahles, no date). The tool incorporated the following annotation: "*Permission is granted for clinical use of all original material; all other material is cited and in the public domain for clinical use"*. As this tool was initially developed with an adult target audience in mind it was thought to require content adaptation so that the intervention tool appropriated an adolescent population. An ethics application was submitted

and approved in accordance with the Massey University Human Ethics Committee guidelines before its commencement. The focus group was deemed to be low risk (Application Number 4000022368). All comments were considered and changes were made to the intervention tool as a result of the feedback. These changes are displayed in Table 1.

Table 1

Changes made to the Intervention Tool, 'A Toolkit Based on the Principles of Acceptance and Commitment Therapy', for each session.

Session	Changes made
	The original modules including the mindfulness exercises, the whole of 'The Observing Self, and 'Values and Committed Action', were removed due to the focus on this study predominantly being on Acceptance (which involves a component of mindfulness).
1	Removed the weekly rating information Added introductions including: recap of anxiety and depression measures, confidentiality and limits on disclosure, expectations regarding respect and non-judgmental attitudes, personal introduction. Added further information on the act of separating from our thoughts, mindfulness and the benefits involved, acceptance and avoidance, examples of avoidance. Added the Serenity Prayer. The participants were instructed to spend 15 minutes or so praying this prayer in the evening as homework.
2	Removed: 'The unwelcome guest' module. Removed: 'Why mindfulness is a superpower: an animation'. Removed: 'Mindfulness of emotions script'. Added: The Serenity Prayer. The participants were instructed to spend 15 minutes or so praying this prayer in the evening as homework.
3	Removed the 'One moment meditation', 'Insight timer, 'Smiling mind' and the two questions following these exercises. Removed '7 really good reasons to start a mindfulness meditation practice'. Added the Serenity Prayer. The participants were instructed to spend 15 minutes or so praying this prayer in the evening as homework.
4	Removed mindfulness educational components. Removed the Weekly R0ting Sheet. Removed option 2 and Option 3 exercises. Added the Serenity Prayer. The participants were instructed to spend 15 minutes or so praying this prayer in the evening as homework.
5	Removed 'Between now and the next appointment' exercises. Removed 'Eating one raisin: A first taste of mindfulness'.

	Removed 'Mindful breathing' exercise, Mindfulness Meditation, Body Scan, Mindful Eating. Removed the weekly rating scale. Removed all of Module 4 and 5. Added the Serenity Prayer. The participants were instructed to spend 15 minutes or so praying this prayer in the evening as homework.

Chapter Four: Methodology

Research Question

This research aimed to introduce a spiritually-supported intervention to reduce subclinical anxiety in adolescents. The primary aim of the study was to reduce anxiety through the introduction of the coping skills of mindfulness, acceptance of emotions and defusion of thought, with an acceptance-based prayer element to support coping skills. Another aim of the study was that of achieving an anxiety reduction prevention of anxiety disorders from forming in subsequent years. However, long term follow-up would be required in order to assess the feasibility of this aim. Also, to facilitate the study aim and aid the acceptance process, a 'handing over' of disturbing psychological content to God was introduced through the daily use of the Serenity Prayer (Niebuhr, 1951). The study was centered around the following research question: Does the practice of acceptance (cognitive defusion, acceptance, mindfulness) and prayer, decrease anxiety in adolescents?

Hypotheses

1. It is anticipated that the students will have a reduction in anxious symptomatology compared with the baseline, using the State-Trait Anxiety Inventory (STAI), following completion of the acceptance and prayer components of the intervention.
2. It is anticipated that participants will have a reduction in depressive symptoms compared with baseline, as determined by the Kutcher Adolescent Depression scale (6-KADS).
3. It is predicted the participants will display increases in mindfulness and acceptance, as assessed by Child Acceptance and Mindfulness Measure (CAMM-10).
4. It is predicted that participants will display decreases in psychological inflexibility, as assessed by the Avoidance and Fusion Questionnaire for Youth (AFQ-Y).

This study involved a single group, quasi-experimental design utilizing mixed methods. The aim was to explore the participants' experience of, and response to, the brief intervention, acceptance and prayer for adolescent anxiety, in an explorative and in-depth manner. Brief interventions are important in order to remain cost and time effective which are particularly relevant to an adolescent population. The primary source of data is quantitative in nature. Quantitative measures were employed to demonstrate the efficacy of the intervention in reducing the symptoms of adolescent anxiety. The quantitative data was analyzed using a one-group design with pre and post measures of the STAI, 6-KADS, CAMM-10, and AFQ-Y. The independent variables include: Acceptance components (cognitive defusion, acceptance and mindfulness), along with an acceptance-based prayer. The dependent variables include: participant anxiety level and participant depression level.

Qualitative data was obtained in face-to-face interviews using semi-structured interview questions which lasted 30 minutes. This was utilized in order to obtain an authentic and reflective view of the participants involvement and engagement with the intervention. The interview was audio recorded and transcribed responses were thematically analyzed using interpretative phenomenological analysis (IPA). The ideas and patterns that transpired, and how they relate to the research questions, were identified and noted (Pietkiewicz & Smith, 2014). It was also felt to be of importance through this qualitative method to acquire participant background information and lived experiences to draw potential parallels with the current suffering and link those experiences with the empirical literature.

Qualitative data was taken four weeks post-intervention and provided an in-depth understanding of the participants' experience. The following topics were raised as semi-structured questions and were subsequently analyzed thematically: 1) Adherence to the acceptance and prayer sessions, 2) Identification of personal anxiety experience, including the symptoms they experience, the background/onset of symptoms and identifying potential

triggers, 3) Changes in thought or behaviour, 4) Ideas around causation of change, 5) Most impactful content in the intervention, 6) Least impactful content in the intervention, 7) Changes in faith, 8) The therapeutic relationship and group effects. The analyzed categories that emerged from the questioning included: 1) Factors involved in adolescent anxiety, 2) Personal impact of the intervention, 3) Impact of doing an intervention in a group format.

Theoretical foundation

This research assumes an underlying epistemology of Relational Frame Theory (RFT). ACT originated within the theoretical grounding of functional contextualism in RFT which asserts that we, as humans, make sense of our experiences through language and cognitive processes. We make arbitrary and strong connections between things, despite the fact that the relationship with them may cause harm. There is evidence to suggest that our brains register a sense of security if we can create meaning within our experience (Inzlicht, Tullett, & Good, 2011). ACT seeks to provide more psychological flexibility in the meanings that are put in place for our thoughts and feelings (Hayes, 2016).

With regards to prayer, various theoretical methods have been proposed that may explain causality between prayer and the pray-er's increase in health and/or wellbeing (Breslin & Lewis, 2008). This research relies on meditative and acceptance-based prayer in reducing psychological and physiological responses through the active mechanisms of acceptance of circumstantial events, lessening of the need for control through the process of 'giving over' and subsequent release of anxiety.

Ethical considerations

All participants were fully informed of the purpose, process and research assumptions and aims. Consent forms from both the participants and their parents were endorsed and gathered before beginning the research. A confidentiality agreement was signed by anyone involved in the research project. Primary data was stored separately from working data. The

data was stored in a cloud-based personal One Drive that is password protected. Working data was anonymized to include references to individuals as participant 1 (P1). Consent forms will be held for ten years in personal OneDrive storage with the following path: Massey > For the Intervention > Consent Forms. This folder was password protected and only the primary researcher has access to the consent forms. A full ethics application was submitted and approved in accordance with the Massey University Human Ethics Committee guidelines before its commencement (Application number NOR 20/15).

Study design

The study design involved a mixed-method approach with a quasi-experimental design involving a pre-test - post-test method, and, a semi-structured interview. This prospective method involved a one group, non-randomized design and was chosen for this research in order to evaluate the efficacy of the intervention as assessed by the anxiety outcome. By incorporating quantitative data twice from the same dependent variable, along with qualitative data, this study should provide sufficient depth and meaning from the participants' experience while being informed by the theoretical framework.

Investigation of anxiety requires taking a wide ontological perspective. Anxiety is a complex emotion which involves multiple contributors in its formation and maintenance (Kerig & Ludlow, 2012). Quantitative and qualitative methods were chosen for this research study in order to incorporate the solid data with the backing of the lived experience. This was felt to provide a more precise and comprehensive understanding by allowing for additional conjecture and theorization (Haq, 2015). Due to the self-conscious nature of adolescents, as well as the internalizing and self-critical tendencies that anxious participants have, there was a great need for the researcher to display an empathic and appreciative understanding of their thoughts and behaviours. This element of the therapeutic relationship was facilitated by the time and inquiring nature allowed by utilizing a qualitative, semi-structured interview

approach. Adolescence is a time of immense growth and a mixed-method approach was chosen to capture the wide contextual and developmental views of the participants' experience.

The research setting

The setting of the current study where the intervention was evaluated is a private, coeducational, Christian school in Auckland that caters for Years one through to thirteen. The school has a total of 88 students in Years 10 to 13 which includes ages ranging from 14 to 18 years. The curriculum is academically rigorous involving the University of Cambridge International Curriculum, implements Christian values and implementing a Christ-centered education for all school levels. Ethnicity data from the latest ERO report (2020) revealed ethnicity rates as: Pākehā 60%, Māori 1%, Indian 15%, African 1%, Chinese 7%, Samoan 1%, British/Irish 2%, Filipino 1%, Korean 1%, Other European 9%, and Other 2%. The school's gender composition was stated to be 44% boys and 56% girls. Authorization to undergo this research was given by the Principal and the Board of Trustees (Appendix 2).

Recruitment

The study was advertised by email from the school secretary to the Year 10 to 13 students attached with the Participant Information Sheet (Appendix 3). This included the lead researcher's contact details and the students were asked to respond to the lead researcher within one week. The following week the lead researcher was able to attend the first in-person assembly since lockdown, as the country had advanced to Level One in the Covid-19 pandemic. Allowing meetings of over 100 people to resume. The lead researcher reintroduced the study and the study's aims, along with the symptoms of anxiety, to the students in these year levels. Prior to the assembly there had been no expressions of interest in the study. The lead researcher felt it likely that adolescents with mild to moderate anxiety may not be aware that the symptoms they experienced daily were due to anxiety. It was felt that by highlighting

the anxiety symptomology commonly experienced in their age group, the students may have a better understanding as to whether anxiety is something they were affected by. Five students subsequently expressed interest in participating. The primary investigator arranged to meet with the interested students and fully informed them of the process and research expectations. Parent and participant consent forms were signed and collected (Appendices 4. and 5). Confidentiality and transcript forms were also signed by the participants (Appendices 6. and 7).

The inclusion criteria required the participants to be between the ages of 14 to 18 years. They needed to present with mild to moderate anxiety symptoms, not be exhibiting depressive symptoms or suicidal ideation, or attending any other form of psychotherapy.

All five students decided to proceed with the study and were screened for depression and suicidal ideation using the 6-item Kutcher Adolescent Depression Scale (6-KADS) to ensure inclusion and exclusion criteria were met. Interestingly, all five students exhibited scores 6 and above on the 6-KADS scale (see Table 2 in List of Tables), indicating that depression is possible and warranting further investigation. All students were given a list of useful contacts for additional support (Appendix 8), including the contact details of an external child counsellor. One result was particularly raised compared to the other four. Contact was made with the parent to suggest that further assessment may be warranted, and the researcher suggested that this should initially be discussed with the student’s general practitioner. Despite all students potentially displaying depressive symptoms, after discussion with the primary researcher’s supervisor, it was felt that the students would not be excluded from the study due to there being no obvious impairment in occupational functioning. The level of anxiety was determined by the scores on the State-Trait Anxiety Inventory (STAI-6). All five participants exhibited symptoms of mild to moderate anxiety, with scores above the

normal range, which for females is between 34 and 36 (Bekker, Legare, Stacey, O'Connor, & Lemyre, 2003).

Participants

Five adolescents aged between 14 and 16 years were included within the study. Table 3 below displays the participants' details including age, gender, year of schooling, and ethnicity. Noteworthy, was that all participants who volunteered to be in the study were female.

Table 3

Participant details including age, gender, year of schooling and ethnicity (N = 5).

Details	Range	Participants
Age	14	1
	15	2
	16	2
Gender	Male	0
	Female	5
Year of schooling	Year 10	1
	Year 11	3
	Year 12	1
	Year 13	0
Ethnicity	NZ European	2
	Asian	1
	South African	2

Primary outcome measures

State-Trait Anxiety Inventory (STAI-6)

In order to measure the participants pre and post anxiety levels the Spielberger State-Trait Anxiety Inventory (STAI-6) (Spielberger, 1983) was administered by self-report. This scale is a 6-item measure that assesses the general tendency to experience anxiety along with the current symptoms on a four-point Likert scale with responses ranges from *not at all* to

very much. It gives a subscale range from 20-80, with higher scores indicating higher anxiety and aims to assess the severity of anxiety symptoms widely with a 'normal' score indicating 34–36 (Bekker et al., 2003). The STAI-6 (Appendix 9) has been found to possess good reliability (α = 0.82) (Marteau & Bekker, 1992) and internal consistency was >0.90.

Secondary outcome measures

Kutcher Adolescent Depression Scale – 6 items (6-KADS)

The 6-KADS (Appendix 10) was administered to assess the level of depressive symptomology in the participants in order to rule out the likelihood of depression as a confounding variable. The 6-KADS is a six-item, self-report measure that assesses depression in adolescents. It asks the adolescent to consider how they have been feeling in the last week on a four-point Likert scale with responses ranging from *hardly ever* to *all the time*. It has a cut off score of six which could indicate possible depression and the need for a thorough assessment. Scores below six indicate that depression is unlikely. The 6-KADS produced sensitivity and specificity amounts of 92% and 71% respectively (LeBlanc, Almudevar, Brooks, & Kutcher, 2002).

Child Acceptance and Mindfulness Measure (CAMM-10)

In order to measure the participants pre and post levels of the use of the coping skills, acceptance and mindfulness, the CAMM-10 (Appendix 11) was administered (Greco, Baer, & Smith, 2011). The CAMM-10 is a 10-item psychometric for children and adolescents between 12 and 15 years which measures the frequency of acceptance and mindfulness skills used. The self-report measure has a five-point Likert scale, ranging from *never true* to *always true*. Participant scores are determined by summing up the answers for each of ten items, with lesser scores signifying larger expressions of mindfulness. The CAMM-10 is stated to possess good reliability (α = 0.84), as well as good internal consistency (α = 0.84) (de Bruin, Zijlstra, & Bögels, 2014; Greco et al., 2011; Kuby, McLean, & Allen, 2015). Greco et al. (2011)

discovered that the CAMM-10 is positively associated with quality of life, academic competence, and social skills.

Avoidance and Fusion Questionnaire for Youth (AFQ-Y)

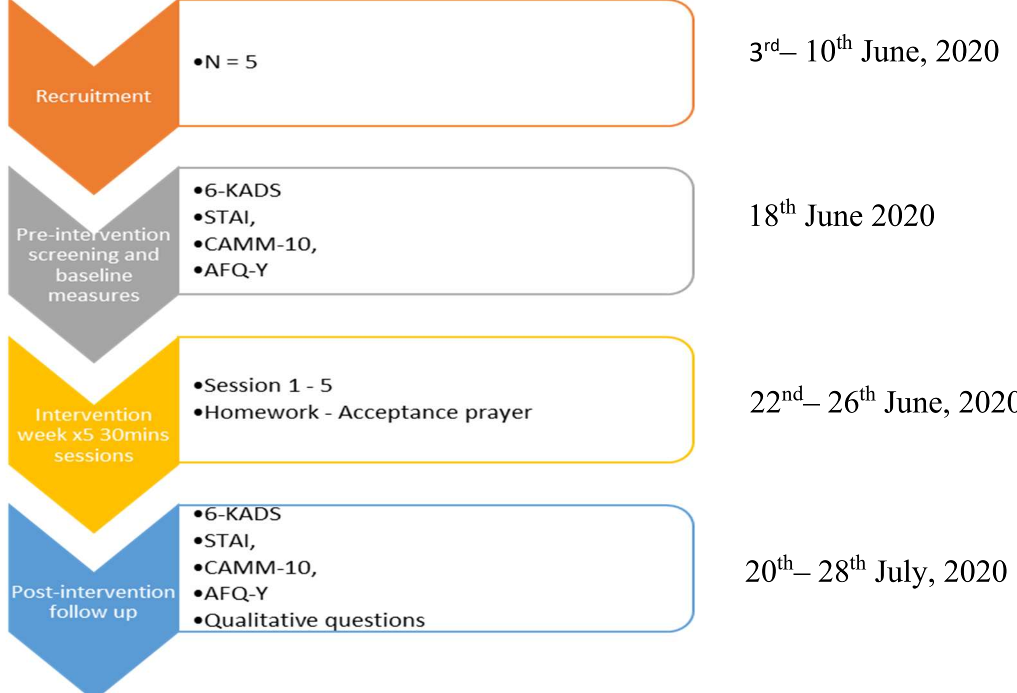
In order to measure the participants' psychological flexibility, the AFQ-Y (Greco, Lambert, & Baer, 2008) was administered and completed (Appendix 12). The measure was selected due to its specificity in identifying cognitive fusion and avoidance in youth, both of which are proposed by this research as mechanisms of action in adolescent anxiety. The AFQ-Y is a 17-item measure on a Likert scale with responses ranging from *not at all true* to *very true*. Higher scores indicate higher levels of psychological inflexibility (Greco, Murrell, & Coyne, 2005). The AFQ-Y has been found to have adequate internal consistency reliability ($\alpha = 0.90$) and convergent validity (Cheron & Ehrenreich, 2008; Greco et al., 2008). Studies have found the AFQ-Y to correlate positively with child anxiety (Greco et al., 2008).

Timeline

Figure 1 below outlines the research process and timeline of the current study.

Figure 1

Research Process and Timeline showing the Sequence of Events, including the Measures that were taken from Recruitment through to the Post-Intervention Interview.



Procedure

The intervention was an open exploratory trial of three acceptance components (cognitive defusion, acceptance and mindfulness), for 30-minute sessions every day for five consecutive days. On each day of the intervention week, the participants were asked to spend 15 minutes praying the Serenity Prayer in the evenings as homework. This prayer was described to the participants as facilitating acceptance of current struggle and also the 'handing over' of burdens. These sessions were held at the end of the school day. The content of each session was delivered by the primary investigator and informed in practice by 'When the Going Gets Tough, the Tough Get Mindful: A Toolkit Based on the Principles of Acceptance and Commitment Therapy' (Jenkins & Ahles, no date).

Intervention Outline

Below is an overview of the content of each daily session (see Appendix 13 for the full content of the intervention). At the end of the session participants were then asked to undergo 15 minutes of prayer 'homework' each evening. The intervention was held over five consecutive days for 30-45 minutes sessions.

Session 1

This session commenced with discussions on confidentiality and limits on disclosure, respect for each other and non-judgmental attitudes, as well as personal introductions. Since the group all knew each other, I asked them to share something that they love. This session was entitled 'uncomfortable thoughts and feelings'. It covered the concept of learning new coping skills in the form of the act of separating from our thoughts (cognitive defusion), mindfulness, and acceptance. Anxiety was introduced as being a product of our overactive minds through focusing too much on the content of our thoughts. The concept of mindfulness was introduced as focusing on the here and now and not what has happened in the past, or trying to anticipate what may happen in the future. We discussed avoidance and how it maintains anxiety, including examples of what avoidance of unwanted thoughts or feelings may look like. Learning was supported by watching two videos, one entitled 'The 3 Happiness Myths' which normalized painful experiences in life. The next video was entitled 'Internal Struggles' and it addressed our response to painful experiences. Homework included a time of meditative acceptance-based prayer. Participants were encouraged to spend some time alone in the evening meditating on and praying the words of the Serenity Prayer.

Session 2

This session built further on the topic of avoidance and identification of coping strategies. We discussed some common avoidance techniques using the DOTS anagram: Distraction, Opting-out, Time Travelling and Self-harm. The participants were then asked to fill out a question and response table on what avoidance strategies they find themselves using when feeling anxious or having distressing thoughts. The importance of identification of avoidant coping strategies is due to the anxiolytic reinforcement that they exhibit. This is evidenced in theoretical, clinical and experimental observations and is affiliated mainly with cognitive behavioural strategies (Krypotos, Effting, Kindt, & Beckers, 2015). We then watched a video entitled 'Sushi Train', which is a psychological technique for non-

judgmentally observing thoughts and letting them pass. Homework included a time of meditative acceptance-based prayer. Participants were encouraged to spend some time alone in the evening meditating on and praying the words of the Serenity Prayer.

Session 3

This session involved the practice of exercises to help reduce our psychological and physiological response to anxiety. The first exercise was called ‘Dropping Anchor’, which helps to focus on the present moment. The next exercise involved the main concepts of acceptance starting with a body scan exercise, then the noticing of sounds, breathing, thoughts, and feelings. Homework included a time of meditative acceptance-based prayer. Participants were encouraged to spend some time alone in the evening meditating on and praying the words of the Serenity Prayer.

Session 4

This session was entitled ‘Make room for negative thoughts/feelings’. The participants were further introduced to acceptance strategies through the concept of making room for negative thoughts and feelings. This session included four videos on acceptance and mindfulness entitled ‘Acceptance’, ‘The Struggle Switch’, ‘Accepting the Mind’, and ‘Changing Perspective’. These videos teach acceptance techniques to help reduce the impact of distressing experiences, not to attempt to control them. Homework included a time of meditative acceptance-based prayer. Participants were encouraged to spend some time alone in the evening meditating on and praying the words of the Serenity Prayer.

Session 5

This session was entitled; ‘Past, future and present’. The participants were given some further thoughts on mindfulness. Two videos were watched including; ‘Acceptance and Commitment Therapy: Presence’, and ‘Dan Harris: Hack your brain’s default mode with meditation’. We then went on to do an exercise entitled ‘3-minute body scan’ which is a breathing meditation to help reduce autonomic arousal. Homework included a time of

meditative acceptance-based prayer. Participants were encouraged to spend some time alone in the evening meditating on and praying the words of the Serenity Prayer.

Post Intervention follow up session

Individual review sessions took place at four weeks post-intervention. Participants initially completed the psychometric assessments including the; 6-KADS, STAI-6, CAMM-10, and AFQ-Y to gather post-intervention depression, anxiety, acceptance and mindfulness measures. The primary researcher then conducted a 30 to 45-minute interview with each participant, utilizing semi-structured interview questions, in order to obtain fresh insight and further understanding of how the participants experienced the intervention 'Acceptance and prayer for adolescents with anxiety', together with the homework component which was an acceptance-based prayer (Serenity Prayer). The interviews were audio recorded and transcribed the same evening as the interview. Following the establishment of rapport through light conversation, semi-structured questions were asked, and open, engaging dialogue followed. Active listening and empathy were displayed by the researcher throughout the interview. At the commencement of the interview the researcher thanked each participant for their valued participation in the study and gave them a $30 gift card. Table 4 below displays the semi-structured interview questions that were asked to explore the participants' views on their experience and perceptions of the intervention.

Table 4

Semi-Structured Interview Questions that were asked at the Four week Post-Intervention Follow Up Assessment.

During the week of the intervention:
• Did you miss any of the sessions? If yes, which ones/s? • Did you complete any at home? • Did you pray the prayer every evening? If no, which evenings did you miss? • What does anxiety feel like for you?

- Thinking over the course of your life, when was the first time that you noticed any symptoms of anxiety?
- Do you know of anything that may have triggered or contributed to them?
- Could you please think over the week and describe any changes that you might have noted in your thoughts or behaviour:
- What do you think has caused the changes that you just described?
- What stands out from the content we covered as having the most impact for you?
- What stands out from the content we covered as having the least impact for you?
- Have you noticed any changes in your faith?
- How was it for you doing this within a group?
- Are there any other comments that you would like to make? (e.g. the way the group was run, questions that were asked, content that was covered, areas where you may have felt uncomfortable or made you feel comfortable)
- Did you enjoy the time we met together? Why or why not? Was the content, relevant, interesting?

Data Analysis

The data was calculated by performing t-tests scores between baseline and post intervention measures collected from all four psychometric measures (6-KADS, STAI-Y-6, CAMM-10, AFQ-Y). The t-tests were then calculated to represent the amplitude of the effect size (Cohen's d). The goal of this analysis was to individually reveal, through standardized models (Cohen, 1988), the size of the intervention's effect on baseline variables of anxiety, as well as acceptance and mindfulness coping skills. Effect sizes are outlined as 0.2 small, 0.5 medium and 0.8 large, with a standard error usage of $p < 0.05$ (Cohen, 1988). The independent variable includes; 1) ACT components (cognitive defusion, acceptance and mindfulness) and prayer. The dependent variables include participant anxiety level, participant depression level, participant mindfulness and acceptance level, participant psychological inflexibility level.

A secondary analysis involves interpretative phenomenological analysis (IPA) on the qualitative data accessed from semi-structured questions at the post intervention interview. The narrative data was analyzed using IPA (Pietkiewicz & Smith, 2014). Relevant categories and subthemes of the participants' meaning and interpretation of important experiences in life were identified. Smith and Shinebourne (2012) state the process of IPA involves identifying

patterns across participants. There are five stages involves with the process of IPA: 1) reading through the transcripts a number of times, and then noting content, language use, and context within the content of the transcript, 2) identify themes within the content and label relevant categories and subthemes, 3) the researcher will structure the analysis by looking for links between the themes, including the similarities and differences, which are then labelled, 4) the categories and subthemes are laid out graphically in the form of a summary table including the appropriate quotes, and leaving out categories or subthemes that are not necessary, and finally, 5) a precise and deep discussion is written based upon the summary table and quotes.

Chapter Five: Results

The current study examined the efficacy of acceptance and prayer for adolescents with anxiety. The aim of this study was to reduce anxiety through the use of a spiritually-enhanced, acceptance-based brief prevention program. The method involved an exploratory study with a single group utilising a pre-test and post-test design. This section covers the main results found, starting with the quantitative data obtained from baseline to follow-up measures, including the: 6-KADS, STAI-Y6, CAMM-10, AFQ-Y which all participants completed (*N* = 5). The results strongly support the first two hypotheses including the reduction in anxious symptomatology, depressive symptoms compared with the baseline, following completion of the acceptance and prayer components of the intervention. The results also strongly support increases in acceptance but not mindfulness.

This section then follows on to outline the categories and subthemes, and their relationship with the expression of anxiety, extracted from a qualitative, semi-structured interview at four-weeks follow-up. The categories include: 1) Factors involved in adolescent anxiety, 2) Personal impact of the intervention, 3) Impact of doing the intervention in a group format. Table 5 below outlines the descriptive and inferential statistics for the primary variable: anxiety, and, secondary variables; depression, mindfulness and acceptance, before and after undergoing the intervention.

Table 5

Descriptive and inferential statistics for STAI-Y6 (anxiety), 6-KADS (depression), CAMM-10 (mindfulness), and AFQ-Y (psychological inflexibility), at pre-intervention and four-week post-intervention follow-up (N = 5).

Measure	Pre-intervention		Post-intervention		95% Confidence intervals		t	p	Cohen's d
	M diff	SD	M diff	SD	Lower	Upper			
STAI-Y6[a]	63.30	7.07	32.70	8.62	15.90	45.40	5.76	0.004	2.58
6-KADS[b]	8.80	1.92	5.00	2.45	1.41	6.19	4.42	0.012	1.98
CAMM-10[c]	14.20	8.64	16.80	7.89	-12.30	7.12	-0.74	0.499	-0.33
AFQ-Y[d]	51.20	6.42	33.80	15.63	0.47	34.30	2.85	0.046	1.28

a Possible range of scores for STAI-Y6 is 20 to 80.

b 6-KADS - Total scores below 6 indicate 'probably not depressed'; total scores at or above 6 suggest 'possible depression' and warrant further assessment.

c CAMM-10 has a mean score of 22.73 (SD = 7.33) and a possible range in scores from 0-100; higher scores indicating higher levels of mindfulness Guerra et al. (2019).

d Possible range of scores for AFQ-Y is 0 to 68 with lower scores corresponding to lower levels of psychological inflexibility.

Primary outcome: Anxiety

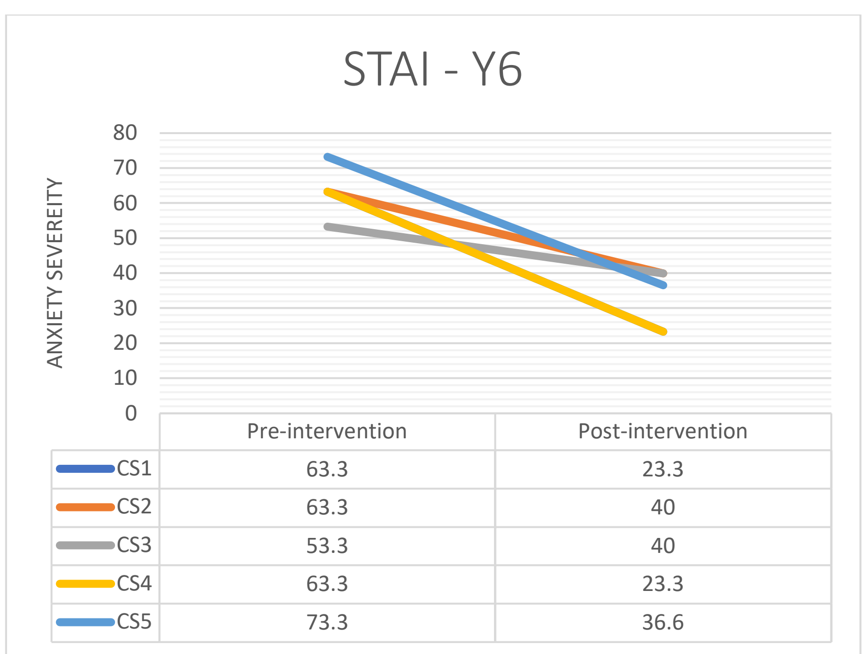
Anxiety results for pre-treatment and post-treatment follow-up (four-week follow-up) including the mean difference (*M*), and standard deviation (*SD*) are shown in Table 5. This table also includes; *t* statistic, *p* level, 95% confidence intervals (*CI*), and the effect size (Cohen's *d*). A paired-samples t-test was conducted to evaluate the impact of the intervention on participants' scores on the Spielberger State Trait Anxiety Inventory (STAI-

Y6). There was a statistically significant decrease in STAI-Y6 scores from pre (M = 63.30, SD = 7.07) to post (M = 32.60, SD = 8.62), t (4) = 5.76, p = 0.004 (two-tailed). The mean decrease in STAI-Y6 scores was 30.60 with a 95% confidence interval ranging from 15.90 to 45.40. The Cohen's d statistic revealed a large effect size (d = 2.58).

The results support the hypothesis that there would be a significant decrease in anxiety from pre to post-intervention as the t statistic (t = 5.76) is more extreme than the cut-off score needed of 2.77. It was hypothesized that participants would have a reduction in anxiety symptomatology, compared with baseline, using the State-Trait Anxiety Inventory (STAI-Y6), following completion of the acceptance and prayer components of the intervention. Figure 1 below displays the pre and post-intervention anxiety scores as measured by the STAI-Y6 for participants one to five.

Figure 1

STAI-Y6 scores for pre and post-intervention demonstrating the severity of anxiety symptomology of participants one to five following the acceptance and prayer intervention.



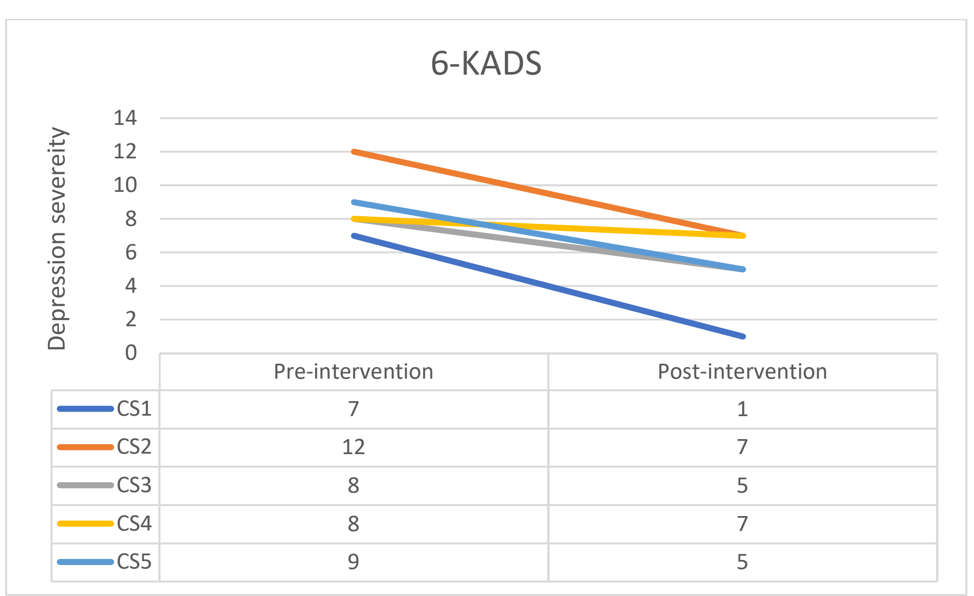
	Pre-intervention	Post-intervention
CS1	63.3	23.3
CS2	63.3	40
CS3	53.3	40
CS4	63.3	23.3
CS5	73.3	36.6

Secondary outcome: Depression

Depression results for pre-treatment and post-treatment follow-up (four-week follow-up from the completion of the intervention), including the mean (*M*) and standard deviation (*SD*), are shown in Table 5. This table also includes *t* statistic, *p* level, confidence intervals (*CI*) and the effect size (*d*). All participants showed a decrease in symptoms of depression. A paired-samples t-test was conducted to evaluate the impact of the intervention on participants' scores on the Kutcher Adolescent Depression Scale (6-KADS). There was a statistically significant decrease in 6-KADS scores from pre (M = 8.80, SD = 1.92) to post (M = 5.00, SD = 2.45), t (4) = 4.42, p = 0.012 (two-tailed). The mean decrease in 6-KADS scores was 3.80 with a 95% confidence interval ranging from 1.41 to 6.19. The Cohen's d statistic revealed a large effect size (d = 1.98). Figure 2 below displays the pre and post-depression scores as measured by the 6-KADS for case studies one to five.

Figure 2

6-KADS scores for pre-treatment and post-intervention demonstrating the severity of depressive symptomology of the participants following the acceptance and prayer intervention



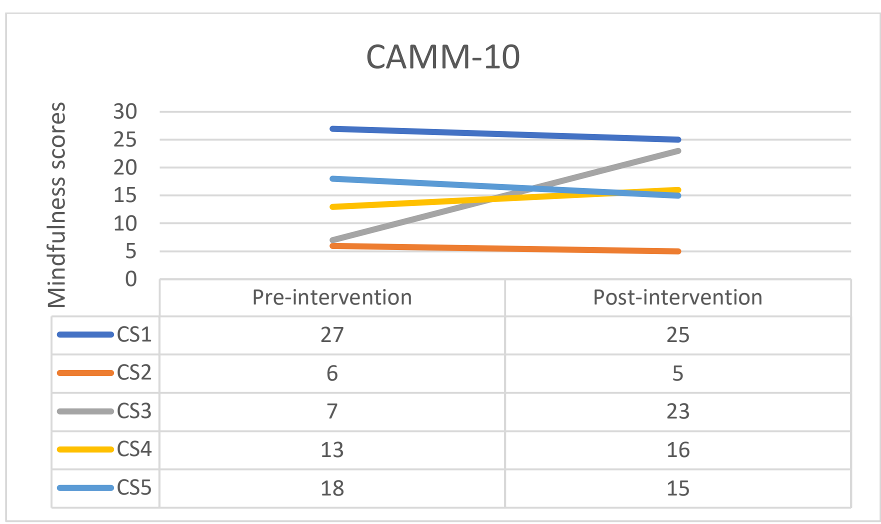
	Pre-intervention	Post-intervention
CS1	7	1
CS2	12	7
CS3	8	5
CS4	8	7
CS5	9	5

Secondary outcome: Mindfulness

Mindfulness results for pre-treatment and post-treatment follow-up (four-week follow-up), including the mean (*M*) and standard deviation (*SD*), are shown in Table 5. This table also includes *t* statistic, *p* level, confidence intervals (*CI*) and the effect size (*d*). A paired-samples t-test was conducted to evaluate the impact of the intervention on participants' scores on the Child and Adolescent Mindfulness Measure (CAMM-10). There was no statistically significant difference in CAMM-10 scores from pre ($M = 14.20$, $SD = 8.64$) to post ($M = 16.80$, $SD = 7.89$), t (4) = -0.74, $p = 0.499$ (two-tailed). The mean increase in CAMM-10 scores was -2.60 with a 95% confidence interval ranging from -12.30 to 7.12. The Cohen's *d* statistic revealed a negative small effect ($d = -0.33$). The results of the CAMM-10 revealed that there was no improvement in measures of mindfulness. Therefore, the hypothesis that increasing the skills of mindfulness would significantly decrease anxiety levels was not able to be supported. Figure 3 below outlines the changes in participants' mindfulness scores from pre-treatment to post-intervention.

Figure 3

CAMM-10 scores for pre-treatment and post-intervention demonstrating the change in mindfulness exhibited following the acceptance and prayer intervention



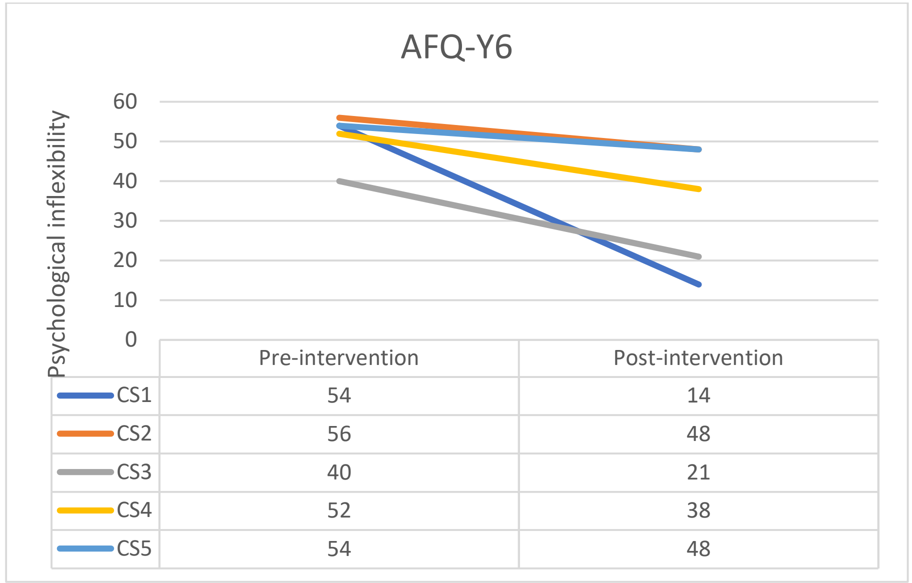
	Pre-intervention	Post-intervention
CS1	27	25
CS2	6	5
CS3	7	23
CS4	13	16
CS5	18	15

Secondary outcome: Acceptance

Acceptance results for pre-treatment and post-treatment follow-up (four-week follow-up), including the mean (*M*) and standard deviation (SD), are shown in Table 5. This table also includes *t* statistic, *p* level, confidence intervals (*CI*) and the effect size (Cohen's *d*). A paired-samples t-test was conducted to evaluate the impact of the intervention on participants' scores on the Acceptance and Fusion Questionnaire for Youth (AFQ-Y). There was a statistically significant decrease in AFQ-Y scores from pre ($M = 51.20$, $SD = 6.42$) to post ($M = 33.80$, $SD = 15.63$), $t\ (4) = 2.85$, $p = 0.046$ (two-tailed). The mean decrease in AFQ-Y scores was 17.40 with a 95% confidence interval ranging from 0.47 to 34.30. The Cohen's *d* statistic revealed a large effect ($d = 1.28$). It is predicted that the participants will experience a decrease in psychological inflexibility compared to baseline measures as assessed by the Avoidance and Fusion Questionnaire for Youth (AFQ-Y). Therefore, a larger score on the AFQ-Y displays a larger level of psychological rigidity. The hypothesis that there will be a decrease in the levels of psychological inflexibility is supported. Figure 4 below outlines the changes in participants' psychological inflexibility scores from pre-intervention to post-intervention.

Figure 4

AFQ-Y6 scores for pre-intervention and post-intervention demonstrating the change in psychological inflexibility exhibited following the acceptance and prayer intervention.



	Pre-intervention	Post-intervention
CS1	54	14
CS2	56	48
CS3	40	21
CS4	52	38
CS5	54	48

Qualitative analysis

Interpretative qualitative analysis (IPA) was performed in response to the semi-structured questioning. The method involved a phenomenon orientation which was directed by the participants' perceptions of how acceptance and prayer affect anxiety and its manifestation in their lives. The themes displayed here provide supportive links with the existing literature on adolescent anxiety. This contextual information helps to make sense of the emergence of anxiety within the participants' social, emotional, psychological and behavioural areas of functioning. The participants will be referred to as P1, P2, etc, in order to differentiate and personally identify their comments. The IPA data revealed emergent themes and subthemes which reflect the participants' sequential learning journeys: 1) *Components of adolescent anxiety*; a) Awareness of somatic symptoms, b) Unawareness of cognitive content; 2) *Personal impact of the intervention*: a) Triggers and onset of the anxiety, b) New awareness and acceptance of symptoms, c) New coping skills, d) Increase in faith, e)

Enjoyment of relaxation exercises and educational videos; 3) *Impact of the group intervention*: a) Perceptions of relatedness, b) Benefits of being in a group.

Components of Adolescent anxiety

Awareness of somatic symptoms

The experience of physical symptoms associated with anxiety was widely reported by all participants. When asked about the symptoms of anxiety, all participants commented that they did not know that what they were experiencing was anxiety when it first developed. Of particular interest was a predominance of somatic complaints including; sleep disturbance, tension, headaches, tiredness, lack of appetite. As seen below, all participants (P1,2,3,4,5) easily described and recognised the physiologically-based symptoms that they experienced:

> "Hyperventilation. Sometimes I start feeling dizzy because I am breathing too fast." "I get migraines, my eyes start hurting and then I vomit for 2 days" (P2).

Participant 2 carried on to describe their other physiological symptoms:

> "I get very 'trippy' [easy startled]; I get frightened really easily. Jolt throughout body and then heart racing" (P2).

Participant 3 and 4 also experienced an awareness of their physical symptoms:

> "I feel really tight. If it gets really bad, I start getting headaches… If I don't do a lot during the day, I feel really tired and I just go home and go to bed. Don't want to eat. Takes a while to get back to sleep. I have had some bad nightmares" (P3).
>
> "I don't eat and I notice I get tired when I get it" (P5).

Sleep problems were commonly reported amongst the participants, such as in these comments from participant 1 and 4:

"It started out as I couldn't get to sleep as I usually could". "I didn't realize that I did have anxiety, especially the sleeping thing" (P1).

"I always wake up tired. Some nights I wake up 5-6 times" (P4).

The descriptions of physiologically-based sensations associated with anxiety provide supportive links with comments on the most impactful element of the intervention, the relaxation exercises. Our results reveal a strong theme that the physical symptoms of anxiety were identified with relative ease by the adolescents in our study. The next theme outlines how participants expressed a lack of awareness of their thought content.

Unawareness of cognitive content

Overall, the participants expressed difficulty accessing the content of their thoughts. The lack of awareness of cognitive content was experienced by most of the participants. With the exception of one participant, most found identifying their thought content or cognitive patterns to be a great challenge, although they were able to recognise that their thoughts were numerous and often overwhelming. Participant 1 affirms the presence of continuous thoughts when asked about any changes in thought or behaviour patterns following the intervention:

"Instead of having everything going on in my mind, it helped me think about one thing at a time and think about the most important thing at a time" (P1).

Others reported the difficulty with knowing what the content of their thoughts was:

"No, I don't notice my thoughts. A lot of thoughts are taking place really quickly – I can't capture my thoughts" (P3).

"When I get it, I cry a lot. When I get it I don't know what's going on. I block myself from everything" (P5).

"I don't really know whether they are anxiety or just normal symptoms" (P4).

One participant recognized that there is a pattern to the content of their thoughts:

> "Continuous thoughts; I drag the same thought over and over again" (P2).

The theme suggests that the participants in the study found accessing cognitive content difficult but they recognised that thoughts were often continuous and disruptive. The next theme outlines personally impactful triggers including relationship disruptions, as well as the timing of onset.

Relational triggers and onset of the anxiety

A categorical theme that arose through the interview was the personal impact that the intervention had on the participants. The initial subthemes that emerged from this were the triggers of the anxiety and the time that these symptoms arose in the participants' lives. In four out of five participants, the theme of relationships continuously emerged as a trigger in anxiety expression, including death, family problems and parental divorce.

Participant 5 identified clear relational triggers in the emergence of the anxiety symptoms:

> "Looking back, I didn't know what was going on, I knew something that was going on but I didn't know what and I knew it was big" (P5).

Participant 5 went on to highlight other stressors that occurred in the lead up to their anxiety symptomology occurring:

> "My uncle that I was very close to committed suicide. We moved to NZ and we never saw our family and then I heard that my uncle committed suicide and things started to get messy from there" (P5).

When asked about what triggers they perceived were associated with the anxiety, participants mentioned difficult family relationships, death, conflict or divorce:

> "the day my grandma passed away…Whenever I think about my childhood...family conflict" (P2).
>
> "My parents divorced when I was seven or eight and it was a brutal divorce" (P1).

"The parents thing was the biggest contributor" (P1).

Four out of five participants communicated that the initial expression of anxiety involved either instability, uncertainty or loss in relationships. As P1 and P2 express below, ongoing conflict greatly contributes to the maintenance of the anxiety:

> “It didn’t hit me as hard then but as I got older there was always this rift and my brother and I are always caught in the middle” (P1).

> “Family conflict. I would get really anxious whenever I seen my parents yelled at. I would get really, really terrified” (P2).

These comments suggest that instability, uncertainty or loss in relationships can be a tremendous source of anxiety. It seemed that each of these participants had made the connection between the anxiety and distress involved in the relational trigger. This is particularly relevant to what is outlined in the empirical literature as adolescence is described as a time of identity formation with healthy, secure relationships directly influencing this transition (Jeppsen, Pössel, Black, Bjerg, & Wooldridge, 2015; Lombardi, Coley, Sims, Lynch, & Mahalik, 2019).

The age of onset of the anxiety was also noted and revealed a similar pattern. When asked at what age the disturbances took place or when the anxiety symptoms emerged, three participants expressed that they were eight years old, two participants expressed that they were twelve or thirteen years old. Comments from P3, P4 and P5 outline the ages at which their anxiety symptoms developed;

> "Four years ago…when I was seven or eight” (P1).

> “…when I was eight years old" (P2).

> "Probably in Year eight, that’s when I started caring about my studies" (P3).

> "[The anxiety started] maybe when I was 12 or 13. I don't know of any triggers" (P4).

"Eight years ago when my parents separated" (P5).

The next theme outlines a new ability to recognize their symptoms following the intervention.

Personal impact of intervention

New awareness and acceptance of symptoms

The personal impact in relation to recognition and acceptance of symptoms was expressed by all participants. Previous to the study occurring, four out of five participants did not know that their suffering was due to anxiety. The theme of a new awareness and acceptance of the anxiety symptoms was mentioned by all participants, exemplified by participant 4's comment below:

"I'm more aware that it could be the anxiety talking" (P4).

The same participant carried on to say:

"They [the thoughts] are not always you speaking" (P4).

Other participants expressed the same sense of awareness around the content of their thoughts:

"I was definitely noticing my minor thoughts more. Normally I think about what homework I have to do but I was noticing much smaller things, like stuff on the floor, like irrelevant things" (P5).

"I didn't realize that I did have anxiety, especially the sleeping thing" (P1).

"I become more aware that its natural" (P2).

"The thing that helped me the most was the way you explained it to us" (P1).

It was encouraging to see that the intervention directly impacted the participants' ability to notice and accept their anxiety symptoms, particularly with regard to having less worry about having the symptoms. The next theme expands upon how the new awareness of symptoms has led to applying coping skills.

New coping skills

Given the new awareness that the participants expressed, an enhanced sense of coping skills was also conveyed. The theme that emerged was an increased sense of control over their symptoms. There was also a lessening of fear around having the symptoms. Participant 1, 2 and 5 expressed a level of acceptance of the thoughts and expressed a new-found sense of control:

> “The exercise where we stopped and made me realize that put myself into perspective and what I can control and what I can’t. It only helped me realize that I can only control my response” (P1).
>
> “I think I realized that I needed to let go of my thoughts” (P2).
>
> "I no longer have to fully think about it" (P5).

Others also expressed a new coping strategy of being mindful:

> “Instead of what is happening in the past and the future, what is happening now. I never used to do that but I used to think about the past or the future” (P5).
>
> “Instead of having everything going on in my mind, it helped me think about one thing at a time and think about the most important thing at a time” (P1).

Participant 2 expressed the same ability to cognitively defuse:

> "…letting the thoughts come and go. I felt good inside and out. I felt really nice the rest of the day". "It helped me realise that it was a natural process".
>
> "It is not a disease; it happens to lots of people. You can handle it and you don’t always have to fight against it".

For participants in this study, the process of acquiring personal knowledge about new techniques that can be applied when feeling anxious was expressed. There was also an expression of a new sense of control. The next theme outlines how a new sense of control may have contributed to an increase in faith.

Increase in faith

Although not specifically measured by itself, the prayer seemed to have a positive effect in providing focused time with God. It seems the prayer time may have helped to increase levels of faith through the mechanism of relieved burden. Increasing the levels of faith may have accounted for the reduction in anxiety. When asked whether there had been any changes in faith, three out of five participants said that they had experienced an initial increase in their faith. Generally, the participants felt that this increase corresponded to when they learnt that what they were experiencing was anxiety.

Participant 1 outlined their increase in faith:

> "I feel more connected. I started losing faith and that after I realized that I had anxiety…I wasn't involved as much and I'm more interested and want to be more involved in it" (P1).

When asked about why they thought this change had occurred, P1 reported:

> "The praying itself, setting aside a time, having a structured time to pray; it made me think about just God at that time and not worry about anything else" (P1).

Another participant commented on their increase in faith:

> "…the first time that I realized that I had anxiety, I started catching on and I watched a lot of videos regarding anxiety and how to cope with it and one of the videos … really helped….so I went back to him and I thought God only did this because he wants me to be strong and then I started praying again….and I feel more at peace with the world" (P2).

Following the intervention, two of the participants expressed an increase in faith. This increase in faith generally followed the knowledge of what they were experiencing. The next

theme goes on to explore the final component of the personal impact of the intervention, the enjoyment of the physical exercises and videos.

Enjoyment of physical exercises and videos

It seems that the participants found the physical and visual exercises to be especially beneficial. The participants found the breathing exercise particularly helpful and this may be reflective of the fact that the anxiety symptoms most commonly recognised in the participants were somatic in nature. The following comments were mentioned when the participants were asked what they thought caused the changes that they previously described:

> "[The most impactful was]. the last session with just me and you. I tried the body scan before I went to sleep" (P3).
>
> "the taking a break breathing exercise, that was nice" (P5).
>
> "The exercise where we stopped and made me realize that put myself into perspective and what I can control and what I can't. It only helped me realize that I can only control my response" (P1).
>
> [The] "videos were good for learning that knowing that those thoughts are anxiety and not me" (P4).
>
> "The sushi train. Also, instead of what is happening in the past and the future, what is happening now. I never used to do that but I used to think about the past or the future" (P5).
>
> "The videos and letting the thoughts come and go. I felt good inside and out" (P2).
>
> "It would be hard to pick out which one, I found most of it beneficial. The videos were good and not too technical – they were more relaxing to watch" (P1).

It appears that the participants especially enjoyed the more interactive ways of learning. Physiological-based exercises greatly helped to reduce somatic symptoms and may have contributed to reducing anxiety. This theme has shown that it may important in adolescent anxiety-prevention programmes to include multiple methods of learning, especially physical relaxation and visually-guided material. The next theme discusses the perceptions of relatedness during a group intervention.

Impact of a group intervention

Perceptions of relatedness

Given the relational triggers theme identified earlier, it seems that being able to relate to others is an important theme in adolescents' lives. When asked about what it was like for each participant to undergo the intervention within a group, the theme of relatedness emerged. Four out of five participants expressed the feeling of not being as alone in their struggle with anxiety, such as in the comments from participant 4:

> "It was pretty good to realise that you are not alone. It helped to think that there are people around you that have anxiety, people that you would never expect; you are genuinely not alone. There are actually people around you. I trusted that none of those people would share info and that you could be in a safe space" (P4).

Participant 5 also recognized that they preferred being in a group space and felt that similarity and not being alone were important:

> "I'm a people person, I prefer working with other people because knowing that they feel similar to me and that I am not like alone" (P5).

Participant 1 also recognized that relating to others was beneficial:

> "I liked it because I had people I knew. I could relate to others and we could talk openly about things" (P1).

Participant 1 also went on to say:

> “It was like a sense of normality because we were there for the same reason” (P1).

It seems that being part of a group who share the same struggle can be very beneficial to the participants. The feeling of not being alone was found to be very comforting for them. This theme has shown that perceptions of relatedness is an important concept in adolescents with anxiety and that this is potentially a very potent part of therapy considering the true internalizing nature of anxiety. The next theme expands on the relational setting of the group intervention by highlighting elements that the participants particularly enjoyed about the group.

Benefits of being in a group

A theme that emerged was that the participants’ experienced group therapeutic effects. All of the participants enjoyed being part of the group as other’s thoughts added to their own. Three out of five participants felt a particular benefit in relation to knowing that they were all attending for the same purpose. This concept is expressed explicitly by participant 1:

> “It was like a sense of normality because we were there for the same reason” (P1).

Participant 5 expressed that the group was less intense than she expected it to be with the focus not necessarily on one person:

> "Working in a group was more comfortable than one on one” (P5).

It seems that by being with others that they knew that were of the same age and sex was especially reassuring for the participants as outlined by the following comments:

> "I prefer being in a group situation than being by myself. Other people will say something and triggers things for me as well" (P5).

Participant 5 also suggested that familiarity was important in group members:

> "I don't know who was going to participate and I didn't know that one of them was going to be my best friend. That's what made me feel anxious but it was comforting that we were all girls and all the same age".

The participants found it comforting participating in a group of people they perceived as similar to themselves. This theme has added to the knowledge that adolescents greatly benefit from familiarity in friendships and the ability to relate to others of the same age and sex.

The themes that emerged during the semi-structured interview revealed many elements that were personally impacting to the participants. These included: 1) *Components of adolescent anxiety*; a) Awareness of somatic symptoms, b) Unawareness of cognitive content; 2) *Personal impact of the intervention*: a) Triggers and onset of the anxiety, b) New awareness and acceptance of symptoms, c) New coping skills, d) Increase in faith, e) Enjoyment of relaxation exercises and educational videos; 3) *Impact of the group intervention*: a) Perceptions of relatedness, b) Benefits of being in a group.

Chapter Six: Discussion

In this study, we aimed to test the efficacy of a brief intervention involving acceptance components and prayer for adolescents with anxiety. The research question asked whether, through the introduction of acceptance-based components and prayer, there would be a reduction in anxiety compared to baseline measures. This study involved a single group, quasi-experimental design utilizing both quantitative and qualitative methods. The aim was to explore the participants experience of, and response to, the brief intervention, acceptance and prayer for adolescent anxiety, in an explorative and in-depth manner. The primary source of data is quantitative in nature. It was hypothesized that there would be a reduction in anxiety, depression, psychological inflexibility and an increase in mindfulness following the intervention. Based on the researchers' current knowledge, this study was the first to include prayer as an adjunct to an acceptance-based model for anxiety in adolescents as a brief intervention involving five consecutive 30-minute sessions.

With valuable information from the focus group a population-specific intervention tool was produced. The main study proceeded and revealed four findings that are particularly noteworthy. Compared with pre-intervention, results at post-intervention revealed 1) a large reduction in anxiety, 2) a large reduction in depression, 3) a large decrease in psychological inflexibility, and 4) a non-significant result in mindfulness levels. IPA of the qualitative data also revealed the following three main categories and themes: 1) the dominant features of adolescent anxiety, including physical symptoms and lack of unawareness of cognitive content, 2) areas where the participants were personally impacted by the intervention, such as triggers, new awareness of symptoms and coping skills, increase in faith, enjoyment of relaxation/visual aid, 3) specific findings with regard to the impact of a group intervention upon this adolescent population, including, perceptions of relatedness and other benefits involved of being in a group. These results are then discussed and compared with existing

literature, strengths and limitations involved in the study are explained, explain the strengths and limitations involved in the study and provide conclusive statements, along with, suggested directions for future research.

Anxiety

The primary objective of the study was to investigate the effect of the acceptance and prayer intervention upon the participants' level of anxiety. There were four findings that will be discussed along with several contributing factors that are likely to have affected the resultant anxiety levels of the participants. There are several possible explanations for the anxiety reduction evidenced including the following likely moderators: 1) a new understanding and awareness that what the participants were experiencing was anxiety, with a subsequent lessening of fear around having symptoms, 2) the acquisition of new coping skills including acceptance/psychological flexibility through the practice of cognitive defusion, 3) prayer facilitating the acceptance process and allowing for release of control mechanisms, 4) perceptions of relatedness and connection, and/or, 5) the reduction of autonomic arousal through the use of relaxation techniques. The following sections will discuss these points in relation to current evidence.

The current study revealed an implausibly high effect size (d = 2.58) showing reductions in anxiety in all participants following the intervention. The potential reasons for the inflated effect size will be discussed in more detail later in the chapter. Despite being elevated, the results support our hypothesis that anxiety levels would reduce following the intervention. The results of this study are in agreement with previous studies utilizing ACT for adolescents in a school-based setting (Burckhardt et al., 2017; Livheim et al., 2015). A study similar to this current study, an Australian study using ACT as a preventative approach for anxiety and depressive disorders with a sample of 48, Year 10 (aged 14 – 16 years) school students, also produced medium to large effect sizes (Burckhardt et al., 2017). These findings

are also consistent with Rowan et al. (2017) who evidenced medium to large effect sizes in a preventative programme using ACT for adolescents with clinical forms of anxiety and those obtained in a pilot study by Livheim et al. (2015) using ACT for adolescents. Despite the limitation of small sample numbers, Livheim et al. (2015) reported that their Australian (N = 66) and Swedish (N = 32) study produced large effects sizes in both depressive and stress symptoms. The pilot study was similar to this current study involving a brief ACT-based intervention (8 sessions) group program, although the interventions were aimed at depression (Australian) and stress (Swedish). The Australian program results revealed significant decreases in psychological inflexibility. The Swedish study revealed significant decreases in anxiety and increased mindfulness skills and recommendations were put forward for full-sized studies. Taken together, previous results with ACT for adolescents have been extremely successful, and in line with this research, at reducing anxiety, depression and stress symptoms in the short term. The additional prayer component in this study is likely to have added further benefits and solidification of acceptance processes considering the predominance of Christian participants (three out of five). Further rigorously controlled studies including prayer would be beneficial to rule out extraneous variables and outline the benefit to this population of adolescents. Also, brief interventions over the course of a week are indicated and may help to increase attrition in the adolescent population.

The vast majority of preventative programs utilize cognitive behavioural treatment (CBT), as the approach considered to be the gold standard in psychotherapy (David & Cristea, 2018). However, it is recognized that there is still further work required to increase CBT's efficacy/effectiveness (David & Cristea, 2018), especially in trials related to depression and anxiety (Cuijpers, Cristea, Karyotaki, Reijnders, & Huibers, 2016). ACT is referred to as a third-wave cognitive and behavioural approach but it differs from CBT in how it deals with aspects of psychologically disturbing content (Kahl, Winter, Schweiger, &

Sipos, 2011). The primary aim of CBT is to reappraise and replace negative thought content with more productive/realistic ways of thinking. Both interventions were felt to evidence clinical advancement and changes in cognition produced via the same mechanism in CBT and ACT. There is clear evidence for the efficacy of both ACT and CBT. There are still questions remaining as to the best approach for adolescents with anxiety.

It may be that the ability to sustain attention long enough to recognize thoughts is difficult to achieve for some individuals. The lack of awareness involved with cognitive content was experienced by most of the participants and is an issue that has been well established in the literature on cognitive therapies (Costello, 1992) and is likely to have contributed to a non-significant mindfulness result. Although, both CBT and ACT require cognitive content to be identified, CBT requires that the content is captured long enough in order for the thought to be evaluated and then to be replaced. In ACT, content only needs to be briefly accessible before cognitive defusion skills are utilized. The majority of participants in this study were unaware of their thought content. It may be that CBT's core cognitive component is limited in adolescents by their inability to easily access automatic thoughts (Halder & Mahato, 2019). Their current level of metacognition is likely to be highly dependent upon the development of this transitional phase (Howells, 2018), including the degree to which they have been previously taught these skills, and their level of motivation to change (Wergeland et al., 2016). It seems likely that either CBT or ACT will require more sustained attention to thought content which may be a limiting factor for some individuals who may lose motivation to continue with the therapy.

The lack of cognitive content and awareness of having anxiety was one of the primary factors that was revealed to be of significance in this study. This feature was very relevant to most participants in our study as they commented during the semi-structured interview that they were unaware that they experienced anxiety until the primary researcher discussed the

symptoms of anxiety in the school assembly when advertising the study. They thought that the symptoms that they were experiencing were thought to be 'just them' and not due to 'a condition'. This is consistent with the finding that anxious youth are limited in their ability to recognize, understand, and accept their emotions (Mathews et al., 2016), yet, recognize subsequent patterns of thought are present, such as worry and rumination (Kerig & Ludlow, 2012). The lack of cognitive content in adolescents serves as a potential risk factor (Schneider et al., 2018), therefore, making them a good target for therapeutic interventions (Dadds et al., 1999) and directly affects how prevention programs can be introduced. This finding highlighted the need for in depth psychoeducation for adolescents, with a particular focus on the symptoms that can be experienced cognitively, physiologically, emotionally and behaviourally. Adolescents should also be made aware of what a relaxed body and mind experiences in order to know when they are functioning outside of what is beneficial for them. This will help facilitate the identification of clear and specific health goals.
Historical evidence has shown some psychoeducational sessions to be equivalent to the more dynamic components of CBT (Last, Hansen, & Franco, 1998; Silverman et al., 1999). Psychoeducational sessions can help adolescents to identify about their anxiety symptoms, the role of avoidance and identifying unhelpful ways of thinking. It may be of great value in the therapeutic setting for adolescents with anxiety to spend time personally identifying recurring and unhelpful thinking patterns. Therefore, the reduction in anxiety in the participants in our study may be a reflection of the increased awareness of what their symptoms were, thereby reducing associative fear of the symptoms. Said differently, the participants may be more cognizant of the nature and cause of the anxiety which makes them less likely to resist what they were experiencing. Avoidance theory suggests that internal avoidance of worry contributes and maintains anxiety (Borkovec, Alcaine, & Behar, 2004). Being more aware and accepting of symptoms may moderate the associated fear to achieve

anxiety reduction. This new awareness, along with the acceptance components, would likely have acted as a form of exposure with a subsequent desensitizing response (Behar, DiMarco, Hekler, Mohlman, & Staples, 2009).

Awareness of one's own emotional and thought-based sensitivity, or metacognition, is likely to vary greatly from individual to individual but has been found to be highest in late adolescence (Palsson, 2020). However, metacognition is dependent upon the degree to which an adolescent has been taught to recognize these processes (Gallagher & Cartwright-Hatton, 2008; Moreira & Canavarro, 2018) and is a factor that affects both treatment adherence and efficacy (Palsson, 2020). This explanation speaks to the importance of anxiety psychoeducation which will provide a good footing to commence preventative strategies in adolescents. This set of findings demonstrates the importance of parent education programs that teach emotional awareness practices which may well lessen the need for ongoing interventional approaches.

The reduction in anxiety also confirms the association between the acquisition of the new skills involved in acceptance and anxiety reduction. The mechanism behind the change in anxiety in the adolescents is not clear as the components were not analyzed separately. However, it is likely that through the use of cognitive defusion, experiential avoidance exercises and prayer (the latter will be discussed in a following section), acceptance of their experience may have lessened fear, and facilitated an increased sense of control. It has long been established that anticipation and uncertainty play a role in the expression of anxiety (de Jong-Meyer, Beck, & Riede, 2009; Grupe & Nitschke, 2013). Additionally, investigations into the mechanisms of action involved in psychotherapy studies have revealed perceived control as benefiting preventative interventions (Ahlen et al., 2019; Schleider et al., 2019; Weisz, 1986). The component of acceptance within the ACT framework has been found to be an identified moderator of symptom severity (Forman et al., 2012). The exact mechanism of

the anxiety reduction is yet to be determined in this study as further research would be required by assigning participants to treatment groups through the process of randomization. Despite questions around causality, the findings of this study suggest that the acceptance components, including cognitive defusion and experiential avoidance experiences, help to reduce anxiety symptomology in adolescents.

In support of this suggestion, the current study indicated that a decrease in psychological inflexibility was achieved following the intervention, evidenced by a large effect size (d = 1.28). The result is in line with the hypothesis of this study which suggested that psychological inflexibility levels would decrease following the intervention. The results also further support the idea that psychological inflexibility is positively associated with child anxiety (Simon & Verboon, 2016). In contrast, psychological flexibility is the ability to be able to identify and modify internal experiences, including distressing content (Kashdan & Rottenberg, 2010). A lack of psychological flexibility has been strongly associated with rumination and worry (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). Further in support of this finding from the qualitative data, the participants expressed that rumination and worry were regular and recurrent thought patterns for them. By reducing the participants tendency to ruminate through the use of cognitive defusion, a reduction in anxiety may have been achieved. This may be explained further by the knowledge that anxiety is maintained through the use of maladaptive behaviours and the adoption of new coping skills is required in order to reduce its effect (Wells, 1999). Rumination is one such behaviour that maintains anxiety (Wong & Moulds, 2009) and is especially dominant in female adolescent populations (Craske, 1997). Together these findings demonstrate the importance of enhancing psychological flexibility through acceptance processes in order to achieve a reduction in anxiety.

Prayer

Anxiety reduction may also have been achieved through prayer. Spiritually-based interventions such as prayer, spiritual counselling/psychotherapy have established results in producing a reduction in anxiety symptoms (Boelens et al., 2012; Cassell, 2018; Groover, 2020; Knabb & Frederick, 2017). There are several possible explanations for these results. One suggestion involves an increased sense of trust in the participant's relationship with God. Prayer may provide a sense of restoration when union with God has been damaged (Pargament, Murray-Swank, Magyar, & Ano, 2005). This suggestion is consistent with findings by (Groover, 2020) who found that all participants (100%) who participated in the prayer intervention encountered a reduction in their levels of anxiety. Groover (2020) also suggested that prayer may be observed as an exposure task to combat experiential avoidance or repression through confronting the feared stimulus. There are still many unanswered questions about the impact of prayer on anxiety in adolescents. It is also possible that prayer helped to reduce anxiety through the mechanisms of strengthening faith, replaced control and attachment to God (Sung Kim, 2018; Miner, Dowson, & Malone, 2014). There may also have been a mindfulness effect from prayer (Knabb, J. J., 2012) Together these studies highlight that prayer can be an effective tool for anxiety reduction.

In addition, the inclusion of prayer in this study helped facilitate and strengthen the acceptance processes through the release of control (Zarzycka et al., 2019). Questions still remain about the specific results and workings involved in prayer as these were not quantitatively analyzed separately in this study. However, in combination with acceptance, it is likely that prayer greatly facilitated the reduction in anxiety achieved, along with other variables involved in the group intervention. Future studies involving prayer would benefit from looking at personal barriers to faith and current beliefs around prayer.

Perceptions of relatedness, as a result of group participation, is likely to have added to the reduced levels of anxiety. The overall positive views expressed in the semi-structured interview revealed that social relatedness was immensely important and helpful to the adolescents. The empirical literature asserts that identity formation in adolescence is facilitated by healthy, secure relationships (Jeppsen et al., 2015; Lombardi et al., 2019). The results also showed that conflicts, arguments, loss and instability in relationships can be a substantial source of anxiety. However, being able to relate to others with the same psychological battle allowed the feeling of not being so alone. This construct is consistent with results from a large adolescent health study involving 6504 adolescents at six-month follow-up, and 4834 adolescents in the 12-14 year follow-up (Jacobson & Newman, 2016). In this study anxiety and depression measures, along with perceptions of close and group relationship measures, were all taken at six months and 12-14 years later (Jacobson & Newman, 2016). The results revealed that interpersonal relationships have a large influence on depression forming in adolescents with anxiety later in life. It was found that higher levels of anxiety in adolescents mediated the relationship between the anxiety and later clinical depression in adulthood. The authors suggested that when an adolescent experiences high levels of anxiety they perceive a lack of love and acceptance and are more likely to become aware of feelings of disconnection with others (Jacobson & Newman, 2016). It seems possible that these results are due to an adolescent's need to feel loved and accepted in the relationships that matter to them. This set of findings demonstrates the importance of social connection for adolescents with anxiety. Future research would benefit from identifying interventions that foster social connection.

The expression of the participants' anxiety in this study was strongly connected to relational triggers. Three out of five participants in this study directly attributed disturbances or loss of family relationships to be the initial trigger for their anxiety. The relational trigger

occurred when two of the participants were eight years old and when one was nine years old. The age and level of dependence the child has upon the disturbed relationships is likely to determine the child's vulnerability to internalization as a response to the stressor (Newman & Blackburn, 2002). These results fit with worldwide data revealing that as much as fifty per cent of mental unwellness starts before the age of fourteen (World Health Organisation, 2018), and New Zealand data revealing one in five will experience an anxiety disorder before the age of nineteen years old (Ministry of Health, 2016). However, there is limited merit in focusing on identification of risk without identifying methods for adaptation during risk periods. Instead, focusing on resilience and health-promoting adjustment methods may be more powerful in terms of longer term outcomes (Newman & Blackburn, 2002). Extensive research from cohort studies has identified that the greatest resilience-enhancing determinants include "supportive families, positive peer relationships, external networks, opportunity to develop self-esteem and efficacy through valued social roles" (Newman & Blackburn, 2002, p. 1). Newman and Blackburn (2002) have also suggested that resilience is built through exposure to, and mastery of, stressors at a level that we are able to effectively cope with. When adolescents are connected in youth groups, church and other religious institutions, such as Christian education, their involvement has been found to act as a protective factor against setbacks and produces resilience in the lives of those who attend (Cole-Lewis, Gipson, Opperman, Arango, & King, 2016; Sangwon Kim & Esquivel, 2011; Wright, Yendork, & Kliewer, 2018). This set of findings demonstrates the importance of giving children the psychological and physical skills to enable them to grow, adapt and continue to thrive even in the face of significant challenge. Our findings emphasize that prevention programs aimed at parents, including content on how to build resilience in their children will reduce the likelihood of internalization occurring which may in turn lead to a reduction in anxiety.

Another possible contributor to anxiety and depression reduction includes a lessening in autonomic activity following both the prayer and the relaxation exercises. One such neuroendocrine marker of anxiety is the measurement of cortisol levels. Cortisol is a steroid hormone made by the adrenal cortex, and when found at higher levels, has been found to be an overactivity of the hypothalamic-pituitary-adrenal (HPA) axis under stress (Schiefelbein & Susman, 2006). Both chronic elevation and underactivity of the HPA is associated with psychological mood alterations and physical conditions (Ehlert, Gaab, & Heinrichs, 2001). One study looked at the relationship between anxiety in adolescents and cortisol levels with 108 boys and girls between the ages of 9 and 14 (Schiefelbein & Susman, 2006). The authors found gender differences, with girls displaying a significant positive relationship over time between cortisol levels and anxiety, which wasn't found in boys. The results also showed that in girls, morning cortisol levels increased across a one-year period, whereas those of boys decreased (Schiefelbein & Susman, 2006). These results may help explain why females display higher rates of anxiety disorders (Beesdo et al., 2009). It seems possible that higher cortisol levels in girls could be due to girls being more responsive to stress or that reproductive hormones may affect cortisol release (Schiefelbein & Susman, 2006) making girls more prone to anxiety.

Other results reveal that heightened cortisol levels in the afternoon is associated with prosocial behaviour in adolescence and that diminished cortisol levels indicates reduced arousal which drove aggressive behaviour (Lindsay, Young, Smyth, Brown, & Creswell, 2018). Another study with 1768 adolescents found no evidence of connection between current anxiety level (state) and cortisol levels, but persistent anxiety (trait) symptoms were associated with a greater level of HPA activity (Greaves-Lord et al., 2007). The evidence base for the associations between cortisol and anxiety in adolescents is mixed and somewhat limited when compared to the cortisol's association with depression in adolescents which is

well-established (Elnazer & Baldwin, 2014). Therapeutic interventions that have successfully reduced cortisol include prayer (Connor, Engers, & Slear, 2011), cognitive therapy (Tafet, Feder, Abulafia, & Roffman, 2005), acceptance (Lindsay et al., 2018), meditation (Yoo et al., 2016), mindfulness (Hoge et al., 2018) and relaxation methods, such as yoga (West, Otte, Geher, Johnson, & Mohr, 2004), and progressive muscle relaxation (Pawlow & Jones, 2002). The adolescents in our study indicated that the physiologically-reducing exercises were effective and enjoyable.

There are strong empirically tested links between cortisol levels and depression in adolescents (Van den Bergh, Van Calster, Smits, Van Huffel, & Lagae, 2008; Varvogli & Darviri, 2011). There is also evidence of epigenetic expression in predicting cortisol responses to stress in adolescents (Lipschutz et al., 2018; Van den Bergh et al., 2008). The current study found that physical complaints including sleep disturbance, tension, headaches, tiredness, lack of appetite, were present, all of which are reflected as heightened HPA activity in the empirical literature (Beesdo et al., 2009; Kerig & Ludlow, 2012). Given the positive response to these exercises, it is unsurprising that the physical relaxation components were enjoyed the most as commented on by three out of five of the participants. The personal impact and enjoyment of the relaxation exercises will be covered more comprehensively in a later theme. Relaxation exercises are one obvious treatment pathway which would likely be of great benefit to adolescents with anxiety. This study affirms the general presence of physiologically-based symptomology amongst the participants. These results further support the idea that physical relaxation is highly beneficial for adolescents with heightened anxiety and may help to reduce heightened cortisol secretion. In sum, evidence is clear that elevated or reduced cortisol levels are highly likely to impact dysfunctional emotional regulation in adolescents. Together these findings highlight the need to maintain optimal cortisol levels which can be achieved through physical exercise, relaxation and psychotherapeutic methods.

It is very likely that the use of the breathing and body scan exercises in this study produced a reduction in cortisol and a subsequent lessening of anxiety in the participants. This set of findings demonstrates the importance of relaxation exercises and is one obvious treatment pathway which would likely be of great benefit to adolescents with anxiety.

Despite these promising results for the use of acceptance and prayer in adolescents with anxiety, caution is advised. The effect size estimate is very large, making the results likely to have contained extraneous variables that inflated the result. It is normative and expected for studies of this nature to produce either small to medium effect sizes (d = 0.2 to 0.7) (Barrett et al., 2006; Hugh-Jones et al., 2020), although as outlined above, some have produced large effect sizes (d = 0.8 to 1.0) (Burckhardt et al., 2017; Livheim et al., 2015). However, effect sizes that extend far beyond 1.0 imply that the strength of the association between the outcome and the intervention is biased by extraneous variables or outside influences. Caution should be taken with regards to interpretative findings as bias is likely to be involved. Causal associations are likely to be achieved with the institution of rigorous and controlled testing procedures such as randomization and the use of a control group, which this current study did not have. Another aim of the study was to achieve anxiety reduction in order to prevent anxiety disorders from forming in the years to follow. However, long term follow-up would be required in order to assess the feasibility of this aim. This aim postulates that meaningful changes in distress, even in small amounts, can be influential in directing adolescents in more beneficial pathways (Fisak et al., 2011). The study's results are initially very encouraging, that there was a significant change in anxiety following the intervention. Despite these promising results, some questions remain unanswered as to the exact mechanisms involved in the reduction in anxiety in all participants. The intervention was kept as brief as possible in order to minimize the potential impact of confounding variables. However, there is the potential influence of decreasing stress following exams and a break

from school in the interim period before the post-intervention assessment was performed. Future studies will benefit from post-intervention assessments obtained immediately following the intervention.

Depression

A secondary result revealed significant decreases in depression. These results included a large effect size (d = 1.98). Although not a primary analysis target, depression scores had a statistically significant decrease from pre-intervention to post-intervention levels. The depression psychometric (6-KADS) was initially implemented in order to provide a measure for the exclusion/inclusion criteria. However, all five participants revealed levels above the cutoff score of six (indicating that further investigation was warranted). It was decided to include all participants due to there being no functional or occupational impairment. In order to utilize all relevant data, the 6-KADS was administered again at the four-week post-intervention follow-up session. There was a decrease in depression for all participants. The pre-intervention mean was 8.8 and the post-intervention mean was 5, indicating a meaningful improvement in depression scores. There are several possible explanations for these results including those which have been addressed above for the reduction in anxiety. At an interventional level, other studies looking at prevention strategies targeting depression suggest that predictors of large effect sizes for adolescents include brief interventions, assigning homework, and having more females (Stice, Shaw, Bohon, Marti, & Rohde, 2009) which were all features in this study. There are still many unanswered questions about what led to the decrease in depressive symptoms in the participants and to better clarify the nature of these relationships, further work on the link between anxiety and depression is likely to be beneficial.

Depression and anxiety in adolescents are intrinsically linked with anxiety assuredly predicting depression (Herren, 2009; Jacobson & Newman, 2012). Various mechanisms are

thought to be at play in this association between anxiety and later depression but some that may be particularly relevant to this study include perfectionism and acute life stress (O'Connor, Rasmussen, & Hawton, 2010), not feeling loved or accepted in close relationships (Jacobson & Newman, 2016), and anxious solitude and peer exclusion (Gazelle & Ladd, 2003). Another study found that a predictor of adolescent depression was the fear involved with cognitive impairment and that disengagement from negative thoughts can decrease depression (Ho et al., 2018).

In this study, the participants made powerful statements about the impact of relatedness, the benefits of being in a group of peers who truly understand the anxiety struggle and therefore not feeling so alone. Personality factors were not assessed in this study but during the semi-structured interview and in general conversation, there was evidence of all participants displaying perfectionistic tendencies. Acute life stress was a major factor and trigger in the expression of anxiety in four out of five participants. Social support was not a primary focus of this study but relational content was a continual topic of discussion which was initiated by the participants. Taken together, these results support connectedness being a key indicator of emotional health and providing protective aspects against depression for those experiencing anxiety. This suggestion speaks to the importance of providing ways for the enhancement of true social connection for adolescents where they are free to be genuine and authentic. There is abundant room for further progress in determining ways to facilitate social connection for adolescents, yet strong evidence is suggestive of church youth groups providing a level of support and protectiveness against depression and suicidal ideation (Cole-Lewis et al., 2016). Support and protection in those who attend church youth groups is exhibited as a higher level of goal-directedness, emotional regulation, coping strategies (Wright et al., 2018), and social ties (Dill, 2017). New Zealand data on the effect of church participation is very similar with youth exhibiting less mental illness and fewer health-risk

behaviours (O'brien et al., 2013). The question then remains as to what individual, familial, and societal barriers inhibit adolescents attending these groups and there is abundant room for further research in this regard.

Mindfulness

This study showed no conclusive evidence regarding mindfulness following the intervention. This finding means that the hypothesis that with an increase in mindfulness skills there would be a reduction in anxiety was not able to be supported. The ability to modulate arousal and anxiety in order to incorporate moment by moment attentional processes is a difficult balance for adolescents (Broderick & Frank, 2014). This may be due to the fact that adolescents are still in the early stages of brain development in the area of executive functions that moderate emotional regulation (Giedd, 2004). This may help to explain why the participants experienced an inability to fully integrate new concepts such as mindfulness into their current understanding. It is likely that not enough dedicated practice time was given in order for mindfulness to become more established behaviorally. It seems possible that a longer mindfulness component at the beginning of each session may have enhanced the result given strong and established work using mindfulness with adolescents (Broderick & Frank, 2014; Dunning et al., 2019). It may also be due to personality differences (Kuby et al., 2015; Salahat & Azaghlool, 2018), and the extent to which the adolescent was mindfully parented (Moreira & Canavarro, 2018). However, despite the struggle, it seems possible that with practice, successful cognitive and experiential reflection can occur (Broderick & Frank, 2014). It is also very likely that the brief intervention was not long enough to fully appreciate and apply the mindfulness skills. There are still unanswered questions remaining about why there was not a significant difference in the level of mindfulness. Future studies would benefit from more time and attention to mindfulness

processes. This requires covering fundamental elements and justification of its use to solidify understanding of the goals and achievements involved.

It is also likely that personality differences and motivation to change contributed to the results of the study. The CAMM scale is mildly connected to the personality trait of positive affect but strongly connected to a reduction in negative affect in females (Kuby et al., 2015). This suggests that the mindfulness outcome may be more reflective of personality factors including proneness to worry and the propensity to internalize disputes and anxiety versus a personality that is less prone to future thinking and acting with awareness of the present moment. Perfectionism, in combination with acute life stress, has been found to be a predictor of adolescent depression and anxiety (O'Connor et al., 2010). Personality factors were not assessed as part of this research and there are still many unanswered questions about how personality and one's motivation to change affects the results. Prevention programs aimed at personality risk factors such as perfectionism, proneness to worry and future-focused thinking may impact adolescent anxiety outcomes and increase the ability to incorporate mindfulness skills.

Psychological inflexibility

The current study found that psychological inflexibility levels significantly decreased with a large effect size (d = 1.28), which is in line with the hypothesis of the study. This finding is of interest considering previous research confirming the association between psychological inflexibility and anxiety (Hazavei & RobatMili, 2019; Kashdan & Rottenberg, 2010; Simon & Verboon, 2016). However, given this study's small sample size it is difficult to generalize. Previous studies strongly support increasing psychological flexibility is associated with psychologically healthy outcomes (Kashdan & Rottenberg, 2010), and in adolescents, accelerated maturation of identity development (Loevinger, 1987; Westenburg & Block, 1993). In contrast, those with anxiety respond rigidity to a confronted fear stimulus

evidenced by cognitive fusion and experiential avoidance (Greco et al., 2008). It seems possible that the reduction in psychological inflexibility has had an effect on the participants' anxiety levels through the mechanisms of cognitive defusion and a reduction in experiential avoidance. However, the exact causal influence is not clear considering the high likelihood of bias. There are still many unanswered questions about whether the decrease in psychological inflexibility has reduced the participants' anxiety and depression levels but it appears to play a part.

Strengths of the study

The strengths of the study design involve a number of elements inherent in group designs including the establishment of therapeutic trust, depth of analysis with IPA, brief nature of the intervention, and the inclusion of a spiritual component, which helped to facilitate that acceptance process. The therapeutic relationship and group effects were considered carefully in light of the knowledge that adolescents are often particularly sensitive to all aspects of relationships. Trust building in the therapeutic relationship with the therapist and other the participants was thought through and actioned cautiously. This issue was addressed in several different ways. Firstly, to build therapeutic trust, the primary researcher outlined their level of training and encouraged the participants to ask any questions at stage if further explanation was required. Also, confidentiality within the group was explained to the participants. It was also explained that there is one limitation to confidentiality and that is when self-harm/suicidal ideation are expressed, at which time, the immediate caregiver would be contacted. Secondly, upon advertising the study, it was explained to the students that there was no expectation on them with regards to a certain level of faith and that experiencing spiritual doubt was considered normal and expected. This issue was felt, by the principal of the school, to be a specific concern for these students in particular and experienced as a form of failure. This was particularly relevant to those who were considered

to be perfectionistic and anxious in thought and behaviour. The participants expressed a high degree of trust within the group and they attributed this to being a female only group. Interpretative phenomenological analysis brings a personal and social touch to thematic analysis. It enabled a larger number of features to be explored in depth such as the current context and more 'naturally occurring events' in order to interpret the meaning that the participants took from their experiences. This is important as the perception of circumstances instructs our response rather than the circumstances themselves.

The brief nature of the study which included five consecutive days meant that the intervention was more attractive to the participants when compared to a longer intervention. Attrition is a major barrier to successful interventions as well as efficacy in research (De Haan, Boon, de Jong, Hoeve, & Vermeiren, 2013). A group intervention that spanned several weeks may have provided a barrier to participation for these participants considering the nature of their busy lives. It seems likely that psychologically committing to one week may not be as overwhelming as committing to several weeks of therapeutic sessions.

The inclusion of a spiritual component greatly helped to facilitate the acceptance process. The overall positive views expressed by the participants in this study with relation to the prayer element was very encouraging. However, it is unknown what effect prayer would have on another population of adolescents who were not exposed to school-based prayer on a daily basis which may limit generalizability of these results.

Limitations of the study

As previously highlighted, despite the promising results it is important that the data must be interpreted with caution as the involvement of extraneous variables is strong and will likely have played a part in the expression of the inflated effect size. Firstly, demand characteristics occur when participants adjust their thoughts or behaviour after picking up on the experimenter's aim which adds bias to the study's results. This characteristic is felt to be

involved due to the extreme effect size. The primary researcher used gestures and feedback which may have reinforced participants' thoughts and behavior to act in line with the hypothesis. However, the therapist feedback can also be viewed as a therapeutic tool to strengthen and facilitate change. It may be beneficial in future studies to institute a placebo control group and randomization so that participants are unaware of whether they are in the treatment group or not.

Secondly, another inherent limitation involved in quazi-experimental studies is with generalizability. The participants involved in this study were all female. This may inhibit the ability of the findings to be generalized to males. Thirdly, the timing that the intervention and assessment took place was a particularly stressful time for the participants which may have impacted the results of the study. The period in which the baseline and follow-up anxiety measures were taken may have been a contributor in the significant anxiety results. The participants had just returned to school after being at home for approximately six-weeks for Covid-19 Level 4, then 3, lockdown. It is of little doubt that feelings of stress, overwhelm and anxiety would have been present in most school students due to the pandemic's unprecedented nature. Additionally, baseline measures were taken while the participants were in the middle of their mid-year exams when academic pressure was elevated. All participants verbally recognized and reported that their stress levels were high at this time. All participants expressed a sense of being busy with schoolwork, homework and extracurricular activities and felt the need for downtime. However, it is worthy of note that all participants felt that being involved in the study enabled them to feel that they were doing something good for themselves, rather than having to complete another task in the day. This realization in itself may have led to an increased awareness of the stress that they perceived they were under.

Upon reflection, a stress scale such as the Depression Anxiety Stress Scales (DASS-21) (Lovibond & Lovibond, 1995) may have been beneficial considering the immense pressure that the participants were under with regards to upcoming exams and navigating through the Covid-19 pandemic. The DASS-21 is a 21-question depression scale which assesses a negative emotionality through a tripartite model including anxiety, depression and stress, and has been validated with an adolescent sample (Willemsen, Markey, Declercq, & Vanheule, 2011). Although, not dissimilar to the 6-KADS in its non-diagnostic approach, the DASS-21 may have provided a more comprehensive picture of participants' current levels of stress.

Fourth, the length of time between the end of the intervention and the follow-up period caused retrospective memory difficulties. The post-intervention follow-up measures were taken immediately following the return to school after a three-week mid-year holiday. It is uncertain how this break would have affected the participants as there was no enquiry as to whether the skills they learnt in the intervention were continued throughout this period. The participants also noted that they felt substantially reduced stress levels compared to prior to the break. Additionally, the follow up assessment was taken four-weeks post intervention, which reportedly affected memory recall. Therefore, it seems possible that recall bias may have affected the ability to accurately remember thought or behavioural change processes retrospectively. Three out of five participants commented on lack of memory being a feature. Fifth, reliance on self-report was another limiting factor in the reliability of results. Future studies would benefit from adopting other means of gathering behavioural data, such as parent and school reports. Sixth, the length of the intervention may not have been sufficient for total acquisition of new skills. The intervention involved five consecutive days lasting approximately thirty minutes each session. The amount of time dedicated to learning new coping skills, which are somewhat counterintuitive to nature, may not have been sufficient to

fully integrate and learn novel ways of thinking. Seventh, due to time restrictions, no further follow-up measures could be taken. The study would benefit from reassessment at 6 and 12-month periods in order to assess the most effective timing of the brief intervention and current levels of understanding in the adolescent population.

Eighth, all participants volunteered for the study. There may have been something inherently different about those who volunteered compared to those who did not volunteer. As the population of non-participants were not able to be studied, we do not know if this is the case. Finally, the intervention was generally high in acceptability and adherence. Partly attributable to this is the brief intervention design over five consecutive days. It may be that committing to every day for a week is less intrusive than over a period of many weeks for adolescents. However, considering the small participant numbers the results may have been influenced by one participant's lack of adherence to the acceptance and prayer sessions. It is recognized the results of this study may have been influenced either negatively or positively if complete adherence had been achieved. Attrition is common and problematic for all psychotherapeutic interventions in youth (Ahlen et al., 2019). One possible explanation involved in those who have trouble maintaining adherence to the intervention may be that these individuals experience more elevated emotional and/or behavioural difficulties (Ahlen et al., 2019). Also, despite the initially encouraging results attributing statistical significance is difficult due to the small participant numbers. Future studies would benefit from including as much demographic and clinical detail as can be extracted in order to facilitate follow-up and the reasons for lack of adherence or attrition.

Conclusions and future recommendations

Acceptance and prayer are supported for future use in preventative programs for adolescents with anxiety. Despite the sample size being small, the results are promising for a small open trial and it is recommended that a larger is conducted. Increasing awareness of

what they were experiencing, enhancing psychological flexibility, confronting feared stimulus, increasing faith, facilitating a sense of relatedness, reducing autonomic nervous system activity, and giving over control through prayer, were all felt to contribute to the reduction in anxiety in the participants.

Increasing faith by restoring trust and attachment to a relationship with God may help to reduce anxiety. Prayer may have also been found to act as an exposure task by confronting a feared stimulus. Prayer-based interventions are recommended in Christian populations and future studies would benefit from looking at personal barriers to faith and current beliefs around prayer.

The fact that adolescents are unaware of their anxious symptomology directly affects how prevention programs can be introduced. This finding highlighted the need for in-depth psychoeducation for adolescents, with a particular focus on the symptoms that can be experienced cognitively, physiologically, emotionally and behaviourally. The participants found accessing their cognitive content difficult, yet with additional time and practice this will likely be achieved more readily. Sustained attention is required in order to be able to access cognitive content. This was a barrier to treatment in our study, may have affected adherence and is likely to have affected the mindfulness result. Future studies involving dedicated time personally identifying recurring and unhelpful thinking patterns would greatly benefit adolescents with anxiety. Parental education programs that teach emotional awareness practices may well lessen the need for ongoing interventional approaches in their children. Future research and interventions which provide in-depth psychoeducation, with a particular focus on the symptoms that are commonly experienced by adolescents, will greatly add to the value of any intervention. It may also be worth including personality risk factors, such as perfectionism and proneness to worry in the psychoeducational element.

The personal impact and enjoyment of the relaxation exercises was dominant in feedback on the intervention. Relaxation exercises are one obvious treatment pathway which would likely be of great benefit to adolescents with anxiety. The addition of the following design aspects is likely to be of great value: a psychoeducational component, sex-specific groups, conducted in a school-based setting. Brief interventions may be of value when considering busy schedules, as well as being more appealing to adolescents. However, longer sessions of one hour may be of value in order to provide more time for appropriation and practice. Homework, including relaxation methods alongside prayer, is likely to be beneficial. The primary researcher's experience with providing therapeutic interventions to adolescents is limited which may have affected the results of the study. It is unknown if therapist experience influenced the efficacy of this study. Future studies would benefit from randomizing participants to groups that include untrained therapists versus therapists with several years' experience in working with adolescents.

In adolescents with mild to moderate anxiety there appear to be therapeutic effects from participating in a group intervention. Normalization of experience is a significant contributor in lessening stigma and aloneness which is particularly relevant to an adolescent population. Interventions that foster social connection, especially in sex-specific groups, are likely to be of great benefit. Additionally, recognition of significant loss (separative/divorce, death) and conflict in relationships were major triggers in the expression of anxiety. Prevention programs aimed at parents on how to build resilience in their children may be extremely valuable for anxiety reduction by providing protective mechanisms.

References

Ahlen, J., Lenhard, F., & Ghaderi, A. (2019). Long-term outcome of a cluster-randomized universal prevention trial targeting anxiety and depression in school children. *Behavior therapy, 50*(1), 200-213. doi: 10.1016/j.beth.2018.05.003

Ahmed, S. P., Bittencourt-Hewitt, A., & Sebastian, C. L. (2015). Neurocognitive bases of emotion regulation development in adolescence. *Developmental Cognitive Neuroscience, 15*, 11-25.

Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. N. (2015). *Patterns of attachment: A psychological study of the strange situation*: Psychology Press.

Ano, G. G., & Vasconcelles, E. B. (2005). Religious coping and psychological adjustment to stress: A meta-analysis. *Journal Of Clinical Psychology, 61*(4), 461-480.

Arbeit, M. R., Hershberg, R. M., Rubin, R. O., DeSouza, L. M., & Lerner, J. V. (2016). "I'm hoping that i can have better relationships": Exploring interpersonal connection for young men. *Qualitative Psychology, 3*(1), 79.

Armstrong, A. B., Morrison, K. L., & Twohig, M. P. (2013). A preliminary investigation of acceptance and commitment therapy for adolescent obsessive-compulsive disorder. *Journal of Cognitive Psychotherapy, 27*(2), 175-190. doi: 10.1891/0889-8391.27.2.175

Association., A. P. (2013). Diagnostic and statistical manual of mental disorders (dsm-5®). *American Psychiatric Pub.*

Aten, J. D., & Schruba, A. (2016). An integrative approach to hope, healing, and acceptance. *61*(49). doi:10.1037/a0040595

Balázs, J., Miklósi, M., Keresztény, A., Hoven, C. W., Carli, V., Wasserman, C., Brunner, R. (2018). Comorbidity of physical and anxiety symptoms in adolescent: Functional impairment, self-rated health and subjective well-being. *International journal of environmental research and public health, 15*(8), 1698.

Barrett, P. M., Farrell, L. J., Ollendick, T. H., & Dadds, M. (2006). Long-term outcomes of an australian universal prevention trial of anxiety and depression symptoms in children and youth: An evaluation of the friends program. *Journal Of Clinical Child And Adolescent Psychology, 35*(3), 403-411.

Bartkowski, J. P., Acevedo, G. A., & Van Loggerenberg, H. (2017). Prayer, meditation, and anxiety: Durkheim revisited. *Religions, 8*(9), 191.

Bazley, R., & Pakenham, K. (2019). Suicide prevention training for christian faith-based organizations using acceptance and commitment therapy: A pilot controlled trial of the holly program. *Journal of Contextual Behavioral Science, 11*, 6-14.

Beck, E. D., & Jackson, J. J. (2020). Consistency and change in idiographic personality: A longitudinal esm network study. *Journal of personality and social psychology, 118*(5), 1080.

Beesdo, K., Knappe, S., & Pine, D. S. (2009). Anxiety and anxiety disorders in children and adolescents: Developmental issues and implications for DSM-5. *Psychiatric Clinics, 32*(3), 483-524.

Behar, E., DiMarco, I. D., Hekler, E. B., Mohlman, J., & Staples, A. M. (2009). Current theoretical models of generalized anxiety disorder (gad): Conceptual review and treatment implications. *Journal of Anxiety Disorders, 23*(8), 1011-1023.

Bekker, H. L., Legare, F., Stacey, D., O'Connor, A., & Lemyre, L. (2003). Is anxiety a suitable measure of decision aid effectiveness: A systematic review? *Patient education and counseling, 50*(3), 255-262.

Biddle, S. J., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British journal of sports medicine, 45*(11), 886-895.

Bluett, E. J., Homan, K. J., Morrison, K. L., Levin, M. E., & Twohig, M. P. (2014). Acceptance and commitment therapy for anxiety and ocd spectrum disorders: An empirical review. *Journal of Anxiety Disorders, 28*(6), 612-624. doi:https://doi.org/10.1016/j.janxdis.2014.06.008

Boelens, P. A., Reeves, R. R., Replogle, W. H., & Koenig, H. G. (2012). The effect of prayer on depression and anxiety: Maintenance of positive of positive influence one year after prayer intervention. *International Journal of Psychiatry in Medicine, 43*(1), 85-98. doi:10.2190/PM.43.1.f

Bögels, S., & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: A review and new model. *Clinical Psychology Review, 28*(4), 539-558.

Borkovec, T. D., Alcaine, O., & Behar, E. (2004). Avoidance theory of worry and generalized anxiety disorder. *Generalized anxiety disorder: Advances in Research and Practice, 2004*.

Bourdon, J. L., Savage, J. E., Verhulst, B., Carney, D. M., Brotman, M. A., Pine, D. S., . . . Hettema, J. M. (2019). The genetic and environmental relationship between childhood behavioral inhibition and preadolescent anxiety. *Twin research and human genetics: the official journal of the International Society for Twin Studies, 22*(1), 48.

Bowlby, J. (1969). Attachment and loss v. 3 (vol. 1). *Random House. Furman, W., & Buhrmester, D.(2009). Methods and measures: The network of relationships inventory: Behavioral systems version. International Journal of Behavioral Development, 33*, 470-478.

Braam, A. W., Schaap-Jonker, H., Mooi, B., Ritter, D. d., Beekman, A. T., & Deeg, D. J. (2008). God image and mood in old age: Results from a community-based pilot study in the netherlands. *Mental Health, Religion and Culture, 11*(2), 221-237.

Breslau, J., Gilman, S. E., Stein, B. D., Ruder, T., Gmelin, T., & Miller, E. (2017). Sex differences in recent first-onset depression in an epidemiological sample of adolescents. *Translational Psychiatry, 7*(5), e1139-e1139.

Breslin, M. J., & Lewis, C. A. (2008). Theoretical models of the nature of prayer and health: A review. *Mental Health, Religion and Culture, 11*(1), 9-21.

Bridges, L. J., & Moore, K. A. (2002). *Religion and spirituality in childhood and adolescence*: Child trends. Washington, DC.

Brillhart, D. (2017). In J. Davies & C. Nagi (Eds.), *Individual psychological therapies in forensic settings: Research and practice.* 11-27. New York, NY: Routledge/Taylor & Francis Group.

Broderick, P. C., & Frank, J. L. (2014). Learning to breathe: An intervention to foster mindfulness in adolescence. *New Directions for Youth Development, 2014*(142), 31-44.

Burckhardt, R., Manicavasagar, V., Batterham, P. J., Hadzi-Pavlovic, D., & Shand, F. (2017). Acceptance and commitment therapy universal prevention program for adolescents: A feasibility study. *Child and Adolescent Psychiatry and Mental Health, 11*(1), 27.

Byrd, K. R., & Boe, A. (2001). The correspondence between attachment dimensions and prayer in college students. *The International Journal for the Psychology of Religion, 11*(1), 9-24. doi:10.1207/S15327582IJPR1101_02.

Campbell, E. L. (2015). Utilizing the serenity prayer to teach psychology students about stress management. *Journal of Psychology and Theology, 43*(1), 3-7.

Carlson, C. R., Bacaseta, P. E., & Simanton, D. A. (1988). A controlled evaluation of devotional meditation and progressive relaxation. *Journal of Psychology and Theology, 16*(4), 362-368.

Casey, B., Heller, A. S., Gee, D. G., & Cohen, A. O. (2019). Development of the emotional brain. *Neuroscience Letters, 693*, 29-34.

Casper, K. (2001). Affective feelings as feedback: Some cognitive consequences. *Theories of Mood and Cognition: A User's Guidebook, 27*.

Cassell, M. L. (2018). *Effectively transporting a spiritually based intervention for reducing subsyndromal anxiety and increasing coping skills in urban adolescents: A multiple baseline design.* A multiple baseline design [ProQuest Information & Learning]. In Dissertation Abstracts International: Section B: *The Sciences and Engineering* 79(11B(E)).

Chavira, D. A., Stein, M. B., Bailey, K., & Stein, M. T. (2004). Child anxiety in primary care: Prevalent but untreated. *Depression and Anxiety, 20*(4), 155-164.

Cheron, D., & Ehrenreich, J. T. (2008). Assessment of acceptance and mindfulness processes in youth. *Acceptance and Mindfulness Treatments for Children and Adolescents: A Practitioner's Guide*, 37.

Chu, J. T. W., Wadham, A., Jiang, Y., Whittaker, R., Stasiak, K., Shepherd, M., & Bullen, C. (2019). Development of myteen text messaging program to support parents of adolescents: Qualitative study. *JMIR mHealth and uHealth, 7*(11), e15664.

Cohen, J. (1988). The effect size index: D. *Statistical Power Analysis for the Behavioral Sciences, 2*(1).

Cole-Lewis, Y. C., Gipson, P. Y., Opperman, K. J., Arango, A., & King, C. A. (2016). Protective role of religious involvement against depression and suicidal ideation among youth with interpersonal problems. *Journal of religion and health, 55*(4), 1172-1188.

Connor, B., Engers, K. M., & Slear, S. (2011). Cortisol fluctuations. *International Journal of Learning, 17*(11).

Connors, G. J., Toscova, R. T., & Tonigan, J. S. (1999). In W. R. Miller (Ed.), *Integrating Spirituality into Treatment: Resources for Practitioners,* 235-250. Washington, DC: American Psychological Association.

Costello, C. G. (1992). Conceptual problems in current research on cognitive vulnerability to psychopathology. *Cognitive Therapy and Research, 16*(4), 379-390.

Costigan, S. A., Lubans, D. R., Lonsdale, C., Sanders, T., & del Pozo Cruz, B. (2019). Associations between physical activity intensity and well-being in adolescents. *Preventive Medicine, 125*, 55-61.

Craske, M. G. (1997). Fear and anxiety in children and adolescents. *Bulletin of the Menninger Clinic, 61*(2).

Cronjé, F. J., Sommers, L. S., Faulkner, J. K., Meintjes, W., Van Wijk, C. H., & Turner, R. P. (2017). Effect of a faith-based education program on self-assessed physical, mental and spiritual (religious) health parameters. *Journal of Religion and Health, 56*(1), 89-108.

Crowe, M., Ward, N., Dunnachie, B., & Roberts, M. (2006). Characteristics of adolescent depression. *International Journal of Mental Health Nursing, 15*(1), 10-18.

Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Huibers, M. J. (2016). How effective are cognitive behavior therapies for major depression and anxiety disorders? A metaanalytic update of the evidence. *World Psychiatry, 15*(3), 245-258.

Cunha, M., & Paiva, M. J. (2012). Text anxiety in adolescents: The role of self-criticism and acceptance and mindfulness skills. *The Spanish Journal of Psychology, 15*(2), 533.

Dadds, M. R., Holland, D. E., Laurens, K. R., Mullins, M., Barrett, P. M., & Spence, S. H. (1999). Early intervention and prevention of anxiety disorders in children: Results at 2-year follow-up. *Journal of Consulting and Clinical Psychology, 67*(1), 145.

David, D., & Cristea, I. (2018). The new great psychotherapy debate: Scientific integrated psychotherapy vs. Plurality. Why cognitive-behavior therapy is the gold standard in

psychotherapy and a platform for scientific integrated psychotherapy. *Journal of Evidence-Based Psychotherapies, 18*(2), 1.

Davis, T. L., Kerr, B. A., & Kurpius, S. E. R. (2003). Meaning, purpose, and religiosity in at-risk youth: The relationship between anxiety and spirituality. *Journal of Psychology and Theology, 31*(4), 356-365.

de Bruin, E. I., Zijlstra, B. J., & Bögels, S. M. (2014). The meaning of mindfulness in children and adolescents: Further validation of the Child and Adolescent Mindfulness Measure (CAMM) in two independent samples from the netherlands. *Mindfulness, 5*(4), 422-430.

De Haan, A. M., Boon, A. E., de Jong, J. T., Hoeve, M., & Vermeiren, R. R. (2013). A meta-analytic review on treatment dropout in child and adolescent outpatient mental health care. *Clinical Psychology Review, 33*(5), 698-711.

de Jong-Meyer, R., Beck, B., & Riede, K. (2009). Relationships between rumination, worry, intolerance of uncertainty and metacognitive beliefs. *Personality and Individual Differences, 46*(4), 547-551.

Demehri, F., Saeedmanesh, M., & Jala, N. (2018). The effectiveness of Acceptance and Commitment Therapy (ACT) on rumination and well-being in adolescents with general anxiety disorder. *Middle Eastern Journal of Disability Studies, 8*, 25-25.

Dill, L. J. (2017). "Wearing my spiritual jacket": The role of spirituality as a coping mechanism among african american youth. *Health Education & Behavior, 44*(5), 696-704.

Dindo, L. N., Recober, A., Haddad, R., & Calarge, C. A. (2017). Comorbidity of migraine, major depressive disorder, and generalized anxiety disorder in adolescents and young adults. *International Journal of Behavioral Medicine, 24*(4), 528-534.

Dong, L., Martinez, A. J., Buysse, D. J., & Harvey, A. G. (2019). A composite measure of sleep health predicts concurrent mental and physical health outcomes in adolescents prone to eveningness. *Sleep Health, 5*(2), 166-174.

Donovan, C. L., & Spence, S. H. (2000). Prevention of childhood anxiety disorders. *Clinical Psychology Review, 20*(4), 509-531.

Doré, I., Sylvester, B., Sabiston, C., Sylvestre, M.-P., O'Loughlin, J., Brunet, J., & Bélanger, M. (2020). Mechanisms underpinning the association between physical activity and mental health in adolescence: A 6-year study. *International Journal of Behavioral Nutrition and Physical Activity, 17*(1), 9.

Drake, K. L., & Ginsburg, G. S. (2012). Family factors in the development, treatment, and prevention of childhood anxiety disorders. *Clinical Child and Family Psychology Review, 15*(2), 144-162.

Dunning, D. L., Griffiths, K., Kuyken, W., Crane, C., Foulkes, L., Parker, J., & Dalgleish, T. (2019). Research review: The effects of mindfulness-based interventions on cognition and mental health in children and adolescents - a metaanalysis of randomized controlled trials. *Journal of Child Psychology and Psychiatry, 60*(3), 244-258.

Ehlert, U., Gaab, J., & Heinrichs, M. (2001). Psychoneuroendocrinological contributions to the etiology of depression, posttraumatic stress disorder, and stress-related bodily disorders: The role of the hypothalamus–pituitary–adrenal axis. *Biological Psychology, 57*(1-3), 141-152.

Ehrmantraut, A. (2015). *Phenomenon of Adolescent Prayer: Christian, Jewish, and Muslim perspectives*: Saint Mary's University of Minnesota.

Ellison, C. G., Bradshaw, M., Flannelly, K. J., & Galek, K. C. (2014). Prayer, attachment to god, and symptoms of anxiety-related disorders among us adults. *Sociology of Religion, 75*(2), 208-233.

Elnazer, H. Y., & Baldwin, D. S. (2014). Investigation of cortisol levels in patients with anxiety disorders: A structured review. In *Behavioral Neurobiology of Stress-related disorders*, 191-216, Springer.

Esmaeili, L., Amiri, S., Abedi, M. R., & Molavi, H. (2018). The effect of acceptance and commitment therapy focused on self-compassion on social anxiety of adolescent girls. *British Journal of Clinical Psychology*, 53(1), 78-94

Essau, C. A. (2003). Comorbidity of anxiety disorders in adolescents. *Depression and Anxiety, 18*(1), 1-6.

Essau, C. A., Lewinsohn, P. M., Lim, J. X., Moon-ho, R. H., & Rohde, P. (2018). Incidence, recurrence and comorbidity of anxiety disorders in four major developmental stages. *Journal of Affective Disorders, 228*, 248-253.

Esteban-Gonzalo, L., Turner, A. I., Torres, S. J., Esteban-Cornejo, I., Castro-Piñero, J., Delgado-Alfonso, Á., Veiga, Ó. L. (2019). Diet quality and well-being in children and adolescents: The up & down longitudinal study. *British Journal of Nutrition, 121*(2), 221-231.

Estrada, C. A. M., Lomboy, M. F. T. C., Gregorio, E. R., Amalia, E., Leynes, C. R., Quizon, R. R., & Kobayashi, J. (2019). Religious education can contribute to adolescent mental health in school settings. *International Journal of Mental Health Systems, 13*(1), 28. doi:10.1186/s13033-019-0286-7

Fallot, R. D. (1998). In R. D. Fallot (Ed.), *Spirituality and Religion in recovery from mental illness,* 35-44. San Francisco, California: Jossey-Bass.

Farrell, L. J., & Barrett, P. M. (2007). Prevention of childhood emotional disorders: Reducing the burden of suffering associated with anxiety and depression. *Child and Adolescent Mental Health, 12*(2), 58-65.

Ferentzy, P., Skinner, W., & Antze, P. (2010). The serenity prayer: Secularism and spirituality in gamblers anonymous. *Journal of Groups in Addiction & Recovery, 5*(2), 124-144. doi:10.1080/15560351003766125

Fisak, J. B. J., Richard, D., & Mann, A. (2011). The prevention of child and adolescent anxiety: A meta-analytic review. *Prevention Science, 12*(3), 255. doi:10.1007/s11121-011-0210-0

Forman, E. M., Chapman, J. E., Herbert, J. D., Goetter, E. M., Yuen, E. K., & Moitra, E. (2012). Using session-by-session measurement to compare mechanisms of action for acceptance and commitment therapy and cognitive therapy. *Behavior Therapy, 43*(2), 341-354.

Fowler, J. W., & Dell, M. L. (2006). Stages of faith from infancy through adolescence: Reflections on three decades of faith development theory. *The Handbook of Spiritual Development in Childhood and Adolescence*, 34-45.

Francis, L. J., & Penny, G. (2016). Prayer, personality and purpose in life: An empirical enquiry among adolescents in the uk. In *Research in the Social Scientific Study of Religion, 27*, 192-209, Brill.

Frankl, V., E. (1979). The unheard cry for meaning: Psychotherapy and humanism. Simon and Schuster.

Frydenberg, E. (2018). *Adolescent Coping: Promoting Resilience and well-being*: Routledge.

Fu, X., Padilla-Walker, L. M., & Brown, M. N. (2017). Longitudinal relations between adolescents' self-esteem and prosocial behavior toward strangers, friends and family. *Journal of Adolescence, 57*, 90-98.

Gallagher, B., & Cartwright-Hatton, S. (2008). The relationship between parenting factors and trait anxiety: Mediating role of cognitive errors and metacognition. *Journal of Anxiety Disorders, 22*(4), 722-733.

Garcia-Klemas, E. (2019). *Comparing the efficacy of a centering or intercessory prayer intervention on stress in christian participants.* (Dissertation, Northcentral University).

Garzon, F. (2013). Christian devotional meditation for anxiety. *Evidence-based practices for Christian Counseling and Psychotherapy*, 59.

Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis–stress model of internalizing trajectories in childhood. *Child Development, 74*(1), 257-278.

George, K. (2019). *Too blessed to be stressed? Correlations between prayer, scripture readings, and mental health measures.* (Doctoral dissertation, Baylor University).

Geronimi, E. M., Patterson, H. L., & Woodruff-Borden, J. (2016). Relating worry and executive functioning during childhood: The moderating role of age. *Child Psychiatry & Human Development, 47*(3), 430-439.

Giedd, J. N. (2004). Structural magnetic resonance imaging of the adolescent brain. *Annals of the New York Academy of Sciences, 1021*(1), 77-85.

Goldstein, S. N. (2010). The exploration of spirituality and identity status in adolescence. *Currents: Scholarship in the Human Services, 9*(1).

Greaves-Lord, Ferdinand, Oldehinkel, Sondeijker, Ormel, & Verhulst. (2007). Higher cortisol awakening response in young adolescents with persistent anxiety problems. *Acta Psychiatrica Scandinavica, 116*(2), 137-144.

Greco, L. A., Baer, R. A., & Smith, G. T. (2011). Assessing mindfulness in children and adolescents: Development and validation of the child and adolescent mindfulness measure (camm). *Psychological Assessment, 23*(3), 606.

Greco, L. A., Lambert, W., & Baer, R. A. (2008). Psychological inflexibility in childhood and adolescence: Development and evaluation of the avoidance and fusion questionnaire for youth. *Psychological Assessment, 20*(2), 93.

Greco, L. A., Murrell, A., & Coyne, L. (2005). Avoidance and fusion questionnaire for youth (AFQ-Y). *Acceptance and Commitment Therapy. Measures Package, 141*.

Grimwade, L., & Cook, C. (2019). The clinician's view of spirituality in mental health care. *Chaplaincy and Spiritual Care in Mental Health Settings*, 31.

Groover, C. D. (2020). The impact prayer has on reducing anxiety. (Doctoral dissertation, Liberity University).

Grover, R. L., Ginsburg, G. S., & Ialongo, N. (2007). Psychosocial outcomes of anxious first graders: A seven-year follow-up. *Depression and Anxiety, 24*(6), 410-420.

Grupe, D. W., & Nitschke, J. B. (2013). Uncertainty and anticipation in anxiety: An integrated neurobiological and psychological perspective. *Nature Reviews Neuroscience, 14*(7), 488-501.

Guerra, J., García-Gómez, M., Turanzas, J., Cordón, J. R., Suárez-Jurado, C., & Mestre, J. M. (2019). A brief spanish version of the Child and Adolescent Mindfulness Measure (CAMM). A dispositional mindfulness measure. *International Journal of Environmental Eesearch and Public Health, 16*(8), 1355.

Gullone, E., & Taffe, J. (2012). The emotion regulation questionnaire for children and adolescents (erq–ca): A psychometric evaluation. *Psychological Assessment, 24*(2), 409.

Gunlicks-Stoessel, M., Eckshtain, D., Lee, S., Reigstad, K., Mufson, L., & Weisz, J. (2019). Latent profiles of cognitive and interpersonal risk factors for adolescent depression and implications for personalized treatment. *Journal of Abnormal Child Psychology, 47*(12), 1957-1967.

Halder, S., & Mahato, A. K. (2019). Cognitive behavior therapy for children and adolescents: Challenges and gaps in practice. *Indian Journal of Psychological Medicine, 41*(3), 279-283.

Han, G., Helm, J., Iucha, C., Zahn-Waxler, C., Hastings, P. D., & Klimes-Dougan, B. (2016). Are executive functioning deficits concurrently and predictively associated with depressive and anxiety symptoms in adolescents? *Journal of Clinical Child & Adolescent Psychology, 45*(1), 44-58.

Hancock, K. M., Swain, J., Hainsworth, C. J., Dixon, A. L., Koo, S., & Munro, K. (2018). Acceptance and commitment therapy versus cognitive behavior therapy for children with anxiety: Outcomes of a randomized controlled trial. *Journal of Clinical Child & Adolescent Psychology, 47*(2), 296-311.

Haq, M. (2015). A comparative analysis of qualitative and quantitative research methods and a justification for adopting mixed methods in social research. (Doctoral dissertation, University of Bradford).

Hardy, S. A., Baldwin, C. R., Herd, T., & Kim-Spoon, J. (2019). Dynamic associations between religiousness and self-regulation across adolescence into young adulthood. *Developmental Psychology*. 56(1), 180.

Harle, T. (2005). Serenity, courage and wisdom changing competencies for leadership. *Business Ethics: A European Review, 14*(4), 348-358. doi:10.1111/j.1467-8608.2005.00416.

Harrington, L. A. (2017). *Acceptance and commitment therapy for adolescents: An experimental single case multiple probe design.* [ProQuest Information & Learning]. In Dissertation Abstracts International: Section B: The Sciences and Engineering (Vol. 77, Issue 10–B(E)).

Harris, J. I., Schoneman, S. W., & Carrera, S. R. (2002). Approaches to religiosity related to anxiety among college students. *Mental Health, Religion & Culture, 5*(3), 253. doi:10.1080/13674670110112730

Harris, J. I., Schoneman, S. W., & Carrera, S. R. (2005). Preferred prayer styles and anxiety control. *Journal of Religion and Health, 44*(4), 403-412.

Hartas, D. (2019). The social context of adolescent mental health and wellbeing: Parents, friends and social media. *Research Papers in Education*, 1-19.

Hawks, S. R., Hull, M. L., Thalman, R. L., & Richins, P. M. (1995). Review of spiritual health: Definition, role, and intervention strategies in health promotion. *American Journal of Health Promotion, 9*(5), 371-378.

Hayes, S. C. (2016). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies–republished article. *Behavior Therapy, 47*(6), 869-885.

Hazavei, F., & RobatMili, S. (2019). The effect of acceptance and commitment therapy on psychological flexibility and behavioral inhibition of adolescents with social anxiety disorder. *Journal of Health Promotion Management, 8*(6), 18-29.

Hazeldean Betty Ford Foundation (2020). The Serenity Prayer and Twelve Step Recovery. Retrieved from: https://www.hazeldenbettyford.org/articles/the-serenity-prayer.

Herren, J. A. (2009). Investigation of anxiety symptoms in a cognitive-stress mediational model of depression in early adolescent girls. (Doctoral dissertation, University of Texas, Austin).

Hettema, J. M., Neale, M. C., & Kendler, K. S. (2001). A review and meta-analysis of the genetic epidemiology of anxiety disorders. *American Journal of Psychiatry, 158*(10), 1568-1578.

Hettema, J. M., Prescott, C. A., Myers, J. M., Neale, M. C., & Kendler, K. S. (2005). The structure of genetic and environmental risk factors for anxiety disorders in men and women. *Archives of General Psychiatry, 62*(2), 182-189.

Ho, S. M., Dai, D. W. T., Mak, C., & Liu, K. W. K. (2018). Cognitive factors associated with depression and anxiety in adolescents: A two-year longitudinal study. *International Journal of Clinical and Health Psychology, 18*(3), 227-234.

Hoge, E. A., Bui, E., Palitz, S. A., Schwarz, N. R., Owens, M. E., Johnston, J. M., Simon, N. M. (2018). The effect of mindfulness meditation training on biological acute stress responses in generalized anxiety disorder. *Psychiatry Research, 262*, 328-332.

Holler, K., Kavanaugh, B., & Cook, N. E. (2014). Executive functioning in adolescent depressive disorders. *Journal of Child and Family Studies, 23*(8), 1315-1324.

Hovenkamp-Hermelink, J. H., Jeronimus, B. F., Spinhoven, P., Penninx, B. W., Schoevers, R. A., & Riese, H. (2019). Differential associations of locus of control with anxiety, depression and life-events: A five-wave, nine-year study to test stability and change. *Journal of Affective Disorders, 253*, 26-34.

Howells, L. (2018). *Cognitive behavioural therapy for adolescents and young adults: An emotion regulation approach*: Routledge.

Hudson, J. L., Murayama, K., Meteyard, L., Morris, T., & Dodd, H. F. (2019). Early childhood predictors of anxiety in early adolescence. *Journal of Abnormal Child Psychology, 47*(7), 1121-1133.

Hugh-Jones, S., Beckett, S., Tumelty, E., & Mallikarjun, P. (2020). Indicated prevention interventions for anxiety in children and adolescents: A review and meta-analysis of school-based programs. *European Child & Adolescent Psychiatry*, 1-12.

Astin, A. W., Astin, H. S., & Lindholm, J. A. (2004). *Spirituality in higher education: A national study of college students' search for meaning and purpose*. Higher Education Research Institute, University of California, Los Angeles.

Inzlicht, M., Tullett, A. M., & Good, M. (2011). Existential neuroscience: A proximate explanation of religion as flexible meaning and palliative. *Religion, Brain & Behavior, 1*(3), 244-251.

Jackson, R. N. (2020). An in-depth exploration of clinical patterns within spiritually integrated therapy. (Doctoral dissertation, Brigham University).

Jacobson, & Newman. (2012). The temporal relationship between anxiety and depression: A meta-analysis. *Association for Behavioral and Cognitive Therapies, 18*.

Jacobson, & Newman. (2016). Perceptions of close and group relationships mediate the relationship between anxiety and depression over a decade later. *Depression and Anxiety, 33*(1), 66-74.

Jeppsen, B., Pössel, P., Black, S. W., Bjerg, A., & Wooldridge, D. (2015). Closeness and control: Exploring the relationship between prayer and mental health. *Counseling and Values, 60*(2), 164-185. doi:10.1002/cvj.12012

Johnson, Cohen, P., Kasen, S., & Brook, J. S. (2008). Parental concordance and offspring risk for anxiety, conduct, depressive, and substance use disorders. *Psychopathology, 41*(2), 124-128.

Johnson, D., Dupuis, G., Piche, J., Clayborne, Z., & Colman, I. (2018). Adult mental health outcomes of adolescent depression: A systematic review. *Depression and Anxiety, 35*(8), 700-716.

Johnstone, J., Rooney, R. M., Hassan, S., & Kane, R. T. (2014). Prevention of depression and anxiety symptoms in adolescents: 42 and 54 months follow-up of the aussie optimism program-positive thinking skills. *Frontiers in Psychology, 5*, 364.

Kahl, K., Winter, L., Schweiger, U., & Sipos, V. (2011). The third wave of cognitive-behavioural psychotherapies: Concepts and efficacy. *Fortschritte der Neurologie-Psychiatrie, 79*(6), 330-339.

Kallapiran, K., Koo, S., Kirubakaran, R., & Hancock, K. (2015). Effectiveness of mindfulness in improving mental health symptoms of children and adolescents: A metaanalysis. *Child and Adolescent Mental Health, 20*(4), 182-194.

Kandel, E. (2006). In search of memory: The emergence of a new science of mind. 2006. *New York Times Book Review*.

Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review, 30*(7), 865-878.

Kazdin, A. E. (2000). *Encyclopedia of psychology*. Washington, D.C.; Oxford [Oxfordshire]; New York: American Psychological Association ; Oxford University Press.

Kendler, K. S., Myers, J., & Prescott, C. (2000). Parenting and adult mood, anxiety and substance use disorders in female twins: An epidemiological, multi-informant, retrospective study. *Psychological Medicine, 30*(2), 281-294.

Kerig, P., & Ludlow, A. (2012). Developmental psychopathology: From Infancy through Adolescence, 1-33.

Kesek, A., Zelazo, P. D., & Lewis, M. D. (2009). The development of executive cognitive function and emotion regulation in adolescence. *Adolescent Emotional Development and the Emergence of Depressive Disorders*, 135-155.

Kessler, R. C., Davis, C. G., & Kendler, K. S. (1997). Childhood adversity and adult psychiatric disorder in the us national comorbidity survey. *Psychological Medicine, 27*(5), 1101-1119.

Kessler, R. C., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Wittchen, H. U. (2012). Twelve-month and lifetime prevalence and lifetime morbid risk of anxiety and mood disorders in the United States. *International Journal of Methods in Psychiatric Research, 21*(3), 169-184.

Kézdy, A., Martos, T., Boland, V., & Horváth-Szabó, K. (2011). Religious doubts and mental health in adolescence and young adulthood: The association with religious attitudes. *Journal of Adolescence, 34*(1), 39-47.

Kim, S. (2018). The effect of a bible based manualized protocol targeting attachment to god in anxiety and stress. (Doctoral Dissertations, Liberty University).

Kim, S., & Esquivel, G. B. (2011). Adolescent spirituality and resilience: Theory, research, and educational practices. *Psychology in the Schools, 48*(7), 755-765.

Kirkpatrick, L. A. (1992). An attachment-theory approach psychology of religion. *The International Journal for the Psychology of Religion, 2*(1), 3-28.

Knabb, J. J. (2012). Centering prayer as an alternative to mindfulness-based cognitive therapy for depression relapse prevention. *Journal of Religion and Health, 51*(3), 908-924,

Knabb, J. J. (2016). *Faith-based act for christian clients : An integrative treatment approach*: Routledge.

Knabb, J. J., & Frederick, T. V. (2017). *Contemplative prayer for christians with chronic worry : An eight-week program*: Routledge.

Koenig, H. G. (2001). Religion and medicine ii: Religion, mental health, and related behaviors. *The International Journal of Psychiatry in Medicine, 31*(1), 97-109.

Koenig, H. G. (2009). Research on religion, spirituality, and mental health: A review. *The Canadian Journal of Psychiatry, 54*(5), 283-291.

Kovacs, M., & Devlin, B. (1998). Internalizing disorders in childhood. *The Journal of Child Psychology and Psychiatry and Allied Disciplines, 39*(1), 47-63.

Krypotos, A.-M., Effting, M., Kindt, M., & Beckers, T. (2015). Avoidance learning: A review of theoretical models and recent developments. *Frontiers in Behavioral Neuroscience, 9*, 189.

Kuby, A. K., McLean, N., & Allen, K. (2015). Validation of the child and adolescent mindfulness measure (camm) with non-clinical adolescents. *Mindfulness, 6*(6), 1448-1455.

Kulkarni, A., Swinburn, B., & Utter, J. (2015). Associations between diet quality and mental health in socially disadvantaged New Zealand adolescents. *European Journal of Clinical Nutrition, 69*(1), 79-83.

Ladd, K. L., & Spilka, B. (2013). In K. I. Pargament, J. J. Exline, & J. W. Jones (Eds.), *APA Handbook of Psychology, Religion, and Spirituality (vol 1): Context, Theory, and Research,* 293-310. Washington, DC: American Psychological Association.

Larsen, B., & Luna, B. (2018). Adolescence as a neurobiological critical period for the development of higher-order cognition. *Neuroscience & Biobehavioral Reviews, 94*, 179-195.

Last, C. G., Hansen, C., & Franco, N. (1998). Cognitive-behavioral treatment of school phobia. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*(4), 404-411.

LeBlanc, J. C., Almudevar, A., Brooks, S. J., & Kutcher, S. (2002). Screening for adolescent depression: Comparison of the kutcher adolescent depression scale with the beck depression inventory. *Journal of Child and Adolescent Psychopharmacology, 12*(2), 113-126. doi:10.1089/104454602760219153

Lee, E. B., Homan, K. J., Morrison, K. L., Ong, C. W., Levin, M. E., & Twohig, M. P. (2020). Acceptance and commitment therapy for trichotillomania: A randomized controlled trial of adults and adolescents. *Behavior Modification, 44*(1), 70-91.

Lee, G., & Son, C. (2019). Effects of acceptance and commitment therapy (ACT) on assertiveness and interpersonal anxiety of university students with interpersonal anxiety. *Journal of Digital Convergence, 17*(4), 345-353.

Leppin, A., Schwarzer, R., Belz, D., Jerusalem, M., & Quast, H.-H. (1987). Causal attribution patterns of high and low test-anxious students. In R. Schwarzer, H. M. Van der Ploeg, & C. D. Spielberger (Eds.), Advances in test anxiety research, Vol. 5 (p. 67–86). Swets North America.

Levy, D. B. (2017). *Prayer and psychological well-being: The mediating role of mindfulness*: Pace University.

Lewinsohn, P. M., Gotlib, I. H., Lewinsohn, M., Seeley, J. R., & Allen, N. B. (1998). Gender differences in anxiety disorders and anxiety symptoms in adolescents. *Journal of Abnormal Psychology, 107*(1), 109.

Lindsay, E. K., Young, S., Smyth, J. M., Brown, K. W., & Creswell, J. D. (2018). Acceptance lowers stress reactivity: Dismantling mindfulness training in a randomized controlled trial. *Psychoneuroendocrinology, 87*, 63-73.

Lipschutz, R., Bick, J., Nguyen, V., Lee, M., Leng, L., Grigorenko, E., Crowley, M. J. (2018). Macrophage migration inhibitory factor (mif) gene is associated with adolescents' cortisol reactivity and anxiety. *Psychoneuroendocrinology, 95*, 170-178.

Littleton, J. G., Bell, J.S. (2008). Living the serenity prayer: True stories of acceptance, courage, and wisdom, 14. Simon & Schuster

Liu, R., & Bell, M. A. (2019). Fearful temperament and the risk for child and adolescent anxiety: The role of attention biases and effortful control. *Clinical Child and Family Psychology Review*, 1-24.

Livheim, F., Hayes, L., Ghaderi, A., Magnusdottir, T., Högfeldt, A., Rowse, J., Tengström, A. (2015). The effectiveness of acceptance and commitment therapy for adolescent mental health: Swedish and australian pilot outcomes. *Journal of Child and Family Studies, 24*(4), 1016-1030.

Lockhart, S., Sawa, A., & Niwa, M. (2018). Developmental trajectories of brain maturation and behavior: Relevance to major mental illnesses. *Journal of Pharmacological Sciences, 137*(1), 1-4.

Loevinger, J. (1987). *Paradigms of Personality*: WH Freeman/Times Books/Henry Holt & Co.

Lombardi, C. M., Coley, R. L., Sims, J., Lynch, A. D., & Mahalik, J. R. (2019). Social norms, social connections, and sex differences in adolescent mental and behavioral health. *Journal of Child and Family Studies, 28*(1), 91-104.

Lu, W. (2019). Adolescent depression: National trends, risk factors, and healthcare disparities. *American Journal of Health Behavior, 43*(1), 181-194.

Malinakova, K., Kopcakova, J., Geckova, A. M., van Dijk, J. P., Furstova, J., Kalman, M., Reijneveld, S. A. (2019). “I am spiritual, but not religious”: Does one without the other protect against adolescent health-risk behaviour? *International Journal of Public Health, 64*(1), 115-124.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology, 3*(5), 551.

Marcia, J. E. (1980). Identity in adolescence. *Handbook of Adolescent Psychology, 9*(11), 159-187.

Marteau, T. M., & Bekker, H. (1992). The development of a six-item short-form of the state scale of the spielberger state—trait anxiety inventory (STAI). *British Journal of Clinical Psychology, 31*(3), 301-306.

Martinsen, K. D., Rasmussen, L. M. P., Wentzel-Larsen, T., Holen, S., Sund, A. M., Løvaas, M. E. S., Neumer, S.-P. (2019). Prevention of anxiety and depression in school children: Effectiveness of the transdiagnostic emotion program. *Journal of Consulting and Clinical Psychology, 87*(2), 212.

Mathews, B. L., Koehn, A. J., Abtahi, M. M., & Kerns, K. A. (2016). Emotional competence and anxiety in childhood and adolescence: A meta-analytic review. *Clinical Child and Family Psychology Review, 19*(2), 162-184.

Maxwell, S. D., Fineberg, A. M., Drabick, D. A., Murphy, S. K., & Ellman, L. M. (2018). Maternal prenatal stress and other developmental risk factors for adolescent depression: Spotlight on sex differences. *Journal of Abnormal Child Psychology, 46*(2), 381-397.

McCann, R. A., & Webb, M. (2012). Enduring and struggling with God in relation to traumatic symptoms: The mediating and moderating roles of cognitive flexibility. *Psychology of Religion and Spirituality, 4*(2), 143.

McCullough, M. E., & Larson, D. B. (1999). In *Integrating Spirituality into Treatment: Resources for practitioners.* (pp. 85-110). Washington, DC, US: American Psychological Association.

McMillan, S. J., & Morrison, M. (2006). Coming of age with the internet: A qualitative exploration of how the internet has become an integral part of young people’s lives. *New Media & Society, 8*(1), 73-95.

Mental Health Foundation. (2021). Are our kiwi kids alright? Retrieved from: https://www.mentalhealth.org.nz/home/news/article/24/are-our-kiwi-kids-all-right.

Merikangas, K. R., Avenevoli, S., Dierker, L., & Grillon, C. (1999). Vulnerability factors among children at risk for anxiety disorders. *Biological Psychiatry, 46*(11), 1523-1535.

Michaelson, V., Brooks, F., Jirásek, I., Inchley, J., Whitehead, R., King, N., Pickett, W. (2016). Developmental patterns of adolescent spiritual health in six countries. *SSM-Population Health, 2*, 294-303.

Miner, M., Dowson, M., & Malone, K. (2014). Attachment to God, psychological need satisfaction, and psychological well-being among christians. *Journal of Psychology and Theology, 42*(4), 326-342.

Ministry of Health. (2016). Evaluation report: The youth primary mental health service. Wellington: Ministry of health.

Moffitt, T. E., Caspi, A., Harrington, H., Milne, B. J., Melchior, M., Goldberg, D., & Poulton, R. (2007). Generalized anxiety disorder and depression: Childhood risk factors in a birth cohort followed to age 32. *Psychological Medicine, 37*(3), 441-452.

Mónaco, E., Schoeps, K., & Montoya-Castilla, I. (2019). Attachment styles and well-being in adolescents: How does emotional development affect this relationship? *International Journal of Environmental Research and Public Health, 16*(14), 2554.

Montaldo, M. E. (2016). *" Lord, hear our prayer": How interfaith attachment to God and religious coping influence stress levels*: Palo Alto University.

Moreira, H., & Canavarro, M. C. (2018). Does the association between mindful parenting and adolescents' dispositional mindfulness depend on the levels of anxiety and depression symptomatology in mothers? *Journal of Adolescence, 68*, 22-31.

Morrish, L., Chin, T. C., Rickard, N., Sigley-Taylor, P., & Vella-Brodrick, D. (2019). The role of physiological and subjective measures of emotion regulation in predicting adolescent wellbeing. *International Journal of Wellbeing, 9*(2).

Neil, A. L., & Christensen, H. (2009). Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review, 29*(3), 208-215.

Newman, T., & Blackburn, S. (2002). Transitions in the lives of children and young people: Resilience factors. *Interchange 78*.

Ní Raghallaigh, M. (2011). Religion in the lives of unaccompanied minors: An available and compelling coping resource. *British Journal of Social Work, 41*(3), 539-556.

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science, 3*(5), 400-424.

O'brien, L.-A., Denny, S., Clark, T., Fleming, T., Teevale, T., & Robinson, E. (2013). The impact of religion and spirituality on the risk behaviours of young people in aotearoa, New Zealand. *Youth Studies Australia [online], 32*(4), 25.

O'Connor, R. C., Rasmussen, S., & Hawton, K. (2010). Predicting depression, anxiety and self-harm in adolescents: The role of perfectionism and acute life stress. *Behaviour Research and Therapy, 48*(1), 52-59.

O'Laoire, S. (1997). An experimental study of the effects of distant, intercessory prayer on self-esteem, anxiety, and depression. *Alternative Therapies in Health and Medicine, 3*(6), 38-53.

Olson, R., & Metzger, A. (2019). Disaggregating behavioral and psychological components of religious and spiritual development across adolescence: Variations by geographic location. *Psychology of Religion and Spirituality, 11*(1), 1.

Palsson, O. S. (2020). Development and validation of the thought impact scale: A measure of subconscious connectedness. *American Journal of Clinical Hypnosis, 62*(3), 198-230.

Pargament, K. I. (2011). *Spiritually integrated psychotherapy: Understanding and addressing the sacred*: Guilford Press.

Pargament, K. I., Murray-Swank, N. A., Magyar, G. M., & Ano, G. G. (2005). Spiritual Struggle: A Phenomenon of Interest to Psychology and Religion. In W. R. Miller & H. D. Delaney (Eds.), Judeo-Christian perspectives on psychology: Human nature, motivation, and change (p. 245–268). American Psychological Association. https://doi-org.ezproxy.massey.ac.nz/10.1037/10859-013.

Parveen, S. (2019). *Mechanisms behind the development of anxiety symptoms in norwegian adolescents: The interplay between self-esteem and peer relations.* (Masters thesis, University of Oslo).

Pawlow, L. A., & Jones, G. E. (2002). The impact of abbreviated progressive muscle relaxation on salivary cortisol. *Biological Psychology, 60*(1), 1-16.

Perkonigg, A., Kessler, R. C., Storz, S., & Wittchen, H. U. (2000). Traumatic events and posttraumatic stress disorder in the community: Prevalence, risk factors and comorbidity. *Acta Psychiatrica Scandinavica, 101*(1), 46-59.

Peterman, J. S., LaBelle, D. R., & Steinberg, L. D. (2014). Devoutly anxious: The relationship between anxiety and religiosity in adolescence. *Psychology of Religion and Spirituality, 6*(2), 113-122. doi:10.1037/a0035447.

Petersen, L. R., & Roy, A. (1985). Religiosity, anxiety, and meaning and purpose: Religion's consequences for psychological well-being. *Review of Religious Research, 27*(1), 49-62. doi:10.2307/3511937

Pietkiewicz, I., & Smith, J. A. (2014). A practical guide to using interpretative phenomenological analysis in qualitative research psychology. *Psychological Journal, 20*(1), 7-14.

Piper, J. (1988). Battling the unbelief of despondency. Retrieved from: https://www.desiringgod.org/messages/battling-the-unbelief-of-despondency.

Poloma, M. M., & Gallup, G. (1991). *Varieties of prayer: A survey report*: Trinity Pr International.

Poloma, M. M., & Pendleton, B. F. (1989). Exploring types of prayer and quality of life: A research note. *Review of Religious Research*, 46-53.

Pössel, P., Black, S. W., Bjerg, A. C., Jeppsen, B. D., & Wooldridge, D. T. (2014). Do trust-based beliefs mediate the associations of frequency of private prayer with mental health? A cross-sectional study. *Journal of Religion and Health, 53*(3), 904-916. doi:10.1007/s10943-013-9688-z

Potek, R. (2012). *Mindfulness as a school-based prevention program and its effect on adolescent stress, anxiety and emotion regulation*: New York University.

Psycom. (2020). Depression definition and dsm-5 diagnostic criteria. Retrieved from: https://www.psycom.net/depression-definition-dsm-5-diagnostic-criteria/.

Raftopoulos, M., & Bates, G. (2011). 'It's that knowing that you are not alone': The role of spirituality in adolescent resilience. *International Journal of Children's Spirituality, 16*(2), 151-167.

Rapee, R. (2012). Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. IACAPAP Textbook of Child and Adolescent Mental Health.

Reich, J. W. (2015). *Mastering your self, mastering your world: Living by the serenity prayer*. Alresford, HAM: Psyche Books/John Hunt Publishing Ltd.

Rim, J. I., Ojeda, J. C., Svob, C., Kayser, J., Drews, E., Kim, Y., Weissman, M. M. (2019). Current understanding of religion, spirituality, and their neurobiological correlates. *Harvard Review of Psychiatry, 27*(5), 303.

Riquelme, M., García, O. F., & Serra, E. (2018). Psychosocial maladjustment in adolescence: Parental socialization, self-esteem, and substance use. *Anales de Psicología, 34*(3), 536.

Rosales, A., & Tan, S.-Y. (2016). Acceptance and commitment therapy (ACT): Empirical evidence and clinical applications from a christian perspective. *Journal of Psychology and Christianity, 35*(3), 269.

Rothbart, M. K. (2011). *Becoming who we are: Temperament and Personality in Development*: Guilford Press.

Rothbart, M. K., & Bates, J. E. (2007). Temperament. *Handbook of Child Psychology, 3*.

Rowan, B., Vijaya, M., Philip, J. B., Dusan, H.P., & Fiona, S. (2017). Acceptance and commitment therapy universal prevention program for adolescents: A feasibility study. *Child and Adolescent Psychiatry and Mental health*(1), 1. doi:10.1186/s13034-017-0164-5.

Rubin, K. H., Coplan, R. J., & Bowker, J. C. (2009). Social withdrawal in childhood. *Annual Review of Psychology, 60*, 141-171.

Saeedmanesh, M., & Babaie, Z. (2017). The effectiveness of acceptance and commitment therapy (act) on anxiety and self-esteem in adolescents 14 to 16 years of stuttering. *Middle Eastern Journal of Disability Studies, 7*, 56-56.

Salahat, M. A., & Azaghlool, R. O. (2018). Predictive ability of big personality factors towards mindfulness among yarmouk university students. *Journal of Al-Quds Open University for Educational & Psychological Research & Studies, 9*(25), 2.

Schiefelbein, V. L., & Susman, E. J. (2006). Cortisol levels and longitudinal cortisol change as predictors of anxiety in adolescents. *The Journal of Early Adolescence, 26*(4), 397-413.

Schindler, N., & Hope, K. J. (2016). Commitment and relatedness: How college students use religious coping to manage anxiety. *Journal of College Counseling, 19*(2), 180-192. doi:10.1002/jocc.12040

Schleider, J. L., Abel, M. R., & Weisz, J. R. (2019). Do immediate gains predict long-term symptom change? Findings from a randomized trial of a single-session intervention for youth anxiety and depression. *Child Psychiatry & Human Development, 50*(5), 868-881.

Schneider, R. L., Arch, J. J., Landy, L. N., & Hankin, B. L. (2018). The longitudinal effect of emotion regulation strategies on anxiety levels in children and adolescents. *Journal of Clinical Child & Adolescent Psychology, 47*(6), 978-991.

Schwartz, J. M., Stapp, H. P., & Beauregard, M. (2005). Quantum physics in neuroscience and psychology: A neurophysical model of mind–brain interaction. *Philosophical Transactions of the Royal Society B: Biological Sciences, 360*(1458), 1309-1327.

Scott, L. D., Munson, M. R., McMillen, J. C., & Ollie, M. T. (2006). Religious involvement and its association to risk behaviors among older youth in foster care. *American Journal of Community Psychology, 38*(3-4), 223-236.

Semple, R. J., & Lee, J. (2008). Treating anxiety with mindfulness: Mindfulness-based cognitive therapy for children. *Acceptance and Mindfulness Interventions for Children, Adolescents and Families*, 63-87.

Shanahan, L., McHale, S. M., Crouter, A. C., & Osgood, D. W. (2007). Warmth with mothers and fathers from middle childhood to late adolescence: Within-and between-families comparisons. *Developmental Psychology, 43*(3), 551.

Shapiro, F., R. (2014). "Who wrote the serenity prayer?". *The Chronicle of Higher Education*. The Chronicle Review, 28.

Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. F., Rabian, B., & Serafini, L. T. (1999). Contingency management, self-control, and education support in the treatment of childhood phobic disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 67*(5), 675.

Simon, E., & Verboon, P. (2016). Psychological inflexibility and child anxiety. *Journal of Child and Family Studies, 25*(12), 3565-3573.

Sistler, A., & Washington, K. S. (1999). Serenity for african american caregivers. *Social Work with Groups, 22*(1), 49-62. doi:10.1300/J009v22n01_04

Smith, J. A., & Shinebourne, P. (2012). *Interpretative Phenomenological Analysis*: American Psychological Association.

Song, Y., & Li, B. (2019). Locus of control and trait anxiety in aged adults: The mediating effect of intolerance of uncertainty. *International Journal of Mental Health and Addiction, 17*(1), 13-21.

Spencer, C. M., Topham, G. L., & King, E. L. (2020). Do online parenting programs create change?: A meta-analysis. *Journal of Family Psychology*, 34(3), 364–374. https://doi-org.ezproxy.massey.ac.nz/10.1037/fam0000605

Spielberger, C.D. (1983) State-Trait Anxiety Inventory STAI. Consulting Psychologists Press, Palo Alto.

Steiner, L. M., Zaske, S., Durand, S., Molloy, M., & Arteta, R. (2017). Spiritual factors predict state and trait anxiety. *Journal of Religion and Health, 56*(6), 1937-1955.

Stevanovic, D., Jancic, J., & Lakic, A. (2011). The impact of depression and anxiety disorder symptoms on the health-related quality of life of children and adolescents with epilepsy. *Epilepsia, 52*(8), e75-e78.

Stice, E., Shaw, H., Bohon, C., Marti, C. N., & Rohde, P. (2009). A meta-analytic review of depression prevention programs for children and adolescents: Factors that predict magnitude of intervention effects. *Journal of Consulting and Clinical Psychology, 77*(3), 486.

Strong, P. (2007). *Romans 12:2 as an important paradigm for transformation in a christian: A practical theological study.* North-West University,

Sturman, E. D. (2019). An evolutionary perspective on winning, losing, and acceptance: The development of the defeat, victory, and acceptance scale (dvas). *Personality and Individual Differences, 146*, 9-19.

Svob, C., Wang, Z., Weissman, M. M., Wickramaratne, P., & Posner, J. (2016). Religious and spiritual importance moderate relation between default mode network connectivity and familial risk for depression. *Neuroscience Letters, 634*, 94-97. doi:10.1016/j.neulet.2016.10.009

S Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2013). Acceptance and commitment therapy in the treatment of anxiety: a systematic review. *Clinical Psychology Review*, 33(8), 965-978.

Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2014). Mechanism of change exploratory outcomes from a randomized controlled trial of acceptance and commitment therapy for anxious adolescents. *Elsevier Journal of Contextual Behavioral Science*.

Swain, J., Hancock, K., Hainsworth, C., & Bowman, J. (2015). Mechanisms of change: Exploratory outcomes from a randomised controlled trial of acceptance and commitment therapy for anxious adolescents. *Journal of Contextual Behavioral Science, 4*(1), 56-67. doi:10.1016/j.jcbs.2014.09.001

Tafet, G. E., Feder, D. J., Abulafia, D. P., & Roffman, S. S. (2005). Regulation of hypothalamic-pituitary-adrenal activity in response to cognitive therapy in patients with generalized anxiety disorder. *Cognitive, Affective, & Behavioral Neuroscience, 5*(1), 37-40.

Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology, 68*(4), 615.

Thompson, D. P. (2008). A meta-analysis on the efficacy of prayer [ProQuest Information & Learning]. In Dissertation Abstracts International: Section B: *The Sciences and Engineering*, *68*(12-B), 8416.

Turner, S. M., Beidel, D. C., & Costello, A. (1987). Psychopathology in the offspring of anxiety disorders patients. *Journal of Consulting and Clinical Psychology, 55*(2), 229.

Turner, S. M., Beidel, D. C., & Wolff, P. L. (1996). Is behavioral inhibition related to the anxiety disorders? *Clinical Psychology Review, 16*(2), 157-172.

Van den Bergh, B. R., Van Calster, B., Smits, T., Van Huffel, S., & Lagae, L. (2008). Antenatal maternal anxiety is related to HPA-axis dysregulation and self-reported depressive symptoms in adolescence: A prospective study on the fetal origins of depressed mood. *Neuropsychopharmacology, 33*(3), 536-545.

Varvogli, L., & Darviri, C. (2011). Stress management techniques: Evidence-based procedures that reduce stress and promote health. *Health Science Journal, 5*(2), 74.

Vasey, M. W., & Dadds, M. R. (2001). *The developmental psychopathology of anxiety*: Oxford University Press.

Vøllestad, J., Nielsen, M. B., & Nielsen, G. H. (2012). Mindfulness and acceptance-based interventions for anxiety disorders: A systematic review and metaanalysis. *British Journal of Clinical Psychology, 51*(3), 239-260.

Wallace Jr, J. M., & Forman, T. A. (1998). Religion's role in promoting health and reducing risk among american youth. *Health Education & Behavior, 25*(6), 721-741.

Weisz, J. R. (1986). Contingency and control beliefs as predictors of psychotherapy outcomes among children and adolescents. *Journal of Consulting and Clinical Psychology, 54*(6), 789.

Wells, A. (1999). A metacognitive model and therapy for generalized anxiety disorder. *Clinical Psychology & Psychotherapy: An International Journal of Theory & Practice, 6*(2), 86-95.

Wergeland, G. J. H., Fjermestad, K. W., Marin, C. E., Bjelland, I., Haugland, B. S. M., Silverman, W. K., Havik, O. E. (2016). Predictors of treatment outcome in an effectiveness trial of cognitive behavioral therapy for children with anxiety disorders. *Behaviour Research and Therapy, 76*, 1-12.

West, J., Otte, C., Geher, K., Johnson, J., & Mohr, D. C. (2004). Effects of hatha yoga and african dance on perceived stress, affect, and salivary cortisol. *Annals of Behavioral Medicine, 28*(2), 114-118.

Westenburg, P. M., & Block, J. (1993). Ego development and individual differences in personality. *Journal of Personality and Social Psychology, 65*(4), 792.

Whittington, B. L., & Scher, S. J. (2010). Prayer and subjective well-being: An examination of six different types of prayer. *International Journal for the Psychology of Religion, 20*(1), 59-68.

McCrindle, M. (2018). Faith and belief in New Zealand. https://nzfaithandbeliefstudy.files.wordpress.com/2018/05/faith-and-belief-full-report-may-2018.pdf

Willemsen, J., Markey, S., Declercq, F., & Vanheule, S. (2011). Negative emotionality in a large community sample of adolescents: The factor structure and measurement invariance of the short version of the depression anxiety stress scales (dass-21). *Stress and Health, 27*(3), e120-e128.

Wong, Q. J., & Moulds, M. L. (2009). Impact of rumination versus distraction on anxiety and maladaptive self-beliefs in socially anxious individuals. *Behaviour Research and Therapy, 47*(10), 861-867.

Woods, H. C., & Scott, H. (2016). # sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence, 51*, 41-49.

Woodward, L. J., & Fergusson, D. M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*(9), 1086-1093.

World Health Organisation. (2018). World health statistics data visualisation dashboard; http://apps.Who.Int/gho/data/

Wright, A. W., Yendork, J. S., & Kliewer, W. (2018). Patterns of spiritual connectedness during adolescence: Links to coping and adjustment in low-income urban youth. *Journal of Youth and Adolescence, 47*(12), 2608-2624.

Yap, M. B. H., Cardamone-Breen, M. C., Rapee, R. M., Lawrence, K. A., Mackinnon, A. J., Mahtani, S., & Jorm, A. F. (2019). Medium-term effects of a tailored web-based parenting intervention to reduce adolescent risk of depression and anxiety: 12-month findings from a randomized controlled trial. *Journal of Medical Internet Research, 21*(8), e13628.

Yoo, Y.-G., Lee, D.-J., Lee, I.-S., Shin, N., Park, J.-Y., Yoon, M.-R., & Yu, B. (2016). The effects of mind subtraction meditation on depression, social anxiety, aggression, and salivary cortisol levels of elementary school children in south korea. *Journal of Pediatric Nursing, 31*(3), e185-e197.

Zarzycka, B., Liszewski, T., & Marzel, M. (2019). Religion and behavioral procrastination: Mediating effects of locus of control and content of prayer. *Current Psychology*, 1-10.

Appendix 1: The Serenity Prayer

Prayer:
God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.

(Adapted from the original developed by Reinhold Niebuhr, 1951)

Appendix 2: Authorization by principal and board of trustees

Hi Debbie, we had a Board meeting last night. We discussed your Masters and we are very happy to support you with your research. There were a couple of queries: firstly, would it work for anxious students to give up time during lunch time when others will see that they are taking part in the study? Would after school, when they can be less conspicuous work and encourage more to participate? Something to think about. Secondly, one Board member was keen to know the audience for your Masters, expressing concern that the school's participation may suggest that we have a particular problem with anxiety at [the school]. Personally, I see it in the opposite light, that we are accepting what is a reality, and looking at ways to support our students. Anyway, this Board member would like to know who will be reading the research following the completion of your study.

Looking forward to you being able to get started with the research! Exciting and busy times ahead!

[Email received from the principal on 22-5-2020]

Appendix 3: Participant Information Sheet

Acceptance and Prayer for adolescents with mild to moderate anxiety.

Researcher(s) Introduction

Hello. My name is Debbie Gill and I am the Primary Researcher for a research project looking at acceptance and prayer for adolescents with mild to moderate anxiety. This research is for my Master's thesis in Psychology in which I am undertaking through Massey University.

Project Description and Invitation

The research project is aimed at adolescents with mild to moderate anxiety. Those who participate in the study will be taught new coping skills including acceptance, which is one component of Acceptance and Commitment Therapy, a scientifically-supported psychotherapy for anxiety. We are also incorporating prayer as it has been found to reduce psychological distress in a range of studies.

Please note that there are **no** expectations on you with regards to having an expected level of faith. What we are aiming for is to get a good reflection of what occurs for most people your age at the completion of these sessions. Sometimes our faith is weak, sometimes strong, sometimes non-existent and this is normal and expected. You will not be asked about your level of faith. We are solely looking at the result of the use of acceptance and prayer on anxiety.

You are invited to participate in the research project. It is important that you understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with those closest to you, whom you trust, before you decide whether you would like to participate. Feel free to ask if there is anything that seems unclear or if you would like further information.

Participant Identification and Recruitment

We are looking for a maximum of 10 students who experience anxiety from Pukekohe Christian School who are between the ages of 14 and 18 years. The maximum number of participants will be 10 to ensure there is adequate time and attention for both teaching of skills, prayer and discussion. Once you have read through this information sheet, discussed with those closest to you and still wish to participate, please express interest by making contact with me (details below).

Following this process, I will be in contact to arrange to meet with those interested in participating in the study. We will meet as a group in order to explain about the study's aims and give further details, as well as, give an opportunity to respond to any questions you may have. From there, some psychological testing will be done in the form of questionnaires to assess your suitability for the study. Unfortunately, at this time, we are unable to include those with an anxiety or depressive disorder, suicidal thoughts, have psychosis, or those undergoing any other form of therapy for mental illness. However, if you are feeling sad and down and have suicidal thoughts please talk to your parent/ caregiver or an adult about getting help. If you are presenting with mild to moderate anxiety symptoms, and not exhibiting depressive symptoms, psychosis or suicidal ideation or attending any other form of psychotherapy, you will be invited to participate in the study. You will then be given some additional forms to complete at home. These forms will need to be signed, put in the attached addressed envelope and sent within one week's time. The forms will include:

1. Name, date of birth, contact details and demographic data
2. consent forms
3. confidentiality agreement

Following the completion of the project, you will be reimbursed for your time with a $30 gift card.

Project Procedures

The project procedure will involve working through a workbook, watching videos and filling out questions. Each teaching session will be followed by reading through and then praying a given prayer. The time required will be 30mins after school for five consecutive days. You will also be required for an individual meeting with the primary researcher one month following the project sessions. This meeting will be approximately 30mins in length and involve filling in further forms and answering verbal questions about how the sessions went for you.

It is not anticipated that you will experience any discomfort or increase in symptoms during this research. However, if this does occur, you will be given the contact details of appropriate psychological or counselling support.

Data Management

The information that we receive from you will be statistically analyzed and the results will be written up and incorporated into my master's thesis. The data will be safely stored, by password protection for a minimum period of 10 years and will then be securely disposed of. Following participation in the study, a summary of the project findings will be emailed to you. Also, please note that confidentiality is one of our highest priorities and that your identity will not be

revealed in any of the findings. Instead of identifying features, labels such as Case Study 1 (CS1), Case Study 2 (CS2) etc, will be adopted.

Participant's Rights

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study at any time, within 3 months of the commencement of the study.
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.
- ask for the recorder to be turned off at any time during the interview.

Project Contacts

Please feel free to contact us if you have any questions or would like to express interest in being involved in the project.

Please feel free to contact us if you have any questions about the project.

Debbie Gill

Primary Researcher

Mob: [redacted]

E: debbie.gill.1@uni.massey.ac.nz

Dr Matt Shepherd

Senior Lecturer/Registered Clinical

Psychologist/Ngāti Tama

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E: Matt.Shepherd1@massey.ac.nz

W: psychology.massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application NOR 20/15. If you have any concerns about the conduct of

this research, please contact Dr Fiona Te Momo, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x 43347, email: humanethicsnorth@massey.ac.nz.

Appendix 4: Parent Consent Form

Acceptance and Prayer for adolescents with mild to moderate anxiety.

PARENT CONSENT FORM

I have read, or have had read to me in my first language, and I understand the Information Sheet attached as Appendix I. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether I wish for my child to participate in this study and I understand their participation is voluntary and that they may withdraw from the study at any time.

1. I agree to my child participating in this study under the conditions set out in the Information Sheet.

Declaration by Parent:

I ___________ [print full name]__________ hereby consent for my child to take part in this study.

Signature: ________________________ Date: _________________

Appendix 5: Participant Consent Form

Acceptance and Prayer for adolescents with mild to moderate anxiety.

PARTICIPANT ASSENT FORM - INDIVIDUAL

I have read, or have had read to me in my first language, and I understand the Information Sheet attached as Appendix I. I have had the details of the study explained to me, any questions I had have been answered to my satisfaction, and I understand that I may ask further questions at any time. I have been given sufficient time to consider whether to participate in this study and I understand participation is voluntary and that I may withdraw from the study at any time.

1. I agree to participate in this study under the conditions set out in the Information Sheet.

Declaration by Participant:

I ___________ [print full name]__________ hereby consent to take part in this study.

Signature: ________________________ Date: ________________

Appendix 6: Confidentiality Agreement

Acceptance and Prayer for adolescents with anxiety

CONFIDENTIALITY AGREEMENT

I .... (Full Name - printed)

agree to keep confidential all information concerning the project

....

....

....

.... (Title of Project).

I will not retain or copy any information involving the project.

Signature: .... **Date:** ....

Appendix 7: Transcript Form

Acceptance and Prayer for adolescents with anxiety

TRANSCRIBER'S CONFIDENTIALITY AGREEMENT

I .... (Full Name - printed) agree to transcribe the recordings provided to me.

I agree to keep confidential all the information provided to me.

I will not make any copies of the transcripts or keep any record of them, other than those required for the project.

Signature: .... **Date:** ....

Appendix 8: Useful contacts for any students needing support

Organisation	Website	Contact details
Freedom COUNSELLING MINISTRIES	Freedomcounsellingministries .co.nz	Sam Anderson 022 642 8429 samanderson@outlook.co.nz Colleen Thompson 021 0248 3380 colleenthompson2307@gmail.com
THE LOWDOWN.CO.NZ	thelowdown.co.nz	0800 111 757 Text 5626 (Free)
FindSupport	www.findsupport.co.nz	0800 044 334
Youthline Changing lives.	www.youthline.co.nz	0800 37 66 33 Free text 234 talk@youthline.co.nz

Appendix 9: STAI-Y6

Spielberger State-Trait Anxiety Inventory (STAI: Y-6 item)

Published:
Marteau TM and Bekker H. The development of a six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). *British Journal of Clinical Psychology*. 1992;31:301-306.

Measure:
Name .... *Date* ....

A number of statements which people have used to describe themselves are given below. Read each statement and then circle the most appropriate number to the right of the statement to indicate how you ***feel right now, at this moment****. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.*

	Not at all	Somewhat	Moderately	Very much
1. I feel calm	1	2	3	4
2. I am tense	1	2	3	4
3. I feel upset	1	2	3	4
4. I am relaxed	1	2	3	4
5. I feel content	1	2	3	4
6. I am worried	1	2	3	4

Appendix 10: 6-KADS

6-ITEM Kutcher Adolescent Depression Scale: KADS

NAME : ________________ DATE : ________________

OVER THE LAST WEEK, HOW HAVE YOU BEEN "ON AVERAGE" OR "USUALLY" REGARDING THE FOLLOWING

1. Low mood, sadness, feeling blah or down, depressed, just can't be bothered.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

2. Feelings of worthlessness, hopelessness, letting people down, not being a good person.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

3. Feeling tired, feeling fatigued, low in energy, hard to get motivated, have to push to get things done, want to rest or lie down a lot.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

4. Feeling that life is not very much fun, not feeling good when usually would feel good, not getting as much pleasure from fun things as usual.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

5. Feeling worried, nervous, panicky, tense, keyed up, anxious.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

6. Thoughts, plans or actions about suicide or self-harm.

☐ a) Hardly Ever ☐ b) Much of the time ☐ c) Most of the time ☐ d) All of the time

TOTAL SCORE: ________________

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Appendix 11: CAMM-10

Child and Adolescent Mindfulness Measure (CAMM)

We want to know more about what you think, how you feel, and what you do. **Read** each sentence. Then, circle the number that tells <u>**how often**</u> **each sentence is true for you.**

	Never True	Rarely True	Some-times True	Often True	Always True
1. I get upset with myself for having feelings that don't make sense.	0	1	2	3	4
2. At school, I walk from class to class without noticing what I'm doing.	0	1	2	3	4
3. I keep myself busy so I don't notice my thoughts or feelings.	0	1	2	3	4
4. I tell myself that I shouldn't feel the way I'm feeling.	0	1	2	3	4
5. I push away thoughts that I don't like.	0	1	2	3	4
6. It's hard for me to pay attention to only one thing at a time.	0	1	2	3	4
7. I get upset with myself for having certain thoughts.	0	1	2	3	4
8. I think about things that have happened in the past instead of thinking about things that are happening right now.	0	1	2	3	4
9. I think that some of my feelings are bad and that I shouldn't have them.	0	1	2	3	4
10. I stop myself from having feelings that I don't like.	0	1	2	3	4

Appendix 12: AFQ-Y

Acceptance and Fusion Questionnaire for Youth (AFQ-Y)

We want to know more about what you think, how you feel, and what you do. Read each sentence. Then, circle a number between 0-4 that tells how true each sentence is for you.

	Not at all True	A Little True	Pretty True	True	Very True
1. My life won't be good until I feel happy.	0	1	2	3	4
2. My thoughts and feelings mess up my life.	0	1	2	3	4
3. If I feel sad or afraid, then something must be wrong with me.	0	1	2	3	4
4. The bad things I think about myself must be true.	0	1	2	3	4
5. I don't try out new things if I'm afraid of messing up.	0	1	2	3	4
6. I must get rid of my worries and fears so I can have a good life.	0	1	2	3	4
7. I do all I can to make sure I don't look dumb in front of other people.	0	1	2	3	4
8. I try hard to erase hurtful memories from my mind.	0	1	2	3	4
9. I can't stand to feel pain or hurt in my body.	0	1	2	3	4
10. If my heart beats fast, there must be something wrong with me.	0	1	2	3	4
11. I push away thoughts and feelings that I don't like.	0	1	2	3	4
12. I stop doing things that are important to me whenever I feel bad.	0	1	2	3	4
13. I do worse in school when I have thoughts that make me feel sad.	0	1	2	3	4
14. I say things to make me sound cool.	0	1	2	3	4
15. I wish I could wave a magic wand to make all my sadness go away.	0	1	2	3	4
16. I am afraid of my feelings.	0	1	2	3	4
17. I can't be a good friend when I feel upset.	0	1	2	3	4

Appendix 13: The intervention

Acceptance and prayer for adolescents with anxiety symptoms

Session 1: Uncomfortable thoughts and feelings

1. Recap of anxiety and depression scales
2. Confidentiality and limits on disclosure.
3. Respect and non-judgemental attitudes.
4. Personal introductions – eg, name, something they love.

We are going to learn some new coping skills which have been found to be very helpful for those who experience anxiety:

1) The act of separating from thoughts,
2) Mindfulness
3) Acceptance.

One source of anxiety comes from **focusing too much on the content of our thoughts**. The problem with this process is that we make decisions based upon these thoughts on not upon our current experience. The process involves allowing ourselves to just notice our thoughts and in the case of anxiety, see them for what they are – **a product of our overactive minds**.

Mindfulness is a mental state of awareness, openness, focus and non-judgement. We are focusing on what is here and now and not on what may happen in the future or what may have happened in the past. In a state of mindfulness, painful thoughts and feelings have much less impact on us. In a state of mindfulness, we can effectively handle even the most difficult feelings, urges, memories, thoughts and sensations – and as we learn to do so, we can break self-defeating habits or destructive patterns of behaviour. By focusing on what is happening for us right here and now, we can take a break from all that our mind is trying to figure out and we learn about what we are experiencing rather than pushing it away or avoiding it. This is a skill we can learn – it needs time and practice.

When we feel an uncomfortable feeling or distressing thought, we naturally want to push it away or avoid it. Avoidance is not only what's inside, but also what is happening around us that may serve as a "trigger" or cue for unwanted feelings, such as social gatherings, school tests, and family functions, etc.

Avoiding what doesn't feel good is a natural human reaction, and it works: feelings and thoughts we don't like are temporarily reduced, so avoidance feels like it works so we do it again.

Examples of avoidance include;

- refusing to do something,
- avoid difficult conversations,
- avoiding leaving the home.

Or, avoidance can include doing something else to escape the unwanted feelings or trying to distract yourself:

- excessive handwashing to avoid worry about germs,
- counting calories to avoid worrying about weight

- School avoidance and this may be due to concerns or feeling pressured about academic performance, social pressures, bullying, or the pressures may not be related to school at all.
- You may avoid participating in school activities, interacting with friends or joining in on sports/activities.

The underlying reasons for the avoidance may include fear of failure, fear of criticism, lack of motivation, boredom, depression, or anxiousness may make it tough to exert any energy into the task.

However, when used too much and in ways that limit things may otherwise do in our lives, it greatly impacts our sense of fulfilment. Avoidance can therefore have devastating effects. In contrast, imagine the confidence that comes from overcoming things we fear because we have faced them. Acceptance is the opposite of avoidance - it involves embracing the feelings and thoughts we have without unnecessary attempts to change how or when they come.

Pain is a fact of life. Every human being experiences pain: Please watch "The 3 Happiness Myths" [4:02]: https://youtu.be/93LFNtcR1Ok

My Notes (optional): ____

____

____

It is common and normal to respond to pain by trying to control our thoughts and feelings. We want to cling to the good ones and push the bad ones away.

Please watch "Internal Struggles by Dr. Russ Harris" [2:28]: https://youtu.be/dz_nexLqY_8

https://www.youtube.com/watch?v=rCp1l16GCXI. My Notes (optional): ____

____

____

The bad news:
Over the long run, trying to control our thoughts and feelings does not often work very well. Our negative thoughts and feelings don't tend to go away forever. Trying to control them might seem to help in the short term, but eventually it can lead to more suffering and cause other serious consequences. Trying to control these thoughts and feelings often takes the form of avoidance. We will talk about Avoidance in the next session.

Prayer:
God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.

(Adapted from the original developed by Reinhold Niebuhr, 1951)

Session 2: Coping Strategies

Let's talk a little more about Avoidance and what it may look like in your life. Some avoidance techniques include:
Distraction (Facebook, Twitter, Sleeping, Music, playing on cell phones**)**
Opting Out (events or people they avoid or strategies such as excessively helping others, always presenting themselves as happy, or never asserting their own opinion),
Time traveling (thinking into the past and the future)
Self-Harm (excessive shopping, excessive exercise, risky behaviours/sexual activities, cutting/burning themselves).

Let's have a look into how these attempted solutions have affected you.

My Coping Strategies
When you feel anxious, or have thoughts of no one liking you, how do you handle that? How do you get rid of thoughts and feelings you don't want, even for a little while?
Does this strategy work in the short term? Do you feel better?
Does this strategy work in the long term? Do the difficult thoughts and feelings show up again?
Does this strategy have any negative consequences or cause any problems of its own? Does it help you live a better life?

Note: If any of these coping skills are working for you and aren't causing their own problems, keep using them! If any of them are not working or are creating other problems for you, this toolkit will offer you some alternative skills to try.

The good news:

There are psychological tools we can learn to use instead of trying to control our thoughts and feelings. These skills can help us live a better life.
Please watch "The Sushi Train - an Acceptance & Commitment Therapy (ACT) Metaphor" [4:51]: https://www.youtube.com/watch?v=tzUoXJVI0wo

My Notes (optional): ____
____
____
____
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Prayer:
God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.
(Adapted from the original developed by Reinhold Niebuhr, 1951)

Session 3: Practice exercises

Practice new skills:

Dropping Anchor: Sometimes when negative thoughts and feelings threaten to overwhelm us, the most effective response we can have is focusing on the present. This is like a ship dropping an anchor in the middle of a storm. It doesn't stop the storm from happening, but it keeps the ship from getting blown off course. Here's how you do it: Let your thoughts and emotions continue to run and at the same time press your feet firmly into the floor. Notice your body sitting in your chair. Look around the room and notice where you are. Notice that we are here working together and that you are in a safe environment. Let's try that together now.

The following exercise will help you experience the main concepts of the acceptance approach. Sometimes it is easier to understand something if you experience it, rather than have someone try to explain it to you in words. As I read the following exercise to you, follow along as best you can with the instructions as I'm reading them. Don't worry if you get distracted or lose focus. This is normal. Just refocus on the exercise as soon as you notice that your mind has wandered.

Please find a comfortable position in your chair; one where you can stay relatively still for about 5 to 10 minutes. I recommend feet flat on the floor with arms on your legs or folded in your lap, but feel free to do whatever is most comfortable for you. If you feel comfortable closing your eyes, please do so; or you can simply pick a spot in the room to focus on.
Take a few moments to mentally scan your body from head to toe… Notice if there are any areas of tension such as your jaw or shoulders… If you notice any tension, see if you can let some of that tension go… If not, that's okay, just take a few moments to connect with your sense of touch… Notice what physical sensations are happening in your hands… See if you can feel where your hands make contact with each other or with your legs… See if you can feel your feet on the ground…

Next, take a few moments to notice what you can hear… There may be several sounds, or just one, or it may be silent. Just notice whatever is there…When you're ready, move your attention to your breathing… Watch the breath come in and go out on its own, without you having to control it… See if you can feel your breath in your nose or your belly…

As you breathe, you will notice that thoughts may come into your mind… They may be pleasant thoughts, or unpleasant thoughts, or neutral thoughts, like the sun is out or the leaves on the trees are green… This what the human mind does, it is a thinking machine… Just see if you can **notice** the thoughts without getting caught up in them, and then return your attention to your breathing… Each time a thought pops up, notice it and then return your attention to your breath… This will happen over and over and over again, and that's okay, it means you're normal… With practice you can get better at noticing your thoughts, rather than getting carried away by them. As you continue breathing, you will notice that certain feelings or emotions will also show up… Some of these may be pleasant feelings, unpleasant feelings, or neutral feelings… See if you can notice these feelings the same way you notice

your thoughts… There is no need to try and change what's there, just try to notice what you feel… When you notice a feeling, see if you can locate where it is in your body… Notice what sensations come along with the emotion… There may be heaviness, lightness, warmth, coolness, tingling, or tension… You may find these sensations in your head, shoulders, arms, legs, or abdomen…

Whatever you feel and wherever it happens, just notice what's going on and see if you can let it be…And now see if you can return your attention to your breathing… See if you can notice that there is a part of you that's able to watch your breathing, watch your thoughts, watch your feelings, watch the sensations that happen in your body… There is a part of you that does the thinking and feeling, and a part of you that can notice the thinking and feeling… Take a few moments to experience what it's like to connect with the part of you that just notices … And when you're ready, slowly bring your attention back to the room and back to where we are now. If you like, move your fingers and toes around and have a nice stretch.

My Notes (optional): ____ _
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Prayer (Please read through slowly first)

God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.

(Adapted from the original developed by Reinhold Niebuhr, 1951)

Session 4: Make room for negative thoughts/feelings

Since we can't always control our negative thoughts and feelings, a better way forward is to make room for them. This doesn't mean we like them or want them around, but we are willing for them to be there.

Please watch; Acceptance (1:46mins)]: https://youtu.be/jrmKtaMqOh4
My Notes (optional): ____

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When we spend less time trying to control our negative thoughts and feelings, we have more freedom to make choices that improve our lives.

Please watch "The Struggle Switch - By Dr. Russ Harris" [3:02]:
https://youtu.be/rCp1l16GCXI
My Notes (optional): ____

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We can make room for our negative thoughts and feelings by practicing skills called mindfulness and defusion (the act of separating from our thoughts).

Please watch "Accepting the Mind" [1:06]:
https://youtu.be/qUcC71-W9Os

Please watch "Changing Perspective" [1:16]:
https://youtu.be/iN6g2mr0p3Q
My Notes (optional): ____

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Mindfulness and defusion aren't about controlling negative thoughts and feelings. The purpose is not to make us feel better (although sometimes this does happen), the goal is to reduce the *impact* that negative thoughts and feelings have on us. Remember from Session 1 that negative thoughts and feelings never go away for good. The aim is to give ourselves the freedom to make choices that improve our lives.

Prayer (Please read through slowly first)

God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.

(Adapted from the original developed by Reinhold Niebuhr, 1951)

Session 5: Past, Future & Present

Challenging thoughts and feelings come from negative thoughts and feelings about the past or the future. The present moment is a safe place that we can learn to connect with at any time.

Please watch "Acceptance and Commitment Therapy: Presence" [2:34]: https://youtu.be/kthk-vmQ02A

My Notes (optional): ____

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When we practice being in the present, negative thoughts and feelings about the past or future have less impact on us.

Please watch "Dan Harris: Hack Your Brain's Default Mode with Meditation" [3:43]: https://youtu.be/FAcTIrA2Qhk

My Notes (optional): ____

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Practice new skills:

We are going to do an exercise to help you experience the process of present moment awareness. Sometimes it is easier to understand something if you experience it, rather than have someone try to explain it to you in words. As you listen follow along as best you can with the instructions. Don't worry if you get distracted or lose focus. This is normal. Just refocus on the exercise as soon as you notice that your mind has wandered.

3-minute body scan from UCLA Mindful Awareness Research Center
Please click here: http://marc.ucla.edu/mpeg/01_Breathing_Meditation.mp3

Prayer (Please read through slowly first)
God, grant me the serenity to accept the things I cannot change; courage to change the things I can; and wisdom to know the difference. Living one day at a time; enjoying one moment at a time; accepting hard-ships as the pathway to peace; taking, as Jesus did, this sinful world as it is, not as I would have it; trusting that He will make all things right if I surrender to His will; that I may be accepting of the things that occur in this life and supremely happy with Him forever in the next. Amen.

(Adapted from the original developed by Reinhold Niebuhr, 1951)