

Gender Differences in Protective Factors of Child Anxiety

by

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Abstract

Anxiety is a commonly experienced emotion encompassed by nervousness, worry, and often accompanied by physical symptoms such as increased heart rate (American Psychological Association, 2015). Anxiety disorders are the most commonly diagnosed mental disorders in both children and adolescents (Reinecke, Dattilio, & Freeman, 2006). While previous research on gender differences in anxiety throughout adulthood is considerable, there is little on gender differences among children. The present study examines protective factors of child anxiety, namely self-esteem and coping strategies, from self-report data (Doyle, 2016) on children in grades four and five to determine if gender differences exist. Maladaptive and adaptive coping strategies were measured using the Coping Scale for Children and Youth (CSCY). Also, a rating of global self-esteem was measured using the Coopersmith Self-Esteem Inventory Revised (SEI). While no gender differences were found on self-esteem, findings showed that girls were significantly more likely than boys to draw on the coping strategy of “cognitive avoidance”. Present findings are comparable to research in adult anxiety, such that women are more likely to experience symptoms of anxiety than men, and more likely to engage in avoidance behaviours (Bekker & van Mens-Verhulst, 2007; Kessler & Merikangas, 1994; McLean, Asnaani, Litz, & Hofmann, 2011). However, some of the findings are inconsistent with earlier adult studies. For example, boys use of problem solving strategies (Bahrami & Yousefi, 2011). These results will expand the knowledge of anxiety, specifically among younger children, and can inform the development and implementation of preventative programming.

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Terminology

The terms ‘sex’ and ‘gender’ are used often when discussing ‘males’ and ‘females’. For the present study, the term ‘gender’ will be used throughout when referring to male and female differences. The researchers cannot make assumptions about a participant’s anatomy, and therefore refer to the identified gender of each ‘girl/boy’ in the study. This is consistent with other research (e.g., McLean et al., 2011; Quatman & Watson, 2001; Zahn-Waxler, Shirtcliff, & Marceau, 2008). Canadian Institutes of Health Canada (2017) has cautioned researchers of the importance of appropriate differentiation within health related research. Sex and Gender Based Analysis (SGBA) is an approach that this thesis attempts to adhere to which aims to promote research that is sensitive to and aware of the differences between sex and gender. This aids to support individuals across genders and those within the gender diverse culture (CIHC, 2017).

In addition, the present study discusses the topic of gender and anxiety pertaining to prepubescent children. Therefore, when the terms *children*, *young children*, or *prepubescent* are used throughout this thesis, it can be assumed the children being discussed are between 8 and 11 years of age.

Chapter One

Introduction

The Canadian Mental Health Association (CMHA) discusses anxiety as being likely to impact all Canadians indirectly at some point, but specifically suggests that twenty percent of all Canadians will develop a mental illness in their lifetime (2016). Anxiety disorders are the most commonly observed mental disorder among Canadians (Canadian Mental Health Association, 2016). While anxiety can affect individuals at any point in development, the average age of onset for anxiety disorders tends to be late adolescence into early adulthood (Kessler, Ruscio, Shear, & Wittchen, 2009). There is, however, increasing evidence in the literature that young children also experience symptoms of anxiety and are capable of experiencing these at clinical levels of severity (King, Hampton, & Strommen, 2014). While gender differences among adults with anxiety have been studied repeatedly, there exists only a small body of research investigating possible gender differences in anxiety among children (Cartwright-Hatton, 2006). In addition to expanding knowledge about the nature of anxiety among children, learning more about whether boys and girls distinctly experience anxiety may guide treatment and prevention methods.

Gaining knowledge and perspective into gender differences is necessary for the continued efforts to prevent mental illness. Gender is related to risks associated with mental disorders, the age of onset, and the diagnosis and treatment of mental disorders (World Health Organization, 2016). The literature has continually suggested that women are nearly twice as likely as men to be diagnosed with an anxiety disorder in their lifetime (Christiansen, 2015;

Kinrys & Wygant, 2005). Research also shows higher symptom severity reported among women and more comorbid disorders compared to men (Kinrys & Wygant, 2005). If significant gender differences are observed between adult men and women with anxiety, then it can be assumed some differences may exist between boys and girls with anxious feelings, as well. Research on the topic of gender differences among children may provide important information on risk factors pertaining to specific mental disorders (APA, 2013). Understanding whether boys and girls experience and respond to anxiety differently can allow professionals to gain insight into effective interventions and services.

The present study aims to narrow a gap in the literature and provide a significant contribution to understanding gender and protective factors of anxiety among children (ages 8 through 11). This study uses previous data collected from a larger study on the efficacy of an anxiety intervention program on children in grades four and five (Doyle, 2016). The program, Friends For Life (FFL), was introduced in Newfoundland in 2012. It has been implemented in several of the province's elementary schools by trained guidance counsellors/facilitators (Doyle, 2016). The aim of the program is to teach students about feelings, anxiety, and healthy methods of coping (Barrett et al., 2003).

The present research investigates whether protective factors of child anxiety, namely coping and self-esteem, differ significantly between girls and boys. While little research has been conducted on gender differences among children of a prepubescent age, it is an area worth investigating given the increase in development of anxiety (CMHA, 2016). Findings can widen the breadth of knowledge in the area of gender and childhood anxiety, inform prevention and

treatment, and promote awareness of the risks related to anxiety in children, specifically in girls and boys.

Prior research (Bekker & van Mens-Verhulst, 2007; Kessler & Merikangas, 1994; McLean et al., 2011) indicates the presence of gender differences among adults with anxiety. Specifically, the literature informs us that adult females experience higher levels of anxiety than adult males. Two factors that are directly linked to the development of anxiety are levels of self-esteem and styles of coping (Ahmad, Bano, Ahmad, & Khanam, 2013; Mann, Hosman, Schaalma, & de Vries, 2004; Manna, Falgares, Ingoglia, Como, & Santis; 2016). When these factors have been examined among an adult population, gender differences were clearly observed.

Self-esteem has been reportedly higher among adult males than adult females (Bleidorn et al., 2015; Orth & Robins, 2014). For coping, research on gender differences has demonstrated that adult females are more likely to draw on avoidance coping than adult males who tend to use more 'rational' strategies, such as problem solving (Bahrami & Yousefi, 2011; Matud, 2004). These findings are indicative that similar results may be observed among a young population. These factors (coping and self-esteem) are considered to be linked, as research has indicated that higher self-esteem among children predicts effective coping and lower self-esteem predicts ineffective coping strategies such as avoidance behaviours (Ciarrochi et al., 2007; Dumont & Provost, 1999; Thorne, Andrews, & Nordstokke, 2013).

Research among children has observed a higher rate of girls (aged 10-15) using assistance seeking behaviours than of boys (Brodzinsky et al., 1992; Wertlieb, Weigel, &

Feldstein, 1987 as cited in Brodzinsky et al., 1992). Moreover, children who use positive coping strategies display lower levels of anxiety, while children who use negative coping strategies display higher levels of anxiety (Weems, 2007). Thus, the research that does exist on children's self-esteem, coping strategies, and anxiety suggests that positive self-esteem and effective coping strategies are associated with lower levels of child anxiety. Exploration, to date, on gender and children has largely concluded that there are differences between boys and girls (Beesdo et al., 2009; Zahn-Waxler et al., 2008). Various schools of thought attribute these differences to differing factors. While some purport that gender differences are innate (Lewinsohn et al., 1997), others suggest that differences are a product of environment (Bekker & van Mens-Verhulst, 2007).

Considering the previous findings among adults and the limited research available regarding a younger population, the present study hypothesizes that factors related to anxiety will differ between boys and girls preceding puberty. Specifically, it was hypothesized that 1) maladaptive coping strategies, namely cognitive and behavioural avoidance, would be reported more by girls than boys; 2a) that adaptive coping strategy of assistance seeking would be higher among girls than boys and b) the adaptive coping strategy of problem solving would be reported more by boys than girls; and 3) that global self-esteem would be higher in boys than girls. Grade level was considered in statistical analyses to account for a possible influence of grade on any observed gender differences.

Chapter Overview

This thesis is divided into chapters. *Chapter Two* consists of a review of relevant literature on the topic of anxiety and gender. *Chapter Three* details the methodology used for the present study, including the procedure, participants and measures used. *Chapter Four* outlines the findings of the research and finally, *Chapter Five* discusses any implications, limitations, and possible future directions suggested from the findings.

Chapter Two

Literature Review and Theoretical Framework

The Nature of Anxiety

Anxiety is a commonly experienced emotion encompassed by nervousness, worry, and often accompanied by physical symptoms such as increased heart rate (American Psychological Association, 2015). It is important to note that a certain level of anxiety is normal and adaptive, allowing us to respond to danger or strengthen performance on tasks (Albano & Kendall, 2002). Anxiety can be considered maladaptive or not normative once the body is reacting as if it is in danger, in the absence of a true threat (Swinson, 2006). Anxiety becomes a disorder when the symptoms are intense, long-standing, and disruptive (Bittner et al., 2007). For adults and children, in order to be diagnosed with an anxiety disorder the worry must persist more often than not for a period of at least six months (American Psychiatric Association, 2013).

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) indicates that having an anxiety disorder can impair an individual's overall functioning. Anxiety can involve feelings of nervousness, overwhelming feelings of panic or fear, obsessive thoughts, lowered self-efficacy and difficulty regulating their emotions (APA, 2013). Anxiety tends to be associated with worrying about past or future situations instead of current circumstances (Farrell & Barrett, 2007). Some of the typically observed physical symptoms of generalized anxiety disorder (GAD) include sweaty palms, increased heart rate, restlessness, stomach upset, and nausea (National Institute of Mental Health, 2016).

Anxiety disorders are the most prevalent mental illness affecting Canadians (Kessler & Merikangas, 1994; Mood Disorders Society of Canada, 2009; Statistics Canada, 2013), with one in four individuals expected to develop at least one anxiety disorder during their lifetime.

According to Statistics Canada (2013), approximately three million adults in Canada (11.6%) reported a diagnosis of a mood/anxiety disorder. If untreated, anxiety can worsen and lead to the development of other disorders (American Psychiatric Association, 2013).

It is not clear why some people develop anxiety disorders while others do not, but various factors are now known to contribute to their development. The National Institute of Mental Health (2016) outlines several risk factors to developing anxiety disorders. Risk factors are personal or environmental traits that can negatively impact an individual, leading to the prospect of physical, social, or emotional problems, such as anxiety disorders (Moore, 2006). Some risk factors include shyness, female gender, low socioeconomic status, trauma exposure, biological predisposition, and being divorced/widowed (NIMH, 2016).

The Canadian Mental Health Association (CMHA) (2016) identifies several factors that may lead to anxiety disorders. First, the perception of life events can trigger higher levels of anxiety, beyond what is considered normal. This is especially true for childhood experiences, and perceptions of these experiences, which can impact later anxiety development. Second, high concordance rates in twin studies provide evidence for genetics as a risk factor in anxiety development. Kendler, Neale, Kessler, Heath, and Eaves (1992) examined 1033 female twin pairs using psychiatric assessment and their results suggested that the development of generalized anxiety disorder is more likely to be a result of family genetics than of familial

environment. Also, problems with an individual's brain chemistry can also influence anxiety, such as abnormalities in neurotransmitters (e.g., serotonin). Finally, traumatic events such as sudden death of a loved one or war experiences can also be a trigger for the onset of an anxiety disorder (CMHA, 2016; Perry, 2007).

Childhood Anxiety

Anxiety can impact an individual at any age but anxiety disorders are the most prevalent mental disorder among children and adolescents (Mood Disorders Society of Canada, 2009; Piacentini & Roblek, 2002; Reinecke et al., 2006). Children with anxiety worry more often and more intensely than other children (Nutter, 2014). Specifically, they are known to worry excessively about their performance and competence at school or in extracurricular activities, about personal safety and the safety of others, or about natural disasters and future events (APA, 2013). Cartwright-Hatton (2006) considered that one of the key factors determining what a child is likely to worry about is their age. Certain fears and anxieties are common and expected at varying developmental levels. For example, young children often fear the dark, while adolescents often fear public speaking (Albano, Causey, & Carter, 2001; Castellanos & Hunter, 1999; Farrell & Barrett, 2007). The variety of areas about which children report worry increases with age. For example, Cartwright-Hatton (2006) reported that the number of worries identified by a group of eight year olds was almost double that reported by a group of five year olds. Some research suggests that anxiety among children shifts from specific fears to more generalized worries and concerns as children mature. For instance, younger children are more

likely to report higher levels of separation anxiety (specific), while older children tend to experience more social and generalized fears (McLoone, Hudson, & Rapee, 2006).

Although some fears and anxieties may be developmentally normal, the amount of fear or anxiety for certain individuals goes beyond what is developmentally expected (Nutter, 2014). Increased amounts of fear and anxiety significantly decreases functioning at home, at school, and socially (APA, 2013; Kazdin & Weisz, 1998). Prolonged feelings of anxiety, without treatment, can have negative impacts on an individual. Issues may arise with insecurity that may interfere with personal growth and successful social relationships. Specifically, untreated anxiety disorders at a young age can lead to the development of depression and substance abuse in early adult life (Wittchen, Kessler, Pfister, & Lieb, 2000; Wu et al., 2010). Anxiety disorders have negative effects not only on the patients but also on their families (Swinson, 2006). A study by Senaratne, Van Ameringen, Mancini, and Patterson (2010) examined the impact of an anxiety disorder on family members and found their physical health, psychological well-being, and overall family functioning was negatively impacted.

Children are not born with anxiety, but many do show signs of various anxiety disorders early in life. While many childhood phobias and anxiety symptoms do diminish with age, research investigating long-term implications of childhood fears suggests that nervousness among children may be predictive of anxiety symptoms in adulthood (Gittelman 1986; National Scientific Council on the Developing Child, 2010). Therefore, it is important for parents and professionals to stay attuned to a child's behaviour and be aware of symptoms of anxiety (e.g., restlessness, sleep disturbance, irritability).

There are various implications that accompany the diagnosis of anxiety among children. If mental health problems such as anxiety are not treated early, they can persist into adulthood and result in issues such as unemployment, criminality, impaired occupational functioning, or comorbidity with other disorders (Farrell & Barrett, 2007; Rapee, 2013; Wright & Sulkowski, 2013). Comorbidity, when discussing mental health issues, is the occurrence of more than one mental disorder simultaneously (Garber & Weersing, 2010). The most common comorbid diagnosis with childhood anxiety is depression (Rapee, 2013; Swinson, 2006). The presentation of comorbid anxiety and depression is more serious than either disorder on its own, with there being increased suicide attempts, higher symptom severity, increased likelihood of relapse, increased risk of experiencing drug dependence, and educational challenges in early adulthood (Garber & Weersing, 2010; McLoone et al., 2006; Piacentini & Roblek, 2002).

Diagnosis. Anxiety is a cognitive and emotional response to perceived threats (Ohman, 2000). While anxiety and similar responses are a normal part of everyday living, prolonged anxiety can become a problem that requires psychiatric assessment and diagnosis (Swinson, 2006). According to Asbahr (2004), children with anxiety disorders are typically first referred for mental health services based on the presence of behavioural issues within the home and school contexts. For diagnosticians, it can be challenging to decipher between normal features of a healthy child with an inhibited temperament, and symptoms of a childhood anxiety disorder (Beesdo, Knappe, & Pine, 2009). For instance, a healthy child without anxiety can display high levels of shyness. At the same time, extreme shyness could be a symptom of an undiagnosed social anxiety disorder. Rhoads and Donnelly (n.d.) discuss this under-diagnosis and suggest

that the 1% of children being diagnosed with SAD is inaccurate due to a common failure of parents and teachers to recognize the behaviour as anything other than shyness. Cartwright-Hatton (2006) cautions that the decision to offer early intervention is one to be made sensitively and with caution. Even though certain components of anxiety, such as fear, are developmentally normal for children to experience, Piacentini and Roblek (2002) purport that anxiety disorders should be diagnosed if the anxiety is persistent, causes excessive distress or interferes with school, activities, or family functioning.

In addition to developmental factors, due to the variability and normalcy of childhood fears and anxieties, diagnosing childhood anxiety also requires practitioners to pay attention to other contributing factors (Piacentini & Roblek, 2002). Biological influences, for instance, suggest some children are genetically predisposed to developing anxiety. Children who are born to parents with anxiety will often have an increased likelihood of having anxiety as well (Lewinsohn et al., 1997; Piacentini & Roblek, 2002). The detection of contributing emotional factors is also of importance, as anxiety disorders can interfere with developmental processes such as social learning (Mian & Carter, 2013). Mental health professionals require multisource (i.e., parent, child, and teacher) and multiple approach (i.e., rating scale, interview, and observational) data collection in order to confirm the presence of an anxiety disorder, to determine its level of severity, and to establish the most appropriate treatment (Beesdo et al., 2009; Piacentini & Roblek, 2002). Clinicians have access to a variety of instruments to assess symptoms and criteria of anxiety among children. One commonly used tool is the Screen for Child Anxiety Related Disorders (SCARED). This instrument relies on a multisource approach,

as it utilizes both child and parent reports (Beedso et al., 2009). A multisource diagnostic approach is required for the challenging task of identifying internalizing problems (e.g., level of anxiety) of children who may have difficulty externally expressing their feelings (Coplan & Ooi, 2013). There are other assessment tools that can assist in predicting anxiety. Low self-esteem and maladaptive strategies of coping are risk factors for anxiety, and therefore identifying the presence of these factors early may be advantageous. For self-esteem, Coopersmith's Self-Esteem Inventory Revised is a well-known tool for measuring a child's level of self-esteem (Hills, Francis, & Jennings, 2011). Coping, on the other hand, may be measured by the Coping Scale for Children and Youth (Brodzinsky et al., 1992). Coplan and Ooi suggest that it is beneficial for parents, teachers, and practitioners to pay attention to children's sociability, reactions, and behaviours while they are in their peer groups as emotional disturbances may be recognized early enabling for appropriate treatment (2013). The DSM-5 offers specific diagnostic criteria for general anxiety disorder among children:

- Excessive anxiety and worry about a number of events or activities, occurring more days than not for at least six months;
- The individual finds it difficult to control the worry;
- The anxiety and worry are associated with at least one of the following six symptoms: restlessness or feeling keyed up or on edge, being easily fatigued, difficulty concentrating or mind going blank, irritability, muscle tension, or sleep disturbance;
- The anxiety, worry, or physical symptoms cause clinically significant distress;

- The disturbance is not attributable to the physiological effects of a substance or another medication;
- The disturbance is not better explained by another mental disorder. (p. 222)

Advances made in the area of assessment and diagnostics allow for more comprehensive methods of assessment of anxiety with less reliance on parent or teacher reports, and increased validity and reliability. According to Mian and Carter (2013), advancements in assessment have been slow, due to a lack of awareness in the importance of identification and treatment of young children's emotional issues (Rhoads & Donnelly, n.d.). Limited knowledge about the need for early diagnosis and intervention has in all likelihood contributed to low numbers of parents seeking treatment for their children and limited referrals from family doctors and paediatricians. Unlike externalizing problems such as aggressive behaviour, emotional issues such as anxiety tend to be less noticeable as they are less disruptive in nature, and thus more difficult to detect.

Expanded knowledge in diagnosis can have significant implications on prevention, early detection, and intervention. It is important for parents and professionals to know more about the symptoms of anxiety among children as well as how these symptoms can predict mental health issues so early intervention can be pursued.

Treatment. Intervention requires choosing the appropriate treatment based on factors that include availability of resources, type of anxiety with which an individual presents, severity of the disorder, and whether the patient is a child or an adult. If an individual has access to supports and resources, they may seek out a more evidence-based plan such as a combination of

talk therapy and medication (Evans et al., 2012). The type of anxiety is also likely to inform a treatment plan; for instance, phobias are often treated using fear exposure (Swinson, 2006). Severity of anxiety should also be considered while discussing treatment. For example, while an early intervention program such as Friends for Life may benefit a child with mild anxiety (Farrell & Barrett, 2007), a child with high levels may require psychotropic medication (Kaufman, 2009). An individual's age may also guide treatment, as the efficacy of techniques is often dependent on age (Perepletchikova et al., 2011). The most common treatment options for childhood anxiety include cognitive-behaviour therapy (CBT), and psychoactive medication, or a combination of both. In addition to traditional CBT, other behavioural approaches may be used in treating child anxiety, such as Play Therapy and Dialectical Behaviour Therapy (DBT) (Harter, 1977; Linehan, 1993).

Cognitive-behavioural therapy. Cognitive-behavioural therapy (CBT) is a widely accepted form of therapy used in the treatment and reduction of anxiety. A defining feature of CBT, both historically and currently, is its strong emphasis on the cognitive mediation of behaviour. CBT focuses on how individuals perceive their surroundings, view themselves, or think about their future with emphasis on helping clients change their negative perceptions (ADAA, 2016; Farmer & Chapman, 2016). The basic premise is that if an individual can alter the way they think or behave, it can change the way they feel. Some of the components of CBT include education, problem-solving, homework, fear exposure for phobias, and emotion-regulation (Swinson, 2006).

Treatment using CBT for children may involve a multitude of techniques and approaches. Specifically, an example of CBT involving components of education, problem-solving, and homework is the Friends for Life (FFL) Program, wherein recipients are taught the topic of feelings and it occurs within the school (Farrell & Barrett, 2007). Homework is an integral component of CBT and for children, they may be asked to journal or complete worksheets describing their weekly experiences with anxiety (AnxietyBC, 2016). FFL and other similar programs (e.g., Coping Cat) are targeted for children and adolescents, where its aim is for the individual to learn to recognize and cope with anxiety effectively (McNally Keehn, Lincoln, Brown, & Chavira, 2013). For children with persistent fear or phobias, CBT may involve exposure therapy. This involves a fear hierarchy with first identifying the triggers for anxiety, and then slowly and systematically exposing them to the trigger in order to help lessen their anxiety (Bubrick, 2017).

In addition, for children, parent involvement often contributes to more effective treatment of the child's anxiety. Involvement of the family can increase the effects of therapy outside sessions as parents can reinforce what was learned during CBT with professionals (Asbahr, 2004). According to Siddaway, Wood, and Cartwright-Hatton (2014), "parental involvement in treatment may facilitate and reinforce the successful learning, maintenance, and generalization of new skills and perspectives into the child's and family's everyday life, during and after treatment" (p. 323).

CBT is often used in the treatment of child anxiety and it has demonstrated much success. Specific CBT techniques will vary depending on the development of a child. For

example, teaching young children about their feelings may be more effective using age-appropriate games and activities. McLoone et al. (2006) reference empirical evidence, suggesting 50-80% of children receiving CBT are free of their primary anxiety diagnosis following treatment. Otte (2011) indicates that meta-analyses examining the efficacy and effectiveness of CBT have found that it is a well-established, 'gold standard' method of treatment for anxiety. The benefits of CBT treatments among children have been consistent in long-term outcomes, with continued benefit up to seven years post-treatment (McLoone et al., 2006). Collectively, research into the efficacy of CBT suggests it is a highly effective intervention in the treatment of anxiety disorders.

Medication. When an individual does not respond to CBT, other forms of treatment or combinations of treatment are considered. Psychoactive drugs generally are not the first line of treatment considered for persons with anxiety disorders. Typically, medication is recommended as a last resort. However, for those who display severe symptoms of anxiety, therapy alone may be ineffective. Under these circumstances, drugs combined with CBT may be the ideal form of treatment (Asbahr, 2004; Cartwright-Hatton, 2006). One class of medications often used in treatment of childhood anxiety is selective serotonin reuptake inhibitors (SSRIs). This class of drug affects the concentration and activity of the neurotransmitter serotonin, a chemical in the brain linked to anxiety disorders. Kauffman (2009) discusses data from six trials examining the efficacy of SSRIs for anxiety, which demonstrated benefit in 69% of participants versus 39% in the placebo group. Despite evidence supporting the use of medication for young children with emotional disorders, medications have not always shown to decrease the worry experienced by

an individual with GAD (Behar, DiMarco, Hekler, Mohlman, & Staples, 2009). Also, safety concerns and side effects associated with the use of SSRIs in children have also been identified (Cartwright-Hatton, 2006). Korczak (2013) cautions about short-term side effects in some patients from SSRIs that include gastrointestinal issues, sleep changes, and headaches. While the risk of suicidal ideations has also been a concern, it has been concluded that the risk of harm is greater without SSRI treatment (Korczak, 2013). Most researchers in the area of childhood anxiety agree that a dual approach, involving both psychotropic medications and cognitive-behavioural therapy is often important to consider for effective treatment (Evans et al., 2012).

Other treatment options. In addition to the more commonly used treatments for anxiety, there are a multitude of options. For younger children, some components of traditional CBT may not be effective. Play therapy is one way for a clinician to engage a child who presents with issues of anxiety. The value of play has been seen in the literature for centuries, from theorists such as Plato, Freud, and Rogers, and it has been empirically supported for over sixty years (Hall, Kaduson, & Schaefer, 2002). Play therapy was introduced as a way to engage with “neurotic children” as talk therapies were not always effective (Cambell, 2017). The aim of play therapy is to provide children a way to communicate and express emotional issues with the use of toys, role-play, and minimal discussion. Therapy can be directive or non-directive, directive involving more guidance from the therapist (Harter, 1977). Therapy can also involve parents/families, so that play can continue outside sessions (Bratton & Landreth, 1995). There are also alterations based on the child’s presenting issue (e.g., sand tray for trauma victims). Research has supported the efficacy of play therapy across various presenting issues, including

anxiety. Clients have generally showed moderate to high positive results from play therapy (Bratton et al., 2013; Ray, Armstrong, Balkin, & Jayne, 2015).

Dialectical Behaviour Therapy (DBT) is often viewed as combination of CBT and mindfulness; it was introduced by Marsha Linehan who needed an effective treatment model for clients with borderline personality and suicidal ideations (Linehan, 1993). Since then, it has been effective in treating clients with a variety of issues across ages. The basic tenet is that acceptance is necessary for change and the client is taught various exercises to bring this forward in and outside sessions (Linehan, 1993). For children, DBT can be adapted to accommodate the typical development stage a client is in. For instance, instead of some of the longer/complex mindfulness techniques and practices seen, child-friendly ones have been introduced (e.g., STOP acronym). STOP is an acronym guiding a child to Stop, Take a step back, Observe, and Proceed mindfully when faced with a trigger for anxiety (Perepletchikova et al., 2011). Other outlined techniques include role-play, practice, and multimedia presentations.

Early intervention and prevention. Resiliency is the ability of an individual to thrive when faced with adversity (Prince-Embury, 2015). Through prevention and early intervention, counsellors and mental health professionals strive to develop resiliency among young children and reduce the likelihood of anxiety development. Prevention and early intervention using the most appropriate and effective treatments for anxiety among children can ultimately minimize anxiety and related issues into adulthood. Research suggests that symptoms of anxiety at a young age are predictive of future issues such as other disorders, and problems with social, work, and physical aspects of life (Rapee, 2013). Identifying effective treatments for children

experiencing anxiety disorders, therefore, is worth investing in, as it will likely benefit not only children but also society as a whole (Cartwright-Hatton, 2006). While intervention programs are important, the aim for society should be the prevention of mental health issues such as anxiety, through the fostering of positive self-esteem and resiliency (Farrell & Barrett, 2007; Prince-Embury, 2015). Fostering resiliency and addressing possible anxiety symptoms early is important because if ignored, they can impact a child's life significantly (Farrell & Barrett, 2007). Strengthening existing self-esteem is another motivator for the use of these programs. Research observing psychiatric histories of patients with anxiety disorders discovered that one third of them had childhood anxiety or depression (NIMH, 2016).

Focusing on factors contributing to anxiety in early development allows children to learn useful coping strategies. One study by Lowry-Webster, Barrett, and Dadds (2001) examined the effects of the Friends for Life as a prevention program for boys and girls aged ten to thirteen. The study produced encouraging results for the area of prevention intervention research. Researchers observed a significant reduction post-treatment in anxiety symptoms, regardless of risk status, among participants in the treatment group, compared to the control (Lowry-Webster et al., 2001). Some Canadian research examined early intervention programs for anxiety—a three-month psycho-educational group-based program in schools with parents of children displaying emotional and behavioural problems related to anxiety. The program in this investigation was found to reduce childhood *anxiety* significantly (Bayer & Beatson, 2013).

Early intervention and prevention programs can be implemented in a variety of environments, such as the home, a clinical setting, and/or the school. Students challenged by

anxiety symptoms tend to experience inattention at school, as well as excessive worry, frequent headaches and stomach upset, poor attendance, and below average grades (Bostick & Anderson, 2009; Ingul et al., 2012; Thompson, Robertson, Curtis, & Frick, 2013). If issues in school persist, they may contribute to school drop-out and concerns with adult health and well-being (Ingul et al., 2012). The school setting offers an opportunity for professionals to teach students about anxiety and ways to cope with negative feelings. Various studies have examined the effects of in-school interventions for anxiety and results show that teaching students about their feelings and coping strategies leads to lower levels of anxiety (Lothmann, Holmes, Chan, & Lau; 2011; Marks, Sobanski, & Hine, 2010; Muris, Meesters, & Gobel, 2002; Thompson et al., 2013; Thompson, & Trice-Black, 2012; Von Der Embse, Barterian, & Segool, 2013).

One such initiative, the Friends for Life (FFL) program, utilizes CBT strictly in the school environment and works to decrease anxiety in children. It works as both an early intervention method for those who have symptoms of anxiety and a prevention method for others. As Farrell and Barrett (2007) point out, even those children without anxiety issues can benefit from programs such as FFL. Through ten weekly sessions in the school, this Program aims to provide treatment and prevention of anxiety in children and youth by assisting them in building resiliency, confidence, and self-esteem, while learning important skills and techniques to cope with feelings of fear, worry, and depression (Barrett, 2004). The Program focuses on assisting children in developing skills to cope effectively with anxiety-provoking situations, normalizing the feeling of anxiety, building problem-solving skills, promoting self-confidence, and empowering children and their families (Barrett, 2004). The structure of the Program

involves group discussions and engaging activities, as well as practicing skills learned in the home environment to strengthen generalization and application of the learning from settings in addition to the school (Barrett, 2004). The Friends for Life Program has been recognized by the World Health Organization as an effective treatment and prevention method for anxiety (Barrett, 2004). The Program has been shown to significantly increase coping factors and self-esteem, while also reducing feelings of worry, anxiety and depression in the (non-clinical) younger population (Barrett, Lock, & Farrell, 2005; Barrett, Sonderegger, & Xenos, 2003). Prior research has found that this Program is strong in its social validity, reliability, and generalizability as a prevention and early intervention Program (Barrett, Shortt, Fox, & Wescombe, 2001).

Protective Factors of Child Anxiety

Factors that are directly linked to anxiety and its development are vast and have been described in the literature, and may include: a person's support system, socioeconomic status, a history of anxiety within the family, age, location, and employment. Generally these factors have been identified as risk or protective factors. When a child is being assessed for anxiety, the consideration of a number of biological and environmental risk factors he or she is exposed to is necessary. These influences give professionals insight into how a disorder may manifest (Arens & Hasselhorn, 2014). Risk factors are personal or environmental characteristics that can negatively impact a child's development leading to the likelihood of physical, social, or emotional problems, such as anxiety disorders (Moore, 2006). One example of a risk factor is having a low socioeconomic status (SES).

Protective factors are those that enhance the likelihood of positive outcomes and lessen the likelihood of negative consequences from exposure to risk (Jessor, Turbin, & Costa, 1998). Dumont and Provost (1999) highlight the importance of protective factors in a discussion of how the effects of stress on mental health are less important for individuals who possess such protective influences compared to those who do not. Protective factors include social supports, high SES, resiliency, self-esteem, and coping strategies. There is also evidence for the positive effects of strong support systems of peer groups, family, and other social supports on protection of young children's mental health. Coplan and Ooi (2013) explain that these interactions assist in building important developmental skills, such as conflict resolution, self-regulation, and communication.

Resiliency is the ability to combat adverse events or situations (Prince-Embury, 2014). When an individual experiences anxiety, the presence of resiliency allows them to recover or 'bounce back' from emotional experiences that may otherwise have a negative impact. Resiliency also implies the ability to be adaptable to the changes and stressors everybody encounters throughout development (Prince-Embury, 2015). Protective factors like self-esteem and adaptive coping strategies are what comprise resiliency, which improves a child's ability to cope with distressing emotions, such as anxiety (Newland, 2014).

Specifically, research has been conducted widely on coping and self-esteem among adults, but it is only in recent years that there has been an interest in exploring these factors among children and adolescents (Dumont & Provost, 1999; Evans et al., 2012). Research in the area, especially with a younger population, is undoubtedly of importance given that training in

coping-skills represents a major feature of cognitive-behavioural treatments against anxiety. Implementing positive coping strategies (e.g., problem-solving) and having a high level of self-esteem can help to increase resiliency while protecting against the development of anxiety. The five factors being examined in the present study are: four coping strategies (i.e., cognitive-behavioural problem solving, assistance seeking, cognitive avoidance, and behavioural avoidance) and global self-esteem.

Self-esteem. Self-esteem has been defined as a personal judgment or decision an individual makes about their worth (Coopersmith 1967; Crocker & Park, 2004). Global self-esteem refers to an individual's overall sense of self worth. Many people use the terms self-esteem and self-concept interchangeably, but they differ specifically in meaning. Self-concept refers to the totality of cognitive beliefs that people have about themselves; it is everything that is known about the self, and includes concepts such as name, race, likes, dislikes, beliefs, and values. By contrast, self-esteem is the emotional response that people experience as they contemplate and evaluate different things about themselves (Heatherton & Wyland, 2003). Self-esteem can be considered both a risk and a protective factor, depending on its level. A child with low self-esteem is thought to be more at risk of developing psychopathologies such as an anxiety disorder, whereas a child with higher self-esteem may be less at risk of developing an anxiety disorder. According to Dumont and Provost (1999), individuals with high self-esteem tend to adopt active coping strategies focused on seeking and implementing solutions to problems. According to the DSM 5, negative perceptions of self are a key feature in the diagnostic criteria of various mental illnesses (Mann et al., 2004). Research has indicated that

self-esteem is inversely correlated with anxiety. For example, Mann et al. (2004) observed low self-esteem in highly socially anxious children.

Coping. Based on investigations into anxiety development, one of the most powerful protective factors against mental illness is an individual's ability to cope with adverse circumstances (Mann et al., 2004). Coping strategies are techniques used by individuals to tolerate, escape, or minimize the effects of stress and make up an individual's coping style (Bernard, 1991; Dumont & Provost, 1999). Research suggests that while positive strategies are associated with reduced stress and anxiety, negative strategies are typically associated with increased stress and possible development of anxiety (Brodzinsky et al., 1992; Carver, Scheier, & Weintraub, 1989; Weems, 2007).

The way individuals cope with and respond to anxiety varies, as each person is unique in how they perceive a problem. Individuals engaging in more positive ways of coping through problem solving behaviours tend to experience less negative feelings. An individual's unique life experiences may contribute to the way one responds to anxiety. Coping strategies tend to be deemed either adaptive (positive) and protective, or maladaptive (negative) in nature. Positive coping strategies involve assistance seeking and problem solving behaviours where a child seeks help from those around him/her and tend to address or prevent a problem from occurring. Those who respond to anxiety through worry and rumination are not engaging in adaptive or healthy coping strategies and these behaviours tend to increase depressive mood symptoms (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008).

Adaptive (positive) coping strategies include cognitive-behavioural problem solving and assistance seeking behaviours. Children who draw on these strategies aim to identify the source of a problem, determine possible solutions, and seek the support of others when necessary (Skinner & Zimmer-Gembeck, 2007). In general, it is logical to infer that children who possess these skills are less likely to develop and face issues of anxiety, in general. Being able to effectively problem-solve is necessary for fostering resiliency (Bernard, 1991). The process of using a positive coping strategy such as problem-solving involves identifying a problem, generating solutions, deciding on best action, and pursuing it. For children, this is not always an easy process, which is why the encouragement of positive coping skills through modelling and reinforcement is of such importance (Bernard, 1991; Skinner & Zimmer-Gembeck, 2007). Similarly, some children draw on the positive coping strategy of assistance-seeking wherein a child seeks help from an adult when faced with a problem and does not know how to respond to it. The development of coping skills is ongoing as children mature, with younger children often having fewer strategies from which to draw (Bernard, 1991).

On the other hand, negative coping strategies involve avoidance behaviours and children who draw on these strategies are less likely to effectively address a problem (Brodzinsky et al., 1992). Maladaptive (negative) coping strategies include both cognitive and behavioural avoidance behaviours. Cognitive avoidance occurs when individuals cognitively avoid facing a problem or anxiety provoking thoughts (Jacofsky, Stantos, Khemlani-Patel, & Neziroglu, 2013). Avoidance coping can cause anxiety to increase because people using this technique typically experience more of what they were trying to avoid (Stapinski, Abbott, &

Rapee, 2010). Therefore, if a person does not confront the situation causing anxiety, but *avoids* it, their anxiety is likely to remain or increase. A child who cognitively avoids anxiety temporarily experiences a reduction from the unpleasant experience of a stressful situation, but the anxiety is maintained because the individual does not learn to deal with their anxiety (Jacofsky et al., 2013). In addition to cognitive avoidance, another negative coping strategy is behavioural avoidance. This is similar to cognitive avoidance wherein a problem is actively avoided by an individual through certain behaviours (Jacofsky et al., 2013). An example of a behavioural avoidance strategy is refusal of going to school. The child believes this behaviour lessens their overall feelings of anxiety, but in reality it is likely to increase issues in academic and social areas (Dumont & Provost, 1999). Cognitive and behavioural avoidance deprive individuals of the opportunity to learn about their capability to effectively cope with adversity (Jacofsky et al., 2013).

With research suggesting such value in possessing positive coping strategies, teaching these to children at a young age needs to be more highly considered. One study assessed the efficacy of a program teaching coping skills, *Coping Cat*, for children with anxiety. Results showed a significantly greater reduction in anxiety post treatment, compared to the control group (McNally et al., 2013).

Gender Differences

Gender indicates culturally and socially specific differences between males and females (Afifi, 2007). The terms gender and sex are often used interchangeably, but as societies progress, these terms are becoming more and more distinct. According to the American

Psychological Association (2011), sex refers to the biological status of an individual (i.e., sex chromosomes, internal reproductive organs, external genitalia), while gender encompasses the feelings and behaviours associated with a biological sex, and varies with culture. Eckert and McConnell-Ginet (2003) simplify the difference between sex and gender by describing sex as something we are born with or have, and gender as something we do. Gender has been a factor of investigation in countless areas of research and academics, and now represents a defined area of research. Gender differences refer more to the behaviours of males and females and have been defined as “variations in an individual’s self-representation that includes the psychological, behavioural, and social consequences of one’s perceived gender” (American Psychiatric Association, 2013, p. 15).

From birth, males and females are treated and interacted with differently. Research has shown that individuals handle babies more tenderly when they assume it to be a girl and more playfully when they understand it to be a male (Eckert & McConnell-Ginet, 2003), which persists into adulthood as it is deemed socially unacceptable for a male to hit a female. Also, parents talk to babies differently depending on whether it is a girl or boy. For instance, they use more diminutives (e.g., horse-y, dog-gy) when talking to girls over boys (Eckert & McConnell-Ginet, 2003). After the age of two gender differences begin to appear, as boys and girls select different toys and engage in different play (Eckert & McConnell-Ginet, 2003). The way children are treated as they develop undoubtedly guides their behaviour. Their behaviours are first differentiated by their parents through gifts and communication styles and then later by their peers through making fun of gender-inappropriate play (e.g., male child making fun of

male peer for playing with a doll). Gender differences arise when discussing health and have value in the area of diagnosis and treatment. Gender can inform health professionals about whether an individual is more at risk of developing a disorder, or the likelihood of specific symptoms of a disorder being experienced by an individual (American Psychological Association, 2013).

Examining differences in gender can be especially advantageous when discussing mental health issues and protective factors. When observing the role of gender in mental illness, some distinctions have been made. For instance, there are significant gender differences reported in high-prevalence disorders such as depression and anxiety (World Health Organization, 2016). However, minimal gender difference can be concluded for low-prevalence and severe mental disorders such as schizophrenia and bipolar disorder (WHO, 2016).

Gender differences in anxiety. It is well documented in psychological epidemiology that females are significantly more likely than males to develop an anxiety disorder throughout the lifespan (Bekker & van Mens-Verhulst, 2007; Christiansen, 2015; McLean et al., 2011). The National Institute of Mental Health (2016) has identified one of the risk factors to developing anxiety as being female. Statistics Canada reports that in the year 2009, nearly one million adult females were diagnosed with an anxiety disorder, compared to half of a million adult males. Reasons that females tend to experience higher levels of anxiety are unclear, but the literature provides some theories. Many of these theories are based on developmental differences, observed as males and females mature. For instance, girls typically begin puberty before boys, which may be considered a stressor for young females (Worell & Goodheart, 2006). Another

possible explanation offered by the Anxiety and Depression Association of America is that females process serotonin, a neurotransmitter in the brain, responsible for responding to stress and anxiety, at a slower rate than males (2016).

Another explanation for gender differences in anxiety may be early differentiation in parental treatment of male versus female children (Christiansen, 2015; Eckert & McConnell-Ginet, 2003). Specifically, Christiansen (2015) highlights differences in parent reactions to girl versus boy behaviours at a young age as encouragement for childrens' varied means of coping with stress. For example, the phenomenon coined 'the skinned knee effect', is a model of stereotyping still observed today (Christiansen, 2015). The theory suggests that when a boy scrapes his knee and cries to his parent, he receives minimal comforting; whereas when a girl scrapes her knee and seeks support, she is more likely to be coddled and hugged. Theories such as this suggest that boys are more often told to 'get over' their fears than girls, resulting in a greater exposure to and extinction of fear responses in males compared to females (Christiansen, 2015). If the belief that boys are expected to simply 'get over' their fears and worries persists into adulthood, men are less likely to seek counselling or professional support when faced with mental health issues (Addis & Mahalik, 2003).

As children develop, they learn to communicate their needs and emotions in different ways, which guides parents in their provision of caregiving. During the early stages of child development, children learn body expressions (e.g., crying) that allow them to communicate their feelings of emotion according to the situation and develop various social relationships (Chaplin & Aldao, 2013). Researchers have reported this skill of communicating needs/feelings

to others as a key component not only to the development of emotional and social competence, but also in securing mental health and wellness. Researchers have observed developmental as well as gender differences in how emotion is expressed, such as boys are more likely than girls to display defiance and aggression while girls tend to display more symptoms of anxiety and depression than boys (Chaplin & Aldao, 2013; Cole, Michel, & Teti, 1994; Hankin et al., 1998; Ollendick & Yule, 1990 as cited in Chaplin & Aldao, 2013). Maccoby and Jacklin (1974) examined gender differences among children in two types of emotional expression: frustration reactions and fear. They reported that girls were less likely to have negative emotional outbursts, such as anger and crying, as they got older, compared to boys. Else-Quest, Hyde, Goldsmith, and Van Hulle (2006) studied positive mood among boys and girls using parent-report data and results showed that girls were reported to display higher levels of positive mood than boys. Another study by Chaplin and Aldao (2013) examined emotional expression of pre-school and early school age boys and girls. They found that boys' expression of sadness when playing a frustrating game decreased from preschool to early school age, while girls' expressions did not decrease. The researchers purported that girls have a greater expression of sadness/anxiety than boys by early school age. A study by Buck (1977) also found that boys' emotional expressions decreased from age four to six, while girls' expressions remained the same.

Researchers investigating gender differences in anxiety among children tend to agree that some differences exist from an early pre-adolescent age (before age 12) (Beesdo et al., 2009; Zahn-Waxler et al., 2008). For example, research has shown that pre-pubescent girls are

twice as likely as boys to experience symptoms of anxiety (Chaplin, Gillham, & Seligman, 2009; Lewinsohn et al., 1997; Silverman et al., 1995). Theories as to why girls experience higher levels of anxiety than boys vary. Some researchers suggest a biological predisposition (Lewinsohn et al., 1997), while others propose that gender differences in anxiety disorders are linked to differences in parenting styles (Bekker & van Mens-Verhulst, 2007). Still, other findings from a study of twins provide evidence that genetic factors are involved in the development of anxiety disorders (Eley & Gregory, 2004). The early development of anxiety is believed to predict later depression, indicating that girls are experiencing this pathway of early onset anxiety to later depression more often than boys (Zahn-Waxler et al., 2008). Bender, Reinholdt-Dunne, Esjborn, and Pons (2012) examined factors related to anxiety in children (mean age of 11), particularly emotion dysregulation (i.e., emotional response that is poorly modulated). The researchers measured anxiety factors using the Screen for Child Anxiety Related Emotional Disorders-Revised (SCARED-R), and concluded that girls experienced more anxiety and more difficulty regulating their negative emotions than did boys. They also found that emotional dysregulation is more predictive of anxiety in girls than in boys. Some factors are directly linked to the development of anxiety, and gaining insight into these factors can benefit individuals experiencing anxious or depressive thoughts.

While most research is consistent that gender differences in anxiety among children exist, several researchers have disagreed. Lowry-Webster et al. (2001) examined the efficacy of the Friends for Life program as prevention to anxiety development and considered contributing factors such as age and gender. They did not observe differences between genders but noted that

research prior to that had been inconsistent. The researchers suggested further research to help lessen the disparity but maintained that this knowledge can guide prevention in the future.

Gender differences in coping and self-esteem. Considerable developmental research has been conducted across the lifespan to demonstrate gender differences among adults in protective strategies to prevent anxiety, namely coping strategies and self-esteem. While this area of research among children is limited, the research that is available indicates that girls have higher symptoms of anxiety than males due to weaker protective strategies (Brodzinsky et al., 1992; Zahn-Waxler et al., 2008).

There has been a substantial amount of research examining gender differences in self-esteem, a factor directly linked to the development of anxiety, among adults (Bleidorn et al., 2015; Orth & Robins, 2014). The main finding from this research has been that males report higher levels of self-esteem than females. For example, it has been concluded that females generally value physical appearance more than males and there has been a stronger connection between physical appearance and self-esteem for females (Arens & Hasselhorn, 2014). Quatman and Watson (2001) examined the domains of adolescent self-esteem and found that adolescent males showed slightly higher global self-esteem than did adolescent females.

Social media usage has also been linked with higher rates of female anxiety. According to some researchers (Stefanone, Lackaff, & Rosen, 2011; Tufekci, 2008), individuals construct their 'online selves' in order to be perceived by others as 'competent'. Effort is clearly made to appear favourably to others, by posting positive photos and statements online. The authors suggest that females use online tools more often than males to maintain or widen their social

networks. They share more photos and spend more time on social media than males (Stefanone et al., 2011; Tufekci, 2008). Generally, individuals use social media as a way to engage in behaviours that validate their self-worth or maintain their self-esteem. Therefore, it may be proposed that females seek more validation than males through social media use. In summation, gender differences in self-esteem may be contributing to the gender differences observed in anxiety.

Gender differences in anxiety among children have also been linked to coping strategies. Weems (2007) indicated that children who use positive coping strategies (e.g., assistance seeking) display lower levels of anxiety, while children who display negative coping strategies (e.g., avoidance behaviours) demonstrate higher levels of anxiety. Further, research suggests that girls tend to more often use the negative coping strategy of avoidance to cope with anxiety. For example, Bahrami and Yousefi (2011) examined gender differences in anxiety among 50 males and 50 females ranging between 15 and 18 years who had anxiety disorders. Results showed that females were higher on ‘avoidance of worry’ than males. Another study examined gender differences in coping behaviour among high school students with an average age of 15 (n=5954 males; n=6316 females). The study found that females were more likely than males to utilize avoidance-oriented behaviours, meaning that the females were avoiding their problems more often than males (Kort-Butler, 2009). Brodzinsky et al. (1992) examined coping strategies among children and found that girls are more likely to draw on cognitive avoidance and assistance seeking than boys. The finding that boys are less likely to seek support aligns with

research of adult males who are consistently found to be less likely to seek counselling or medical advice (Addis & Mahalik, 2003).

Knowledge of how boys and girls differ in their styles of coping with emotions can provide a wealth of information for appropriate treatment of mental health issues, such as anxiety. Given that younger children also demonstrate the presence of negative coping strategies and are thus less capable of dealing with anxiety effectively, early skills training in developing positive coping factors may be advantageous.

Theoretical Framework

While previous research in the area of gender and anxiety among children is limited, the research and findings of gender differences in general is plentiful thus providing justification for an investigation into the present topic. While many theories offer support for the presence of behavioural differences between genders, this thesis will focus on the biological, social-developmental, behavioural, and social constructionist theories. Biological theorists propose that there are innate sex differences between boys and girls, which exist prenatally at birth, and may lead to distinguishable behaviours (Chaplin & Aldao, 2013). It is suggested that these differences are due to the influence of genes and sex hormones. Biological theorists would likely argue for nature being the main driving force behind differences in how males versus females respond to anxiety.

Social constructionist theories suggest that gender differences occur as a result of ‘social construction’, and that society/culture create gender roles (Marecek, Crawford, & Popp, 2004). While other theorists believe gender is at least a partial product of biological influences, social

constructionist theorists insist gender is a social product. An example of this is that gender differences in children's emotional expression may be more evident when they are in the presence of strangers (Chaplin & Aldao, 2013). This may be due to an assumption that strangers expect them to behave differently than do their parents (Chaplin & Aldao, 2013).

Social-developmental theorists differ from social constructionists as they take typical cognitive development stages into strong consideration (Jacobs & Asokan, 1999). There is the assumption that gender is a product of social interactions driving child development. Social-development theorists consider that behaviour differences between genders exist because children generally learn roles consistent with their gender through socialization and experience (Chaplin & Aldao, 2013). An example of social development theory, which Chaplin and Aldao (2013) discuss, is gender schema. This suggests that boys and girls develop cognitive assumptions about gender based on observations in their environment. They develop schemas (e.g., pink for girls, blue for boys) for their gender, and typically adhere to societal expectations of that role. Social learning theories also support gender differences in behaviour as children are often encouraged to adopt certain gender roles through learning/modeling and reinforcement of a behaviour (Bandura, 1967). Differences may be more prominent in peer groups, where there is a tendency for boys to play rougher than girls (Maccoby & Jacklin, 1974; Rose & Rudolph, 2006). Christiansen (2015) suggests that parents may inadvertently influence the development of stereotypical gender differences through their reactions to their sons' and daughters' behaviours (e.g., skinned knee effect).

There are also theories to explain differences in how children express emotions, leading to gender differences in behaviour. Brody (1999) has suggested that these differences in emotional expression are a result of biological predispositions and socialization to adopt gender-related rules for expressing emotion. For example, females in Western societies are often expected to be more expressive emotionally than males. Girls are generally expected to display more empathy and sympathy both in the form of facial displays and empathic behaviours (Zahn-Waxler, 2001). Usually, males are expected to show less of these affectionate emotions, but are encouraged to express more “externalizing” emotions such as anger.

Summary

Anxiety is one of the most prevalent of all psychological disorders, and if ignored can have detrimental impacts on an individual’s well being. Differences in gender and psychological disorders have been documented from early stages in development onward. While plenty of research is available for the adult gender differences in anxiety, limited research exists for the child population. Gaining knowledge of any gender differences among children with respect to their levels of anxiety can aid in prevention, diagnosis, treatment, and understanding of the disorder. Fostering resiliency is an essential coping skill in the process of offsetting anxiety. High self-esteem and adaptive coping strategies can protect an individual from anxiety and help them to remain resilient when faced with anxious feelings (Bitsika et al., 2010).

The present study contributes to a limited body of research, as it investigates differences in gender among children aged 8-11 with respect to their coping skills and self-esteem, which

are protective factors of child anxiety. Findings of prior research examining gender differences in adolescent and adult anxiety have generally concluded that females experience more anxiety than males. Based on previous findings in this area related to the older population, the present study hypothesizes that similar findings will be seen among a young population. Specifically, it is hypothesized that 1) the maladaptive coping strategies (namely cognitive and behavioural avoidance) would be reported more by girls than boys; 2a) that the adaptive coping strategy of assistance seeking would be reported more by girls than boys; 2b) that the adaptive coping strategy of problem solving would be reported more by boys than girls; and 3) that global self-esteem would be higher in boys than girls. Grade level was considered in statistical analyses to account for a possible influence on any observed gender differences. Results will be analyzed and discussed in detail with reference to prior literature.

Chapter Three

Methodology

The present study is part of a larger study, which investigated the efficacy of the Friends for Life (FFL) program (Doyle, 2016). Researchers from the initial and present study collected self-reports of anxiety among children from grades four and five. The researcher for the initial study (Doyle, 2016) obtained ethical approval from both the Interdisciplinary Committee on Ethics in Human Research (ICEHR) and the English School District in the fall of 2013. The original study was developed in partnership with Eastern Health and the Janeway Hospital of St. John's, Newfoundland, Canada. The school district was approached after the FFL early intervention Program was introduced to the province in 2012. The initial study's aim was to evaluate the efficacy of the Program. School administrators were initially approached by social workers about the study. A portion of the results of several pre-test instruments from the original study was used for this research, which then was used in evaluating gender differences. It should be noted that while the original study focused on the effectiveness of the FFL intervention program, the present study focuses strictly on the pre-test scores of the initial study. Pre-test data was used in order to avoid any possible changes or reductions in anxiety upon treatment, which would provide compromised reports of coping and self-esteem.

Participants

Participants were recruited from ten elementary schools in St. John's and the surrounding area (nine urban and one rural). Children's ages ranged from 8-11 years as dictated

by their respective grade level (grades 4 or 5). The goal of the original study was to collect data from 100 students completing the intervention program, and 100 students who acted as a control group and did not receive the intervention. Ultimately, the researcher (Doyle, 2016) exceeded this and 308 participants were recruited. The final data set included 146 males and 162 females. Participants in this study were not selected on the basis of any pre-existing criteria or clinical diagnosis (e.g., levels of existing anxiety) other than that they were students in one of the ten selected schools, in grades four or five, and who assented to their participation. The program was introduced to the school as a prevention/intervention program to be used with a non-clinical population. The present study examined pre-test data of all 308 participants (experimental and control) to maximize the sample and strengthen any potential findings.

Once approval from school principals and guidance counsellors was obtained, researchers visited each school to distribute assent forms to all children taking part in the program to obtain informed consent. Child Assent Forms (See Appendix C) were composed by the original researcher and were permitted for use within the present study. Participants were read the Form aloud by the researchers and were given opportunity to ask any questions. They were allowed one week to return the Assent Form to their teacher. This Form provided children (and families) information regarding the purpose of the study, the expectations of participants, potential risks and benefits, and confidentiality. It also indicated that their participation was purely voluntary in nature. Children were also asked to complete a Demographics Information Sheet (See Appendix D), where they provided basic information to the researcher regarding

their grade, identified gender, and family dynamics. The data collected supports a biological, behavioural, and social framework by obtaining information pertaining to a variety of contributing areas (e.g., gender, SES).

Measures

While four (4) measures were used in the larger study (Doyle, 2016), the current study focused on research results from two areas of the original study: self-esteem and coping strategies. Measures used to examine these areas were chosen from the original study. For global self-esteem, the Coopersmith Self-Esteem Inventory (Revised) (See Appendix A) was used and gathered a global self-esteem score for participants. To assess the area of coping, the Coping Scale for Children and Youth (CSCY) (See Appendix B) was used. This scale measures four distinct coping strategies: cognitive avoidance, behaviour avoidance, assistance seeking, and problem solving. These measures were selected due to their strong psychometric properties and presence in relevant literature. Other studies investigating children and similar factors have used the Coping Scale for Children and Youth and the Coopersmith Self-Esteem Inventory (Bouchard, Gervais, Gagnier, and Loranger, 2013; Dry, Kane, and Rooney, 2015).

The Coopersmith Self-Esteem Inventory Revised Version (Appendix A, CSEI, Hills et al., 2011) is a standard measure of children's global self-esteem (Bartell & Reynolds, 1986; Slee & Rigby, 1993). This instrument includes 19 questions that assess self-esteem through personal self-esteem, self-esteem derived from parents, and self-esteem derived from peers. Questions examined the child's self-perception such as, "I get upset easily at home" and

were rated as either *Yes* or *No* (Hills et al., 2011). This assessment tool is a revised and shortened version of the original self-esteem inventory. It demonstrates equal internal consistency to the original instrument (.83) as well as improved reliability and inter-item correlations (Hills et al., 2011). There is belief, though, that the shortened form of the instrument does not allow as varied examination of the major areas of self-esteem (Coopersmith, 1981).

The Coping Scale for Children and Youth (see Appendix B, CSCY, Brodzinsky et al, 1992) is a commonly used self-report measure including 29 questions examining the presence of coping strategies. It involves four factors related to positive and negative coping strategies: assistance seeking (positive), cognitive/behavioural problem-solving (positive), cognitive avoidance (negative), and behavioural avoidance (negative). Children respond to statements like, “I tried not thinking about the problem”, by rating their likelihood on a scale from 0-3 (Brodzinsky et al, 1992). This scale holds moderate to high internal reliabilities (0.70 to 0.80), and test-retest reliabilities (0.70 to 0.83) for each of the factors (Brodzinsky et al, 1992). One noted limitation, however, to this measure is it lacks questions that focus on ‘acting out’ or ‘risky behaviour (e.g., hitting). These items are usually included in coping instruments for children/youth (Sveinbjornsdotter & Thorsteinsson, 2008). In Brodzinsky’s study, the CSCY measures were used to examine coping strategies among 498 children. In the present study, this measure was chosen to identify the categories of coping strategies used by the participants in the sample. The data was assessed to investigate whether gender differences exist

in the frequency of use of the coping behaviours.

Procedure

For the larger study by Doyle (2016), data was collected by Memorial University graduate students at three separate points during the span of the study: pre-testing, post-testing, and follow up testing 12 months after the post-test. Pre-testing occurred the week before intervention began and post-testing started the week following completion of the ten-week program, compressed to eight weeks in some schools. While the program was implemented within the classroom, data was collected in a quiet area of the school, usually the gymnasium or library. Verbal instructions were given to the children by researchers and each questionnaire contained a specific set of instructions. Research assistants were also available during the entirety of the data collection sessions to answer any questions students may have. Students were given as much time as necessary to complete their questionnaires. Questionnaires were in the same order in each package and each student was assigned a participant number for anonymity purposes. All data was entered into SPSS programming for analysis.

For the purpose of this research, only pre-test data was necessary to examine gender differences, as the program effectiveness was not being assessed. Children were not randomly assigned to treatment and control groups for this study; it solely examines self-reported gender differences in variables related to anxiety.

Data Analysis

There were five dependent variables analyzed in the present study, four were coping

strategies (i.e., assistance seeking, cognitive-behavioural problem-solving, cognitive avoidance, and behavioural avoidance), and one was global self-esteem. Each variable was analyzed in relation to both grade and gender. The first set of analysis was completed using descriptive statistical techniques, such as frequencies to determine the numbers of boys and girls in the study, as well as grade levels (See Table 1 in Results, Original Pre-test Sample by Doyle, 2016). Then, the scale properties were examined to ensure that the data was normal and without error. More advanced analyses were carried out using Pearson's correlations to determine how each dependent variable (i.e., global self-esteem and coping strategies) and independent variable (i.e., gender) were related to one another and ensure that there was no multicollinearity among the coping scales (See Chapter 4 Results). Once preliminary analyses were completed, the main analysis was conducted using a Multivariate Analysis of Variance (MANOVA), a form of ANOVA. This was carried out to assess the presence of mean differences in the coping scales (i.e., assistance seeking, problem-solving, cognitive avoidance, and behavioural avoidance), self-esteem, grade level and gender. The purpose of this analysis was to investigate the relationships between all variables listed. This procedure allowed the researcher to take into account multiple dependent variables simultaneously (Hair, Black, Babin, & Anderson, 2010). As a part of this analysis, two-way ANOVA's were carried out to investigate statistical differences at the univariate level for gender and grade. Also, a two-way ANOVA was used to determine if there were mean differences in global self-esteem and grade level and gender. Finally, age was used as a control throughout the analyses to account for a possible influence of age/grade on any observed gender differences.

Chapter Four

Results

A multitude of analyses were used to test the hypotheses: [1) maladaptive coping strategies (namely cognitive and behavioural avoidance) would be reported more by girls than boys; 2) that adaptive coping strategy of assistance seeking would be reported more by girls and problem solving would be reported more by boys than girls; and 3) that global self-esteem would be higher in boys than girls]. MANOVAs were used to analyze participants' performance on four measures of coping (assistance seeking, problem solving, cognitive avoidance and behavioural avoidance) and one measure of global self-esteem. In all analyses considering variable outcome scores, specific subscales from the following measures were utilized: the global self-esteem scale from the *SEI-19* and all scales (assistance seeking, problem solving, cognitive avoidance, and behavioural avoidance) from the *CSCY*. Results are discussed below.

Preliminary Analyses

Descriptive and frequency analyses were conducted on the data from Doyle (2016)'s original FFL pre-test sample to assess demographic information of all the child participants (See Table 1). The overall sample consisted of 308 children, 146 males and 162 females. There were 110 children in grade four, and 198 children in grade five, at the time of data collection. The majority of the children were 10 years old (n=189). The age group with the lowest participation was the group of 11 year olds (n=4). The attrition rate was 18.06%.

Table 1

Child Participant Demographic Information (Doyle, 2016)

<i>Demographic Feature</i>	<i>Total</i>
<i>Child Sample</i>	<i>n = 308</i>
Child Age (M (SD))	9.61 (SD = 0.57)
8 years old	3.20% (N = 10)
9 years old	33.90% (N = 105)
10 years old	61.0% (N = 189)
11 years old	1.30% (N = 4)
Child Gender	
Male	47.40% (N = 146)
Female	52.59% (N = 162)
Child Grade Level	
Grade Four	36.10% (N = 110)
Grade Five	63.90% (N = 198)
Child Ethnicity	
White	96.10% (N = 296)
South Asian	.001% (N = 1)
Native	-
Mixed	.01% (N = 3)
Other	.01% (N = 3)
Child Attrition Rate	18.06% (N=254)

Data in Table 2 shows the mean averages and standard deviations of the self-reported use of each of the four coping strategy factors (i.e., assistance seeking, problem solving, cognitive avoidance, behavioural avoidance) and self-esteem. Global self-esteem was the least noted factor among the participants, based on participant responses. The average self-reported use of cognitive avoidance, which is a negative coping strategy, was higher overall than the other factors examined in this study (i.e., assistance seeking, problem solving, and behavioural avoidance).

Table 2

Descriptive Statistics on the Protective Factors of Anxiety

Variable	N	Mean	Standard Deviation	Min-Max	Skewness
Global Self-Esteem	310	1.59	.09	1.40-1.76	1.07
Assistance Seeking	292	5.79	2.60	5.47-6.08	.066
Problem Solving	300	10.42	6.17	9.73-11.15	.206
Cognitive Avoidance	299	16.64	8.53	15.64-17.60	-.088
Behaviour Avoidance	299	7.78	5.45	7.14-8.39	.304

Correlation results (See Table 3) demonstrated a mixture of variable relationships. There was a significant relationship between problem solving and assistance seeking ($r=.53$, $p=.01$), meaning that those participants who engaged in problem solving behaviours were probably more likely to engage in assistance seeking behaviours. Also, there was a significant negative relationship observed between behavioural avoidance and cognitive avoidance ($r=-.52$, $p=.01$), meaning that those participants who engaged in behavioural avoidance behaviours were probably less likely to engage in cognitive avoidance behaviours. Finally, a significant

relationship was observed between behavioural avoidance and problem solving ($r=.15$, $p=.01$), meaning that those participants who engaged in behavioural avoidance behaviours were more likely to engage in problem solving behaviours. There were no other significant relationships observed.

Table 3

Correlations for Coping Strategies & Global Self-Esteem

Coping Strategies	1	2	3	4	5
1. Assistance Seeking	1.00				
2. Problem Solving	.525**	1.00			
3. Cognitive Avoidance	-.011	.020	1.00		
4. Behavioural Avoidance	.072	.154**	-.521**	1.00	
5. Global Self-Esteem	.003	-.105	-.006	.028	1.00

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

The following descriptive statistics (See Table 4) demonstrates differences between grade level and gender in the use of coping skill strategies and global self-esteem. There was a significant difference found between boys and girls and their tendency to use the negative coping skill of cognitive avoidance. Girls were found to use cognitive avoidance significantly more often than boys. For assistance seeking, problem solving, and behaviour avoidance, there were trends observed but no significant differences. Specifically, boys tended to use problem-solving strategies, assistance seeking and behavioural avoidance more than girls, with smaller

tendencies noted for boys' use of assistance seeking and behaviour avoidance strategies.

Table 4

Descriptive Results for Grade and Gender on Coping Strategies

			Mean	Std. Deviation	N
Assistance Seeking	4.00	Boy	5.88	2.60	52
		Girl	5.52	2.62	52
		Total	5.70	2.61	104
	5.00	Boy	5.95	2.64	80
		Girl	5.77	2.55	105
		Total	5.85	2.58	185
	Total	Boy	5.92	2.61	132
		Girl	5.69	2.57	157
		Total	5.80	2.59	289
Problem Solving	4.00	Boy	12.06	6.49	52
		Girl	10.35	5.90	52
		Total	11.20	6.23	104
	5.00	Boy	10.78	6.13	80
		Girl	10.30	5.73	105
		Total	10.50	5.89	185
	Total	Boy	11.28	6.28	132
		Girl	10.31	5.77	157
		Total	10.75	6.01	289
Cognitive	4.00	Boy	16.44	8.73	52

Avoidance		Girl	18.40	7.84	52	
		Total	17.42	8.31	104	
	5.00	Boy	15.05	9.08	80	
		Girl	17.61	8.29	105	
		Total	16.50	8.71	185	
	Total	Boy	15.60**	8.93	132	
		Girl	17.87**	8.13	157	
		Total	16.83	8.57	289	
	Behavioural Avoidance	4.00	Boy	8.31	5.83	52
			Girl	7.71	5.51	52
Total			8.01	5.65	104	
5.00		Boy	8.03	4.71	80	
		Girl	7.90	5.64	105	
		Total	7.96	5.24	185	
Total		Boy	8.14	5.16	132	
		Girl	7.84	5.58	157	
		Total	7.98	5.38	289	

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5 shows the results for the MANOVA examining both gender and grade level. This was carried out to assess the presence of mean differences in the coping scales, self-esteem, grade level and gender. The first results investigated are the interaction of grade and

gender and the four coping strategies. This interaction was not significant ($F=.280$, $df=4$, $p=.891$), meaning grade and gender together had no significant effect on childrens' coping styles. Next, the impact of grade on coping styles was examined and no significant differences were detected ($F=.953$, $df=4$, $p=.434$), meaning there were no considerable differences observed across grades in how children cope with feelings of anxiety. Finally, gender was examined and no significant differences were detected ($F=1.953$, $df=4$, $p=.102$), meaning there were no considerable differences observed in how boys and girls cope with feelings of anxiety. This differed from Table 4 results, where girls were found to use cognitive avoidance significantly more often than boys.

Table 5

Multivariate Analysis of Variance for Grade and Gender Differences and Coping Strategies

Effect	Value	F	Hypothesis df	Error df	Sig.
Intercept	.06	1220.55	4	282	.000
Grade	.99	.953	4	282	.434
Gender	.97	1.953	4	282	.102
Grade by Gender	.00	.280	4	282	.891

Table 6 shows the results for the univariate analysis of both gender and grade level and coping skills. The first results investigated are the interaction of grade, gender, and the coping strategies. This interaction did not reach significance, meaning there is no significant relationship across these factors. Next, grade level and coping skills were examined, however again the interaction did not reach significance. Finally, gender and coping skills were

examined and a significant relationship was found ($F=4.658$, $df=1$, $p=.032$), with girls displaying significantly higher levels of cognitive avoidance than boys (also seen in Table 2). This means girls were reporting higher frequencies of engaging in avoidance behaviours (e.g., *I pretended the problem wasn't very important to me*). It is of note that girls also have a higher tendency than boys to utilize behavioural avoidance as well, as seen in results from Table 4.

Table 6

Univariate Analysis of Variance for Grade and Gender Differences and Coping Strategies

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.
Intercept	Assistance Seeking	8841.452	1	8841.452	1310.626	.000
	Problem Solving	31247.171	1	31247.171	864.573	.000
	Cognitive Avoidance	75340.833	1	75340.833	1038.398	.000
	Behavioural Avoidance	16875.792	1	16875.792	576.777	.000
Grade	Assistance Seeking	1.667	1	1.667	.247	.619
	Problem Solving	29.404	1	29.404	.814	.368
	Cognitive Avoidance	79.050	1	79.050	1.090	.297
	Behavioural Avoidance	.132	1	.132	.005	.946
Gender	Assistance Seeking	4.892	1	4.892	.725	.395
	Problem Solving	79.388	1	79.388	2.197	.139
	Cognitive Avoidance	337.933	1	337.933	4.658**	.032
	Behavioural Avoidance	8.485	1	8.485	.290	.591

		Avoidance				
Grade X Gender	Assistance Seeking	.577	1	.577	.086	.770
	Problem Solving	25.085	1	25.085	.694	.405
	Cognitive Avoidance	5.912	1	5.912	.081	.776
	Behavioural Avoidance	3.745	1	3.745	.128	.721

Note: * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 7 displays the means and standard deviations for grade, gender, and global self-esteem. There were 110 children in grade four and 198 in grade five. There were more boys in grade four (N=57) than girls (N=53). There were more girls in grade five (N=109) than boys (N=89). There were no significant differences found between grade/gender and global self-esteem. The relationship between gender and cognitive avoidance is nearing significance though, similar to the results in Table 4 where girls were found to use cognitive avoidance significantly more than boys.

Table 7

Descriptive Results for Grade and Gender on Global Self-Esteem

Grade	Gender	Mean	Std. Deviation	N
4.00	Boy	1.2807	1.44858	57
	Girl	1.7736	1.62483	53
	Total	1.5182	1.54879	110
5.00	Boy	1.6854	1.58541	89
	Girl	1.5596	1.72901	109
	Total	1.6162	1.66302	198
Total	Boy	1.5274	1.54114	146
	Girl	1.6296	1.69357	162
	Total	1.5812	1.62129	308

Table 8 shows the results for the two-way ANOVA analyzing the impact of gender and grade level on global self-esteem. The first results investigated are the interaction of grade, gender, and global self-esteem. This interaction was found to be not significant ($F=2.563$, $df=1$, $p=.110$), meaning there are no significant relationships across these three variables. Next, the impact of grade level on global self-esteem was examined and no significant differences were found ($F=.244$, $df=1$, $p=.622$), meaning there were no considerable self-esteem differences seen for children in grade four versus grade five. Finally, the impact of gender on global self-esteem was examined and there were also no significant differences observed ($F=.903$, $df=1$, $p=.343$), meaning there were no considerable self-reported differences in self-esteem seen between boys and girls.

Table 8

Two-way Analysis of Variance for Grade and Gender on Global Self-Esteem

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8.126 ^a	3	2.709	1.031	.379
Intercept	698.344	1	698.344	265.754	.000
Grade	.640	1	.640	.244	.622
Gender	2.372	1	2.372	.903	.343
Grade X Gender	6.735	1	6.735	2.563	.110
Error	798.845	304	2.628		
Total	1577.000	308			

Chapter Five

Discussion

The aim of the present study was to compare two protective factors, namely coping and self-esteem, of child anxiety in both girls and boys. While there exists a large body of research on gender and factors of anxiety among adolescents and adults, there is a dearth of research on this topic among children. Specifically, this study aimed to narrow that gap in the literature by targeting participants aged 8 through 11 using pre-test data from Doyle's larger FFL study (2016).

Upon analyzing the data of this study, correlations were found across variables. The significant relationship between the positive coping strategies, of problem solving and assistance seeking, implies that children who engage in problem solving behaviours are also more likely to engage in assistance seeking behaviours. This is consistent with the findings of Brodzinsky et al. 1992) where children's strategies of coping were examined. This result also complements research by Skinner and Zimmer-Gemeck (2007), who introduced the notion of 'families of coping', where categories of coping are formed. Problem solving and assistance seeking coping strategies often co-exist and are considered adaptive processes that both "coordinate actions and contingencies in the environment" (Skinner & Zimmer-Gemeck, 2007, p. 126).

There were two unexpected relationships observed from the correlational analyses. First, there was a significant negative correlation between the negative coping strategies of behavioural avoidance and cognitive avoidance, which means that those who engage in

behavioural avoidance behaviours are less likely to engage in cognitive avoidance behaviours. This relationship is surprising, as cognitive and behavioural coping strategies are typically not mutually exclusive. For instance, if an individual is cognitively avoiding an issue (e.g., tell themselves everything is fine) they are also often seen avoiding the issue through certain behaviours (e.g., going to sleep to avoid confronting problem). Skinner and Zimmer-Gemeck (2007) suggest that these maladaptive coping strategies (cognitive avoidance and behavioural avoidance) are frequently seen together and thus are grouped together as an “escape” category, meaning that these are strategies of coping one uses in order to escape or avoid an issue. Additionally, there was a significant positive relationship between behavioural avoidance and problem solving among participants. This means that those who engage in behavioural avoidance behaviours (negative coping style) are significantly more likely to engage in problem solving behaviours (positive coping style). This conflicts with Skinner and Zimmer-Gemeck’s ‘category’ theory where positive strategies are usually observed with other positive strategies and negative strategies observed with other negative strategies. Beasley, Thompson, and Davidson (2003) offer a possible explanation and contributing factor that leads to these inconsistent results across studies. They note that individuals present different levels of resilience in response to life stresses, specifically, coping styles. Simply, children combine various strategies of coping and some are more helpful than others. Therefore, these unexpected relationships found in the present study may be due to a variation in the levels of resilience across participants.

In addition to these observed relationships, other findings were noteworthy. It was

hypothesized that the maladaptive (negative) coping strategy of cognitive avoidance would be observed significantly more among girls than boys. Results confirmed this prediction and showed that girls were more likely to draw on the negative coping strategy of cognitive avoidance than were boys. Thus, they identified as being more likely to avoid thinking about a problem. Cognitive avoidance is often used to temporarily reduce the unpleasant experience of a stressful situation (Stapinski et al., 2010). This finding is consistent with other studies examining gender and coping strategies where females have been found to draw on avoidance coping more than males (Bahrami and Yousefi, 2011; Kort-Butler, 2009; Matud, 2004). However, previous studies have focused on older populations, whereas the present study is unique in that it assessed prepubescent children. Cognitive avoidance was also the highest self-reported strategy overall among the variables. This result is similar to findings by Dickson, Ciesa, and Reilly (2012), where cognitive and behavioural avoidance were examined in relation to worry. Cognitive avoidance was observed as a positive predictor for worry while behavioural avoidance was not. As ‘worry’ is the main feature of anxiety (APA, 2013), cognitive avoidance, deserves more attention with its potential connection to anxiety development. Weems (2007) discusses the relationship between coping styles and anxiety stating that, children with low levels of anxiety tend to use more positive coping styles, while children with higher levels of anxiety tend to draw on more negative coping styles.

It was also hypothesized that the maladaptive (negative) coping strategy of behavioural avoidance would be seen significantly more among girls than boys. This prediction was not supported by the results and no significant gender differences were found for behavioural

avoidance. This is not consistent with other research, such as Matud (2004) where adult females scored significantly higher than adult males on avoidance coping styles (e.g., not going to school) and lower on rational and detachment coping (e.g., seeking a parent's support). The males were observed as having higher emotional inhibition than the females (Matud, 2004). This inconsistency in the literature between children and adults could be explained by social-development theory, in that it is conceivable children's coping strategies are still developing compared with adults. This theory of coping and development is not well supported in the literature, though. Skinner and Zimmer-Gemeck (2007) point out there exists no developmental framework for coping among children and that definitions of coping are borrowed from adult theories.

Another hypothesis made was that the adaptive (positive) coping strategy of assistance seeking would be reported significantly more among girls than boys. Although it did not reach significance, results showed more girls displaying this behaviour than boys. This finding is consistent with previous research where males (adult and children of the same age) were less likely to seek support from others (Addis & Mahalik, 2002; Brodzinsky et al., 1992; Wertlieb et al., 1987 as cited in Brodzinsky et al, 1992), but further research is needed to support a hypothesis that assistance seeking is significantly higher among girls.

The researcher hypothesized that boys would report that they use the positive strategy of problem solving more than girls do. This was not found in the present study, and does not align with prior literature on adolescents, which suggests males tend to draw on more rational methods of coping than females, by using skills such as problem solving (Bahrami and Yousefi,

2011; Kort-Butler, 2009; Matud, 2004). It is not clear why these results conflict, but previous research has mainly focused on older participants, so this inconsistency may reflect developmental changes in coping styles between genders. However, with a limited area of research on development and coping, further research on this age group is required.

It was hypothesized that global self-esteem would be significantly higher among boys than girls. However, no significant self-esteem differences between boys and girls were observed. While the literature on the younger population is limited, the adult literature indicates that males have higher self-esteem than females (Bleidorn et al., 2015; Orth & Robins, 2014). Quatman and Watson (2001) examined global self-esteem among adolescents and found males displayed higher overall self-esteem than did females. With limited research on such a young population, it is difficult to determine why no differences were observed. However, the influences of the Roots of Empathy program (discussed below) are plausible, as well as children still developing their styles of coping.

Strengths

There are several strengths to the design of the present study. The data was analyzed multiple ways (i.e., MANOVA, regression, two-way ANOVA) strengthening the validity of the findings. Specifically, advanced analyses involved using Pearson's correlations to establish how each dependent variable (i.e., global self-esteem and four coping strategies) and independent variable (i.e., gender) were related to one another. This ensured that there was no

multicollinearity among the coping scales. The study also controlled for age by using it as a covariate, to rule out any discrepancies in age as a contributing factor to the results.

In addition, this research adds to limited literature in the area of protective factors of child anxiety and gender. The study also examined children of a general, non-clinical population, whereas other studies often focus on participants from a clinical setting. Participants in the study were not required to have any pre-existing criteria, other than being in a certain grade within a school that implements Friends for Life. This makes the study more unique, and lends to findings that are more generalizable than previous studies in this field. The sample size of this study is also considerably high, which produces more generalizable findings to the wider population, in comparison to other studies with a much smaller sample (Pereira et al., 2014; Shortt et al., 2001). The assessment tools used within this study also hold high psychometric value and have been used frequently in the literature (Brodzinsky et al., 1992; Hills et al., 2011), which strengthens the current findings. The use of self-report data is worth noting, as it is the most commonly used measure of personality with many advantages (Paulhus & Vazire, 2009). Reports are easy to interpret as they are written in a language common to the researcher and participant, the participant is responding and is the best source to gain information from, these reports are efficient, not expensive, and very practical in nature (Paulhus & Vazire, 2009).

Limitations

While this study has various strengths, there are also several limitations to the study. There are limitations to the data collection of the larger study of 308 participants that may have affected the present findings. First, an issue with the study was the researcher's inability to

randomly select schools for child participation. Random selection would provide a more generalizable sample of students. This may be attainable in future if more schools are offering the Friends for Life Program. Also, the present study used self-report, pre-test data from the child participants, excluding parental reports of anxiety factors. The findings may have been strengthened had parent reports been combined with child reports.

Correlation analyses, while advantageous to the researcher, have limitations as they merely identify a relationship and do not provide possible reasons for why that relationship exists. Correlations are not cause and effect relationships (Kamer-Ainur & Marioara, 2007), so if correlations are found, limited conclusions can be drawn.

In addition, despite the advantages to self-report data, children may have responded in the way they believed was desirable or preferred by the researcher through a variety of response biases. These may include demand characteristics (participants make assumptions about the purpose of the study and alter their behaviour to complement their assumptions), extreme responding (inaccurate responses; common in self-report measures), and social desirability biases (over reporting of 'good behaviour') (Paulhus & Vazire, 2009). These biases are an inherent limitation to studies using self-reported measures. The environment in which children participated may have included some undesired distractions, such as it being an unfamiliar room. Another possible limitation to the study's procedure would be the number of tests (in addition to the two presented here) originally administered to the children. While this study focused on results from two assessments, there were a higher number of measures (five) used for the initial study and this may have been too exhaustive for the young participants. Also,

overall test-taking time may have had an effect on participants. Most students were finished their package of questionnaires in less than an hour but were allowed as much time as they needed.

Roots of Empathy Program. A limitation worthy of discussion is the possible impact on children's levels of anxiety of another intervention Program that was simultaneously offered to the participants. Roots of empathy (ROE) is an evidence-based program that occurs in the classroom among kindergarten through grade eight and it has been implemented internationally (Schonert-Reichl, Smith, Zaidman-Zait & Hertzman, 2012). Its aim is to create more 'caring' classrooms through emotional literacy. Children who are recipients of this Program learn how to better understand their feelings and the feelings of others (i.e., empathy). The intention is that they are less likely to be insensitive to others' feelings by carrying out acts of bullying or cruelty. The evaluation outcomes of the Program demonstrate significant decreases in aggression and increases in pro-social behaviour (Schonert-Reichl et al., 2012). Pro-social behaviours are acts that benefit others, such as helping and acts of kindness (Brief & Motowidlo, 1986). The participants in the present study were recipients of the ROE program. Since this Program was teaching the children about their feelings, it may have influenced them and impacted their responses on the questionnaires in the present study, possibly skewing the results and diminishing the validity of the program.

Future Directions

Given the sparse research in the area and the limitations of this study, further exploration of the factors of childhood anxiety and gender differences is warranted. In addition,

more research on a variety of factors related to anxiety among children can supplement the present study's findings and implications, as it only assessed two factors (i.e., coping and self-esteem). These results cannot generalize too widely, as there are many other factors to be assessed in relation to anxiety development, such as rumination, emotion regulation, reframing, distraction, helplessness, and withdrawal (Skinner & Zimmer-Gemeck, 2007).

Given the adaptation necessary for most students at the beginning of a school year, spreading out the times of testing may strengthen the study's findings. It is plausible that children experience less symptoms of anxiety later in the school year, once they are adjusted in comparison to the beginning of the school year. Increasing times between testing can provide useful information on how anxiety, coping strategies, and self-esteem develop or change as a child transitions and develops. It would also be worth investigating grade level differences and anxiety in future studies. The present study only examined children whose age varied slightly, and the small difference in age/grade level was controlled. Some research has shown differences across grade levels (Muris et al., 2002; Thompson et al., 2013) with levels of anxiety changing over time.

Additionally, in studies where program efficacy is examined, it may be beneficial to examine pre-treatment differences in anxiety, self-esteem, pro-social behaviours, and coping skills between the experimental and control participants. If there were no significant differences in the outcome variables between groups prior to the intervention, this would suggest greater confidence in a treatment effect, providing more certainty that randomization had effectively limited confounding effects.

The majority of research investigating anxiety (or related factors) among children, such as the present study, relies on self-report data. While this method is informative and expands knowledge of the topic, it would be preferable to also use methods that gain perspective into child and adolescent expression of anxiety in natural, real life contexts. Future studies may benefit and gain validity by also collecting data through behaviour observations. To be successful in carrying out meaningful behaviour observations, a trained coder would be an asset in drawing conclusions about feelings and emotions of the children being studied.

Conclusions

In conclusion, the present study's findings confirm that girls are inclined to use the protective factor, cognitive avoidance, more than boys. Gaining insight into the needs of both genders with regard to anxiety can strengthen the area of anxiety-related issues among children. Girls aged 8-11 were found to be more likely than boys to avoid negative, anxiety-provoking thoughts, which is known to be a factor involved in the development of anxiety. If future research supports the finding that girls cognitively avoid problems more than boys, proactive approaches to building resilience and learning coping skills through prevention may address this difference. Implementation of early intervention programs such as FFL and Coping Cat (Barrett et al., 2003; Doyle, 2016; Lowry-Webster et al., 2001) will help to reduce the likelihood of anxiety development among all children. The results of this study may inform future Program developers to ensure gender differences are considered in their Programs.

The researcher's theoretical framework guided the present study, allowing for

biological, behavioural, social-development, and social constructionist theories to be considered. Research indicates that these areas contribute to an individual's mental health. The demographics questionnaire examined factors such as age, self-reported gender, along with dynamics in the family and SES. The self-esteem and coping questions are contextually social, providing merit to theories that suggest social experiences guide gender and development. There are also questions examining behaviours, such as how one typically responds to feelings of anxiety.

To summarize, the present study provides future researchers with new information in the area of gender differences and protective factors of childhood anxiety. A gap in the area of gender and anxiety has begun to be filled by placing importance on younger children. Despite some researchers denying its significance (Barrett et al., 2003; Lowry-Webster et al., 2001), the present results support the notion that some gender differences in aspects of mental health among children exist, specifically when discussing their feelings. Further research is necessary to address the variability in gender differences and coping styles (e.g., cognitive avoidance). Knowledge of the gender differences in protective factors of child anxiety can allow for potentially more effective and inclusive interventions, ensuring the needs of each gender are better addressed.

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Appendix A

The Coppersmith Self-Esteem Inventory Revised Version

SEI-19

Here are 19 statements about self-esteem. You are to decide which of these statements you agree with about yourself and which you do not agree with. If you think the statement applies to yourself, circle the Y (Yes) to the right of the statement. If you think the statement does not apply to yourself, circle the N (No) to the right of the statement.

- | | | |
|---|---|---|
| 1. I often wish I were someone else. | Y | N |
| 2. There are lots of things about myself I'd change if I could. | Y | N |
| 3. I get easily upset at home. | Y | N |
| 4. I am a lot of fun to be with. | Y | N |
| 5. I am popular with kids my own age. | Y | N |
| 6. My parents usually consider my feelings. | Y | N |
| 7. My parents expect too much of me. | Y | N |
| 8. It is pretty tough to be me. | Y | N |
| 9. Things are all mixed up in my life. | Y | N |
| 10 Kids usually follow my ideas. | Y | N |

- | | | |
|--|---|---|
| 11 I have a low opinion of myself. | Y | N |
| 12 There are many times when I would like to leave home. | Y | N |
| 13 I often feel upset in school. | Y | N |
| 14 I am not as nice looking as most people. | Y | N |
| 15 If I have something to say I usually say it. | Y | N |
| 16 My parents understand me. | Y | N |
| 17 Most people are better liked than me. | Y | N |
| 18 I usually feel as if my parents are pushing me. | Y | N |
| 19 I often get discouraged in school. | Y | N |

Appendix B

The Coping Scale for Children and Youth

CSCY

All Children and teenagers have some problems they find hard to deal with and that upset them or worry them. We are interested in finding out what you do when you try to deal with a hard problem. Think about some problem that has upset you or worried you in the past few months. It could be a problem with someone in your family, a problem with a friend, a school problem, or anything else. Briefly describe what the problem is in the space below.

Listed below are some ways that children and teenagers try to deal with their problems. Please tell us how often each of these statements has been true for you when you tried to deal with the problem you described above.

	Never	Sometimes	Often	Very Often
I asked someone in my family for help with the problem	0	1	2	3
I thought about the problem and tried to figure out what I could do about it	0	1	2	3

I tried not thinking about the problem	0	1	2	3
I stayed away from things that reminded me about the problem	0	1	2	3
I got advice from someone about what I should do	0	1	2	3
I took a chance and tried a new way to solve the problem	0	1	2	3
I went on with things as if nothing was wrong	0	1	2	3
I tried not to feel anything inside of me. I wanted to feel numb	0	1	2	3

I shared my feelings about the problem with another person	0	1	2	3
I made a plan to solve the problem and then I followed the plan	0	1	2	3
I pretended the problem wasn't very important to me	0	1	2	3
I went to sleep so I wouldn't have to think about it	0	1	2	3
I kept my feelings to myself	0	1	2	3
I went over in my head some of the things I could do about the problem	0	1	2	3

I knew I had lots of
feelings about the
problem, but I just
didn't pay any attention
to them

0	1	2	3
---	---	---	---

When I was upset about
the problem, I was
mean to someone even
though they didn't
deserve it

0	1	2	3
---	---	---	---

I thought about the
problem in a new way
so that it didn't upset
me as much.

0	1	2	3
---	---	---	---

I tried to get away from
the problem for a while
by doing other things

0	1	2	3
---	---	---	---

I tried not to be with anyone who reminded me of the problem	0	1	2	3
I learned a new way of dealing with the problem	0	1	2	3
I pretended the problem had nothing to do with me	0	1	2	3
I decided to stay away from people and be by myself	0	1	2	3
I tried to figure out how I felt about the problem	0	1	2	3
I tried to pretend that the problem didn't happen	0	1	2	3

I figured out what had to be done and then I did it	0	1	2	3
I hoped that things would somehow work out so I didn't do anything	0	1	2	3
I tried to pretend that my problem wasn't real	0	1	2	3
I realized there was nothing I could do. I just waited for it to be over	0	1	2	3
I put the problem out of my mind	0	1	2	3

Appendix C

Child Assent Form

Title: Program Evaluation of the FRIENDS Anxiety Prevention Program

(Doyle, 2016)

You are invited to take part in a research project entitled “Program Evaluation of the FRIENDS Anxiety Prevention Program”.

I understand that I am being asked to take part in a study to help people find out more about the FRIENDS program that I am taking part in at my school. I am going to be asked to fill out some questionnaires about how I think and feel. My parents will also be asked to fill out some forms.

I understand that I do not have to take part in the study if I do not want to.

I can ask for help at any time, and I can ask to stop or to take a break at any time. If I am uncomfortable with any of the questions, I can stop. I know I do not have to answer any questions I do not want to answer.

Whatever I write on my questionnaires is private. No one here will use my name to talk about anything that I write or say.

This is not a test. There are no right or wrong answers. I can answer these questions however I think or feel.

If I have questions for anyone, I can ask them now before we begin or at any time I need help.

I understand what I just read, and I agree to take part in this study.

Assent of minor participant:

Signature of minor participant

Date

Appendix D

Child Demographic Information Sheet

(Doyle, 2016)

1. What grade are you in? (circle one) 2. How old are you? 3. What month were you born?
4. What year were you born?

1. Circle which one you are. a. Boy

b. Girl 5. Who do you live with?

4th 5th 6th

a. I live mostly or only with my mom.

b. I live mostly or only with my dad.

c. I spend about the same time living with my mom and dad but they do not live together

d. I do not live with my mom or dad, but I live with

e. I live with my mom and dad together.

6. How many sisters do you have? (write 0 if you do not have any sisters)

7. How many brothers do you have? (write 0 if you do not have brothers)

8. Which of the following is your ethnic group?

f. White g. Black h. East Asian (e.g. Chinese, Japanese, Korean) i. South Asian (e.g. Indian, Pakistani, Sri Lankan) j. Native (e.g. Inuit, Metis) k. Mixed l. Other

9. What do your parents do (even if they do not work now)?

m. Father's job _____ n. Mother's job _____