

EVALUATION OF A SCHOOL-BASED TIER TWO ANXIETY INTERVENTION:  
THE WORRY BOX TECHNIQUE

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## ABSTRACT

### EVALUATION OF A SCHOOL-BASED TIER TWO ANXIETY INTERVENTION: THE WORRY BOX TECHNIQUE

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Anxiety disorders are the most commonly diagnosed mental health disorders in youth in the United States. Anxiety can have long-term adverse effects on the child's academic, social, and emotional functioning if left untreated. Children spend the majority of each day in a school setting, placing school professionals in an ideal situation to identify and provide interventions to address childhood anxiety as a part of the students' everyday routine. Due to the constraints of the school setting school-based providers often utilize less resource-intensive intervention strategies adapted from websites and social media, which may sometimes lack empirical support. The present study examined the effectiveness of a cognitive-behavioral strategy found on social media, blogs, and "Pinterest"—the worry box technique—when implemented as a tier two intervention with ( $n = 3$ ) students who demonstrated elevated levels of anxiety in the school setting. Students participated in an eight-week intervention designed to teach children to compartmentalize their anxiety, focusing on their present thoughts, and addressing the identified anxious thoughts at a designated worry time. Each student completed the

Multidimensional Anxiety Scale for Children 2<sup>nd</sup> Edition Self Report (MASC-2 SR; March, 2013) before and after the intervention period, and completed self-reported ratings of anxiety during each session, to measure the efficacy of the intervention. Results of the present study cannot definitively assert that the worry box technique was the primary reason for the reduction of self-reported anxiety levels in participants. Other components of the intervention were considered as possible mitigating factors to the participants' anxiety levels. Suggestions are made for future research.

To my husband, my family, and my cohort  
Thank you for supporting and believing in me throughout my educational journey.

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## CHAPTER I

### INTRODUCTION

Anxiety is a natural, temporary response to developmentally appropriate stressors in an individual's life. While most people worry, it is often transitory and does not impair life functioning (Beesdo, Knappe, & Pine, 2009). Anxiety becomes problematic and may be identified as a psychiatric disorder when the associated symptoms are persistent, excessive, and interfere with daily functioning (Jarrett, Black, Rapport, Grills-Tauechel, & Ollendick, 2015). In fact, the National Comorbidity Survey-Adolescent Supplement (2010) reports that anxiety disorders are the most commonly diagnosed mental health disorder in youth in the United States (Merikangas et al., 2010; Rapee, Schniering, & Hudson, 2009), with prevalence rates reported to range between 8% to 20% in children and adolescents (Costello, Egger, & Angold, 2005; Muris, Schmidt, & Merckelbach, 2000).

Unfortunately, only approximately 17% to 20% of affected youth receive any form of treatment or services to address their symptoms their anxiety (Collins, Westra, Dozois, & Burns, 2004; Elkins, McHugh, Santucci, & Barlow, 2011; Merikangas et al., 2011). Of those who receive mental health services, about 70%-80% of affected youth received mental health interventions through the school setting (Burns et al., 1995; Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011). Children and adolescents spend the majority of their day in a school setting which places school professionals in an ideal

position to identify and provide services to youth affected by anxiety disorders (Christner, Forrest, Morley, & Weinstein, 2007; Haugland et al., 2017; Sulkowski, Joyce, & Storch, 2012). Furthermore, school psychologists have the ethical responsibility to address non-academic barriers to students' learning (Lionetti, Snyder, & Christner, 2010).

Without effective treatment and intervention, childhood anxiety can have long-term adverse effects on the child's academic, social, and emotional functioning (Bittner et al., 2004). It is essential that school professionals such as school psychologists, school counselors, and educators lead early identification, intervention, and prevention efforts to mitigate long-term detrimental effects of anxiety.

Research supports the use of cognitive behavioral interventions and techniques to address childhood anxiety in the school setting (Chiu et al., 2013; Christner et al., 2007; Herzig-Anderson, Colognori, Fox, Stewart, & Warner, 2012; Miller, Short, Garland, & Clark, 2010; Teubert & Piquart, 2011). Limited resources and the need for additional staff training may impede efficient implementation of cognitive behavioral therapy (CBT) in some schools, thus school-based providers often utilize less resource-intensive intervention strategies from websites and social media, which may lack empirical support (Whitaker et al., 2018).

One particular cognitive-behavioral strategy that does not require significant training is known as the "worry box" technique. Frequently used and regarded by school-based practitioners on social media, blogs and "Pinterest" (Marston, 2013; That Counselor Couple, 2014; Wein, 2014),—though not well-examined in the research literature—the worry box is a cognitive-behavioral strategy loosely based on stimulus control treatment. The worry box provides children a tangible mechanism to

compartmentalize their anxiety by placing a physical representation of their worries (anxious thoughts) inside a box and “outside” of their mind. The worry box employs stimulus control techniques via identification of worried thinking (in the form of irrational or maladaptive thoughts), focusing on the present moment, and postponement of worries to a designated worry time (Borkovec, Wilkinson, Folensbee, & Lerman, 1983).

After extensive review, no studies were found that demonstrate the effectiveness of a worry box intervention with students who experience anxiety in the school setting. Further, only two studies were found that support the effectiveness of stimulus control treatment (Borkovec et al., 1983; McGowan & Behar, 2013), despite the relative ease of implementation of the technique. The purpose of the present study was to examine the effectiveness of the worry box technique when implemented as a tier two intervention in a school setting for children with anxiety.

## CHAPTER II

### LITERATURE REVIEW

This literature review begins with a definition of childhood anxiety, an overview of the common characteristics and symptoms of anxiety, a review of prevalence and statistics, and a discussion of the long-term impacts of childhood anxiety. The sections to follow describe the different kinds of assessment, interventions, and supports that are currently used to address childhood anxiety in the school environment. Finally, the limited literature available describing the worry box technique is reviewed.

#### **Anxiety**

Anxiety is a natural, temporary response to developmentally appropriate fears or stressful situations that children, adolescents, and adults face each day. This response is naturally present early in childhood, and it is considered advantageous when the anxiety and feelings of worry encourage the individual to act in a way to protect himself or herself from potentially dangerous stimuli (Beesdo et al., 2009). For example, it is situationally appropriate for an individual to feel anxious when encountering a physical threat (i.e., a snake or an oncoming car). It is only when these feelings of worry are persistent, excessive, and interfere with daily functioning that anxiety is problematic and may be identified as a psychiatric disorder (Jarrett et al., 2014). Some of the most frequently diagnosed anxiety disorders in childhood are separation anxiety disorder, social phobia and specific phobia (Beesdo et al., 2009).

**Characteristics and symptoms.** Anxiety disorders are displayed differently from one individual to another (Merrell, 2008). Generally, anxiety disorders involve three areas of symptoms: subjective feelings, overt behaviors, and physiological responses. According to Merrell (2008), subjective feelings include symptoms such as dread, excessive worry, and fear; overt behaviors are commonly avoidant and/or social withdrawal; and physiological responses include somatic symptoms such as sweating, headaches, upset stomach, and shaking.

In addition, common characteristics and symptoms that are indicative of anxiety disorders may include negative and irrational thinking patterns, panic attacks, intense fear, cognitive distortions (errors in thinking), restlessness, avoidant behaviors, and complaints of physical symptoms such as nausea and headaches (Minahan & Rappaport, 2012; Wright & Sulkowski, 2013). Many of these symptoms are experienced internally and are not overtly observed, which adds to the difficulty in detecting and addressing the symptoms of the disorder without the individual's self-disclosure (Albano, Chorpita, & Barlow, 2003).

**Prevalence in children and adolescents.** According to The National Comorbidity Survey-Adolescent Supplement, a large-scale diagnostic interview survey conducted with a nationally representative sample of children and adolescents in the United States, anxiety disorders are the most commonly diagnosed mental health disorder in youth in the United States (Merikangas et al., 2010; Rapee et al., 2009). Overall prevalence rates of anxiety may vary depending on factors such as age, instruments used to assess, overlap with other internalizing disorders, and children's cognitive ability to identify symptoms of anxiety (Costello et al., 2005). The prevalence of anxiety disorders



is reported to range between 8% to 20% in children and adolescents (Costello et al., 2005; Muris et al., 2000). When undiagnosed school-age children suffering from subclinical anxiety levels are included, the prevalence rates rise to 15 – 30% (Costello et al., 2005).

If left untreated, children with subclinical levels of anxiety are placed at a higher risk of developing clinically diagnosable anxiety (Costello et al., 2005; Albano et al., 2003). Unfortunately, only about 17% to 20% of affected youth receive any form of treatment or services to address their anxiety (Collins et al., 2004; Elkins et al., 2011; Merikangas et al., 2011). Moreover, among all of the mental health disorders, anxiety disorders have the earliest median age of onset of six years old (Merikangas et al., 2010). The effects of childhood anxiety are not restricted to this developmental period; if not addressed early, research suggests that the distress and negative consequences associated with anxiety can persist through adulthood (Kerig, Ludlow, & Wenar, 2012; Van Ameringen, Mancini, & Farvolden, 2003).

**Consequences.** Without effective treatment and intervention, childhood anxiety places the affected individuals at a higher risk for developing psychiatric impairments such as depression, substance abuse, and other anxiety disorders later in life (Miller et al., 2010; Kerig et al., 2012). Furthermore, childhood anxiety can lead to disruptions to the normal course of development such as in social functioning, academic performance, and underachievement (Bittner et al., 2004; Wright & Sulkowski, 2013). For example, disruptions in daily life caused by symptoms of anxiety can impair the child's ability to concentrate when attending to academic tasks and disrupt his or her ability to recall previously learned information (Thompson, Robertson, Curtis, & Frick, 2013).

Furthermore, children with anxiety are at a greater risk for engaging in school refusal behaviors and school absenteeism which results in academic and social difficulties (Kearney, 2008). Early identification, intervention, and prevention efforts are essential in mitigating the long-term detrimental effects of anxiety in a child's development.

### **Anxiety in School Settings**

Anxiety can have a negative impact, not only on a child's development, but also on his/her academic functioning and social-emotional development. Unfortunately, a vast majority of youth with mental health concerns do not receive treatment and only approximately 20% of receive any form of treatment or intervention (Collins et al., 2004; Elkins et al., 2011). Of those who receive mental health services, as high as 70%-80% of affected youth receive mental health services in the school setting (Burns et al., 1995; Lyon et al., 2011). It is important to address anxiety in the school setting because children may be exposed to more anxiety-provoking situations in school. For example, separation from parents, increased socialization with peers, and exposure to greater academic demands occur in school (Haugland et al., 2017; McLoone, Hudson, & Rapee, 2006).

**Impact on academic performance.** High levels of anxiety can have adverse effects on a child's quality of life, which often are initially observed in school settings. Students with anxiety may experience negative consequences on their academic functioning such as impaired working memory (Minahan & Rappaport, 2012), difficulty retrieving previously learned information (Thompson et al., 2013), and difficulty with concentration and attention (Nail et al., 2015). In addition, children with anxiety are at a greater risk for underachieving in school (Masia Warner & Fox, 2012; Van Ameringen et al., 2003), engaging in school refusal behaviors, and have higher rates of school

absenteeism (Bernstein et al., 1997; Kearney, 2008). Finally, children and adolescents with anxiety are at an increased risk of dropping out of school prematurely which could have long-term negative social, academic, and economic implications to the child's life (Van Ameringen et al., 2003).

**Impact on social-emotional development.** In addition, anxiety can have a great impact on youth's social-emotional development. Research shows that students who experience anxiety are more likely to be withdrawn, face difficulties creating and maintaining friendships, and have lower social acceptance among their peers (Kearny, Pawlukewicz, & Guardino, 2014). Affected youth tend to lack social skills to interact with their peers and tend to avoid social interactions (Albano et al., 2003). Moreover, children and adolescents with anxiety experience higher incidences of bullying victimization in the school setting (D'Esposito, Blake, & Riccio, 2011). The salience of these stressors in the school environment demonstrates the need to provide early intervention and services.

### **Multi-tiered Systems of Supports for Students with Anxiety**

To improve the allocation of resources in the schools, a multi-tiered school-based system of supports (MTSS) framework is increasingly recommended in schools to address the growing academic, behavioral, and mental health needs of students (Wright & Sulkowski, 2013). Most MTSS frameworks designate that services are provided to the school population through three tiers: tier one (universal), tier two (targeted), and tier three (intensive). The function of tier one services is to provide universal delivery of evidenced-based school-wide prevention services and system-wide academic and behavior screening for all students. In addition, tier one involves data analysis to address

the needs of the school system and to identify students who may benefit from more targeted interventions (Greenwood et al., 2011; Sulkowski et al., 2012). In most school systems, tier one services are delivered to address the needs of 80 – 85% of the students.

Tier two services are provided to students who are deemed at-risk and whose needs cannot be adequately met with tier one services alone. Services at this level are designed to address common needs of students and are typically delivered in small-group settings. These services are delivered to address the needs of approximately 5% to 15% of the students. Students who continue to show inadequate progress will be considered for more intensive interventions through tier three (Greenwood et al., 2011).

Finally, approximately 1-5% of students will require tier three services which are considered intensive and designed to target the students whose needs cannot be met in tier one or tier two services (Sulkowski et al., 2012). These services are individualized, intensive interventions and services based on the student's academic or behavioral needs. If students continue to make inadequate progress in tier three, students may be referred to be assessed for special education services.

Anxiety interventions can fall across the continuum of services in a school's MTSS framework. The MTSS framework allows school professionals to determine the type and intensity of evidence-based anxiety interventions that match the student's need. These interventions can be provided in tier one, tier two, or tier three services.

### **School-Based Interventions for Students with Anxiety**

Research has shown that only about 17% to 20% of affected youth receive any form of treatment or services to address their anxiety (Collins et al., 2004; Elkins et al., 2011; Merikangas et al., 2011), and approximately 70% - 80% of these youth reporting

receiving treatment through the school setting (Burns et al., 1995; Lyon et al., 2011). Children and adolescents spend the majority of each day in a school setting, placing school professionals such as teachers, school counselors, school social workers and school psychologists in an ideal situation to identify, provide services, and teach the skills necessary to address childhood anxiety as a part of the students' everyday routine (Christner et al., 2007; Sulkowski et al., 2012). School personnel, including school psychologists and school counselors, have the ethical responsibility to address mental health concerns in order to assist students in overcoming non-academic barriers to learning (Lionetti, Snyder, & Christner, 2010).

Furthermore, families whose children experience anxiety may face barriers to gaining access to resources and services for anxiety. Such barriers include a lack of transportation, the burden of the cost of treatment, and difficulties with scheduling (Barrett & Pahl, 2006; McLoone et al., 2006), as well as the stigma and shame associated with receiving mental health treatment (Elkins et al., 2011; Rapee et al., 2006). Since a vast majority of children and adolescents attend school daily, regardless of socioeconomic status, school can be an ideal setting to provide early prevention programs and interventions to reduce the negative outcomes of childhood anxiety (Neil & Christensen, 2009; Sulkowski et al., 2012). School-based interventions for anxiety are most effectively delivered within a multi-tiered system of support (MTSS) across a continuum of tiers that denote level of intensity, duration, and resources needed.

**Tier one.** Services and interventions at tier one are designed to support and address the needs of all students in the school. Tier one in an MTSS framework focuses on universal interventions led by teachers or school counselors such as school-wide

prevention and early intervention programs that are offered to all students in order to reduce symptoms of anxiety before they are problematic (Mian, 2014). One of the goals of class-wide and school-wide programs in tier one is to establish social and emotional competence by fostering a positive school environment and by teaching skills to cope effectively with challenges students may encounter in and outside of school (Christner et al., 2007).

**Tier two.** Tier two interventions are implemented for students who continue to show elevated levels of anxiety despite receiving tier one supports. A number of assessments are used to identify “at risk” students such as direct observation, interviews, and behavior rating scales. Examples of behavior rating scales include the Revised Children’s Manifest Anxiety Scale, Second Edition (RCMAS-2; Reynolds & Richmond, 2008) and the Multidimensional Anxiety Scale for Children, Second Edition (MASC-2; March, 2013). Data from these behavior screeners and other assessments are used to identify students who may benefit from more intensive tier two strategies. Research has shown that small group interventions and computer-based CBT programs are effective tier two methods used to treat students with anxiety (Sulkowski et al., 2012). Tier two interventions, delivered in small-group settings, are typically designed to address the common needs of children at-risk. If tier two supports do not decrease the severity of anxiety levels in identified students, they may need more intensive supports delivered through tier three.

**Tier three.** Students who continue to show functional impairments resulting from high levels of anxiety may need more intensive supports addressed in tier three of the MTSS model. Interventions at tier three typically require individualized supports based

on the student's unique mental health needs. Examples of tier three interventions include individual counseling and cognitive behavioral intervention programs, which demonstrate a strongest evidence-base (Chiu et al., 2013; Ginsburg & Kingery, 2007).

Cognitive behavioral therapy (CBT) is a multi-component approach aimed at challenging and modifying an individual's maladaptive thoughts and teaching new coping skills to reduce anxiety. The primary CBT strategies for childhood anxiety disorders typically include the following components: psychoeducation, relaxation training, exposure, contingency management, cognitive restructuring, problem-solving, and parent involvement (Ginsburg & Kingery, 2007). CBT is deemed as a "probably efficacious" treatment and is considered the gold standard in addressing childhood anxiety disorders (Olatunji, Cisler, & Deacon, 2010; Silverman, Pina, & Viswesvaran, 2008). However, in many of these studies, the treatment providers are often non-school personnel such as outside therapists and clinicians (Chiu et al., 2013). In addition, individual CBT is often time-consuming, costly, and typically requires a trained professional to implement the strategies and interventions, which adds to the difficulty of implementing CBT in the school setting (Mayer, Van Acker, Lochman, & Gresham, 2009).

An example of a tier three cognitive-behavioral program is Coping Cat, a 16-session manualized treatment program that utilizes cognitive and behavioral strategies (i.e., psychoeducation and exposure) to teach children ways to cope with anxiety (Kendall & Hedtke, 2006; McNally- Keehn, Lincoln, Brown, & Chavira, 2013; Mychailyszyn et al., 2011). This program is designed for children ages 7 to 13 who meet the diagnostic criteria for generalized anxiety disorder, social anxiety disorder, and/or

social phobia, but can also be used with youth with subclinical symptoms of anxiety. A meta-analysis of 19 randomized controlled studies provided support to the effectiveness of Coping Cat and reported that the program is “substantially more efficacious for treating anxiety symptoms” when compared to no-treatment (Lenz, 2015, p. 63).

**The worry box technique.** Due to the constraints of the school setting, such as a lack of staff training, scheduling constraints, and low staff resources required to implement cognitive behavioral techniques, school-based providers often utilize less resource-intensive intervention strategies adapted from websites and social media, which may sometimes lack empirical support. One CBT-based strategy that is used and suggested by some school practitioners in social media such as in blogs and Pinterest is the “worry box” (Marston, 2013; That Counselor Couple, 2014; Wein, 2014). The worry box is a technique that utilizes cognitive-behavioral and stimulus control components such as identifying worried thinking (in the form of irrational or maladaptive thoughts), focusing on the present moment, and postponement of worries to a designated worry time. This technique is loosely based on a technique called *stimulus control treatment*.

Initially developed by Borkovec, Wilkinson, Folensbee, and Lerman (1983), stimulus control treatment is described as a “potentially useful behavioral technique” in addressing chronic worrying (McGowan & Behar, 2013, p. 103). With stimulus control, the individual is taught the following procedures: (a) identify worrisome and unpleasant thoughts and learn to distinguish those from other more pleasant thoughts; (b) establish a daily 30 minute “worry period” to occur at the same time and in the same location; (c) delay spontaneous worry to the worry period and instead focus on the present moment;



and (d) use the 30 minute worry period to worry about concerns and problem solve to reduce or eliminate concerns (Borkovec et al., 1983; McGowan & Behar, 2013, p. 92).

A worry box provides a tangible way to compartmentalize anxiety by placing a physical representation of a child's worries (anxious thoughts) inside a box and thus "outside" of their mind. This provides a developmentally appropriate application of stimulus control for children with anxiety. If the worries resurface in the child's mind outside of his or her designated worry time, he or she is reminded to visualize letting go of the sheet that contains their worries and direct his or her thoughts to the present moment. Further, the child is prompted to adhere to the stimulus control treatment, to postpone worrying to the designated worry time and to move on to another unrelated thought (Daitch, 2011; McGowan & Behar, 2013). Individuals are instructed to write or draw their worries on a piece of paper as they emerge throughout the day and physically place their worries inside their worry box so they do not have to hold on to it throughout the day. The visual representation of worries helps to introduce stimulus control to a younger audience. At the end of the day, a designated worry time allows the student to reflect on and challenge the thoughts and worries that he or she wrote down throughout the day. The student is permitted to worry as much time as needed to problem solve his or her worries. The worry box technique could be a feasible school-based tier two intervention due to the simplicity of the technique.

There is currently limited research directly supporting the individual effectiveness of stimulus control in addressing anxiety. After extensive literature review, only two studies, Borkovec et al. (1983) and McGowan and Behar (2013), were found that have investigated the efficacy of stimulus control procedure in addressing daily worry and

anxiety, despite the relative ease with which the technique may be implemented in a school setting. Both studies cited stimulus control as a “potentially useful behavioral technique” in addressing high levels of worry (McGowan & Behar, 2013, p. 103). In addition, stimulus control was found to be a simple treatment to reduce anxiety. McGowan and Behar (2013) indicated that this technique can be taught to an individual in a single session and beneficial effects can be observed after two weeks of practice. However further research needs to be conducted to provide a stronger empirical support in using stimulus control to address symptoms of anxiety.

### **The Present Study**

There is limited research examining the use of the worry box technique for students with anxiety in a school setting despite its feasibility and acceptability in a school setting. The purpose of the present study was to add to the scant literature by examining the effectiveness of using the worry box technique when implemented in a school setting as a tier two intervention to reduce symptoms of anxiety.

## CHAPTER III

### METHOD

#### **Research Question and Prediction**

The current study examined the following research question: *What is the impact of the worry box technique when implemented as a tier two intervention for students with anxiety?*

It was predicted that the school-based implementation of the worry box technique would result in reduction in anxiety symptoms for students. This prediction was based on previous research demonstrating the effectiveness of stimulus control in reducing anxiety (Borkovec et al., 1983; McGowan & Behar, 2013).

#### **Research Design**

This study utilized a multiple baseline across participants design with three 4<sup>th</sup> and 5<sup>th</sup> graders demonstrating elevated anxiety scores on the Multidimensional Anxiety Scale for Children 2<sup>nd</sup> edition (MASC-2; March, 2013; Mertens, 2015). This methodology was chosen for several reasons, including: (a) a potentially low sample size where a control group is not possible; (b) the participants' baseline would serve as his or her own control for comparison purposes; (c) the participants' MASC-2 pre- and post-test scores would serve as an additional measure of improvement (Mertens, 2015).

Additionally, the multiple constraints of conducting a true experimental design in a school setting make the selected design more feasible and acceptable.

The dependent variable in the present study was the reduction in anxiety level and symptoms experienced by the participants, measured by participants' completion of a weekly Subjective Unit of Distress Scale (SUDS; Kendall, Crawley, Benjamin, & Mauro, 2013) rating scale and pre- and post-treatment scores on the Multidimensional Anxiety Scale for Children 2<sup>nd</sup> edition (MASC-2; March, 2013). The independent variable was the worry box intervention.

### **Participants and Setting**

**Students.** Participants in the present study included ( $n = 3$ ) 4<sup>th</sup> and 5<sup>th</sup> grade students. Convenience sampling was used in the current study to recruit participants in a Midwestern elementary school in Southwestern Ohio. This sampling method was chosen due to the availability of participants in a school district where the researcher completed a school psychology internship.

Participants were included in the study if they met the following requirements: (a) obtained a *T*-score of 60 or higher (slightly elevated, elevated, and very elevated) on any subscale of the Multidimensional Anxiety Scale for Children 2<sup>nd</sup> edition (MASC-2; March, 2013) and (b) returned a signed parent consent and student assent forms.

Participants were excluded from the study if they met any of the following criteria: (a) the student and/or parent were unwilling or declined to participate in the study, (b) the student was receiving any other concurrent cognitive behavioral interventions to address anxiety symptoms; (c) the student began using medication to decrease symptoms of anxiety within six months of the study's start date, and (d) the student did not obtain a *T*-score of 60 or higher on any subscale of the MASC-2.

The three participants were assigned a pseudonym to protect their identity; each is described in detail below.

**Nathan.** Nathan is an 11 year old fifth grade student. He has been enrolled in the school since first grade. His mother shared that last school year it was difficult to persuade Nathan to attend school. However, she noted that she does not currently have these concerns. He often became upset, would just retreat to his room, and seclude himself from everyone. Nathan's mother and his teachers also reported that Nathan is often overly concerned about what he is going to look like in front of his peers. His biggest worry is attending the overnight camping trip that fifth grade students attend at the end of the school year. He is afraid that he will get hurt and that no one else is going to be around to help him. His mother indicated that Nathan developed these anxiety symptoms within the last couple of years and that Nathan did not have a formal diagnosis of anxiety and, therefore, has received no formal treatment. In addition, Nathan's mother reported that there is a history of anxiety within the family (mother and sister).

**Michelle.** Michelle is a 10 year old fourth grade student. She has been enrolled in the school since kindergarten. Based on teachers and school counselor reports, there have been ongoing concerns regarding her anxiety symptoms since second grade. It is reported by the school counselor that Michelle has a history of trauma. Michelle's teachers indicated that she often complained of physical distress (i.e., stomachaches, headaches) when faced with difficult academic material and/or social situations during class. Michelle's mother indicated that Michelle did not have a formal diagnosis of anxiety, has never received formal treatment, and she denied a family history of anxiety.

**Catherine.** Catherine is a 10 year old fifth grade student. She has been enrolled in the school since kindergarten. Her parents reported that Catherine had significant attendance issues the previous school year due to a gastrointestinal disorder. Her mother indicated that Catherine developed these anxiety symptoms within the last couple of years at the same time as her medical concerns emerged. Catherine did not have a formal diagnosis of anxiety but her mother indicated that Catherine has previously participated in school-based group counseling to address concerns with anxiety. In addition, Catherine's mother reported that there is a parental history of anxiety and depression.

## **Materials**

**Measures.** To initially screen for elevated levels of anxiety and to measure the reduction in anxiety symptoms at the conclusion of the intervention, the participants were asked to complete the Multidimensional Anxiety Scale for Children 2<sup>nd</sup> edition – Self-Report (MASC 2-SR; March, 2013). The MASC 2-SR is a comprehensive, self-report measure of anxiety features in children and adolescents ages 8-19 years. This scale contains 50 items that assess a wide range of symptoms associated with childhood anxiety such as the emotional, physical, cognitive, and behavioral symptoms. The administration of the MASC-2 is intended for early identification and treatment of anxiety symptoms.

The MASC-2 scores are divided into the following ranges: Very Elevated (t-scores of 70 and above); Elevated (t-scores ranging from 65 to 69); Slightly Elevated (t-scores ranging from 60 to 64); High Average (t-scores ranging from 55 to 59); Average (t-scores ranging from 40 to 54); and Low (t-scores below 40). *Very Elevated* scores are characterized as many more concerns than are typically reported, *Elevated* scores reflect

more concerns than are typically reported, *Slightly Elevated* scores are slightly more concerns than are typically reported, *High Average* are borderline levels of concern, *Average* are typical levels of concern, and *Low* reflect fewer concerns than are typically reported.

According to the MASC-2 manual, a *T*-score of 60 or higher (1 standard deviation above the mean) on any one of the subscales (Separation Anxiety/Phobias, Generalized Anxiety Disorder Index, Social Anxiety, Obsessions and Compulsions, Physical Symptoms, and Avoidance) may indicate that the rater is experiencing an elevated number of symptoms in that area (MASC 2-SR; March, 2013). Therefore, for the purpose of the present study and in order to expand the potential sample size, a *T*-score of 60 or higher (*Slightly Elevated*) on any one of the subscales qualified students as eligible to participate in the study.

The MASC 2-SR has strong psychometric properties. The coefficient alpha reliability of the MASC 2-SR Total Score is .92 and the test-retest reliability ranged from .80 to .94, all  $p < .001$ . The internal consistency of the MASC 2-SR was found to be .92 overall and a .79 median alpha value for the scales and subscales. The normative sample for the MASC 2-SR included 1,800 self-report ratings from youth between 8 to 19 years old. This information provides support that the users of the MASC 2-SR can be confident the scores generated using this measure will be consistent and reliable (March, 2013). The validity measures used for this scale found that the MASC 2-SR is highly acceptable in discriminating between relevant groups, correlating meaningfully with scores from other measures of anxiety, and generalizing across rater type and racial/ethnic groups.

It is difficult to overtly observe the symptoms of anxiety due to its internalizing nature (Albano et al., 2003), therefore Subjective Units of Distress Scale (SUDS) rating scales were used in the present study as the primary repeated dependent measure of anxiety-related symptoms. Ratings were obtained from participants weekly during the baseline and intervention periods (see Appendix A; Kendall, Crawley, Benjamin, & Mauro, 2013). SUDS ratings are commonly used to measure changes in anxiety during exposure tasks in cognitive behavioral treatments such as Coping Cat (Kendall & Hedtke, 2006; McNally-Keehn et al., 2013; Wolpe & Lazarus, 1966). In addition, SUDS have been previously used to measure self-reported levels of discomfort (Kaplan, Smith, & Coons, 1995) and distress (McCullough, 2002) in children and adults.

The SUDS rating that was used in the present study was adapted from the Brief Coping Cat Manual, as used in prior studies (Kendall, Safford, Flannery-Schroeder, & Webb, 2004; Leatham, 2017). The SUDS rating was introduced to the participants in the form of a “feelings thermometer” using a scale ranging from 0-8, with 0 indicating “relaxed” to 8 indicating “freaking out” (Kendall et al., 2004). Based on the tapering schedule (described under Procedures), SUDS ratings were recorded each time the participant met with the researcher to provide a behavioral representation of the participant’s anxiety levels over time. In this study, each participant was asked to generate a list of situations in which s/he experienced anxiety. With support from the researcher, a hierarchy of situations based on this list was created and participants used this hierarchy to report their SUDS ratings on these items.

Eight faces ranging from excited to very worried facial expressions were included with the numbers 1 through 8 on the SUDS anxiety rating scale (see Appendix A). This



measure, adapted from Leatham (2017), allowed participants to more easily identify their level of anxiety by supplementing the numerical ratings with facial expressions. This data was graphed and used as the primary dependent measure representing change in anxiety levels in the multiple baseline design.

**Intervention materials.** After the baseline period, each participant created a worry box that was used by the participant throughout the intervention phase. The materials needed to create the worry box varied for each participant. The essential materials are the box or pouch such as a shoebox or a canvas pencil case and, based on the interests of the participant, art supplies such as stickers, markers, and construction paper to decorate the worry box/pouch. In this study, a pencil pouch was used by all three participants due to increased portability and to not draw the attention of their classmates. Throughout the intervention phase, the worry box was used by the participants by having them place their worries (written down on paper) inside their worry box instead of addressing the worry at that moment in time. The researcher guided the participants in challenging and problem solving the worries that were placed in the box during a weekly designated worry time each week.

## **Procedures**

**Phase I: IRB approval.** The University of Dayton Institutional Review Board (IRB) approved this study prior to data collection.

**Phase II: Recruitment, consent, and screening.** Prior to recruitment, a signed consent form was obtained from the school district and the participating school's principal (see Appendix B). The researcher sought assistance from the district's school psychologist and school counselor to recruit participants from one elementary in the

school district based on referrals from teachers. Once potential participants were identified, parental consent and student assent were obtained prior to the screening process. Next, students were asked to complete the MASC-2 SR and those who obtained a score *T*-score of 60 or higher on any subscales of the MASC were eligible to participate in the study. Parents were contacted after the screening to confirm that the student would be participating in the study.

All participants were assigned a pseudonym to protect their identity and to maintain confidentiality in all written documents, including this thesis. All data and information from this thesis project will be shredded and/or deleted two years after this thesis is completed.

**Phase III: Baseline.** Baseline data were collected twice a week for all participants for three consecutive weeks. Prior to the baseline phase, the researcher met with each participant individually for a brief 15-minute psychoeducation module adapted from Chorpita (2007) to introduce the body signals related to anxiety and to explain how to use the SUDS rating scale. During this session, the participant learned how to identify anxiety in their own body, recognize the physical symptoms, and the thoughts and behaviors that may come with anxiety. This brief psychoeducation was used to give the participant a better understanding of what anxiety is and to introduce the weekly rating scale to the participant. With assistance from the researcher, each participant generated a list of situations in which s/he experienced anxiety. A hierarchy of situations based on this list was created with support from the researcher and the participants used this hierarchy to report their SUDS ratings on these items. Participants used the SUDS to rate their levels of anxiety regarding different situations or stimuli that they experienced

during the week. The baseline average was compared to their SUDS ratings in the intervention phase. Participants were given staggered intervention start points in line with a multiple baseline design. The participants' start points were determined by the order in which parental consent was received by the researcher.

**Phase IV: Intervention.** Following three weeks of baseline data collection, each participant met with the researcher to create his or her own worry box. During the intervention phase, participants were taught how to write their worries on a piece of paper as they emerge throughout the day and to physically place their worries inside their worry box instead of addressing the worry at that moment in time. During a designated worry time at the end of the day, typically about 15 minutes each session, the participants individually met with the researcher to process, reflect on, and challenge the worries in his/her box. The researcher used therapeutic techniques such as active listening, showing empathy, reflective listening, and appropriate self-disclosure during this processing time. Participants were permitted ample time to address their worries during this designated time. Each participant met with the researcher for their designated worry time on a tapering schedule. In the first week of intervention, participants met with the researcher at the end of all five school days. In week 2, they met for four days; three in week 3, continuing until the 5<sup>th</sup> week of intervention wherein participants were encouraged to use their worry box independently and seek out the researcher during worry time as needed. Including the baseline period, the study lasted 8 weeks for each student. In the later sessions, the participants were encouraged to take ownership of the “worry time” as their self-awareness of their anxiety improves. The researcher's role shifted to be the supporter as the participants started recognizing the patterns in their anxious thoughts.

**Phase V: Post-intervention data collection.** The participants were asked to complete the MASC-2 one month after the completion of the worry box intervention. The results of this measure were compared to the pre-intervention MASC-2 scores as an additional measure of reduction in anxiety levels.

## CHAPTER IV

### RESULTS

Following are the results of the worry box intervention for students with anxiety, including an analysis of the pre/post results and weekly repeated data for each participant as well as across the group.

#### **Data Analyses**

To answer the research question: *What is the impact of the worry box technique when implemented as a tier two intervention for students with anxiety?*, the following data analyses were conducted by the researcher. The primary data analysis method was a visual analysis of each participant's weekly SUDS ratings. According to What Works Clearinghouse, visual analysis is the preferred method in single case design studies (Kratochwill et al., 2010). Visual analysis included inspection of patterns in level, trend, variability, overlap, and consistency of data in similar intervention phases (Hunley & McNamara, 2009; Kratochwill et al., 2010). In addition, an effect size was calculated for each participant's SUDS ratings using Cohen's *d*. This *d-index* is used to analyze the magnitude of change due to a behavioral intervention. This approach is used when there are at least three baseline data points and variability exists among the data (Hunley & McNamara, 2009). Cohen's *d* is calculated by finding the difference between the mean of all baseline data and the mean of all data collected during the intervention phase, divided by the standard deviation of all data.

The MASC-2 yielded ordinal and interval data and was analyzed using descriptive statistics and a Reliability Change Index (RCI; Nunnally & Kotsch, 1983). When sample sizes are small, such as in the present study, the RCI is the preferred method of statistical analysis. The RCI is used to determine whether the change in each participant's anxiety level was statistically significant based on the reliability of the MASC-2. A *t*-score less than -1.96 (for a change in the negative direction) and greater than +1.96 (for a change in the positive direction) were considered reliable (Nunnally & Kotsch, 1983).

### **Nathan**

**SUDS ratings.** Nathan completed an 8-item rating of self-identified fears during each session of the baseline and intervention phases. The rating utilized an 8-point feelings thermometer, where a 0 (relaxed) indicated that the item triggered no fear in Nathan, and an 8 (flipping out) indicated the item was anxiety provoking and caused a lot of fear.

Nathan's self-identified fears focused on physical symptoms and performance anxieties, consistent with his MASC-2 results. Nathan's SUDS ratings included items such as "getting sick with diseases" and "panicking during a test." Figure 1 depicts how Nathan rated his fears during each session of the baseline and intervention phases. Ratings were collected twice a week during the baseline period and at each session during the intervention period. The ratings in Figure 1 are reported as weekly averages because, with the tapering schedule, the number of intervention sessions varied from the start of the intervention to the end.

Visual analysis of Nathan's graphed data includes a description of level, trend, variability, immediacy of the effect, and overlap (Hunley & McNamara, 2009; Kratochwill et al., 2010). Nathan's self-rated anxiety level decreased from an average of 7 during the first session of the baseline period to an average of 1 at the last session of the intervention period. This indicates a reduction in perceived anxiety levels by the end of the intervention period. Baseline data is highly variable (standard deviation = 2) and shows a downward trend in the baseline period, therefore this data should be interpreted with caution. Nathan mentioned to the researcher that he enjoys talking to someone at the end of the day, even during the baseline period. Prior to the first session, Nathan became aware of why he was participating in the research study due to the information presented through the participant assent form (see Appendix D). Therefore, an expectation that his anxiety levels would decrease after meeting with the researcher was prematurely set. Upon introduction of the intervention, there was a slight change in level of SUDS ratings from the baseline phase (3) to the intervention phase (1.5) and the observed effects of the worry box intervention, as displayed in Figure 1 were not immediate for Nathan. A visual analysis indicate that there is no overlap in data from baseline to intervention and there is an observed downward trend in the baseline and intervention data.

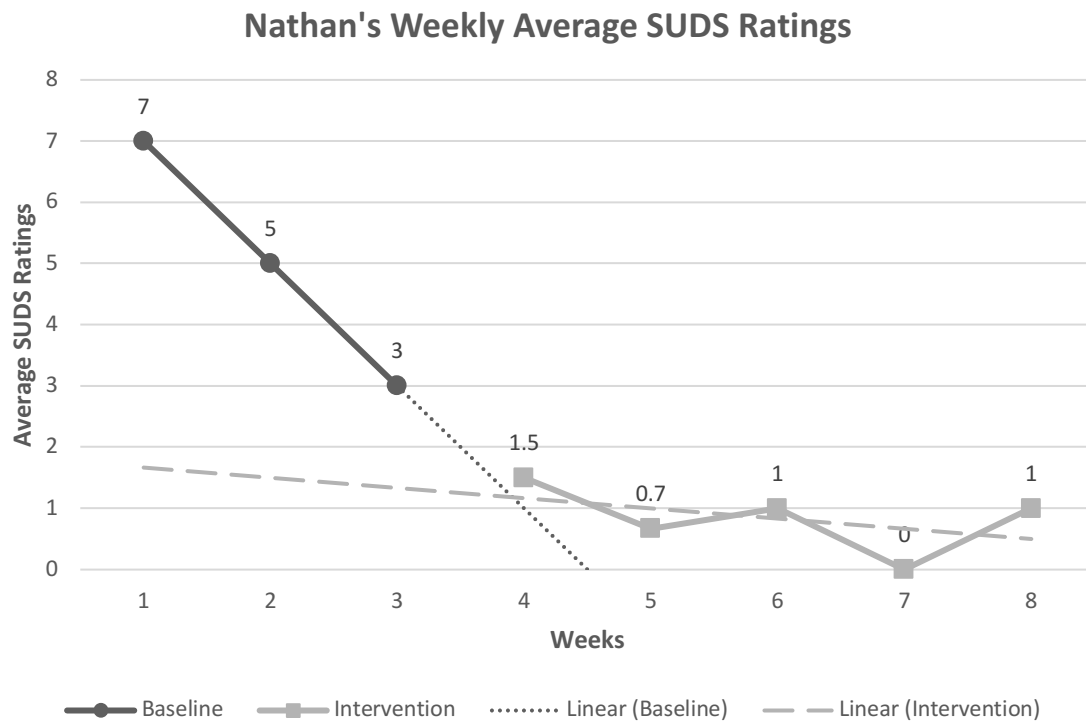


Figure 1. Nathan's Average Weekly SUDS Ratings.

Magnitude of change statistics were calculated. The effect size (*d-index*) for Nathan was -1.71 (intervention mean: 0.83 – baseline mean: 5 / standard deviation of all data: 2.44 = -1.71), and is considered a large effect. A *d-index* of +/-0.80 and higher is considered to be a large effect; however, given the significant decreasing trend and subsequent variability in the baseline data identified through the visual analysis, this effect size should be interpreted with caution.

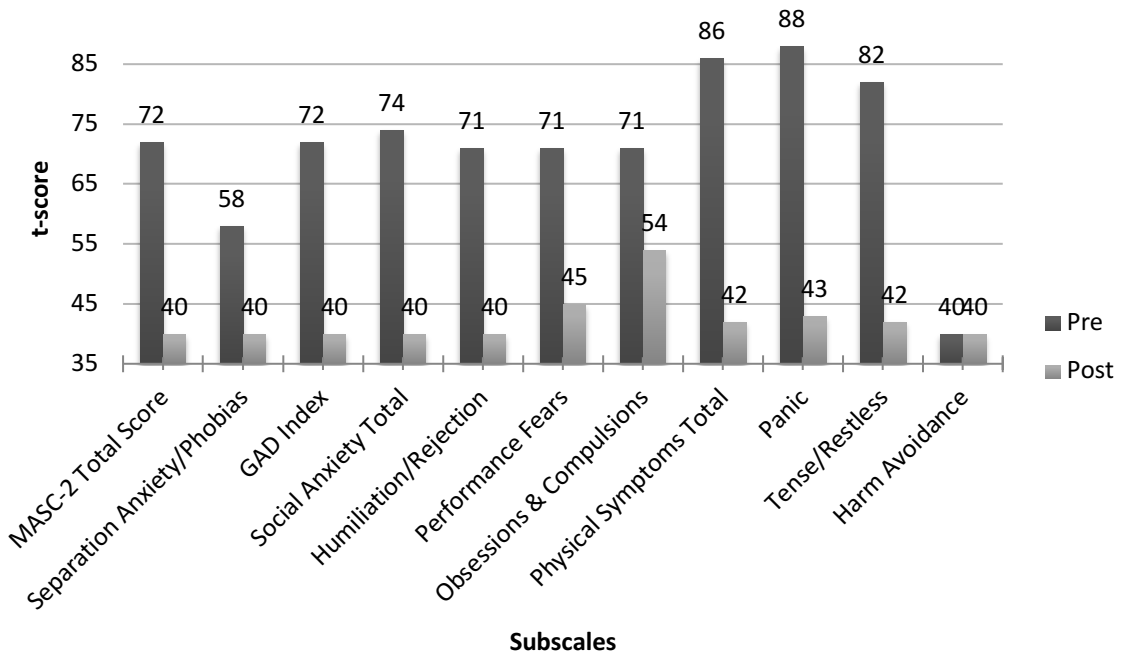
**MASC-2 analysis.** Nathan's MASC-2 pre-test Total t-score was 72, which was in the *Very Elevated* range. On the post-test, Nathan's Total t-score was 40, which is in the *Average* range, when compared to typical same-age, same-gender peers. His Total Score decreased by 32 t-score points. On the pre-test, Nathan demonstrated *very elevated* levels of anxiety on the following scales: *Generalized Anxiety Disorder* [GAD] Index (t-score of 72), *Social Anxiety: Total* (t-score of 74), *Humiliation/Rejection* (t-score of 71),



*Performance Fears* (t-score of 71), *Obsessions and Compulsions* (t-score of 71), *Physical Symptoms: Total* (t-score of 86), *Panic* (t-score of 88), and *Tense/Restless* (t-score of 82).

An anxiety probability score was determined by the number of *elevated* T-scores (t-score of 60 and above) on the Anxiety Scales (Separation Anxiety/Phobias, Generalized Anxiety Disorder [GAD] Index, and Social Anxiety). Nathan demonstrated *elevated* pre-test scores on two of the three scales, thus it was determined that he had a *high probability* of anxiety. On the post-test, all of Nathan's scores that were of concern demonstrated significant reductions. Based on the pre-test, Nathan scored in the *slightly elevated* range or above on all but two scales (*Separation Anxiety/Phobias* and *Harm Avoidance*); on the post-test all of his scores had reduced to within the *Average* range. His anxiety probability index score on the pre-test fell within the *high probability* category while his post-test fell within the *low probability* of having anxiety. For both the pre- and post-measure, the consistency scales fell within the acceptable range, indicating Nathan provided responses that were consistent across questions. Thus, both measures were likely reliable ratings of his true perception of his anxiety-related behavior. Figure 2 displays Nathan's pre-test and post-test scores on the MASC-2 by subscale.

## Nathan's Pre and Post T-Scores on the MASC-2



*Note.* Mean = 50; Standard Deviation = 10

Figure 2. Nathan's Pre- and Post-Test Scores on the MASC-2 Assessment.

### Michelle

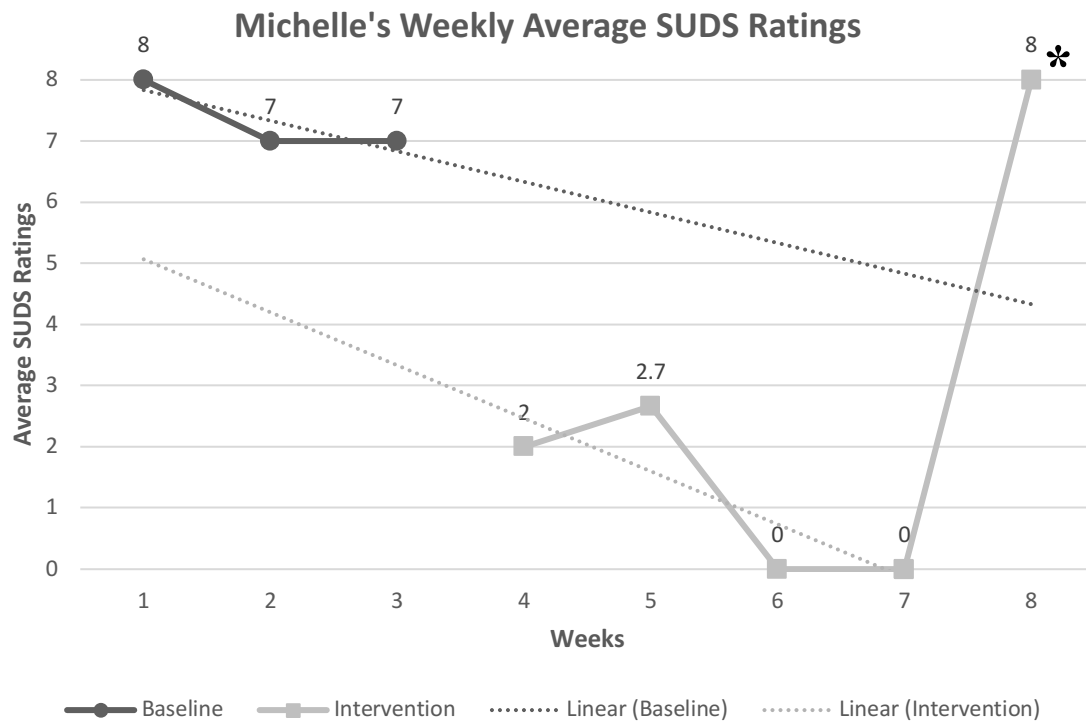
**SUDS ratings.** Michelle completed an 8-item rating of self-identified fears during each session of the baseline and intervention phases. The rating utilized an 8-point feelings thermometer, where a 0 (relaxed) indicated that the item triggered no fear in Michelle, and an 8 (flipping out) indicated the item was anxiety provoking and caused a lot of fear.

Michelle's self-identified fears included generalized and social-related anxieties, consistent with her MASC-2 results. Michelle's SUDS ratings focused on items such as "getting in trouble" and "not fitting in with friends at school". Figure 3 depicts how Michelle rated her fears during each session of the baseline and intervention phases.

Ratings were collected twice a week during the baseline period and at each session during

the intervention period. Data from the last week of intervention was collected after a school break due to the holidays. The ratings in Figure 3 are reported as weekly averages because, with the tapering schedule, the number of intervention sessions varied from the start of the intervention to the end.

Visual analysis of Michelle's graphed data includes a description of level, trend, variability, immediacy of the effect, and overlap (Hunley & McNamara, 2009; Kratochwill et al., 2010). During baseline, the average anxiety ratings reported by Michelle was 7.33 compared to an average of 2.53 during intervention. Upon introduction of the intervention, there was an immediate change in level from the baseline phase (7) to the intervention phase (2). This indicates that Michelle experienced a reduction in perceived anxiety levels by the end of the intervention. In addition, visual analysis indicates a stable baseline data and a downward trend in the intervention data, with the exception of the last data point. Data from the last week of intervention (week 8) should be interpreted with caution as Michelle suffered a concussion a few days before the last session. With the exception of data from the last week of intervention, there is no other overlap in data between the baseline and intervention phases.



\*Note: At the last week of intervention, Michelle suffered a concussion. This data point should be interpreted with caution.

Figure 3. Michelle's Average Weekly SUDS Ratings.

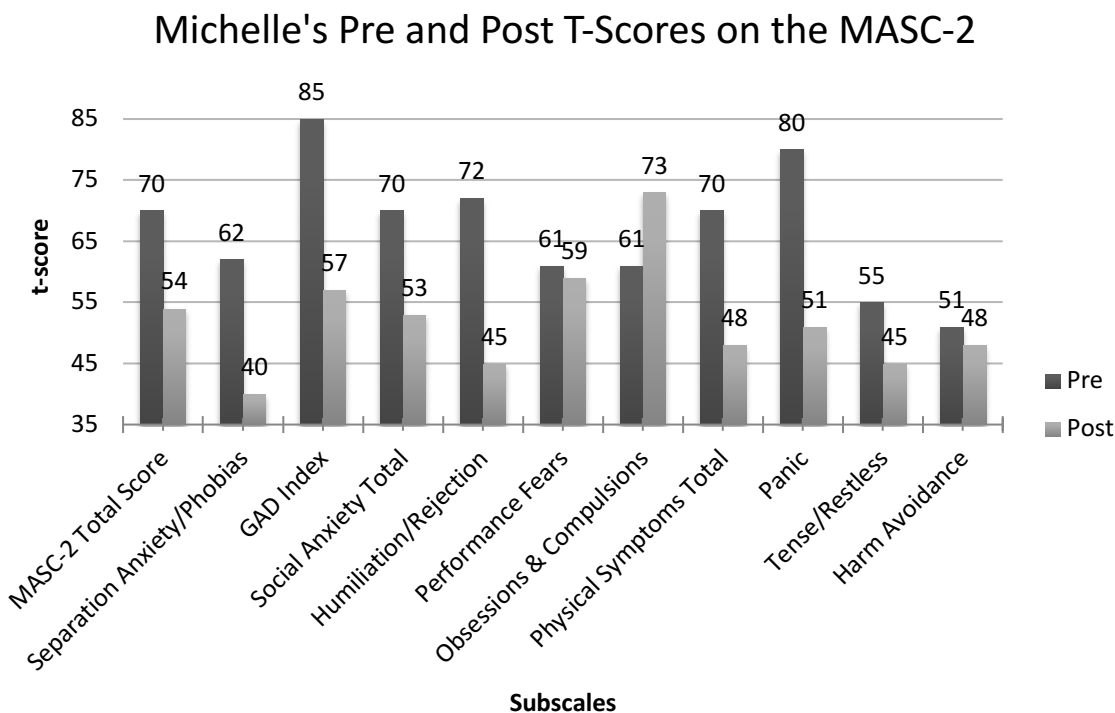
Magnitude of change statistics were calculated. Despite the inconsistency of the data from the last week of intervention due to the concussion, the effect size (*d-index*) for Michelle was -1.36 (intervention mean: 2.53 – baseline mean: 7.33 / standard deviation of all data: 3.52 = -1.36), and is considered a large effect. A *d-index* of +/-0.80 and higher is considered to be a large effect, thus the worry box technique is supported in this study, with this participant, as an effective intervention in reducing anxiety.

**MASC-2 analysis.** Michelle's MASC-2 pre-test Total t-score was 70, which was at the *Very Elevated* range. On the post-test, Michelle's Total t-score was 54, which is in the *Average* range when compared to typical same-age, same-gender peers. Her Total Score decreased by 16 points. On the pre-test, Michelle demonstrated *very elevated* levels

of anxiety on the following scales: *Generalized Anxiety Disorder* [GAD] Index (t-score of 85), *Social Anxiety: Total* (t-score of 70), *Humiliation/Rejection* (t-score of 72), *Physical Symptoms: Total* (t-score of 70), and *Panic* (t-score of 80). Michelle demonstrated *slightly elevated* levels of anxiety on the following scales on the pre-test: *Separation Anxiety/Phobias* (t-score of 62), *Performance Fears* (t-score of 61), and *Obsessions and Compulsions* (t-score of 61).

An anxiety probability score was determined by the number of *elevated* T-scores (t-score of 60 or above) on the Anxiety Scales (*Separation Anxiety/Phobias*, *Generalized Anxiety Disorder* [GAD] Index, and *Social Anxiety*). Michelle demonstrated *elevated* pre-test scores on all three scales; it was determined that she had a *very high probability* of anxiety. All of Michelle's scores that were of concern at baseline, with the exception of one subscale (*Obsessions and Compulsions*), demonstrated significant reductions. Based on the pre-test, Michelle scored in the *slightly elevated* range or above on all but two scales (*Tense/Restless* and *Harm Avoidance*); on the post-test all but one of her scores (*Obsessions and Compulsions*) had reduced to within the *High Average* and *Average* range. Her anxiety probability index score on the pre-test fell within the *very high probability* category while her scores fell within the *low probability* of having anxiety at post-test. On the pre-test, Michelle's inconsistency index total suggests there may be some inconsistency with her responses. The questions that raised concerns were related to the *Obsessions and Compulsions* subscale (i.e., "I check things out first"). The results from Michelle's MASC-2 pretest should be interpreted with caution. For the post-measure, the inconsistency index fell within the acceptable range, indicating Michelle provided responses that were consistent across questions. Thus, both measures were

likely reliable ratings of her true perception of her anxiety-related behavior, with the exception of the *Obsessions and Compulsions* subscale of the pre-test. Figure 4 displays Michelle's pre-test and post-test scores on the MASC-2 by subscale.



*Note.* Mean = 50; Standard Deviation = 10

*Figure 4.* Michelle's Pre- and Post-Test Scores on the MASC-2 Assessment.

### Catherine

**SUDS ratings.** Catherine completed an 8-item rating of self-identified fears during each session of the baseline and intervention phases. The rating utilized an 8-point feelings thermometer, where a 0 (relaxed) indicated that the item triggered no symptoms of anxiety in Catherine, and an 8 (flipping out) indicated the item was anxiety provoking and caused a lot of fear.

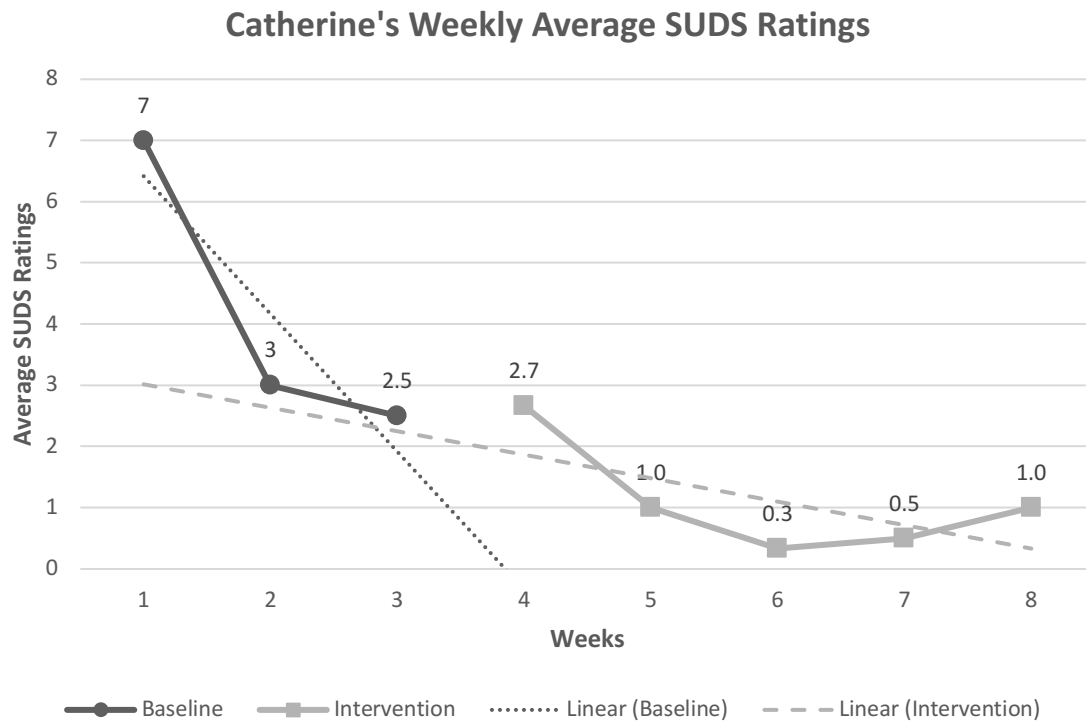
Catherine's SUDS ratings focused on items such as, "getting sick" and "doing something in front of others." Throughout the intervention phase, Catherine's self-

identified fears centered on physical symptoms, worries about future events, and concerns with her family members' health, all of which were consistent with her MASC-2 results. Figure 5 depicts how Catherine rated her fears during each session in the baseline and intervention phases. Data from the last week of intervention were collected after a school break due to the holidays. The ratings in Figure 5 are reported as weekly averages because, with the tapering schedule, the number of intervention sessions varied from the start of the intervention to the end.

Visual analysis of Catherine's graphed data includes a description of level, trend, variability, immediacy of the effect, and overlap (Hunley & McNamara, 2009; Kratochwill et al., 2010). Catherine's self-rated anxiety level decreased from an average of 7 during the first session of the baseline period to an average of 1 at the last session of the intervention period. This indicates a reduction in perceived anxiety levels by the end of the intervention period. However, it should be noted that the baseline data is highly variable (standard deviation = 2.46) and shows a downward trend. Similar to Nathan's situation, Catherine communicated with the researcher that she enjoys meeting with an adult at the end of the school day, even during the baseline period. Prior to the first session, Catherine became aware of why she was participating in the research study due to the information presented through the participant assent form (see Appendix D). An expectation that her anxiety levels would decrease after meeting with the researcher was prematurely set.

During baseline, Catherine reported an average SUDS rating of 4.16 compared to an average of 1.1 during intervention. This indicates that Catherine experienced a reduction in perceived anxiety levels by the end of the intervention. In addition, visual

analysis indicates a downward trend in both baseline and intervention data. Upon introduction of the intervention, there was not a decrease in reported SUDS rating from baseline phase (2.5) to intervention phase (2.66). In addition, there is an overlap in the last data point in the baseline phase and the first data point in the intervention phase.



*Figure 5. Catherine's Average Weekly SUDS Ratings.*

Magnitude of change statistics were calculated. The effect size (*d-index*) for Catherine was -1.41 (intervention mean: 1.10 – baseline mean: 4.16 / standard deviation of all data: 2.17 = -1.41), and is considered a large effect. A *d-index* of +/-0.80 and higher is considered to be a large effect; however, given the significant decreasing trend and subsequent variability in the baseline data identified through the visual analysis, this effect size should be interpreted with caution. Due to the significant decreasing trend in the baseline phase, these results cannot adequately provide support that the worry box

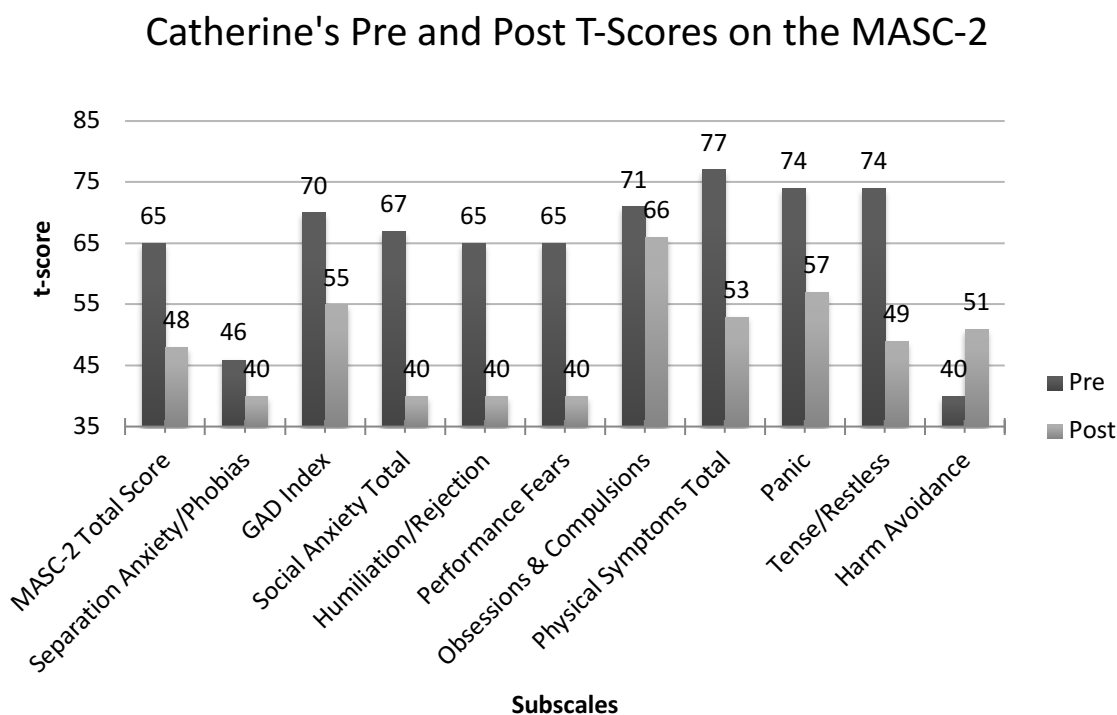


intervention was the primary reason for the reduction in Catherine's self-reported anxiety levels.

**MASC-2 analysis.** Catherine's MASC-2 pre-test Total t-score was 65, which was at the *Elevated* range. On the post-test, Catherine's Total t-score was 48, which is in the *Average* range when compared to typical same-age, same-gender peers. Her Total Score was reduced by 17 points. On the pre-test, Catherine demonstrated *very elevated* levels of anxiety on the following scales: *Generalized Anxiety Disorder* [GAD] Index (t-score of 70), *Obsessions and Compulsions* (t-score of 71), *Physical Symptoms: Total* (t-score of 77), *Panic* (t-score of 74), and *Tense/Restless* (t-score of 74). She demonstrated *elevated* levels of anxiety on the following scales: *Social Anxiety: Total* (t-score of 67), *Humiliation/Rejection* (t-score of 65), and *Performance Fears* (t-score of 65).

An anxiety probability score was determined by the number of elevated T-scores (t-score of 60 or above) on the Anxiety Scales (Separation Anxiety/Phobias, Generalized Anxiety Disorder [GAD] Index, and Social Anxiety). Catherine demonstrated *elevated* pre-test scores on two of the three scales; it was determined that she had a *high probability* of anxiety. All of Catherine's pre-test MASC-2 scores that were of concern demonstrated significant reductions. Based on the pre-test, Catherine scored in the *slightly elevated* range or above on all but two scales (*Separation Anxiety/Phobias* and *Harm Avoidance*); on the post-test all but one of her scores (*Obsessions & Compulsions*) had reduced to within the *High Average* and *Average* range. Her anxiety probability index score on the pre-test fell within the *high probability* category while her post-test fell within the *low probability* of having anxiety. For both the pre- and post-measures, the consistency scales fell within the acceptable range, indicating Catherine provided

responses that were consistent across questions. Thus, both measures were likely reliable ratings of her true perception of her anxiety-related behavior. Figure 6 displays Catherine's pre-test and post-test scores on the MASC-2 by subscale.



*Note.* Mean = 50; Standard Deviation = 10

*Figure 6.* Catherine's Pre- and Post-Test Scores on the MASC-2 Assessment.

### **Overall Group Effectiveness**

An average effect size ( $d\text{-index} = -1.49$ ) was calculated for the entire group to determine an overall intervention effect based on the average weekly SUDS ratings. When examined holistically, the worry box intervention demonstrated a large calculated effect size. However, given the significant decreasing trend and subsequent variability in the baseline data for two out of the three participants, this effect size should be interpreted with caution. Due to the significant decreasing trend in the baseline phase, these results cannot adequately provide support that the worry box intervention was the

primary reason for the reduction in the participants' self-reported anxiety levels. See Table 1 for average SUDS ratings during the baseline and intervention phases by participant, in addition to the overall intervention effect.

Table 1. *Mean SUDS Ratings and Corresponding Effect Sizes*

	Baseline	Intervention	Combined	
Participant	Mean	Mean	SD	Effect Size
Nathan	5.00	0.83	2.44	-1.71
Michelle	7.33	2.53	3.52	-1.36
Catherine	4.16	1.10	2.18	-1.41
Mean				-1.49

In addition to an individual analysis of scores on the MASC-2 to examine changes in t-scores from pre- to post-intervention, a reliability change index (*RCI*) was utilized to examine changes in pre/post measures for MASC-2 results (Nunally & Kotsche, 1983). This is the preferred statistical calculation when there is a small sample size, leading to statistical limitations for measure significance of change in scores on pre/post measures. The *RCI* is a method for determining a significant impact of change when employing an intervention, and is computed by dividing the difference between the pre-intervention and post-intervention t-scores by the standard error of measurement (*SEM*). A calculated *RCI* less than -1.96 is considered reliable and significant. The *RCI* was calculated for the MASC-2 (see Table 2); statistically significant changes from pre- to post- t-scores were observed in 78.7% of the *RCI* scores calculated.

Table 2. *Reliability Change Indexes (RCI) for Participants' Pre/Post Scores on the MASC-2*

	Total Score		Separation Anxiety/ Phobias		Generalized Anxiety Index		Total Social Anxiety		Humiliation/ Rejection		Performance Fears	
Participant	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?
Nathan	-12.30	Yes	-3.50	Yes	-6.21	Yes	-8.29	Yes	-7.69	Yes	-4.25	Yes
Michelle	-5.04	Yes	-3.49	Yes	-4.86	Yes	-4.18	Yes	-7.27	Yes	-0.30	No
Catherine	-5.36	Yes	-0.95	No	-2.60	Yes	-6.65	Yes	-6.73	Yes	-3.75	Yes

Table 2 cont. *Reliability Change Indexes (RCI) for Students' Pre/Post Scores on the MASC-2 continued*

	Obsessions & Compulsions		Total Physical Symptoms		Panic		Tense/ Restlessness		Harm Avoidance	
Participant	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?	<i>RCI</i>	Sig?
Nathan	-4.81	Yes	-13.83	Yes	-11.22	Yes	-8.33	Yes	0.00	No
Michelle	2.87	No	-5.41	Yes	-5.59	Yes	-1.98	Yes	-0.52	No
Catherine	-1.19	No	-5.91	Yes	-3.28	Yes	- 4.97	Yes	1.90	No

## CHAPTER V

### DISCUSSION

#### **Review of Purpose and Major Findings**

Anxiety disorders are the most commonly diagnosed mental health disorders in youth in the United States (Merikangas et al., 2010; Rapee et al., 2009). Anxiety is characterized by feelings of excessive worry or fear, irrational thinking patterns, social withdrawal, and somatic symptoms such as headaches and stomachaches (Merrell, 2008). When anxiety is left untreated, there can be long-term adverse effects on the child's academic, social, and emotional functioning (Bittner et al., 2004). A vast majority of children with mental health concerns do not receive treatment and approximately 70% of the youth who receive treatment get services in the school setting (Burns et al., 1995; Lyon et al., 2011). Children and adolescents spend the majority of each day in a school setting which places school psychologists and school professionals in an ideal situation to provide services to address anxiety as a part of the students' everyday routine (Christner et al., 2007; Sulkowski et al., 2012). Furthermore, school professionals have the ethical responsibility to address non-academic barriers to learning such as anxiety.

Although there are numerous empirically supported cognitive behavioral interventions to address anxiety, existing research has focused mainly on evaluating interventions that are often time-consuming, costly, and typically requires a trained

professional to implement the interventions (Mayer et al., 2009). Limited school resources and the need for additional staff training may create a barrier to efficiently implement effective cognitive behavioral interventions in schools.

The purpose of the present study was to examine the effectiveness of a cognitive-behavioral strategy that does not require significant resources and training, the worry box technique, when implemented in a school setting for children with anxiety. To date, no known studies have examined the effectiveness of this specific intervention strategy for this population in this setting. Results from the present study indicated that the worry box intervention demonstrated a positive effect for decreasing the perceived levels and symptoms of anxiety for one of the three study participants. However, in two out of the three study participants a decreasing trend in self-reported anxiety ratings were observed prior to the introduction of the intervention. Factors such as the brief psychoeducation, positive social support, and social desirability were considered to have a potential effect in reduction of anxiety symptoms in participants in the study.

### **Interpretation of Findings Relative to Predictions**

**Subjective units of distress (SUDS) ratings.** All three participants demonstrated reductions in overall SUDS anxiety ratings at the conclusion of the intervention. However, it should be noted that a visual analysis of Michelle's data showed that her intervention SUDS ratings had a downward trend until the last week of intervention. This last data point should be interpreted with caution as Michelle suffered a concussion a few days before the last intervention session, which may account for the increase in perceived anxiety levels. Studies suggest that brain injuries, such as concussions, are associated with increased symptoms of anxiety (Covassin, Elbin, Beidler, LaFevor, & Kontos, 2017;

Sandel, Reynolds, Cohen, Gillie, & Kontos, 2017). The worry box technique showed reduction in anxiety levels until Michelle's concussion. However, data shows that perhaps the worry box technique was not enough of an intervention to counteract the effects of the concussion.

In a combined visual analysis of all participants' data, a downward-linear trend in each participant's intervention data was observed, indicating that perceived levels of anxiety decreased. The overall decrease in anxiety levels at the end of the intervention, with the exception of Michelle's last data point, given the outcomes observed, showed that the intervention was helpful for all three participants but it did not demonstrate a statistically significant effect across the multiple baseline design. It should be noted that a downward-linear trend in two participants' baseline data was also observed. All participants' effect sizes were greater than  $\pm 0.80$ , which is considered a large effect. Among the three participants, the smallest effect size was observed for Michelle ( $d$ -index = -1.36). It should be noted that, in addition to the concussion, Michelle had the highest average baseline ratings, thus reporting the highest level of perceived anxiety at the onset of recruitment.

One possible explanation for the overall decrease in anxiety ratings could be that psychoeducation was used to introduce the SUDS ratings. In order to measure the participants' level of anxiety throughout the study, participants were taught how to recognize anxiety in their body, particularly in recognizing the presence of anxiety-related somatic symptoms. Teaching children to recognize anxious feelings and somatic symptoms of anxiety are common components of cognitive-behavioral interventions in order to teach children ways to cope with anxiety (Kendall & Hedtke, 2006; McNally-



Keehn et al., 2013). Therefore, providing the brief psychoeducation prior to the baseline period is in itself an intervention. Perhaps the only true baseline data is the first data point in baseline period as psychoeducation may have had an effect of anxiety reduction in the data collection following the initial session.

Another potential explanation for the reduction in reported anxiety symptoms following the initial session is positive social support. According to Roohafza et al. (2014), social support, a strong protective factor for anxiety, is defined as an experience of being valued and cared for by another individual. By meeting with the participant regularly to monitor their level of anxiety, it is possible that the researcher provided an experience for the participants to feel that they are receiving social support that they did not receive prior to the start of the study.

**MASC-2.** All three participants demonstrated a decrease in elevated pre-test scores on the MASC-2 after completion of the intervention period, which reflects a perceived improvement in anxiety symptoms reported by each student. Nathan made the largest reduction in his overall Total Score on the MASC-2 (32 standard points), but all three participants made large reductions on this scale and had moved from either the *elevated* or the *very elevated* range to within the *average range* by the end of the intervention phase. Furthermore, on the post-test all three students moved from either the *high probability* or *very high probability* classification on the Anxiety Probability Score to the *low probability* classification. Lastly, the calculated *RCI* suggests that majority (78.7%) of the differences in t-scores from pre- to post- are considered an effect from the intervention.

It should be noted that for two participants (Michelle and Catherine), all of the subscales of concern demonstrated significant reductions from the pre- and post-test results with the exception of the Obsessions and Compulsions scale which still had *very elevated* and *elevated* scores, respectively. Perhaps the new awareness of anxiety symptoms and the act of recognizing anxious thoughts throughout the day triggered a dysfunctional meta-cognitive (“thinking about thinking”) process which is believed to be correlated with obsessive and compulsive thoughts and behaviors (Gwilliam, Wells, & Cartwright-Hatton, 2004; Irak & Tosun, 2008). Finally, an explanation that could have had an effect in the overall reduction of anxiety symptoms throughout the study in both the SUDS ratings and MASC-2 ratings is social desirability bias. Because participants were aware of the purpose of the study prior to the intervention period, it is possible that the participants provided socially desirable responses instead of providing responses that are reflective of their true feelings (Fisher, 1993).

### **Limitations**

It is important to consider several potential threats to internal and external validity when examining the results of the present study. The outcomes of the present study should be interpreted with caution as the small sample size drawn from one school district limits the generalization of results to the broader population. In addition, there is a potential threat associated with testing, whereby participants become “test-wise” when taking the pre-test and post-test simply because it is the second time they are taking the test. Another threat to consider is social desirability bias whereby the participants could have potentially answered the pre- and post-test according to how they thought the researcher would want them to answer. Furthermore, a stable baseline across all

participants within the multiple baseline design did not occur due to the nature of the school setting and time restraints within the school schedule. Each participant completed a total of 6 baseline data collection points across three weeks but it was not feasible to establish a stable baseline across participants prior to beginning the intervention. These unstable baseline data makes it difficult to definitively conclude that the worry box intervention was the primary reason for the observed reductions in anxiety. The results of this study should be read with caution as these threats to internal validity make it difficult to interpret the visual analysis and effect size, particularly when attributing the change in the participants' levels of anxiety solely to the intervention.

### **Implications for Practice**

Due to the high prevalence of anxiety in school-aged children, school psychologists have the responsibility of providing support and meeting the social-emotional needs of students with anxiety within the multi-tiered system of supports framework (Christner et al., 2007; Mian, 2014). School psychologists can also play an essential role in serving students with anxiety in the school setting by educating school staff about the signs and symptoms of anxiety, assisting with the identification process of at-risk students, and consulting with teachers in implementing evidence-based interventions and strategies to address anxiety (Wright & Sulkowski, 2013). Acquiring social-emotional resources and interventions such as the worry box technique from social media, “Pinterest”, and blogs may seem practical and efficient, however it is unclear whether most of the interventions and resources found online are supported by research (Whitaker et al., 2018). School psychologists can assist school professionals in critically

analyzing social-emotional strategies, resources, and interventions found on social media to determine the credibility of these sources.

### **Implications for Future Research**

This study can be expanded on and replicated in various ways in order to generalize its findings to a larger population of students. Future research should utilize a larger, more diverse sample population in order to increase reliability, validity and generalization to other populations. Additionally, future research should focus on methodological rigor, specifically by establishing a stable baseline data for each participant prior to beginning the intervention phase. Limited variability and lack of clear trend of improvement in baseline data will improve interpretation of outcome data within the multiple baseline design (Byiers, Reichle, & Symons, 2012). Future studies could examine the impact of combining the worry box technique with other evidence-based cognitive behavioral strategies in reducing anxiety symptoms in students. Studies could also examine the effect of shifting the ownership of the processing time from the researcher to the participant. Finally, future studies could examine the impact of parent and teacher involvement in the intervention on student outcomes. These factors could improve the generalizability of the worry box intervention in different settings.

### **Conclusion**

The present study examined the impact of the worry box technique, a relatively simple cognitive-behavioral strategy found on social media, blogs, and “Pinterest” that does not require significant resources and training to implement (Marston, 2013; That Counselor Couple, 2014; Wein, 2014). The study examined the effectiveness of the worry box technique, previously supported only by anecdotal evidence, in reducing the

perceived levels and symptoms of anxiety in students in the school setting. Results of the present study cannot definitively assert that the worry box technique was the primary reason for the reduction of self-reported anxiety levels in the participants. Other components of the intervention such as psychoeducation and consistent positive social support from an adult should be considered as possible mitigating factors to the participants' anxiety levels. Further research is needed to determine the effectiveness of this particular intervention. Such studies are needed to fully investigate what creates positive student outcomes and to add to the scant literature that examines the effectiveness of using the worry box technique as an intervention with students who experience anxiety in the school setting.

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## APPENDIX A

### Repeated Measure – Subjective Units of Distress

	<b>8- Flipping Out</b>	<input type="text"/>
	<b>7- Terrified</b>	<input type="text"/>
	<b>6- Afraid</b>	<input type="text"/>
	<b>5- Nervous</b>	<input type="text"/>
	<b>4- Upset</b>	<input type="text"/>
	<b>3- Unsure</b>	<input type="text"/>
	<b>2- Bothered</b>	<input type="text"/>
	<b>1- Okay</b>	<input type="text"/>
	<b>0- Relaxed</b>	<input type="text"/>

## APPENDIX B

### IRB Materials and Consent/Assent Letters

#### UNIVERSITY OF DAYTON - CONSENT TO PARTICIPATE IN RESEARCH

**TITLE OF STUDY:** EVALUATION OF A SCHOOL-BASED TIER TWO ANXIETY INTERVENTION: THE WORRY BOX TECHNIQUE

Dear \_\_\_\_\_,

My name is Katrina Lazarte and I am a graduate student in the School Psychology program at the University of Dayton. I am currently in the second year of my program and am working on earning an Educational Specialist Degree, which entails completion of a thesis project. I am writing to invite you to participate in a research project examining the Worry Box technique as a feasible school-based intervention for reducing anxiety in children.

#### **PURPOSE OF THE STUDY**

The purpose of the present study is to examine the effectiveness of the worry box technique when implemented in a school setting for children with anxiety. The worry box provides children a tangible way to compartmentalize their anxiety by placing a physical representation of their worries inside a box and outside their mind. This project is important because if students with increased levels of anxiety can receive effective interventions in a school setting, it may improve their academic and social skills.

#### **WHAT WILL BE DONE IN THIS STUDY?**

This project involves using the Multidimensional Anxiety Scale for Children 2nd ed.-Self-Report (MASC 2-SR; March, 2013) in order to determine a student's current level of anxiety. The MASC-2 will be used before (to establish eligibility) and at the conclusion of (to demonstrate improvements) the intervention. The MASC-2-SR consists of 50 Likert scale questions ranked from 0 to 3 (0 = Never, 1 = Rarely, 2 = Sometimes, and 3 = Often). This assessment will be administered individually and will take approximately 15-20 minutes, including reading the assent form to each child, reading the instructions, and completing the questionnaire. Each child will complete this assessment with the researcher/school psychology student, Katrina Lazarte. Students who have identified moderate to significant anxiety levels on the MASC 2-SR will be eligible to participate in the present study.

Another measure that will be used throughout the study is called the Subjective Units of Distress Scale (SUDS), adapted from the Brief Coping Cat program. This rating scale will first serve as a tool to establish baseline, and it will be used as a repeated measure to examine weekly changes in anxiety levels.

Participants will be taught how to write their worries on a piece of paper as they emerge throughout the day and to physically place their worries inside their worry box instead of addressing the worry at that moment in time. During a designated worry time at the end of the day, participants will meet with the researcher to reflect on and challenge the worries in his/her box. Participants will be permitted ample time to address their worries during this designated time.

Each participant will meet with the researcher for their designated worry time on a tapering schedule. In the first week of intervention, participants will meet with the researcher at the end of all five school days. In week 2, they will meet for four days; three in week 3, continuing until the 6th week of intervention wherein participants will be encouraged to use their worry box independently and seek out the researcher during worry time as needed.

### **POTENTIAL RISKS AND DISCOMFORTS**

There are some possible risks with participation in my research project. *First*, children may experience increased stress if scores on the MASC-2 indicate high levels of anxiety and potentially require further evaluation and/or intervention. *Second*, there is a potential that families may face a financial expense if they decide to further pursue additional treatment based on their child's elevated scores on the MASC-2. *Third*, students may miss about 5-10 minutes of class instruction several times throughout the week.

To minimize risk, students and parents will be notified prior to screening of the potential risk. The researcher/school psychology student will offer suggestions for additional support if students don't qualify for the intervention. In addition, the researcher/school psychology student will offer support and additional resources for participants at the end of the intervention. Finally, the researcher will collaborate with the teacher to find the best time to pull out the student for the check-out portion each week. The researcher will also be discreet when removing the student from his/her classroom.

### **ANTICIPATED BENEFITS TO PARTICIPANTS**

There are a number of benefits associated with participation in my project. Benefits may include: (a) early identification of anxiety through the screener (MASC-2); research indicates that early identification leads to better treatment outcomes (Esbjörn, Bender, Reinholdt-Dunne, Munck, & Ollendick, 2012), (b) early intervention provided to each child to help reduce his/her anxiety; s/he will learn a technique to manage his/her anxiety at school and at home, and (c) participation will help us to learn more about the feasibility of a simple tier two intervention to address anxiety.

### **CONFIDENTIALITY**

All information collected in the present study will be kept confidential and under lock and key in a file cabinet at Northmont City Schools and/or on a password protected computer. The assessment and intervention materials will only be available to my advisor (Dr. Elana R. Bernstein) and me. If results from this study are published or discussed in conferences, no identifying information will be included. The participants' identity will be protected by replacing their name and their school's name with pseudonyms.

### **PARTICIPATION AND WITHDRAWAL**

Participation in the project is completely voluntary. If a child and family agree to participate, they are free to stop participating at any time, without penalty. Each child is also free to choose not to answer any questions that he/she is not comfortable with, without penalty. If you choose, you can view the questionnaire and treatment materials before the study begins. If participants experience any kind of discomfort as a result of your participation in this study, they may contact the primary investigator, Katrina Lazarte at (937) 266-0427 and the project's advisory committee chair Dr. Elana Bernstein at (937)-229-3644.

### **IDENTIFICATION OF INVESTIGATORS**

If you have any questions about this research project, please contact one of the investigators listed below:

Katrina Lazarte, Principal Investigator, University of Dayton, School Psychology Graduate Student, (937) 266-0427, [lazartek1@udayton.edu](mailto:lazartek1@udayton.edu).

Elana R. Bernstein, PhD, Clinical Faculty, Advisory Committee Chair, University of Dayton, Department of Counselor Education School & Human Services, School Psychology Program, (937) 229-3624, [eberstein1@udayton.edu](mailto:eberstein1@udayton.edu).

### **RIGHTS OF RESEARCH PARTICIPANTS**

If you have questions about your rights as a research participant you may also contact the chair of University of Dayton's Institutional Review Board, Candise Powell, J.D., at (937) 229-3515, [IRB@udayton.edu](mailto:IRB@udayton.edu).

Thank you for considering allowing me to complete my study in your school. Please return the attached consent form to Katrina Lazarte. Please feel free to contact me with any questions or concerns by phone at (937) 266-0427 or by email at [lazartek1@udayton.edu](mailto:lazartek1@udayton.edu).

<b>SIGNATURE OF RESEARCH PARTICIPANT</b>
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I have read the information provided above. I have been given an opportunity to ask questions and all of my questions have been answered to my satisfaction. I have been given a copy of this form.

Signature \_\_\_\_\_

Date \_\_\_\_\_

**UNIVERSITY OF DAYTON**  
**Parental Consent for Minor/Child to Participate in a Research Project**

Project Title:	EVALUATION OF A SCHOOL-BASED TIER TWO ANXIETY INTERVENTION: THE WORRY BOX TECHNIQUE
Investigator(s):	Katrina Olimpia Lazarte, M.S.Ed.
Description of Study:	<p>The purpose of the present study is to examine the effectiveness of the worry box technique when implemented in a school setting for children with anxiety. The worry box provides children a tangible way to compartmentalize their anxiety by placing a physical representation of their worries inside a box and outside their mind. This project is important because if students with increased levels of anxiety can receive effective interventions in a school setting, it may improve their academic and social skills.</p> <p>This project involves using the Multidimensional Anxiety Scale for Children 2nd ed.-Self-Report (MASC 2-SR; March, 2013) in order to determine a student's current level of anxiety. The MASC-2 will be used before (to establish eligibility) and at the conclusion of (to demonstrate improvements) the intervention. The MASC-2-SR consists of 50 Likert scale questions ranked from 0 to 3 (0 = Never, 1 = Rarely, 2 = Sometimes, and 3 = Often). This assessment will be administered individually and will take approximately 15-20 minutes, including reading the assent form to each child, reading the instructions, and completing the questionnaire. Each child will complete this assessment with the researcher/school psychology student, Katrina Lazarte. Students who have identified moderate to significant anxiety levels on the MASC 2-SR will be eligible to participate in the present study.</p> <p>Another measure that will be used throughout the study is called the Subjective Units of Distress Scale (SUDS), adapted from the Brief Coping Cat program. This rating scale will first serve as a tool to establish baseline, and it will be used as a repeated measure to examine weekly changes in anxiety levels.</p> <p>Participants will be taught how to write their worries on a piece of paper as they emerge throughout the day and to physically place their worries inside their worry box instead of addressing the worry at that moment in time. During a designated worry time at the end of the day, participants will meet with the researcher to reflect on and challenge the worries in his/her box. Participants will be permitted ample time to address their worries during this designated time.</p> <p>Each participant will meet with the researcher for their designated worry time on a tapering schedule. In the first week of intervention,</p>

	<p>participants will meet with the researcher at the end of all five school days. In week 2, they will meet for four days; three in week 3, continuing until the 6th week of intervention wherein participants will be encouraged to use their worry box independently and seek out the researcher during worry time as needed.</p>
Adverse Effects and Risks:	<p>There are some possible risks with participation in my research project. First, children may experience increased stress if scores on the MASC-2 indicate high levels of anxiety and potentially require further evaluation and/or intervention. Second, there is a potential that families may face a financial expense if they decide to further pursue additional treatment based on their child's elevated scores on the MASC-2. Third, students may miss about 5-10 minutes of class instruction for the check out intervention.</p> <p>Students and parents will be notified prior to screening of the potential risk. The researcher will offer suggestions for additional support if students do not qualify for the intervention.</p> <p>To minimize this risk the researcher will collaborate with the teacher to find the best time to pull out your child for the check out portion each week. The researcher will also be discreet when removing your child from his/her classroom.</p>
Duration of Study:	<p>Your child will be asked to meet with the researcher for five to ten minutes at the end of the school day for five weeks. During the 6th week, the child can choose to meet with the researcher, if he/she would like. We will meet in an empty classroom or office where other people cannot see or hear what we are talking about.</p>
Confidentiality of Data:	<p>All information collected in the present study will be kept confidential and under lock and key in a file cabinet at Northmont City Schools and/or on a password protected computer. The assessment and intervention materials will only be available to my advisor (Dr. Elana R. Bernstein) and me. If results from this study are published or discussed in conferences, no identifying information will be included. Your child's identity will be protected by replacing their name and their school's name with pseudonyms.</p>
Contact Person:	<p>Parents or guardians of participants may contact: The primary investigator, Katrina Lazarte at (937) 266-0427 and the project's advisory committee chair Dr. Elana Bernstein at (937)-229-3644.</p> <p>If you have questions about your rights as a research participant you may also contact the chair of University of Dayton's Institutional</p>

	Review Board, Candise Powell, J.D., at (937) 229-3515, IRB@u Dayton.edu.
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Student's Full Name (please print)

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Parent's Full Name (please print)

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Parent or Guardian Signature

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Date

<b>University of Dayton - Participant Assent Form</b>
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**TITLE OF STUDY:** EVALUATION OF A SCHOOL-BASED TIER TWO ANXIETY INTERVENTION: THE WORRY BOX TECHNIQUE

**Who is doing this research?**

My name is Katrina Lazarte and I am a student at the University of Dayton. For one of my classes, I have to do a project and I want to know if you want to be part of my project.

**Why should I do this?**

The purpose of this project is to study a way to help students who sometimes have a hard time handling their anxiety in certain places, like at school and home. If you want to try the technique and be part of the project, we can see if the intervention will help you with your anxiety and help you feel calmer during different situations at home and school.

**How long will it last?**

You will be asked to meet with me for five to ten minutes at the end of the school day for five weeks. During the 6<sup>th</sup> week, you can choose to meet with me, if you would like. We will meet in an empty classroom or office where other people cannot see or hear what we are talking about.

**What will happen?**

At the very beginning, you will be asked 50 questions about how you think and feel which will take about 15-20 minutes. You will answer these questions twice, once at the beginning of the project and once at the end of the project. You will also be asked to rate how much anxiety you feel weekly on the Subject Units of Distress Scale (SUDS), which is a rating scale.

The second time you meet with me, we will make a “Worry Box” that you can decorate yourself. I will explain to you how to use the worry box and we will use it during our 5-10 minute check out after school. In the first week, we will meet every day at the end of the day. For the second week, we will meet four days a week. For the third week, we will meet three days that week, until the fifth week when we will meet once a week.

**How will you feel?**

You may feel nervous or anxious when sharing your feelings with me. After we meet a few times, I hope that you start to feel less anxious at school and at home.

**Will anyone know I’m doing this?**

Everything that you and I talk about when we meet will be kept confidential. This means what whatever you say to me will be kept between us. However, if you tell me that you are going to hurt yourself, hurt someone else, or if someone is hurting you I would have to tell someone like your parents or a safe adult to make sure you are safe.



**What if I have questions or am worried about something?**

If you have questions or start to feel worried, you may talk to me (Ms. Lazarte). You do not have to participate in this activity. If you start the group and change your mind about participating, you can tell your teacher, your parents, or me at any time. This study is only supposed to help you feel better and less anxious; it's not to make you feel sad or worried.

**Consent to Participate**

I agree to work with Ms. Lazarte on this project. I understand all that is expected of me and promise to do my best. Ms. Lazarte has answered all my questions. I understand I may stop this activity at any time.

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Participant's Name

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DATE

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Participant's Signature

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Researcher's Name