Implementation of CBT in School Settings:

An Examination of the Barriers and Facilitators

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Abstract

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Cognitive Behavioral Therapy (CBT) is a treatment method consisting of different interventions that have a long history of use with individuals with anxiety and depression. Despite CBT possessing a breadth of research support of which many interventions are considered evidenced based, the level of use in schools is not well known. Using the constructs from an implementation framework, this study aimed to 1) identify the current use of CBT strategies in schools, and 2) test whether demographic and implementation variables are linked with the use of CBT strategies in school settings. School psychologists and school counselors in districts across the Puget Sound region were surveyed using a 41-item web-based questionnaire. The descriptive results showed that, out of $N = 168$ respondents, approximately 38% of school psychologists and 63% of school counselors in the Puget Sound region report currently implementing some form of school-based CBT. Multilevel model results revealed that four factors were significantly positively related to the implementation of CBT in school settings,

including provider's role (counselors were more likely than psychologists), availability of a CBT manual onsite, district resources available to staff, and the skill level the practitioner perceives about he or she possesses about providing CBT. With these factors in mind, a model for implementation of Evidence-Based Practices, such as CBT, is presented to assist with greater implementation and sustainability.

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CHAPTER 1: INTRODUCTION

Anxiety, depression, conduct disorder, and other mental health disorders are unfortunately quite common in children. Some estimates suggesting that just over 20 percent of all children either currently demonstrate or over some point in their life have experienced a serious mental health disorder (National Institute of Mental Health, 2014). A variety of studies have shown that mental health disorders can have serious negative effects on a child's academic and social functioning (Chorpita, 2007; Kendall & Braswell, 1985). Children who face mental health challenges demonstrate more behavioral and academic challenges, are suspended from school more frequently, and often drop out of school (Chorpita, 2007; Kendall & Braswell, 1985). These social and academic effects can cause further problems later in life if untreated (Chorpita, 2007). Lingering problems might include employment difficulties, relationship strife, and in more extreme cases, addiction, incarceration, and suicide.

The school and mental health fields continue to struggle to identify models of service delivery that adequately meet the needs of learners with mental health disorders. Past estimates suggest that only 20% of students with mental health needs receive adequate services (Society for Research in Child Development, 2009). Recent changes in federal and state laws, such as No Child Left Behind and the Individuals with Disabilities Education Improvement Act (IDEIA), have prompted schools to focus on drop-out prevention and reducing suspensions, especially within Black, Hispanic/Latino, and students that qualify for special education services where disproportional numbers of students experience negative consequences. To face these new challenges, schools have been compelled to take a more comprehensive look at the needs of students. This has prompted school practitioners to examine the role of mental health as a significant contributing factor toward poor school performance.

Practices in the Field

Providing effective services and interventions to students with mental health needs can be quite overwhelming and controversial. A recent google search produced 62 million hits/links to interventions that are listed as appropriate for children with mental health needs. The decisions for schools and other service providers can be overwhelming. However, beginning with IDEA and in subsequent reauthorizations IDIEA and No Child Left Behind, federal legislation increased the requirement for school districts to adopt intervention strategies that demonstrate a solid evidence base for the effectiveness of the intervention (otherwise known as Evidence-Based Practices --EBPs). This legislative initiative posed two issues for schools. First, what is an evidenced-based practice and second and how do we close the research to practice gap.

Before describing EBPs in greater detail, it might help to define the research to practice gap and the resulting field of implementation science. This gap involves a chasm between the knowledge of research-validated interventions and their use by front-line professionals (Backer et a., 1995, Morrissey et al. 1997). Previous methods of spreading information often relied on passive diffusion, where the spread of information is untargeted, unplanned, and uncontrolled (Rabin, Brownson, Haire-Joshu, Kreuter, & Weaver, 2008). The assumption was that professionals would read peer-reviewed journals to gain information about new technologies and then implement the technologies or seek training on how to implement these techniques. Unfortunately, the diffusion method does not reach all professionals and can take long periods of time before a technology is adopted (Rogers, 1995). The attempt to study ways of speeding up the spread of knowledge and use of EBPs has created the field of Implementation Science, where a number of frameworks have been proposed to assist with evaluating implementation processes to assist with better uptake of interventions and programs (Greenhalgh, Robert, MacFarkabem

Bate, Kyriakidou, 2004; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Damschroder, Aron, Keith, Kirsh, Alexander, & Lowery, 2009; Aarons, Hurlburt, & Horwitz, 2010).

The increased emphasis on EBPs led to fields such as mental health, public health, and education to set standards based on the literature to define EBPs (Substance Abuse and Mental Health Services Administration (SAMHSA) National Registry of Evidence-based Programs and Practices, 2017; Lamar Soutter Library, UMass Medical School, 2017). While most fields had long histories of producing effective interventions that also met the criteria for EBPs, the literature continued to call for the need to lessen the research to practice gap. One aspect of the research has focused on defining the differences between efficacy and effectiveness, while the other has focused on how to increase the implementation of a particular intervention (Durlak & DuPre, 2008, McIntosh et al., 2013). In the field of Implementation Science the distinction between efficacy and effectiveness is important when it comes to real-world implementation. Rabin et al. (2008) describe the difference between efficacy and effectiveness in terms of how the research was conducted in support of the benefits of the intervention. Efficacy research can specifically evaluate the causal impact of the intervention under highly controlled situations such as in a laboratory setting or highly control applied setting. Researchers employing these types of studies ensure that their interventions possess "active ingredients" that benefit the intended participants with minimal to no harm. This level of control over the study helps to minimize threats to internal validity, but this comes at a cost to external validity, or being able to generalize the usefulness of the intervention in other, less controlled, settings (Kirk, 2013). In contrast, effectiveness research attempts to validate that the intervention can lead to desired changes in real-world environments. Effectiveness attempts to apply the intervention into environments where the conditions for implementation are less optimal than clinical settings and

the professionals using the intervention may not follow the intervention instructions with complete fidelity. The goal of effectiveness research is to determine what level of success an intervention possesses when exposed to a variety of uncontrolled variables, such variables that exist in school settings. The latter is a focus of Implementation Science.

Evidenced-Based Practices and Mental Health

Not all fields of study agree what defines an Evidence-Based Practice. For example, the What Works Clearinghouse emphasizes research such as Randomized Controlled Trials or Single-Case Designs that produce metrical evidence (WWC, 2017), whereas the American Psychological Association includes mixed-methods and qualitative research as evidence (APA, 2017). Despite incomplete uniformity, most agree that the efficacy and effectiveness research supporting an intervention generally must meet a set of rigorous standards relating Research Design, Quantity of Support, Methodological Quality, and Magnitude of Effect (Cook & Odom, 2013; Cook, Tankersley, & Landrum, 2009). Most fields require that for an intervention to be considered an EBP, evidence must include multiple, high-quality, experimental or quasi-experimental studies showing that the practice has a positive effect for the target audience. Publications such as the January 2005 edition of Exceptional Children have created some clarity on defining EBPs within the special education field by devoting the entire edition to the subject where quality indicators are specified for each research method.

In the field of education, a variety of EBPs exist to support students with emotional and behavioral challenges. Practices such as Functional Behavior Analysis and Assessment (Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; Dunlap et al., 1993; Lalli, Browder, Mace, & Brown, 1993), function based supports (Carr & Durrand, 1985; Carr & Carlson, 1993), behavioral momentum (Vostal & Lee, 2011; Belfiore, Basile, & Lee, 2007), behavior specific praise

(Sutherland, Wehby, & Copeland, 2000), opportunities to respond (Sutherland & Wehby, 2001; Sutherland, Wehby & Yoder, 2002; Stichter et al., 2009), and high probability requests (Lee & Lapse, 2003; Davis, Brady, Williams, & Hamilton, 1992) are just a few that have shown success in helping students to demonstrate more socially adaptive behaviors and emotional regulation. In the field of mental health a variety of EBPs also exist and a growing amount of evidence is leading to even more effective practices such as Multisystemic Therapy for Antisocial Behavior in Children and Adolescents (Henggeler, Schoenwald, Borduin, Rowland, & Cunningham, 2009), Aggression Replacement Therapy (Goldstein, Glick & Gibbs, 1998), and Functional Family Therapy (Sexton, 2011). One such practice that can have particular benefit in the school setting that could benefit students with emotional and behavioral challenges leading to school difficulties is Cognitive Behavioral Therapy. CBT was chosen as a focus of this study due to the high levels of its efficacy demonstrated in previous research (Allison & Ferreira, 2017; Chorpita, Taylor, Francis, Moffitt, & Austin, 2004; Dorsey, Briggs, & Woods, 2011; Morsette et al., 2008; Weisz, Jensen-Doss, & Hawley 2006; Weisz et al., 2012) and in the transporting of CBT into school settings by researchers and clinicians (Masia-Warner et al., 2005; Shirk, Kaplinski, & Gundmundsen, 2009); but the effectiveness of the intervention in school settings by school-based professionals is less established (Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010; Stallard et al., 2014). Understanding the levels of implementation, as well as the barriers, may help to further illuminate the challenges to fidelity of implementation that are often problematic when transporting an intervention from the clinic to a less controlled setting with professionals who may demonstrate less knowledge or skill in the intervention than clinicians.

Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) is one method of supporting individuals with emotional and behavioral challenges that has an extensive research base supporting it as an effective treatment of adult and childhood disorders (Chorpita, 2007; Cohen, Mannarino, & Deblinger, 2006; Kendall & Braswell, 1985; Kendall, 2006). CBT combines the information processing aspects of Cognitive Psychology with the behavior focus of Applied Behavior Analysis to help individuals cope better with life's experiences. CBT examines thoughts (content, structures, processes, and products), feelings, and behaviors and how to change thoughts and behaviors to positively affect feelings. CBT can include a variety of intervention strategies, but some of the most common intervention techniques include psychoeducation, affect modulation, cognitive coping, and exposure (Chorpita, 2007; Chorpita, & Daleiden, 2009; Cohen, Mannarino, and Deblinger, 2006; Kendall, 2006).

Psychoeducation involves providing students with information about the mental health disorder in an attempt to normalize the child's experiences and provide hope for a better outcome through treatment (Chorpita, 2007; Cohen, Mannarino, and Deblinger, 2006; Kendall, 2006). Affect modulation refers to providing a student methods of recognizing one's own emotions and then providing strategies such as relaxation, distraction, and mindfulness to help reduce the emotional dysregulation (Kendall, 2006; Cohen, Mannarino, and Deblinger, 2006). Instruction in cognitive coping involves examining unhelpful thoughts that bolster emotional dysregulation and unhelpful behaviors (Chorpita, 2007; Cohen, Mannarino, and Deblinger, 2006; Kendall, 2006). Lastly, exposure is the process of systematically and carefully helping people face their fears or inaccurate thinking (Chorpita, 2007; Cohen, Mannarino, and Deblinger, 2006; Kendall, 2006).

A critical component of CBT includes attempting to change thought patterns. Individuals with mental health disorders often demonstrate errors in thinking or unhelpful thoughts, called

cognitive distortions, which affect their behaviors and often reinforce the negative feelings (Kendall, 2006). To better understand cognitive distortions and how they affect behavior, it may help to review some basic concepts within cognitive psychology. In brief, cognitive psychology focuses on the internal environment of thoughts within an individual. It examines one's experience of the world, as filtered through the senses, which are in turn stored in the brain through various cognitive processes. In the case of anxiety and depression, the methods by which memories and experiences are stored and retrieved from the brain are disordered, or extreme responses to life events. The term cognition is a complex concept, but Kendall (2006) states that it can be subdivided into four areas that help in providing understanding: Structures, Content, Processes, and Products.

The concept of Cognitive Structures refers to memory, and the way in which information is represented in memory. Constructs such as short term memory, working memory, long-term memory, and episodic memory are examples (Kendall, 2006; Schachter et al., 2014). Cognitive Content refers to the information that is actually represented and stored in the Cognitive Structures (memory). These are the actual events that have occurred and are coded into the brain. Cognitive Processes involve the methods by which the cognitive system works with regard to perceiving and interpreting experiences. Lastly, Cognitive Products are the thoughts that emerge from the interaction of information, Cognitive Structures, Content, and Processes. Cognitive Products can also be thought of as attributions. Kendall suggests that we make meaning of our environment and experiences through our cognitive structures, content, processes, and products. Understanding these basic memory structures helps therapists to see patterns of thinking based on the individuals past behaviors and experiences… and once patterns are detected, the potential for the therapist to facilitate change exists.

When an individual is exposed to new experiences, these experiences are filtered and screened through pre-existing cognitive structures, content, processes, and product. These experiences are then subject to attributions, templates, or schemas which affect how the individual thinks, feels, and behaves. For example, when a child raised in a family where the normal expression of anger is through yelling and hitting, this often becomes that child's template for interacting with others when angry. In other words, this aggressive pattern of interaction becomes the norm for that child. Unfortunately, this template may not appropriately or adaptively match other environments in which the child participates. When in school this child may bring her or her templates or schemas to the classroom environment where the child could easily misperceive the actions and intentions of another student or teacher (such as an inadvertent bump when walking in the hallway) and lead to aggression. In this case, the child's previous experiences stored in his or her cognitive structures, content, and processes predisposes him or her to perceive negative intent on the part of others, which leads to a maladaptive approach toward getting his or her needs met. Kendall states that disruptions or inaccuracies in cognition can lead to psychopathology. Disruptions can take the form of acquired neurologic dysfunction or genetic predisposition toward emotional dysregulation. Unfortunately, many people are not aware of these disruptions or inaccuracies in cognition and external events can automatically trigger previously learned cognitive content and information processing about behavioral events.

One example of a situation where cognitive distortions can adversely affect behavior occurs with Obsessive Compulsive Disorder (OCD) (Piacentini, March, & Franklin, 2011). A common thought pattern for individuals with OCD is that some disastrous event will happen unless an action is performed to prevent the disaster. For instance, a person with OCD might obsessively wash his or her hands to prevent the transmission of a fatal disease to a loved one.

Although there are some adaptive benefits to hand-washing with regard to disease prevention, a person with OCD demonstrates extreme levels of anxiety that lead to excessive hand-washing. To define a disorder this level of hand-washing needs to interfere with life's major functioning (American Psychiatric Association, 2013) such as work, relationships, school or other important pursuits. In this situation the cognitive distortion is the thought that the individual will always, or nearly always, transfer some sort of dangerous or life-threatening pathogen to another person. A sense of hyper-vigilance develops toward inadvertently spreading germs. This hyper-vigilance can be described as a "faulty smoke alarm" that signals a threat too often. The hyper-vigilance and thoughts of spreading germs leads to the behavior of hand-washing to kill the germs that cause the illness in others. Unfortunately, the behavior of hand-washing reinforces the cognitive distortion about the transmission of germs since the hand-washing temporarily provides a respite from the anxiety (e.g., "I've washed my hands so now I can't give germs to others"). This respite is rarely long-lived and the thoughts and feelings return, and sometimes quickly. The combination of consequences reinforcing negative thoughts and feelings is the basis for CBT.

Another example situated within the school setting relates to anxiety-based school refusal. A student who refuses to attend school or classes at school may think "Everyone will ask were have I been and they will tease and laugh at me," or she may think "The teacher will be angry at me for not coming to school." Furthermore, she may also think, "I'm too far behind to catch up." She may want to avoid conversations with others out of a fear that she will be judged negatively for not attending school, or feel that it is pointless to go back because she is so far behind. There may be a grain of truth in these perceptions, but generally most students are not that concerned with where another student has been and teachers can assist with getting students caught up to the rest of the class. In the case of school refusal, the unhelpful thoughts, or

cognitive distortions, fuse with the behavior of refusing to go to school or attend class and with the feelings related to anxiety and depression.

CBT Treatment Components. With respect to the previous two examples, CBT can help by applying the core components of CBT. The following CBT interventions are based on the work by Chorpita (2007), Kendall (2006), and Cohen, Mannarino, & Deblinger (2006). Often, the first step in CBT is to provide the student, and frequently parents, with education about the student's mental health challenges. In the cases described above, anxiety is the primary emotion interfering with life's functioning. A variety of strategies can be used to assist with education about anxiety, but the overarching goal is to normalize the child's experiences and instill a sense of hope that the therapy can help. This step also attempts to depersonalize the anxiety which serves as the first step in reducing cognitive fusion (e.g. "I feel it therefore it is true."). Analogies and metaphors such as an "anxiety monster" that grows bigger when it is fed is one type of metaphor intended to disentangle thoughts and emotions. Along with depersonalization of the emotion, information such as the signs and symptoms, causes, and treatment of anxiety help to provide the student and parent that the child's experiences are not unique and that evidence-based options exist for treatment, options such as CBT. Feeling that he or she is not alone and that treatments exist help with increasing motivation to start treatment.

The next component, affect modulation, aims at helping children recognize their emotions and teaching them ways of regulating the emotions. The instruction in this area depends largely upon the child's level of insight and understanding of his or her experiences of the interfering emotions. Exploring the signs and symptoms in more depth may be one approach, but at some point the tool, Subjective Units of Distress Scale (SUDS,) is introduced (Chorpita, 2007). SUDS, also known as a fear/anger thermometer, involves using a scale, often 1 to 10, that

describes the level of intensity of the anxiety experienced. Typically, a 1 is at the lowest end while a 10 is at the highest end. For instance in the case of anxiety, a 1 may be completely relaxed and comfortable, while a 10 might represent a panic attack. The increments on the scale can often be adjusted up or down based on the child's level of insight (e.g., 1-3), and cognitive and communication levels. Using SUDS is critical for the child and therapist to understand the intensity level of the child's emotional experience. Knowing the level of intensity also helps to guide the intervention processes, in particular when to engage or disengage from a particular intervention.

While teaching the child to assess his or her affect, the role of the therapist is also to assist the child with finding active strategies that help reduce the intensity of the anxiety. A number of strategies exist, but generally fall into a three categories, distraction, positive self-statements, and relaxation (Cohen, Mannarino, & Deblinger, 2006). Distraction entails actively helping a student engage, or reengage, in a productive activity that distracts the student from the anxiety. Distraction techniques may include cognitive approaches such as word puzzles, physical approaches such as taking a walk, and physiological approaches such as splashing cold water on one's face. Positive self-statements involve repeating positive phrases such as "I can do this" that help with increasing one's sense of self-worth (Cohen, Mannarino, & Deblinger, 2006). A variety of relaxation strategies exist, but some common forms include progressive relaxation, visual imagery, and focused breathing. The overall aim of these strategies is to help engage the student's parasympathetic nervous system which helps to combat the fight or flight reactions stimulated by the sympathetic nervous system during times of agitation.

Finally, the therapist introduces the concepts of cognitive distortions and cognitive coping. The goal of this step is to reduce the cognitive fusion and to see anxious cognitions as

merely thoughts that can be acted upon or not. To accomplish this a therapist can use strategies such as teaching about the cognitive triangle and discussing helpful and unhelpful thoughts (Chorpita, 2007; Cohen, Mannarino, and Deblinger, 2006; Kendall, 2006). The cognitive triangle includes thoughts, behaviors, and feelings. The process involves the therapist writing down the three concepts as corners of a triangle and then drawing double-arrowed lines between each node to show that there is an interactional pattern between the concepts. After drawing the diagram, the therapist describes how the three concepts are interconnected and presents an example of how cognitions affect behaviors and emotions.

The process of cognitive coping is an important step in CBT that helps to unlock thoughts from behaviors and feelings. It is a method that is used throughout the next step of modular CBT, exposure, also known as systematic desensitization. Exposure is the process of gently inviting a child to participate in a situation that induces anxiety in order to face up to emotions and learn he or she can handle untrue or unhelpful thoughts or worries. Avoidance of activities reduces anxiety temporarily and provides a brief respite, but is not effective long-term and keeps the anxiety going which can interfere with the child's goals and aspirations. Exposure works on the principal that prolonged contact with stressful situations, combined with using emotional regulation tools and cognitive coping, can reduce the intensity of the anxiety over time.

There are two types of exposure, real and imagined (Chorpita, 2007). Exposure to real-life situations that cause distress for the child tend to provide a more rich opportunity for confronting distortions and practicing the affect modulation, but sometimes the distressing situations cannot, or should not, be replicated. Children that have experienced some form of trauma should obviously not be exposed to similar forms of trauma, but could imagine the traumatic event and use the positive coping skills to help reduce the emotional distress (Cohen,

Mannarino, & Deblinger, 2006). Children who have faced trauma could even be exposed to seemingly non-related stimuli that have been associated with the traumatic event in the child's experience. For instance, children that demonstrate symptoms of Post-Traumatic Stress Disorder (PTSD) may benefit from exposure since environmental stimuli have become generalized cues for reminders of the trauma. In this case, the goal is to expose the child to those cues to reduce the emotional loading thereby reducing the negative effects of PTSD on the child's overall functioning. For some children, the level of intensity of the anxiety may be too intense or the avoidant behavior too entrenched and the child is not willing or emotionally ready for real exposure activities. In these cases, imaginal exposure is a good first step toward progressing on to real situation (Chorpita, 2007).

As Chorpita and Daleiden (2009) note in their study, exposure was the most common treatment approach for a variety of mental health disorders. In some respects, the strategies of cognitive coping, affect modulation, and psychoeducation all aim toward helping a child toward being exposed to situations that evoke emotional distress in order to desensitize the child to these emotions. In a way, the exposure process also works to help a child generalize some of the skill sets learned in the aforementioned strategies. The problem though, is that in the past most of the CBT components were delivered in clinical settings away from the place where children spend a larger percentage of their time- schools.

From Clinics to Schools. Traditionally, CBT has often been provided by licensed mental health therapists in a clinical setting. As mentioned previously, CBT has shown great success in clinical settings and with clinicians providing the treatment in school settings (Chorpita, Taylor, Francis, Moffitt, & Austin, 2004; Weisz et al., 2012). This may be due to the fact that early on in the development of CBT, the treatment required a significant amount of training to be able to

deliver the treatment effectively; however, with a recent trend toward providing manuals for therapists (Kendall, 2002; Chorpita, 2007; Cohen, Mannarino, & Deblinger, 2006) the opportunities for therapists to deliver CBT has become easier.

Part of the reason why manuals have been helpful for therapists is that they have taken a variety of previous strategies and distilled them into the most commonly used cluster of approaches based on the presenting mental health issue. For example, Chorpita and Daleiden (2009) surveyed 322 randomized controlled clinical trials of child mental health treatments based on diagnosis and found a number of common approaches across disorders. Chorpita and Daleiden did not focus on the effectiveness of the individual interventions, but merely examined which intervention techniques were used with a variety of disorders. From these data Chorpita and Weisz (2009) developed the MATCH-ADTC manual for working with children with anxiety, depression, trauma, or conduct problems. One clever approach they took in the development of the manual is that they proposed a modular scheme rather than creating a specific order to follow such as in a manual. The modular approach incorporates a core of 4 modules (a fear ladder, psychoeducation, exposure, and maintenance) used with each child then the therapist can chose from an additional 9 modules based on the child's needs. This approach allows therapists more flexibility for intervention by allowing for certain modules to be used only when necessary (Chorpita, Taylor, Francis, Moffit, & Austin, 2004; Chorpita, 2007; Lyon, Charlesworth-Attie, Vander Stoep, & McCauley, 2011; Chorpita, & Daleiden, 2009). It also helps with implementation by reducing the amount of time potentially wasted by removing aspects of the intervention that may be superfluous.

In conjunction with the development of manuals and modular approaches, attempts to provide CBT treatment in settings other than clinics have been made (Feigenberg, Watts, &

Buckner, 2010; Bernstein et al., 2005; Allison & Ferreira, 2017). These studies have shown that CBT as an EBP can be transported successfully into other environments such as school settings and conducted by school personnel.

With the proliferation of manuals to assist in the spread of knowledge of CBT, overall treatment levels have increased, but still only 50% of children in need of support receive those services in clinical settings (NIMH, 2013). Given that children spend a significant amount of their time in the school setting and the rate of parents transporting children to clinics is insufficient, it seems logical that access to mental health services, and CBT in particular, should be provided through the school setting (Angold et al., 2002; Farmer, Burns, Phillips, Angold, & Costello, 2003;). Additionally, services should also be provided by district-employed mental health providers since the level of access to students should be higher for these professionals than outside agency providers.

School-based providers such as social workers, counselors, and psychologists hold several advantages over clinic-based therapists who provide services in schools. School-based providers also generally possess a better working knowledge of school settings than outside providers. Langley, Nadeem, Kataoka, Stein, and Jaycox (2010) found that clinic-based providers located in school settings reported fewer logistical responsibilities than their school counterparts, but also showed more difficulties coping with the logistics involved in school settings. School-based clinicians, while demonstrating more logistical problems, appeared more able to overcome the logistical challenges within the schools.

Additionally, school-based providers often serve multiple roles within a school and these multiple roles allow the school-based provider more interactions with teachers and administrators. These interactions can provide for better relationships and trust which are

required for teachers and administrators to allow students to miss class and instruction to receive mental health supports. The relationships that also develop can also aid in consultation services provided to teachers by the school-based provider. In general, school-based providers are typically more integrated into the school culture and climate, and this integration can help with providing more comprehensive support services for students (Bruns, Walrath, Glass-Siegel, Weist, 2004; Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010;).

Despite the obvious advantages for CBT delivery in school settings, the level of CBT in schools is relatively unknown, but perceived to be low and variable from state to state (Forman, Fagley, Chu, & Walkup, 2012) thus, providing us with another example of research to practice gap. Therefore, it is essential to understand the level of delivery of CBT in school settings by school mental health providers as well as to understand some of the barriers and supports to school-based mental health providers using CBT. To understand the conditions in which CBT is used, it is helpful to view the spread of the use of CBT through the lens of Implementation Science.

Consolidated Framework for Implementation Research (CFIR)

More recently, a "comprehensive" framework has been developed using existing implementation frameworks. This framework, known as the **Consolidated Framework for Implementation Research** (CFIR), provides an additional 28 potentially important factors involved in CBT implementation status that have not yet been examined. Although several frameworks exist (e.g., Aarons, Hurlburt, & McCue Horwitz, 2011; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Stetler, Damschroder, Helfrich, & Hagedorn, 2011), the CFIR was chosen for this study to evaluate the utility of the framework for stakeholders to use in designing implementation plans. The CFIR also contains discrete categories that might provide a depth of

understanding around variables that implementers can consider and potentially adjust to enhance implementation.

The CFIR model is a unique framework that was developed from a broad evaluation of the majority of existing frameworks within implementation science. Damschroder et al. (2009) reviewed previous research and created a framework that combines the variables derived from other implementation science frameworks into one robust model. The CFIR contains 39 variables comprising five superior areas or "constructs". The five superior areas or constructs include: 1) Intervention Characteristics, 2) The Outer Setting, 3) The Inner Setting, 4) Characteristics of Individuals, and 5) Process. Each of these contains a number of sub-constructs, and within those, several sub-categories. A brief description of the five constructs is as follows.

The **Intervention Characteristics** construct refers to the specific features about the intervention being evaluated that can lead to better implementation. It contains eight sub-constructs that examine the source of the intervention (internal versus external), the amount and quality of evidence supporting the efficacy and effectiveness of the intervention, the complexity of the intervention, and the relative advantage of the intervention over existing interventions within the organization. It also contains judgments of the "adaptability and trialability" of the intervention, taking into consideration the design and packaging of the intervention. Finally, the overall cost of implementing the intervention is considered.

The **Outer Setting** construct refers to the influence of a wide variety of organizations, institutions, and individuals on the implementation process within the implementing organization. In school settings, this includes parents; local, state, and federal governments; community members; universities; other schools; and, professional organizations. The Outer Setting encompasses patient needs and resources, the level of cosmopolitanism of the

organization, the level of peer pressure from similar organizations, and the policies and incentives set forth by governing bodies and the public at large. Within the sub-construct of patient needs and resources, possessing a good understanding of the needs of students with regard to mental health and a "student-centered" service delivery model provides for better implementation. Cosmopolitanism refers to the degree to which the organization is connected and networked with other external organizations (a higher level of cosmopolitanism is associated with quicker implementation of new practices). Cosmopolitanism also involves active participation with professional groups, reviewing research literature, updating skills, and providing external training. Peer pressure refers to the level of perceived, real, or competitive pressure from similar organizations to implement the intervention. Lastly, external policies and incentives is thought to have a large effect on implementation. In summary, changes in the Outer Setting can have positive or negative effects on implementation, and it is often thought of as predicated on the Inner Setting construct (next).

The **Inner Setting** construct within the CFIR contains a large and complex set of characteristics that reside within the organization that influence the implementation of an intervention. The Inner Setting encompasses the sub-constructs of structural characteristics of the organization (the social architecture, age, maturity, and size of an organization), networks and communications (communication structures, styles, and quality), culture of the organization (norms, values, and basic assumptions), implementation climate (the capacity for change), and readiness for implementation (immediate indicators of organizational commitment to implementation). These last two sub-constructs, implementation climate and readiness for implementation, contain several sub-categories that provide further explanation. In general, the Inner Setting refers to the structural characteristics, culture, and communication networks that

exist in school settings that influence the implementation of an intervention. Often, issues associated with resources such as funding, time, materials, and space are referenced as barriers to implementation. These latter variables all fall within the "availability of resources" sub-category of Inner Setting's "readiness for implementation" sub-construct. The extant literature on CBT implementation has focused primarily on these characteristics, sometimes to the exclusion of less proximal, but potentially important, variables.

The fourth construct within the CFIR model, **Characteristics of Individuals**, refers to analyzing the knowledge, beliefs, and the stages of change within the individuals of an organization that can assist or hamper implementation. This area includes four different sub-constructs: knowledge and beliefs about the intervention, self-efficacy, individual stage of change, and individual identification with the organization. Since people within an organization directly implement the intervention, understanding the actions and behaviors of individuals helps to explain the success or failure of the implementation process. Assessing the members' comfort level with the intervention, their individual (and ultimately collective) willingness to change, as well as people's affiliation and comfort level with the organization all affect the quality of the implementation.

Last but not least, the **Process** construct of the CFIR includes the variables involved in rolling out a new intervention, such as planning, engaging, executing, and reflecting and evaluating. These four sub-constructs follow a loose sequential structure where the first step, planning, entails budgeting, delegation of responsibilities, sequencing, logistical organization for training, as well as attempting to provide solutions should potential problems arise. Engaging comprises recruiting support within the organization through strategies of social marketing, education, role modeling, and training. Once a plan is set and people are motivated to move

forward, the next step is to execute the plan. The execution of the plan can then be evaluated by the adherence to the plan (fidelity), the timeliness of completion of various steps within the plan, and the extent to which people in the organization are positively engaged in the implementation process. Successful implementations can sometimes have an organic approach with limited planning, but when planned there are three general approaches that increase success: simulations or practice sessions, pilots or trials, or incremental implementation. Lastly, reflecting and evaluating involves the systematic, and on-going, review of feedback from stakeholders through qualitative and quantitative methods. The feedback and evaluations can be provided both during the executing process, as well as after the implementation has occurred. In the latter case, review of the implementation process can affect future implementations. During the implementation process, progress checks and feedback can help to guide adjustments in implementation to account for unforeseen barriers or allow for adjustments to time and resources.

As can be seen, the CFIR conceptual model provides a large set of variables with which to evaluate previous implementation projects, but it can also provide guidelines for future implementation. Not all areas within the CFIR need be addressed when planning an implementation, but a wise project leader would take into consideration as many variables as feasible to increase the likelihood of success of his or her project.

For more detailed information about CFIR constructs (also known as "areas"), sub-constructs, and sub-categories, refer to the CFIR Technical Assistance Website (CFIR Research Team, 2015).

Implementation Science and CBT

Several recent studies evaluated the facilitators and barriers toward implementing evidence-based mental health supports in the school setting. In particular, four studies have

provided a wealth of information toward understanding how to facilitate better uptake of EBPs such as CBT. Each of the studies used surveys to assist them in identifying the facilitators and barriers to implementing CBT in schools, while two specifically focused on CBT (Langley, Nadeem, Kataoka, Stein, & Jaycox, 2010; Beidas, Mychailyszyn, Edmunds, Khanna, Downey, & Kendall, 2012). Despite some not focusing specifically on CBT, all of the studies provide some insight into the barriers and facilitators of providing mental health based EBPs in school settings.

A study by Feigenberg, Watts, and Buckner (2010) sought to create a survey tool to evaluate individual school's capacity to implement increased mental health services of any kind. Specifically, the authors strove to find and understand the readiness indicators that provide discrimination between schools that lean toward proactively addressing mental health as opposed to those that show more reactive approaches. The resulting tool showed good reliability and discriminant validity between proactive and reactive schools. Through a factor analysis process the authors found that the survey questions fell into four main categories: Intervention; Early Recognition and Referral; Prevention and Promotion; and Mental Health Capacity. Each of these areas serve as factors inherent in schools that are more proactive in providing mental health services and can be thought of as facilitators toward implementation of mental health supports such as CBT.

A separate study by Forman, Fagley, Chu, and Walkup (2012) sought to understand the barriers and facilitators involved in school psychologists' implementation of EBPs. The authors did not specifically look at implementation of CBT, but EBPs in general. A principal components analysis was used to evaluate the resulting survey data and showed loading on four areas: 1) acceptability/efficacy of the intervention, 2) implementation commitment, 3) administrator support and 4) organizational resources. The results of this study demonstrated that

the aforementioned factors are involved in school psychologists' willingness to implement an EBP of any kind.

Two studies focused specifically on the implementation of CBT. Langley, Nadeem, Kataoka, Stein, and Jaycox (2010) recruited site administrators and clinicians from across the United States who had been taught to provide a specific CBT intervention (Cognitive Behavioral Intervention for Trauma in Schools - CBITS) to participate in a semi-structured phone interview. Based upon answers to specific questions the participants were divided into two subgroups, implementers and non-implementers. Participants deemed implementers were asked questions that examined the factors involved in their ability to implement the intervention. Conversely, the non-implementers were asked about the barriers toward implementation. The results of the combined interviews showed that the top facilitators included: a) a solid professional network; b) adequate funding; and c) high perceptions about the ease of implementing the program. In contrast, the top barriers to implementation were: a) competing responsibilities (paperwork, crisis management); b) lack of parent engagement/consent for treatment; c) logistical barriers (e.g., school schedules); d) lack of support from school administrators or teachers (e.g., pulling student out of classes). The authors highlighted that the most common barrier for all the non-implementers involved competing responsibilities. Implementers also listed this as a barrier toward their implementation of the CBITS program.

Lastly, Beidas, Mychailyszyn, Edmunds, Khanna, Downey, and Kendall (2012) sought to quantitatively identify school mental health provider and organizational variables associated with training and implementation of CBT. The authors recruited school mental health providers and provided training in CBT techniques. Two years after the initial training, the participants reported on their implementation of CBT and the barriers and facilitators associated with their

implementation. The results of the study showed that following adequate training and consultation, school-based mental health providers can improve their implementation of CBT for childhood anxiety. Furthermore, the attitudes of the providers with respect to previous experience with CBT and the attitudes toward CBT predicted improvement in adherence to CBT protocols following training and consultation. On the other hand, organizational variables did not predict training or implementation outcomes. The authors also reported several advantages toward providing school-based interventions including the ease of access to children and youth who are experiencing emotional distress. They also reported increased ability to provide not only intervention, but also monitoring of the students during and after the treatment. The participants in the study also reported some barriers similar to those studies previously mentioned. These barriers included engagement with parents/guardians, access to home environments for exposure activities, organizational and systemic constraints including limited time, resources available per child, and a lack of support from teachers and administrators.

In summary of the previous research examining the facilitators and barriers involving implementation of an Evidence Based Practice such as CBT, the following factors were noted:

1. Attributions about the acceptability of the intervention, such as the ease of use, the theoretical fit, and efficacy of the intervention
2. The level of investment/commitment of individual providers to change his/her practice
3. The level of administrator and teacher support, especially to allow students to miss instructional time for therapy
4. Organizational resources such as funding, time, materials, and space

5. The level of engagement in the therapeutic process from parents to provide consent, input, and to participate in exposure activities at home
6. The quality of the professional network to encourage and support the use of EBP
7. The amount of competing responsibilities (meetings, paperwork, crisis management)
8. The level of logistical support for providers
9. The readiness of a school to provide services
10. The existence of a processes for early recognition and referral

While we have some literature examining the facilitators and barriers to implementing CBT, simply examining the facilitators and barriers from the perspective of the implementers provide a very narrow view of the variables that might actually impact implementation, and as such, there may be other variables yet to be evaluated. For example, we know that there are many variables related to the outer setting that may influence how a particular intervention is implemented or picked up by others. We can turn to the implementation science literature to continue to examine crucial factors involved in implementation. The literature has provided many frameworks that describe how interventions get picked up. To date, the literature on CBT has provided a fairly limited view of variables related to implementation of the intervention. Most of the variables have only examined inner setting or the actual resources necessary for implementation. Using an implementation science framework such as the CFIR can assist with examining variables from both an emic and etic perspective.

A Pilot Study

A previous pilot study examined CBT implementation by school psychologists and school social workers who were members of the Washington State Association of School Psychologists and the Washington Association of School Social Workers, respectively (Taylor,

2015). The results of that survey showed that 84% of the $N = 64$ participants had received some form of training in how to provide CBT, but only 53% reported they had never provided CBT to students. One outcome from the pilot study indicated that no districts or Local Education Agencies (LEAs) surveyed have developed or undertaken a comprehensive implementation plan to increase the usage of CBT. Given these findings, a major assumption from the pilot was that the decision to provide CBT is primarily made by the individual provider. Findings showed that psychologists' and social workers' perceptions about their CBT knowledge and sense of self-efficacy correlated with whether or not they used CBT. Further, qualitative analysis of open-ended questions indicated that barriers such as training, funding, time, materials, and space, as well as competing responsibilities (meetings, paperwork, and crisis management), have all hindered provider's abilities to provide CBT on a consistent basis, if at all.

Given these results, it was inferred that the variables that most likely affect CBT implementation reside primarily within two of the CFIR constructs: Inner Setting and Characteristics of Individuals. None of the participants surveyed reported that an implementation plan had been devised or attempted at their school, nor did they mention any Intervention Characteristics or Outer Setting variables as barriers to implementation. In summary, variables pertaining to Inner Setting and Characteristics of Individuals were the focus of the present study.

Research Questions

The purpose of this present study was to investigate the prevalence of CBT use by school mental health staff across a diverse set of districts within Washington State, as well as to test the links between two CFIR-related constructs and CBT implementation. An understanding of which variables hinder or support CBT use will assist policymakers and practitioners in attending to

critical components of successful implementation of CBT (an EBP) in the future. Specifically, we examined the following research questions.

1. What is the frequency with which CBT is being provided to students by school clinicians (i.e., including psychologists and counselors)?
2. Are there any demographic characteristics directly or uniquely associated with CBT implementation?
3. Which CFIR sub-constructs are directly or uniquely associated with CBT implementation?
    a. It is hypothesized that, as demonstrated in the pilot study, the clinician's ratings of a sense of self-efficacy, knowledge of CBT procedures, the perception of being situated in a learning climate, and the perceptions that opinion leaders exist within the organization will correlate with CBT implementation.
    b. Given the qualitative results from the pilot study, it is further hypothesized that the construct of Available Resources will correlate with implementation, meaning that the more resources that the clinician perceives that he or she has available, the more likely the clinician will be to provide CBT.
    c. Other areas within the CFIR may correlate with CBT implementation as well, but from the research literature and the pilot study, it is unknown which additional constructs may be associated with implementation.
4. Do the patterns of relationships observed in the data support the use of CFIR as a framework for understanding and predicting the implementation of an EBP like CBT?

CHAPTER 2: METHOD

Design

This study aimed to understand the current use (prevalence) of **cognitive-behavioral therapy** (CBT) by mental health staff in public school settings, as well as whether variables related to two constructs of the **Consolidated Framework for Implementation Research** (CFIR) are directly and uniquely associated with CBT use. To achieve these aims, a web-based survey instrument adapted from a previous study (Taylor, 2015) was used to collect data from a sample of school counselors and psychologists working in public school districts in the Puget Sound area.

Participants

A database of $N = 1136$ school psychologists and counselors with emails from 35 districts in the Puget Sound region of the Pacific Northwest was constructed. Of these, 168 (14%) consented to and completed a web-based survey (358 school psychologists, and 778 counselors). Importantly, this response rate is consistent with other online surveys: even with incentives, careful attention to survey length, and high social validity (i.e., topic related to participants' interests and vocations), only a 10-15% response rate may be expected (e.g., van Veen, Gortiz, & Sattler, 2015).

Because school psychologists and counselors have unique roles within schools relating to the provision of mental health services, their general roles and responsibilities are described in detail below in order to the understand differences in their day-to-day tasks that may impact their ability to provide evidence-based practices (EBPs) such as CBT.

School psychologists. The National Association of School Psychologists (NASP) is the primary nation-wide advocacy group for school psychologists. These professionals are members

of school teams with expertise in mental health, learning, and behavior, to help children and youth succeed academically, socially, behaviorally, and emotionally (National Association of School Psychologists, 2015).

School psychologists are certificated or licensed/certificated professionals that work in school settings to assist school staff and parents to enhance a child's ability to learn. School psychologists typically possess a specialist's degree or a doctoral degree. The day-to-day activities of a school psychologist often involve assessment, direct intervention, and consultation (National Association of School Psychologists, 2015). Providing mental health services directly to students is within the purview of their roles, and which makes this group a logical focus of this study.

A survey completed in 2004 showed that approximately 35,400 individuals were credentialed school psychologists in the 50 states and the District of Columbia (Charvat, 2008). Approximately 28,500 of the credentialed school psychologists are practicing school psychologists (Curtis et al., 2008). The most recently estimated national ratio of school psychologists to students stood at 1 to 1,482 (Curtis et al., 2008). Within Washington State, there are approximately 1,700 school psychologists (Bureau of Labor Statistics, 2014). In the NASP Practice Model (NASP, 2017a), the organization recommends a ratio of psychologists to students of 1:500-700, but much lower when working with students with intensive special needs. School psychologists are often assigned to one or more schools.

School counselors. The American School Counselor Association (ASCA) is the primary nation-wide advocacy group for school counselors. The association has developed the ASCA National Model to assist with describing the role of the school counselor and to create a model for school counseling programs to emulate (ASCA, 2017a). Generally, the role of a school

counselor is to provide academic, career, and social support for students through consultation and direct services (ASCA, 2017a).

The ASCA National Model consists of four components: Foundation, Management, Delivery, and Accountability. For the present study, the Foundation, Management, and Delivery components were most pertinent. Aspects of the Foundation component stress that counselors should focus on enhancing the learning for all students, specifically around three domains: academic, career, and social/emotional development. Within the Management component, the model stresses that school counselors should spend 80% of their time on direct and indirect service to students. The Delivery component stresses individual student planning and responsive services. School counselors are encouraged to "coordinate ongoing systemic activities designed to assist students in establishing personal goals and developing future plans" (ASCA, 2017a). With respect to providing responsive services, school counselors can design services and supports to meet students' immediate needs and concerns. This can be accomplished by providing individual and small-group counseling services to students. In contrast, the model also states that "providing therapy or long-term counseling in schools to address psychological disorders" is *not* within the role of a school counselor (ASCA, 2017a).

The statement within the ASCA Framework that advocates for *not* providing "therapy or long-term counseling" is important to note because it may put specific parameters around the role of a school counselor with regard to providing CBT. This statement is different from how NASP describes the role of school psychologists, where no distinction is made between therapy and counseling, but instead advocates that psychologists directly provide mental health services (NASP, 2015). Additionally, the language relating to therapy and long-term counseling is vague

and could be misunderstood or misinterpreted. As such, we will return to this issue in the Discussion section of the present study.

The Bureau of Labor Statistics showed that, as of 2014, there were 273,400 school counselors in the United States (Bureau of Labor Statistics, 2014). As of May of 2016, the estimated number of school counselors in Washington State stood at 4,740 (Bureau of Labor Statistics, 2016). The American School Counselor Association recommends a school counselor to student ratio of 1:250.

In summary, school psychologists and school counselors were chosen as the potential participants in this study due to the number of service providers in Washington State- generally, at least one per school- and due to their training, and roles in supporting students with social-emotional challenges. The unique differences between the typical roles and responsibilities of each type of professional is important and will be highlighted in the Results section.

Procedures

Sampling frame. All publically available school district websites within the Puget Sound Educational Service District (PSESD) were used as a sampling frame. The PSESD is one of nine regional Educational Service Districts (ESDs) within the state of Washington; its primary purpose is to assure equal educational opportunities for quality education through professional development, certification, resource sharing, and collaboration (PSESD, 2017). The PSESD was specifically chosen as the frame because it encompasses a variety of districts, ranging from small to very large, as well as a range of locations, from semi-rural to urban. Moreover, this ESD includes a sizable number of districts ($N = 35$) that span a relatively large population of school psychologists and counselors (i.e., with a total of 1136 email addresses available online, $n = 358$ school psychologists and $n = 778$ counselors).

Recruitment and data collection. Once the frame set was established, an email and link to the survey was sent to all participants (see Figure A1 in the Appendix). The email contained a brief description of the study, along with a link to the survey. For participants who had not responded within the first two weeks of the initial email, one reminder email was sent (see Figure A2 in the Appendix). After four weeks, the survey was closed. Only participants who were invited by email were permitted to participate, and all participants had unique identifier codes that prevented more than one response per person; additionally, each participant was linked with her/his district's identifier code for analytic purposes (forthcoming).

Online format. The online survey was constructed in *Qualtrics* (2017) hosted through the Information Technology department at the University of Washington. There were a total of 41 items (11 for demographic characteristics and 30 for rating implementation constructs). *Qualtrics* allows for a list of participants' email addresses to be uploaded into the application and then the application sends out emails with the link to the survey based on criteria set by the researcher. It is also able to collect data into an Excel database that can then be formatted for analyses.

Use of incentives. Extant research has shown that including a small gift, or the potential for a small gift, can increase participation in research surveys; this is predicated on Social Exchange Theory, which proposes that people's natural sense of reciprocity in social interactions is activated when they receive a gift in advance (Dillman, Smyth, & Christian, 2009). Appling this theory in order to encourage participation, 10 randomly chosen participants received a $20 gift certificate of their choosing from one of several national online retailers. The participants emailed the researcher directly to enter in the drawing. The 10 names were drawn at random by

applying the uniform random number generator in Microsoft Excel with respondent identifier numbers.

Survey Instrument

A web-based survey instrument employing *Qualtrics* (2017) software was developed using items adapted from an earlier pilot study (Taylor, 2015) in order to collect information on CBT implementation status as well as CBT implementation barrier and facilitator variables (Figure A3 in the Appendix displays an example of what the online instrument looks like). Demographic data, along with CBT use information, were collected with 11 items (see Table A1 in the Appendix for further details), along with 30 questions used to measure the two CFIR constructs of interest as related to CBT implementation: *Inner Setting* and *Characteristics of Individuals*.

Inner setting. Recall from the Introduction that the CFIR Inner Setting construct spans five sub-constructs, including 1) structural characteristics, 2) networks and communications, 3) culture, 4) implementation climate, and 5) readiness for implementation. Further, two of the sub-constructs, implementation climate and readiness for implementation, each contain their own sub-categories (five for implementation climate and three for readiness for implementation. Additionally, because the previous pilot study showed that structural characteristics did not contribute to CBT implementation, items related to this sub-area were dropped from the survey. In total, for the present study, 11 sub-categories of Inner Setting were measured with two items each (see Table A2 in the Appendix).

Characteristics of individuals. Recall also that the Characteristics of Individuals construct contains four sub-constructs: 1) knowledge and beliefs about the intervention, 2) self-efficacy, 3) individual stage of change, and 4) individual identification with the organization. For

the present study, each of these sub-constructs were measured with two items each, for a total of eight items (see Table A3 in the Appendix).

Combined across the two CFIR constructs there were 30 items; each item contained a statement stem and a bipolar rating scale from 1 (Strongly Disagree) to 7 (Strongly Agree).

Data Analysis Plan

Missing data. For brevity, participants who were missing data on CBT implementation or who were missing the majority of data across CFIR constructs were treated as "missing at random" and subsequently excluded from analyses.

Defining implementers vs. non-implementers. A critical question in the survey asked the participant the number of students for whom he or she implemented CBT. This response option for this item included: none, 1 to 5, and more than 5. This question was then dichotomized into two groups: implementers and non-implementers. Participants who responded none were treated as "non-implementers" and those who indicated "1 to 5 students" or "more than 5" were treated as "implementers." This determination was made *a priori*. Previous research has not yet been focused on what constitutes an implementer versus a non-implementer with respect to number of students or clients, so the distinction is somewhat subjective; however, the implementer/non-implementer definition used here provides a clear manner in which to understand the data.

Construct validity of CFIR constructs. To assess the sub-construct validity of each of the two CFIR constructs, Inner Setting and Characteristics of Individuals (research question 4), as well as to guide the creation of composite variables for other analyses (for research question 3), exploratory factor analysis (EFA) was employed on the rating scales. Recall that the survey employed 30 CFIR-related item stems that participants rated on a 7-point scale, with two items

for each sub-construct/category so that we could tap into slightly different facets of the respective sub-construct/category (see again Tables A2 and A3 in the Appendix for item wording). For example, within the Inner Setting construct, the sub-category of compatibility measures the degree to which there is a fit between the meaning and values the participant attaches to the (CBT) intervention. The first question associated with this sub-category stated: "CBT fits well with the goals of my school." The second stem stated: "CBT is compatible with the goals of my school(s)." The respondent then rated each of these on an agreement scale to indicate their level agreement (or disagreement). Note that each of these items pertains to the compatibility of CBT, but in slightly different ways.

Generally speaking, an EFA reveals patterns of correlation among variables (in this case, the item ratings) that are thought to reflect distinct underlying processes (factors; in this case, the CFIR constructs) affecting item response patterns (cf. Stevens, 2002, pp. 385–453; Tabachnick & Fidell, 2007). General rules of thumb for EFA sample size ratios vary from 20 subjects per variable to 2 subjects per variable (i.e., Stevens, 2002, p. 395, recommends a ratio of 5:1). Although the sample was limited to 168 participants with 22 items for the first EFA and 8 items for the second EFA (yielding ratio of approximately 8:1 and 21:1, respectively), the impact of having fewer subjects than would be desired for psychometric test development simply limits generalization of EFA results (our first EFA's results may be somewhat sample specific).

Several choices also exist among EFA estimation and rotation algorithms. The EFA analyses in the present study used maximum likelihood estimation (i.e., maximizing the probability that the observed item correlations are sampled from the model-implied parameters; cf., Tabachnick & Fidell, 2007) and a Varimax orthogonal rotation. All orthogonal rotations for EFAs have the advantage of preserving estimated item-item relationships while aiding in the

interpretation of results by geometrically shifting axes simultaneously in space so that factor-item relationships are as close as possible to respective factor axes; however, Varimax is the recommended orthogonal rotation because it minimizes the complexity of factors by maximizing the variance of the item-factor relationships for each factor (Tabachnick & Fidell, 2007).

Modeling CBT Implementation. To answer research questions 1-3, multilevel modeling was used. Because the outcome variable for those questions was CBT implementation status, a binary variable, and because respondents (school psychologists and counselors, Level 1) were nested within districts (Level 2), multilevel multiple logistic regression was employed. Not addressing the potential nesting can lead to severely inflated Type I error rates (e.g., Raudenbush & Bryk, 2001). The specific school for each participant was not collected for use in these models because 1) many mental health staff service more than one school, 2) many schools only employ one staff at their school, and 2) the likelihood of a cluster of respondents from one school was low. In total, eight multilevel logistic regression models were used to predict the binary outcome variable, CBT Use. The first (Model 1) was an intercept-only (no predictor) model that allowed us to estimate mean CBT implementation among all types of respondents, controlling for school district (but not controlling for other covariates) (research question 1). Subsequent models tested for different combinations of effects on CBT status (research questions 2-3).

For all models, district was treated as a random effect (U_{0j}) that was equal to the estimated deviation between the participant's district's mean in log-odds use and the grand mean across districts; these deviations are assumed to be normally distributed with a mean of 0 and an estimated variance equal to the between-district variance. All multilevel models were estimated in *HLM7* (Raudenbush, Bryk, & Congdon, 2004) using full information maximum likelihood estimation and robust standard errors (district sample size was sufficiently large). Additionally,

for ease of results interpretation, effect coding was used for all categorical predictor variables (i.e., Gender was coded Female = 1, Male = -1), and standardizing (z-scores) was used for all rating scale predictor items and composites. Models were as follows.

Model 1 (Baseline): $LN(P/(1-P))_{ij} = \gamma_{00} + U_{0j}$

Model 2 (Demographics): $LN(P/(1-P))_{ij} = \gamma_{00} + \mathbf{\gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij}} + U_{0j}$

Model 3 (Job Charact): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} \mathbf{+ \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij}} + U_{0j}$

Model 4 (IS Sub-const): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Resources_{ij} + \gamma_{06}*CBTFit_{ij} + \gamma_{07}*OrgIncent_{ij} + \gamma_{08}*DistGoal_{ij} + \gamma_{09}*DistSupp_{ij} + \gamma_{010}*PosEnviro_{ij}} + U_{0j}$

Model 5 (IC Sub-const): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Beliefs_{ij} + \gamma_{06}*Skill_{ij} + \gamma_{07}*Belonging_{ij}} + U_{0j}$

Model 6 (IS+IC Sub-con): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} + \gamma_{05}*Resources_{ij} + \gamma_{06}*CBTFit_{ij} + \gamma_{07}*OrgIncent_{ij} + \gamma_{08}*DistGoal_{ij} + \gamma_{09}*DistSupp_{ij} + \gamma_{010}*PosEnviro_{ij} + \gamma_{011}*Beliefs_{ij} + \gamma_{012}*Skill_{ij} + \gamma_{012}*Belonging_{ij} + U_{0j}$

Model 7a (IS Tot Constr): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*InnerSetting_{ij}} + U_{0j}$

Model 7b (IC Tot Constr): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*IndividualChar_{ij}} + U_{0j}$

Model 7c (IS+IC Constr): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*InnerSetting_{ij} + \gamma_{06}*IndividualChar_{ij}} + U_{0j}$

Model 7d (IS+IC Interct): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} + \gamma_{05}*InnerSetting_{ij} + \gamma_{06}*IndividualFactors_{ij} \mathbf{+ \gamma_{07}*(Role*Manual)_{ij} + \gamma_{08}*(Role*InnerSetting)_{ij} + \gamma_{09}*(Role*IndividualChar)_{ij} + \gamma_{010}*(Manual*InnerSetting)_{ij} + \gamma_{011}*(Manual*IndividualChar)_{ij} + \gamma_{012}*(InnerSetting*IndividualChar)_{ij}} + U_{0j}$

Model 8a (Resources): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Resources_{ij}} + U_{0j}$

Model 8b (Skills): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Skill_{ij}} + U_{0j}$

Model 8b (Res+Skill): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Resources_{ij} + \gamma_{06}*Skill_{ij}} + U_{0j}$

Model 8d (R+S Interct): $LN(P/(1-P))_{ij} = \gamma_{00} + \gamma_{01}*Exper_{ij} + \gamma_{02}*Gender_{ij} + \gamma_{03}*Role_{ij} + \gamma_{04}*Manual_{ij} \mathbf{+ \gamma_{05}*Resources_{ij} + \gamma_{06}*Skill_{ij} + + \gamma_{07}*Resources_{ij}*Skill_{ij}} + U_{0j}$

For each of the models above, the probability of CBT implementation, *P*, was modeled as the log odds of the probability for participant *i* in district *j*. Each model is described further below.

Model 1 – Baseline. Model 1 simply provided a grand mean estimate of CBT use across the Puget Sound Educational Service District. We treated this as the baseline model to evaluate research question 1.

Model 2 – Demographics. The second model tested the relationship between the demographic variables and CBT implementation. Demographic variables included the level of experience participants had in working in their current role, and participants' gender.

Model 3 – Job characteristics. In the third model, after controlling for demographics, the effects of participants' role as a counselor or psychologist (Role; 1 = school psychologist, -1 = counselor) as well as whether or not the participants have used a manual (Manual; 1= yes, has manual, -1 = does not) were tested for their links with CBT implementation status.

Model 4 – Inner setting (IS) sub-constructs. Model 4 tested a set of six sub-constructs discovered in the EFA results related to the CFIR Inner Setting construct to determine their associations with CBT implementation, controlling for demographic and job characteristics.

Model 5 – Individual characteristics (IC) sub-constructs. Similar to Model 4, Model 5 incorporated and tested the sub-constructs discovered in the EFA results related to the CFIR Characteristics of Individuals construct, controlling for demographic and job characteristics.

Model 6 – Combined IS+IC sub-constructs. Model 6 incorporated all of the previous variables together into one model to test the unique effects of each sub-construct (and demographic and job characteristic) on CBT implementation.

Model 7a – Inner setting (IS) as a combined total construct. All of the previous models treated Inner Setting and Characteristics of Individuals as having sub-constructs; in this

model, Inner Setting is treated as a single construct (combining across all sub-constructs). In other words, Model 7 is a simpler model that does not distinguish among sub-constructs and avoids collinearity (high correlation) issues predicting CBT implementation.

Model 7b – Individual characteristics (IC) as a combined total construct. Like Model 7a, Model 7b combined the sub-constructs of Characteristics of Individuals into one total construct to predict CBT implementation.

Model 7c – Combined IS+IC total constructs. This model was a hybrid of 7a and 7b, and tested the unique effect of each total CFIR construct on CBT implementation in the presence of each other.

Model 7d – Combined IS+IC total constructs and their two-way interactions. Model 7d added all two-way interactions among the variables in Model 7c. This model is exploratory and allows us to understand whether there are moderating effects present in the data.

Model 8a – Resources only. Across Models 7a-d, all CFIR constructs and sub-constructs were used as predictors. In this last set of models, beginning with Model 8a, only the CFIR sub-constructs that were significantly uniquely related to CBT implementation in Models 4-6 were used. Specifically, for the CFIR Inner Setting construct, only the resources sub-construct was used (significant in Models 4 and 6), rather than all six possible sub-constructs.

Model 8b – Skill only. Similarly, for the CFIR Characteristics of Individuals construct, only the skills sub-construct was used (significant in Models 5 and 6), rather than all possible, to predict CBT implementation.

Models 8c and 8d – Resources + skills, and Resources x Skills. These last two models test unique main effects (Model 8c) and the two-way interaction (Model 8d) among these two CFIR sub-constructs on CBT implementation.

CHAPTER 3: RESULTS

Descriptive Statistics

Sample descriptive statistics are presented prior to our analytic models. Importantly, because these descriptive summaries do not account for dependencies due to district, they will not necessarily match the forthcoming model findings (which will show correct estimates).

Representativeness of responses by district. The highest participation rate stemmed from the Bellevue School District at 13%, followed by the Seattle School District at 10%, and then the Federal Way School District at 8%. A total of seven districts (the most populated), the three aforementioned along with Lake Washington, Kent, Highline, and Tacoma, represented nearly two-thirds of the entire sample (see Table 1). The overall response rate just at the district level was 69% (23 of 35).

The participation rates between counselors and psychologists differed in that 60% of the participants reported working as a school counselor; however, this proportion was relatively reflective of the population frame which consisted of 60% counselors and 40% psychologists (see Table 1). In the individual school analysis for the top seven school districts, only two school districts, Tacoma and Federal Way, showed large differences in participation by role, with counselors more represented in Tacoma and psychologists more represented in Federal Way.

Table 1. *District Representation among Districts with any Respondents*

District	Psychologists *n* = 67		Counselors *n* = 101		Combined *N*= 168	
	Count	*%*	*Count*	*%*	*Count*	*%*
Bainbridge Island	2	3	0	0	2	1
Bellevue	13	16	14	11	27	13
Clover Park	0	0	0	0	0	0
Eatonville	0	0	1	1	1	0
Enumclaw	2	3	1	1	3	1
Federal Way	11	14	6	5	17	8
Fife	1	1	1	1	2	1
Franklin Pierce	1	1	0	0	1	0
Highline	3	4	6	5	9	4
Issaquah	3	4	5	4	8	4
Kent	4	5	6	5	10	5
Lake Washington	6	8	8	6	14	7
Mercer Island	1	1	2	2	3	1
Orting	0	0	2	2	2	1
Peninsula	3	4	4	3	7	3
Puyallup	1	1	6	5	7	3
Renton	2	3	5	4	7	3
Riverview	1	1	3	2	4	2
Seattle	7	9	13	10	20	10
Shoreline	1	1	5	4	6	3
Snoqualmie	0	0	0	0	0	0
Sumner	1	1	3	2	4	2
Tacoma	1	1	8	6	9	4
Tahoma	2	3	0	0	2	1
Tukwila	0	0	1	1	1	0
University Place	0	0	1	1	1	0

Demographic information. The vast majority of the participants were female at 85% (*n* = 142). The participants reported a wide range of experience from a low of half a year to a maximum of 41 years. The average for the overall sample was 10.10 years, with counselors reporting an average of 10.00 years and psychologists reporting 10.18 years (see Table 2).

Table 2. *Years of Experience by Role*

	Psychologists			Counselors			Combined		
	n	*M*	*SD*	*n*	*M*	*SD*	*N*	*M*	*SD*
Experience	67	10.18	7.55	101	10.00	7.99	168	10.10	7.80

CBT training information. The survey asked the participants about the type of training they received in providing CBT and 67% received some type of pre-service training from a University (see Table 3). A combined 30% received some form of in-service training through a school-sponsored or organization provided professional development. A small difference existed between counselors and psychologists (31% to 30%, respectively). Approximately 23% of overall sample received some form of training outside of the K-12 setting. In this case, school psychologists showed more propensity to receive outside training (33%) than school counselors (17%). Approximately 11% of all participants reported that they received other training and were self-taught. Other forms of training included internships, webinars, mentorships, and self-guided study. Approximately, 24% reported that they have received no form of training. Lastly, a combined 84% of the participants have had some form of training in how to provide CBT.

Table 3. *Type of Training Participants Reported*

Training Type	Psychologists *n* = 67		Counselors *n* = 101		Combined *N* = 168	
	Count	*%*	*Count*	*%*	*Count*	*%*
Coursework at University Level	46	69	68	67	114	68
Professional Development Within K-12 School Setting	20	30	31	31	51	30
Professional Development Outside of K-12 School Setting	20	30	19	19	39	23
Self-Taught plus Other Training	9	13	12	12	21	13
Self-Taught Only	0	0	2	2	2	1
Other	2	3	8	8	10	6
No Training at All	7	10	14	14	21	13

Percentage of clinicians providing CBT. The participants were asked to estimate the number of students with which they have provided CBT (see Table 4). Of the 168 participants who responded to the question, 47% had not provided CBT to a student, 27% had provided CBT to between one and five students, and 25% had provided CBT to more than five students. A large difference existed between counselors and psychologists in the percentage of students they have served using CBT. Approximately 37% of the counselors surveyed had not used CBT, while 61% of psychologists had not provided CBT. This discrepancy is important to note and will be explained later in the discussion section. Another discrepancy of note existed between the percentage of counselors and psychologists who have provided CBT to more than five students. By percentage, nearly five times more counselors provided CBT (36%) to students than psychologists (7%).

Table 4. *Number of Students Provided CBT by Participant Role*

Number Students Served	Counselors $n = 101$		Psychologists $n = 67$		Combined $N = 168$	
	Count	*%*	*Count*	*%*	*Count*	*%*
None	38	38	41	62	79	47
One to five	26	26	21	31	47	28
More than five	37	37	5	7	42	25

For subsequent statistical analyses, the participants were dichotomized into two categories, implementers and non-implementers. With that in mind the results showed that the overall sample indicated that nearly 53% had provided CBT to at least one student, while 47% had not used CBT. As described earlier, the counselors (62%) provided CBT at a higher percentage than psychologists (38%).

Manual-based CBT training and usage. The results of the survey (see Table 5) showed that 54% of the survey participants that have provided CBT to any student have used a manual-

based or modular CBT protocol. Of those providers that have provided CBT by using a manual, the most commonly used manual was *Trauma Focused CBT* (TF-CBT) (Cohen, Mannarino, & Deblinger, 2006), with 21% of the participants who have used CBT reporting that they have used this manual. The next most common manual used was *Kendall's Coping Cat* (2002), with 19% reporting that they used this manual. It is also noteworthy that many CBT implementers had *not* used a manual, but instead referred to their training.

When comparing the use of a manual between counselors and psychologists, three patterns were observed. Psychologists (25%) tended to report using *Coping Cat* twice as much as counselors (10%), and psychologists (12%) also tended to report using the *Think Good-Feel Good* manual more likely than counselors (8%) to report. In contrast, counselors (17%) tended to report using *TF-CBT* at a higher rate than psychologists (10%).

Table 5. *CBT Manual Protocol Use by Role*

Manual Type	Psychologists $n = 67$		Counselors $n = 101$		Total $N = 168$	
	Count	*%*	*Count*	*%*	*Count*	*%*
CBITS	6	9	9	9	15	9
Cool Kids	1	1	0	0	1	1
Coping Cat	17	25	10	10	27	16
FRIENDS	1	1	2	2	3	2
Adolescent Coping with Depression Course	0	0	0	0	0	0
MATCH	2	3	3	3	5	3
None	37	55	62	61	99	59
Taking Action	0	0	0	0	0	0
TF-CBT	7	10	17	17	24	14
Think Good- Feel Good	8	12	8	8	16	10

Open-ended questions. Recall that the survey contained three open-ended questions included at the end. The first asked participants to describe any barriers that have prevented them

from delivery of CBT in schools, while the second asked about the facilitators that have allowed them to provide CBT. The last question provided an open text box for additional comments.

Barriers. The data analysis procedure involved counting the number of key words or phrases within each participant's response set. Since participants often reported more than one barrier, each barrier reported was tallied separately. Each barrier represented in Table 6 represents the number of times a participant reported a barrier once. The percentage represents the total number of participant who reported that factor as a barrier. Additionally, the rates are separated by role since school counselors and school psychologists have different responsibilities and activities within the school setting (yet with large overlaps). The reporting of the barriers were separated by role in an attempt to highlight any potential differences that may lead to recommendations for ameliorating these barriers.

Table 6. *List of Barriers to Providing CBT by Participant Role*

Barriers	Psychologists *n* = 67		Counselors *n* = 101		*Combined* *N* = 168	
	Count	*%*	*Count*	*%*	*Count*	*%*
Academic Focus	3	4	13	13	16	10
Classroom Lessons	0	0	1	1	1	1
Dual Role	1	1	0	0	1	1
Emergencies	4	6	9	9	13	8
Encouraged Brief Therapy	4	6	10	10	14	8
Evaluations	26	39	2	2	28	17
Lack of Space	1	1	3	3	4	2
Lack of Supervision	3	4	2	2	5	3
Materials	7	10	4	4	11	7
No clerical Support	4	6	2	2	6	4
No Curriculum	1	1	2	2	3	2
No Funds for Training	0	0	1	1	1	1
No leadership Support	12	18	20	20	32	19
Not My Role	16	24	20	20	36	21
ODA Priorities	2	3	15	15	17	10
Parent Involvement	0	0	3	3	3	2
Refer Out	4	6	17	17	21	13

Scheduling Classes	0	0	3	3	3	2
Student Absenteeism	2	3	1	1	3	2
Teacher Resistance	2	3	12	12	14	8
Time	25	37	41	41	66	39
Training	20	30	24	24	44	26
Workload/Caseload	36	54	36	36	72	43

As shown in Table 6, the most frequently reported barrier was the amount of work they have to perform based on their caseload (49%). This barrier is closely followed by a similar construct of time (44%). In nearly half of the responses, the participants reported that their caseloads/workloads prevented them from providing CBT to students. The next most reported barrier involved a perceived lack of training. Exactly 28% of the participants reported that they do not feel they have the proper training to provide CBT. The fourth most frequent reported barrier involved the perception that providing CBT is not within the scope of their job responsibilities (24%). Some of the participants who reported that providing CBT was not within their role attributed this stance their own personal beliefs, while others tied it to district leadership mandates or procedures. Approximately 19% reported that they received limited or no leadership support to provide CBT. This included active prohibition in some cases, to a lack of directionality regarding counseling and therapeutic services. This barrier also appeared to reflect the priorities of the administration at both the district and building level. Many reported that their district policy is to provide brief counseling support (9%), focus on academic counseling (9%), and then refer out to more complex cases or students with more long-term counseling needs (13%). With role definition by administration in mind, 19% of the participants reported that the focus on evaluations and other duties within their job prevented them from providing CBT (11%).

A closer examination of the data from the barrier question shows some differences between counselors and psychologists. Approximately 61% of psychologists reported that their caseload/workload to be the single most barrier to providing CBT, while 40% of counselors reported the same barrier. At a comparison of 2% to 44%, psychologists reported that their special education and 504 evaluation caseload prevented them from providing CBT. In contrast, counselors reported more often the propensity to refer students to outside providers (17% versus 7%), to have other non-therapeutic or counseling responsibilities interfere (17% versus 2%), to encounter teacher resistance to removing students from class (13% versus 2%), to be encouraged to provide brief therapeutic support (11% versus 5%), and finally to maintain an academic focus (12% versus 4%). Lastly, 7% of psychologists reported that the lack of clerical support for paperwork and scheduling of meetings affected their ability to provide CBT as opposed to 1% of counselors.

In order to understand any potential differences between those participants counted as implementers and those that are not, the barriers reported by each sub-sample is reported in Table 7. The overall rates of reporting followed similar patterns as with the barriers reported by role in the previous section, but a couple of areas deserve highlighting. Nearly 55% of implementers reported that their workload/caseload prevented them from providing CBT to students, while only 38% of non-implementers perceive this as a barrier. Not surprisingly, more non-implementers (36%) than implementers (21%) reported that training was a barrier for them. Teacher resistance to students being excused from classes was reported as a barrier more for implementers (12%) than non-implementers (5%). More non-implementers (34%) than implementers (13%) reported that providing CBT was not within the scope of their role as defined by their concerns or by school/district policies. With this in mind, more non-

implementers (17%) reported their role is to refer students to outside agencies than implementers (10%). One last piece of information of note within the barriers by implementation comparison, is that 0% of non-implementers reported that missing a curriculum was an impediment toward their providing CBT. Only 3% of implementers reported the same barrier, but this data point is important and will be discussed later.

Table 7. *List of Barriers to Providing CBT by Participant CBT Implementation Status*

Measure	Implementers *n* = 89		Non-Implementers *n* = 79		Combined *N*= 168	
	Count	*%*	*Count*	*%*	*Count*	*%*
Academic Focus	10	11	6	8	16	10
Classroom Lessons	1	1	0	0	1	1
Dual Role	1	1	0	0	1	1
Emergencies	8	9	5	6	13	8
Encouraged Brief Therapy	6	7	8	10	14	8
Evaluations	14	16	14	18	28	17
Lack of Space	2	2	2	3	4	2
Lack of Supervision	1	1	4	5	5	3
Materials	6	7	5	6	11	7
No clerical Support	4	4	2	3	6	4
No Curriculum	3	3	0	0	3	2
No Funds for Training	1	1	0	0	1	1
No leadership Support	14	16	18	23	32	19
Not My Role	11	12	25	32	36	21
ODA Priorities	10	11	7	9	17	10
Parent Involvement	3	3	0	0	3	2
Refer Out	8	9	13	16	21	13
Scheduling Classes	3	3	0	0	3	2
Student Absenteeism	3	3	0	0	3	2
Teacher resistance	10	11	4	5	14	8
Time	36	40	36	46	72	43
Training	17	19	27	34	44	26
Workload/Caseload	45	51	28	35	73	43

CFIR construct questions. The primary hypothesis assumed prior to conducting the survey was that quantitative differences exist between those professionals that provided CBT to

students and those that did not based on the CFIR constructs. To that end, in Table 8 the means and standard deviations of the rating scale questions for the CFIR constructs (and sub-constructs) are reported. However, again note that these are based on disaggregated data and do not take into account participants' district membership.

Table 8. *CFIR Construct Means and Standard Deviations by CBT Implementation Status*

CFIR Construct and Sub-construct	Implementers $n = 84$			Non-Implementers $n = 78$		
	n	*M*	*SD*	*n*	*M*	*SD*
Inner Setting						
1a. Networks & Communications (Support)	84	3.12	1.96	78	2.77	1.84
1b. Networks & Communications (Admin)	84	5.29	1.39	78	5.32	1.30
2a. Culture (Support)	84	3.89	1.90	78	2.83	1.61
2b. Culture (Out of Class)	84	4.58	1.62	78	3.95	1.68
3. Implementation Climate						
a1. Tension for Change (Needed)	84	5.74	1.16	78	5.40	1.16
a2. Tension for Change (Pressure)	84	2.35	1.47	78	1.53	1.00
b1. Compatibility (Fits)	84	4.74	1.51	78	4.01	1.43
b2. Compatibility (Compatible)	84	4.83	1.51	78	4.24	1.41
c1. Relative Priority (Self)	84	4.26	1.76	78	2.50	1.48
c2. Relative Priority (Other Initiatives)	84	5.04	1.83	78	4.87	1.74
d1. Organizational Incentives & Rewards (Respect)	83	3.94	1.66	77	3.39	1.54
d2. Organizational Incentives & Rewards (Feedback)	83	4.28	1.73	77	3.86	1.36
e1. Goals and Feedback (Expressed)	83	2.55	1.67	77	1.56	1.09
e2. Goals and Feedback (Set)	83	1.90	1.13	77	1.44	.93
f1. Learning Climate (Training)	83	3.49	1.90	77	2.04	1.27
f2. Learning Climate (Safety)	83	4.12	1.79	77	3.29	1.56
4. Readiness for Implementation						
a1. Leadership Engagement (Supportive)	83	4.02	1.74	77	2.79	1.38
a2. Leadership Engagement (Encouraging)	83	2.88	1.60	77	1.70	.99
b1. Available Resources (Materials)	83	2.16	1.49	77	1.31	.75
b2. Available Resources (Caseload)	83	5.14	1.73	77	5.65	1.70
c1. Access to Knowledge and Information (Training)	83	2.16	1.43	77	1.23	.54
c2. Access to Knowledge and Information (Methods)	83	2.01	1.38	77	1.31	.75
Characteristics of Individuals						
1a. Knowledge & Beliefs about Intervention (Skilled)	82	4.11	1.62	77	2.61	1.44
1b. Knowledge & Beliefs about Intervention (Orientate)	82	5.57	1.18	77	5.19	1.35
2a. Self-Efficacy (Successful)	82	5.01	1.47	77	4.22	1.48
2b. Self-Efficacy (Ability)	82	4.45	1.47	77	3.13	1.60
3a. Stage of Change (Likely)	82	4.34	1.57	77	2.79	1.60
3b. Stage of Change (Enjoy)	82	5.23	1.24	77	4.22	1.54
4a. Identification with Organization (Committed)	82	5.06	1.57	77	5.01	1.80

4b. Identification with Organization (Like)	82	5.18	1.33	77	5.44	1.42

Construct Validity: Exploratory Factor Analysis Results

As mentioned previously, the researcher attempted to create 2 questions aligned with each CFIR construct area. In order to empirically test the construct validity exploratory factor analysis (EFA) was used on the on the intercorrelations among the 30 individual questions.

EFA 1. The first EFA analysis was conducted using the 22 questions in the Inner Setting. The results showed that a 6-factor model fit the CBT survey items best, $\chi^2(114) = 224.7$, $p > .001$ (see Table 10). In comparison, a 7-factor model did not fit the data well $\chi^2(98) = 167.816$, $p > .001$, nor did an 8-factor model $\chi^2(83) = 128.861$, $p > .001$. Despite showing a significant goodness of fit result, for all three models, the 6-factor model was chosen for its parsimony and its meaningful loading patterns. The rotated loadings showed that the first 5 items loaded heavily onto the first factor, which is labeled the District Resources factor. All of the questions associated with this factor training, methods for incorporation CBT into the daily work, clerical support, manuals and materials, district level and administrative support deal with resources and support that the larger organization provides. The District Resources factor accounted for the bulk of the rotated variance in the model at 17%. The District Resources factor incorporated the CFIR constructs of Access to Knowledge and Information, Available Resources, Leadership Engagement, and Learning climate. Refer to Table 9 for a comparison of the original CFIR questions within the Inner Setting as compared to the results of the first EFA.

The second factor, called CBT School Fit, contains questions associated with how well CBT is compatible with the goals of the school in which the participant works, as well as the perception that it is needed. The CBT School Fit factor accounted for the next highest of the rotated variance in the model at 10%. With respect to the CFIR, the CBT School Fit factor

mapped well with the Compatibility construct. The construct also incorporated the Tension for Change construct within the CFIR.

The next factor, called Organizational Incentives & Rewards, included questions related to the perception that the participant would be rewarded and respected through positive feedback from colleagues for providing CBT. The Organizational Incentives & Rewards factor accounted for 9% of the rotated variance in the model. The questions within this factor matched exactly with the CFIR construct of Organizational Incentives & Rewards, which is why the factor retains the same name from the CFIR.

The fourth factor, called District-Set Goals and Standards, includes questions related to district administrators expressly setting goals and exerting pressure for providers to use CBT with students. This factor also includes the participants' perception that CBT is a priority for him or her. The District-Set Goals and Standards factor accounted for 8% of the rotated variance in the model. The District-Set Goals and Standards factor incorporates questions from the Goals and Feedback, Tension for Change, and Relative Priority constructs from the CFIR.

The fifth factor, called District Support of Therapy/Therapist includes questions relating to district level administrator support and the perception that the participants feel safe within their district to try new therapeutic methods. This factor accounted for 7% of the overall rotated variance in the model. The questions in this factor were associated with the Leadership Engagement and Learning Climate constructs in the CFIR.

The last factor, called Positive Work Environment, included concepts such as caseload, other completing, initiatives, good clinical supervision and support, support from teachers, and communication from administrators. The Positive Work Environment factor accounted for only 7% of the rotated variance in the model. Two questions within this factor, one pertaining to the

participants' perceptions of teachers in their buildings being supportive of students missing class to receive CBT, and the ease in which the participants feel they can communicate with his or her administrators did not fit the factor well with loadings below the critical $r = \pm 0.38$ with an $N = 168$ participants (Culture: Out of Class, $r = 0.32$; Networks & Communications: Admin, $r = 0.27$) (Stevens, 2002, p. 394, based on Monte Carlo study results of Cliff and Hamburger,1967).

Table 9. *EFA Results for CFIR Inner Setting Sub-constructs*

Item	*Description*	*Communalities*	*Factor1 Loading*	*Factor2 Loading*	*Factor 3 Loading*	*Factor 4 Loading*	*Factor 5 Loading*	*Factor 6 Loading*
1	Access to Knowledge and Information (Training)	.796	**.917**	.053	.075	.103	.060	.124
2	Access to Knowledge and Information (Methods)	.718	**.822**	.066	.062	.177	.132	.039
3	Available Resources (Materials)	.727	**.787**	.083	.090	.202	.169	.172
4	Leadership Engagement (Encouraging)	.711	**.599**	.031	.139	.436	.391	.124
5	Learning Climate (Training)	.482	**.488**	.162	.035	.066	.254	.128
6	Compatibility (Compatible)	.827	.118	**.927**	.125	.058	.075	.076
7	Compatibility (Fits)	.823	.155	**.905**	.105	.083	.035	.122
8	Tension for Change (Needed)	.415	-.005	**.464**	.171	.256	.139	-.164
9	Organizational Incentives & Rewards (Feedback)	.717	.122	.219	**.931**	.079	.083	.010
10	Organizational Incentives & Rewards (Respect)	.706	.083	.116	**.777**	.140	.255	.068
11	Goals and Feedback (Expressed)	.741	.585	.112	.221	**.616**	.024	.149
12	Goals and Feedback (Set)	.665	.489	.106	.091	**.557**	-.043	.140
13	Tension for Change (Pressure)	.447	.332	.178	.032	**.515**	.154	-.035
14	Relative Priority (Self)	.502	.139	.329	.139	**.348**	.274	.148
15	Leadership Engagement (Supportive)	.713	.407	.100	.234	.248	**.693**	.149
16	Learning Climate (Safety)	.587	.314	.167	.193	-.020	**.601**	.302
17	Available Resources (Caseload)	.438	-.072	-.051	.108	.004	-.173	**-.647**
18	Relative Priority (Other Initiatives)	.223	-.066	.083	.024	-.023	-.037	**-.440**
19	Networks & Communications (Support)	.447	.196	.092	.302	.198	-.086	**.439**
20	Culture (Support)	.549	.091	.176	.266	.332	.344	**.433**
21	Culture (Out of Class)	.430	.110	.290	.240	.044	.263	**.318**
22	Networks & Communications (Admin)	.222	.051	.091	.178	.006	.055	**.265**
			Factor 1	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*	*Factor 6*
Unrotated Variance Accounted For			*34%*	*10%*	*8%*	*7%*	*6%*	*5%*
Varimax Rotated Variance Accounted For			*17%*	*10%*	*9%*	*8%*	*7%*	*7%*

Note. N= 168. Significant loadings are in bold face.
* $p < .05$, ** $p < .01$, *** $p < .001$.

Table 10. *Inner Setting Questions relating to EFA Factor Loadings and Original CFIR Sub-constructs*

Factors	Survey Questions	Original CFIR Area
Factor 1: District Resources		
	My district has provided me with adequate training on CBT.	Access to Knowledge & Information
	My district has provided me with methods of how to incorporate CBT into my work.	Access to Knowledge & Information
	My district provides resources such as clerical support, manuals, materials, and training for me to be able to provide CBT.	Available Resources
	My district level administrator encourages me to provide CBT.	Leadership Engagement
	I have been well trained to provide CBT.	Learning Climate
Factor 2: CBT Fit		
	CBT is compatible with the goals of my school(s).	Compatibility
	CBT fits well with the goals of my school.	Compatibility
	CBT is needed in my school.	Tension for Change
Factor 3: Organizational Incentives & Rewards		
	I am or would be rewarded and/or respected for providing CBT.	Organizational Incentives & Rewards
	I would receive positive feedback from colleagues for providing CBT.	Organizational Incentives & Rewards
Factor 4: District-Set Goals and Standards		
	Providing CBT is an expressed goal across the district for my role.	Goals and Feedback
	Administrators have set goals to provide CBT.	Goals and Feedback
	I feel pressure to provide CBT.	Tension for Change
	Providing CBT is a priority for me.	Relative Priority
Factor 5: District Support of Therapy/Therapist		
	My district level administrator is supportive of my providing CBT.	Leadership Engagement
	I feel safe within my district to try new therapeutic methods.	Learning Climate
Factor 6: Positive Work Environment		
	My caseload prevents me from delivering direct intervention services to students.	Available Resources
	Too many other initiatives are occurring in my school to prevent providing CBT.	Relative Priority
	I regularly have good clinical support/consultation from my supervisor(s).	Networks & Communications
	The culture in my school supports me providing therapy for students.	Culture
	Teachers would be fine with me pulling a student out of a class to receive CBT.	Culture
	It is easy to communicate with my administrators.	Networks & Communications

EFA 2. An exploratory factor analysis with a Varimax rotation was conducted with the questions in the Characteristics of Individuals construct. The results showed that a 3-factor model fit the CBT survey items best, $\chi^2(7) = 12.398$, $p = .088$ (see Table 11). In comparison, a 2-factor model did not fit the data well $\chi^2(13) = 116.683$, $p > .001$. As with the first EFA, a Varimax rotation was purposefully used to better understand and represent the variable-factor and factor-factor relationships. The rotated loadings showed that the first 4 items loaded heavily onto a factor called Beliefs & Readiness. The Beliefs & Readiness factor accounted for 18% of the rotated variance and incorporated questions relating to beliefs about being successful providing CBT and aligning with one's theoretical orientation. The factor also addresses the provider's sense of readiness regarding the delivery of CBT. Refer to table 13 for a comparison of the original CFIR questions within the Characteristics of Individuals construct as compared to the results of the second EFA.

The second factor, called Skill Level, accounted for the highest level of rotated variance at 41%. As the name suggests, the questions related to this factor assessed the participant's perceptions of his or her skill level and ability in being able to provide CBT. This factor also addressed the participants' sense of self-efficacy regarding the ability to provide CBT. Lastly, the Sense of Belonging to Organization factor accounted for the least amount of variance within the construct of Characteristics of Individuals at 11%. The questions related to this construct fell within the CFIR construct of Individual Identification with Organization. The questions assessed the participant's level of commitment to his or her district and enjoyment working for the district.

Table 11. *EFA Results for CFIR Characteristics of Individuals Sub-constructs*

Item	*Description*	*Communalities*	*Factor 1 Loading*	*Factor 2 Loading*	*Factor 3 Loading*	
1	Individual Stage of Change (Enjoy)	.572	**.771**	.305	-.010	
2	Knowledge & Beliefs about the Intervention (Orientation)	.436	**.717**	.113	.054	
3	Self-Efficacy (Successful)	.637	**.715**	.443	.058	
4	Individual Stage of Change (Likely)	.524	**.575**	.468	-.041	
5	Self-Efficacy (Ability)	.737	.296	**.918**	.055	
6	Knowledge & Beliefs about the Intervention (Skilled)	.709	.330	**.794**	.053	
7	Individual Identification with Organization (Like)	.432	.050	-.018	**.998**	
8	Individual Identification with Organization (Committed)	.432	.002	.064	**.646**	
			Factor 1	*Factor 2*	*Factor 3*	$\chi^2(7)$
Unrotated Variance Accounted For			*48%*	*21%*	*12%*	
Varimax Rotated Variance Accounted For			*18%*	*41%*	*11%*	12.4

Note. $N = 168$. Significant loadings are in bold face.
*$p < .05$, **$p < .01$, ***$p < .001$.

Table 12. *Characteristics of Individuals Questions relating to EFA Factor Loadings and Original CFIR Sub-constructs*

Factors	Survey Questions	Original CFIR Area
Factor 7: Beliefs & Readiness		
	I enjoy, or will enjoy, providing CBT.	Individual Stage of Change
	CBT fits well with my theoretical orientation.	Knowledge & Beliefs about the Intervention
	I feel I can be successful supporting students by using CBT.	Self-efficacy
	It is highly likely that I will provide CBT in the future.	Individual Stage of Change
Factor 8: Skill Level		
	I have the ability and skill to provide CBT.	Self-efficacy
	I feel skilled enough to provide CBT.	Knowledge & Beliefs about the Intervention
Factor 9: Sense of Belonging to Organization		
	I feel committed to staying with my district/LEA.	Individual Identification with Organization
	I like working for my district/LEA.	Individual Identification with Organization

Zero-order correlations. Table 13 presents the zero-order correlations between the 9 different factors found in the two EFA analyses and the implementation status, gender, role, and manual use. Out of a total of 78 unique comparisons, 55 showed a significant correlation for a rate of 70%. The highest correlation coefficient was r=0.68 between Factor 4 (District-Set Goals and Standards) and Factor 5 (District Support of Therapy/Therapist). Although Tabachnick & Fidell (2007) suggest that correlations of equal to, or greater than, 0.90 likely indicate issues with multicollinearity, the sheer number of correlated measures in these results could indicate that problems with a lack of differentiation between measures leading to non-significant results.

Table 13. *Zero-Order Correlations among all Analytic Variables*

	n	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Implements	168	--												
2. Gender	168	.01	--											
3. Role	168	-.23**	.05	--										
4. Manual Use	168	.32***	.02	.05	--									
5. Factor 1	166	.46***	.09	-.11	.28***	--								
6. Factor 2	168	.23**	.06	.02	.22**	.26**	--							
7. Factor 3	166	.17*	.02	.17*	.19*	.28***	.34***	--						
8. Factor 4	168	.47***	.10	-.27***	.31***	.68***	.44***	.36***	--					
9. Factor 5	166	.34***	.02	-.17*	.19*	.63***	.30***	.43***	.48***	--				
10. Factor 6	168	.21*	.07	-.27***	.17*	.38***	.28***	.35***	.42***	.49***	--			
11. Factor 7	165	.37***	.21**	-.01	.31***	.46***	.53***	.32***	.55***	.44***	.25**	--		
12. Factor 8	165	.43***	.17*	.03	.37***	.52***	.30***	.23**	.37***	.40***	.25**	.65***	--	
13. Factor 9	165	-.04	.03	-.06	.08	.18*	.04	.25**	.15*	.30***	.35***	.05	.08	--

Note. Implements 1= Has provided CBT. See Tables 9 and 11 for Factor 1-9 definitions (sub-constructs of CFIR Inner Setting and Characteristics of Individuals).
* $p < .05$, ** $p < .01$, *** $p < .001$.

Multilevel Logistic Regression Model Results

Baseline Model Results (Model 1). The baseline model results, shown as Model 1 in Table 14, estimate the mean implementation of CBT by participants without any other variables added to the equation. These results showed that the mean predicted CBT implementation was 50% (translated from the intercept logit value of -0.02). A test of the random effect of district showed a significant result, $\chi^2(22) = 56.77$, $p < 0.001$, indicating that districts were significantly different in participants' likelihood of providing CBT; this finding remained after controlling for the subsequent predictors added to the models in Models 2-8.

Model 2 Results. Model 2 added the Experience and Gender variables to the equation. The results of adding these two variables did not significantly increase or decrease the likelihood of implementing CBT, which was calculated at 48% (see Table 14) (ps > 0.05). Despite this, both the experience and gender variables were included in the forthcoming Models 3-6 as control variables (but neither were found significant in these models as well).

Model 3 Results. In contrast to Model 2, adding the participants' role and the use of a CBT manual did show a significant result (see Table 15). Specifically, school psychologists had a lower likelihood of using CBT compared to counselors, and psychologists and/or counselors who used a manual were predicted to have a higher likelihood of using a manual to 65%. For counselors who used a manual, the probability of CBT implementation increased to 78%.

Table 14. *Results for Multilevel Models 1-3 Predicting CBT Implementation*

Fixed Effect	Model 1: Intercept Only					Model 2: Demographics					Model 3: Job Characteristics				
	Coeff	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*
Intercept (Mean CBT)	-0.02	0.29	-0.07	22	.942	0.01	0.32	0.05	22	.964	0.00	0.34	0.01	22	.993
Demographics															
Experience						-0.02	0.16	-0.13	143	.896	0.05	0.17	0.27	141	.785
Gender=Female						-0.06	0.22	-0.25	143	.803	-0.06	0.24	-0.25	141	.805
Job Characteristics															
Role=Psych											-0.62	0.18	-3.48	141	.001
Manual=Yes											0.62	0.18	3.39	141	.001
Random Effect	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*
Between Districts	1.01		56.77	22	**<.001**	1.01		56.80	22	**<.001**	0.97		52.12	22	**<.001**

Note. N = 168 therapists from 23 school districts in PSESD in Washington State.

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

Model 4 Results. Model results for Models 4-6 are given in Table 15. Recall that Model 4 added in all the sub-constructs from the Inner Setting construct that were determined from the EFA reported earlier (i.e., Factors 1-6). In these results we can see that only the first sub-construct, district resources, showed a significant relationship with the likelihood of providing CBT. For participants in districts with relatively more resources (+1 *SD*), the predicted probability of CBT implementation increases from 50% (average) to 81%, controlling for all else. Participants' role and manual use remained significant as well, with psychologists less likely to implement and those with manuals more likely to implement.

Model 5 Results. Recall that this model retained the experience, gender, role, and manual use variables, but replaces the CFIR Inner Setting sub-constructs with the three sub-constructs derived from the second EFA (for the CFIR Characteristics of Individuals construct). The only sub-construct of these three that had a significant relationship with CBT Implementation was the skill level variable: those with relatively higher skills (+1 SD) were predicted to increase from 50% (average) to 72%. Again, role and manual were significant.

Model 6 Results. Model 6 combined all of the demographic and job characteristic variables with all the sub-constructs of the two CFIR constructs. Similar to Models 4 and 5, the only significant predictors of CBT implementation besides role and manual use were again district resources and skill level.

Table 15. *Results for Multilevel Models 4-6 Predicting CBT Implementation*

Fixed Effect	Model 4: Inner Setting Sub-constructs					Model 5: Indiv Sub-constructs					Model 6: Both Types of Sub-Constructs				
	Coeff	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*
Intercept (Mean CBT)	0.43	0.33	1.31	22	.204	0.16	0.35	0.47	22	.643	-1.29	1.35	-0.95	22	.352
Demographics															
Experience	0.12	0.19	0.63	133	.532	0.22	0.20	1.14	135	.258	0.25	0.21	1.21	129	.229
Gender=Female	-0.21	0.27	-0.80	133	.423	-0.35	0.28	-1.26	135	.210	-0.35	0.30	-1.20	129	.233
Job Characteristics															
Role=Psych	-0.52	0.23	-2.26	133	.026	-0.83	0.21	-3.99	135	<0.001	-0.71	0.26	-2.76	129	.007
Manual=Yes	0.48	0.21	2.25	133	.026	0.47	0.21	2.21	135	.029	0.48	0.23	2.09	129	.039
Inner Setting Factors															
F1=District Resources	1.09	0.39	2.78	133	.006						0.75	0.38	2.00	129	.048
F2=CBT Fit	0.06	0.23	0.26	133	.796						-0.12	0.22	-0.57	129	.570
F3=Org Incent/Reward	-0.06	0.24	-0.25	133	.801						0.02	0.17	0.13	129	.898
F4=District Goals/Standards	0.52	0.34	1.53	133	.129						0.36	0.32	1.13	129	.259
F5=District Support Therapist	0.02	0.27	0.06	133	.951						-0.09	0.20	-0.44	129	.659
F6=Positive Environment	-0.12	0.26	-0.47	133	.640						0.04	0.27	0.15	129	.882
Individual Factors															
F7=Beliefs/Readiness						0.32	0.27	1.18	135	.239	0.14	0.34	0.40	129	.688
F8=Skill Level						0.88	0.27	3.20	135	.002	0.71	0.30	2.33	129	.021
F9=Belonging						-0.29	0.19	-1.51	135	.134	-0.42	0.22	-1.91	129	.058
Random Effect	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*
Between Districts	0.38		34.32	22	**.045**	0.79		44.56	22	**.003**	0.35		34.83	22	**.040**

Note. $N = 168$ therapists from 23 school districts in PSESD in Washington State.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Model 7 Results. As described earlier, the CFIR constructs added to these models are aggregates of the questions associated with either the Inner Setting or the Characteristics of Individuals constructs. Model 7a (see Table 16) contained the demographic and job characteristics variables, plus the aggregate of the CFIR Inner Setting construct. As with the previous models, role and Manual were significant indicators of CBT implementation. Additionally, the total Inner Setting construct was also significant (in the positive direction). In Model 7b, the Inner Setting total construct was replaced with the aggregate Characteristics of Individuals total construct, and the results were similar to the previous model, with the total construct positively predicting CBT implementation. However, when both aggregate constructs were entered together, they shared too much variation and failed to be uniquely predictive of CBT implementation.

Finally, in Model 7d, interactions were added to determine whether role or manual might moderate CFIR construct effects on CBT implementation. Findings (see again Table 16) showed no such moderator effects (none of the interactions were significant). In summary, the results from various components of Model 7 showed that the only variables that were consistently predictive of CBT implementation were Role and Manual, and that, although sub-constructs of Inner Setting and Characteristics of Individuals were uniquely predictive in Model 6, they were not predictive together when considered in aggregate (total) constructs.

Table 16. *Results for Multilevel Models 7a-d Predicting CBT Implementation*

Fixed Effect	Model 7a: Inner Setting Sub-constructs Combined					Model 7b: Indiv Characteristics Sub-constructs Combined					Model 7c: Both Combined Constructs					Model 7d: Combined Constructs + Interactions				
	Coeff	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*
Intercept (Mean CBT)	0.11	0.32	0.35	22	.731	0.08	0.34	0.23	22	.824	0.13	0.33	0.40	22	.696	-0.10	0.37	-0.27	22	.791
Demographics																				
Experience	0.09	0.18	0.49	140	.623	0.08	0.18	0.46	137	.648	0.09	0.18	0.50	136	.617	0.11	0.19	0.61	130	.545
Gender=Female	-0.14	0.26	-0.53	140	.598	-0.27	0.26	-1.03	137	.307	-0.25	0.27	-0.92	136	.359	-0.08	0.28	-0.31	130	.759
Job Characteristics																				
Role=Psych	-0.58	0.19	-3.10	140	.002	-0.68	0.19	-3.60	137	<0.001	-0.65	0.19	-3.32	136	.001	-0.69	0.22	-3.19	130	.002
Manual=Yes	0.51	0.19	2.62	140	.010	0.48	0.20	2.44	137	.016	0.46	0.20	2.31	136	.022	0.50	0.22	2.27	130	.025
Inner Setting Factors																				
F1-F6	0.76	0.21	3.55	140	.001						0.46	0.27	1.73	136	.087	0.55	0.32	1.72	130	.088
Individual Factors																				
F7-F9						0.67	0.21	3.20	137	.002	0.44	0.26	1.73	136	.085	0.57	0.31	1.86	130	.066
Interactions																				
Role*Manual																-0.16	0.22	-0.70	130	.485
Role*Inner Setting																0.16	0.28	0.57	130	.570
Role*Indiv Factors																-0.12	0.29	-0.42	130	.676
Manual*Inner Setting																0.11	0.30	0.36	130	.717
Manual*Indiv Factors																0.39	0.30	1.30	130	.198
Inner*Indiv Factors																0.27	0.24	1.10	130	.274
Random Effect	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*
Between-Districts	0.62		40.07	22	**.011**	0.84		47.49	22	**.002**	0.66		41.26	22	**.008**	0.76		42.91	22	**.005**

Note. N=168 therapists from 23 school districts in the PSESD in Washington State.

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

Model 8 Results. Recall that Model 8 took into consideration the results of the previous models and singled out the district resources sub-construct from the Inner Setting construct as well as the skill level sub-construct from the Characteristics of Individuals construct for further scrutiny. Model 8a and 8b tested just each of these sub-constructs in isolation, controlling for demographic and job characteristic variables; Model 8c tested the two together, and Model 8d tested the two-way interactions among these four key variables. As can be seen in Table 17, across all models we find that job characteristics and both of the sub-constructs uniquely predict CBT implementation. Additionally, there was no evidence of any interactions among the variables. Using the coefficient estimates from the final model, Model 8d, predicted probabilities of CBT implementation are plotted by role, manual use, and levels of each of the two sub-constructs (see Figure 1 below).

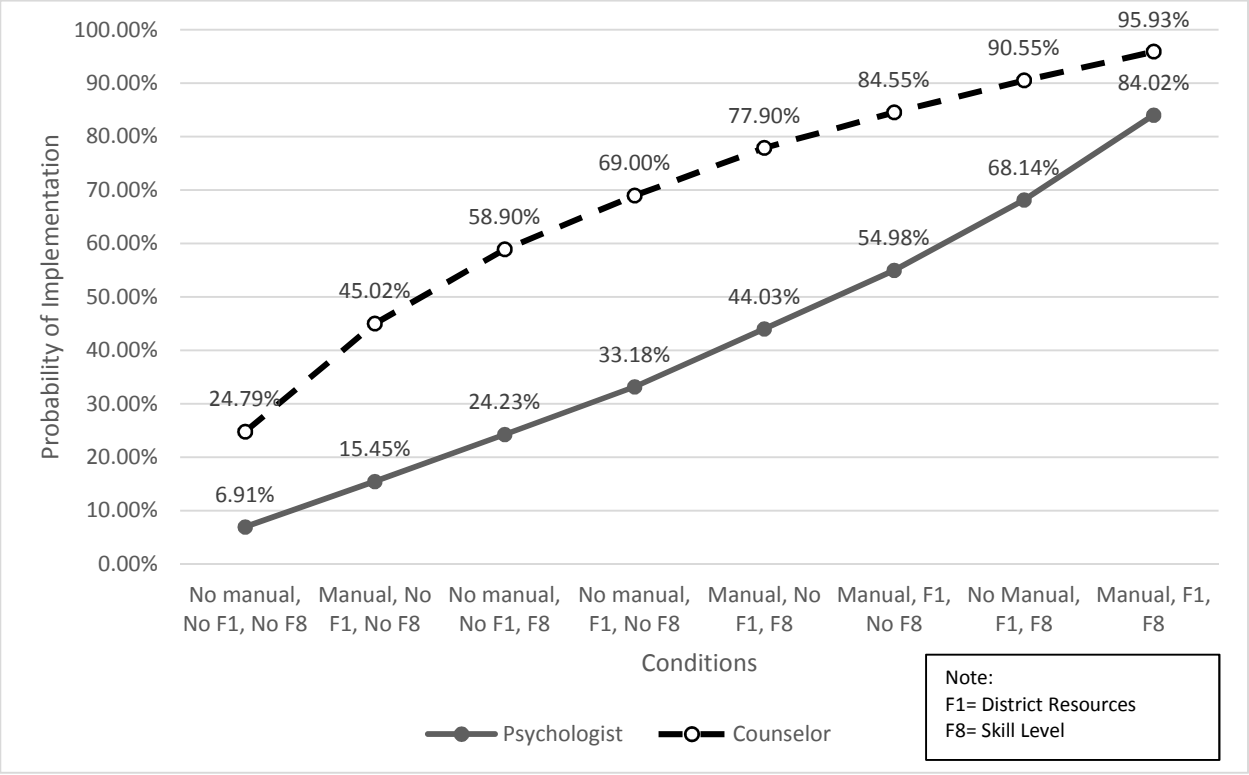


Figure 1. Model-Implied Predicted Probabilities of CBT Implementation

Table 17. *Results for Multilevel Models 7a-d Predicting CBT Implementation*

Fixed Effect	Model 8a: Inner Setting F1 Only					Model 8b: Indiv Factors F8 Only					Model 8c: Both F1 & F8					Model 8d: F1, F8, & Interactions				
	Coeff	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*	*Coeff*	*SE*	*t*	*df*	*p*
Intercept (Mean CBT)	0.37	0.32	1.15	22	.262	0.08	0.35	0.23	22	.823	0.34	0.33	1.03	22	.313	0.47	0.36	1.30	22	.206
Demographics																				
Experience	0.17	0.18	0.90	138	.371	0.19	0.19	1.00	137	.317	0.23	0.19	1.21	136	.230	0.27	0.20	1.33	130	.185
Gender=Female	-0.16	0.26	-0.60	138	.552	-0.27	0.26	-1.02	137	.308	-0.29	0.27	-1.06	136	.293	-0.32	0.28	-1.13	130	.262
Job Characteristics																				
Role=Psych	-0.62	0.20	-3.06	138	.003	-0.79	0.20	-3.89	137	<0.001	-0.75	0.21	-3.49	136	.001	-0.75	0.23	-3.30	130	.001
Manual=Yes	0.54	0.20	2.62	138	.010	0.43	0.20	2.11	137	.037	0.45	0.21	2.12	136	.036	0.51	0.23	2.26	130	.025
Inner Setting Factors																				
F1- District Resources	1.38	0.31	4.38	138	<0.001						0.95	0.33	2.86	136	.005	1.09	0.37	2.98	130	.003
Individual Factors																				
F8- Skill Level						0.98	0.23	4.33	137	<0.001	0.73	0.26	2.82	136	.006	0.68	0.28	2.47	130	.015
Interactions																				
Role*Manual																-0.04	0.23	-0.18	130	.861
Role*F1																-0.01	0.30	-0.05	130	.963
Role*F8																0.04	0.26	0.15	130	.885
Manual*F1																0.29	0.34	0.86	130	.391
Manual*F8																-0.12	0.26	-0.48	130	.635
F1*F8																-0.27	0.31	-0.88	130	.380
Random Effect	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*	*Var*		*chi*	*df*	*p*
Between-Districts	0.39		35.18	22	**.037**	0.89		48.82	22	**.001**	0.37		36.09	22	**.030**	0.33		36.65	22	**.026**

Note. N = 168 therapists from 23 school districts in PSESD in Washington State.

$^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Multi-level Modeling Summary. Throughout all models, four consistencies were found. First, in every model the location of the participant did have a significant relationship with CBT implementation due to the effect on the variables. Controlling for district, participants' experience level and gender showed no linkage to CBT implementation. In contrast, participants role and use of a CBT manual were significantly uniquely predictive of CBT use. Psychologists were less likely than counselors to implement CBT, and therapists who had a manual were more likely to implement. Additionally, district resources (a sub-construct of the CFIR Inner Setting construct) and skill level (a sub-construct of the CFIR Characteristics of Individuals) were each positively predictive of CBT implementation. These four variables, role, manual use, district resources, and skill level, all appear to demonstrate significant additive (main) effects, but not interactive (joint effects).

In summary, this indicates that each of these variables contribute uniquely and in their own right to CBT implementation. The combination of variables that produces the least likelihood of CBT implementation were participants who were psychologists, those with no manual use, those with low district resources, and those with low skill levels (predicted probability of 38% CBT implementation). In contrast, the highest likelihood of CBT implementation predicted is for counselors, those with manual use, those with high district resources, and those with high skill levels (predicted at 96% probability of implementation).

CHAPTER 4: DISCUSSION

An abundance of studies have shown cognitive-behavioral therapy (CBT) to be an effective, evidence-based practice (EBP) tool to help students with emotional regulation and maintain better functioning in school settings, yet despite the body of research it remains largely unused in schools. The results of this study indicate four variables related to the successful implementation of CBT in schools: district resources, practitioner skill level, use of a manual, and practitioner role. The results of the demographic, job characteristic, and open-ended questions will be discussed within the context of these four factors.

District Resources

District resources was found to be the most influential on the implementation of CBT evidenced by predictive modeling demonstrating the highest level of implementation when considered alone. The results of this study indicate that implementation of CBT was greater when district resources were provided to the school psychologist or counselor. District resources include access to knowledge & information as evaluated through access to training, available resources to implement, leadership engagement such as administrator support, and the learning climate or encouragement for implementing CBT in schools. These results are similar when examining the literature on the implementation of other recent initiatives in schools such as Positive Behavior Interventions and Supports (PBIS). In a study specifically examining the facilitators and barriers of PBIS implementation Kincaid, Childs, Wallace, & Blase (2007) found that the top facilitators included gaining support from administrators and both the building and district level, PBIS technical support, the use of data, and school-level and team training. Additionally, Horner et al., (2014) also found that leadership support and the allocation of resources to support the initiative produced better implementation.

An examination of the participants' top responses to the open-ended question asking about the perceived barriers to providing CBT in school settings all revolve around the access to district resources. The barriers of: a) CBT not being a part of the participants role, b) A lack of direct leadership, d) The policy to refer students to outside agencies, e) The allocation of time, f) The provision of district-sponsored training, and finally g) The workload/caseload, all are representatives of both district leadership priorities and state/federal mandates. For example, the job responsibilities of a typical counselor are frequently set by district policies and building administrator priorities. Several participants noted that their district leaders have established practices that encourage counselors to refer students with more significant mental health needs to outside agencies. In this case, the district leadership is dictating that school counselors prioritize other student needs, such as academic counseling, over mental health needs. More locally, building administrators can purposely or inadvertently set priorities on counselors' responsibilities by the type of work they assign their counselors to perform. Some counselors in the study reported that local administrators directed counselors to focus a large percentage of their time on academic counseling for students that are failing. Although certainly within the scope of responsibilities of counselors, other interventionists within the school may be equally suited to respond to non-mental health related academic failure. In cases such as this, the mandates set by building administrators may not allow counselors to use their professional judgement to provide issue-specific interventions to their students due to the volume of academically at-risk students. With respect to district resources as defined through this study, both the number of academic interventionists and the directives of the building administrator affect the amount of mental health interventions a counselor can provide. A principal who allows

a counselor to use his or her professional judgment and skills to focus on mental health related school failure would likely facilitate more use of EBPs such as CBT.

Practitioner Skill Level

Similar to accessing district resources especially in relation to district resources to gain skills, practitioner skill level or their self-efficacy and knowledge regarding delivering the intervention was a significant factor in the implementation, or lack thereof, of CBT. Moreover, when all other variables were held constant, the addition of practitioner skill level produced significant results. The questions in the survey assessing these areas map directly on the implementer's perception of his or her knowledge level about CBT and his or her sense of self-efficacy toward being able to deliver CBT. Implementers expressed more confidence in their knowledge of CBT than non-implementers. Although this may appear obvious, previous research did not address this is a significant factor in whether or not a provider chooses to implement CBT or not. Clearly, providers feeling well-trained and knowledgeable about the intervention, especially if it is a complex intervention such as CBT, increases the likelihood of implementation.

Re-examining the data from the survey question about the participants' type of CBT training reveals interesting information about how Skill Level relates to low levels of frequent CBT implementation. Approximately 12% of the participants reported receiving no training at all in CBT and only 30% reported some form of training provided by their school district. The majority (67%) of the participants received some form of training through their pre-service training at a university. Additionally, the results of the open-ended question relating to barriers toward implementing CBT showed that 28% of the participants responded that training is a barrier once on the job. These data show that although practitioner programs provide the bulk of

the training, school districts need to provide more support for CBT implementation through training courses and professional development. This support could also be through continued professional development and supervision and consultation, where CBT providers team with more experienced clinicians or peers to evaluated problems of practice or challenging situations with students.

Similarly, implementers had a greater sense of self-efficacy toward providing CBT than non-implementers. The CFIR model describes self-efficacy as one's belief in his or her ability to effectively implement an intervention to achieve the goals of the implementation. Damschroder et al. (2009) report that providers who demonstrate a high level of Self-Efficacy within their position within the organization are "… more likely to make a decision to embrace the intervention and exhibit committed use even in the face of obstacles."

Use of a Manual

One of the more straight-forward results of the survey showed that the use of a CBT manual predicted an increase in the implementation of CBT. When controlling for the other significant factors, adding a manual into the equation increases the probability of a practitioner implementing CBT from a base rate of 38.46% to 67.57%. This constitutes a large increase just based on providing manuals to providers!

A major benefit to the use of a manual is that a number of the manuals have been evaluated for both efficacy and effectiveness. The manual Modular CBT for Childhood Anxiety Disorders (Chorpita, 2007) and the MATCH-ADTC (Chorpita & Weisz, 2009) manual have shown to be successful with a variety of children (Chorpita, Taylor, Francis, Moffitt, & Austin, 2004; Weisz et al., 2012). Additionally, several studies regarding the CBITS program have also proven its effectiveness (Dorsey, Briggs, & Woods, 2011; Morsette et al., 2008; Allison &

Ferreira, 2017). A core reason why manuals have proven effective is that providing specific instructions allows for repeatable templates. Manuals provide specific programming and handouts that help professionals by providing a known schema, or template, to use with a variety of students. This template allows therapists to provide consistent instruction (Marques, 1998), but also allows them to deviate from the protocol when necessary (Heimberg, 1998; Kendall, 1998). This could allow for practitioners to feel a greater sense of self-efficacy to provide CBT since they have a reliable fallback curriculum on which to rely when preparation time is short.

Having a consistent template not only helps the provider remember the approaches, but it also helps save the provider save time. Given that time is always a prime commodity within school settings, any aid toward reducing preparatory time for instruction is a great boon. By providing a basic structure and handouts, manuals allow counselors and psychologists to spend more time in service delivery and in-depth analysis of students' challenges than creating content for students.

In addition to providing specific instructions and saving time, manuals also offer at least two other benefits including a guide for inexperienced therapists, and a low cost. When compared to professional development through a trainer or university class, manuals are much less expensive, ranging from $25 (Kendall & Hedtke's Coping Cat) (Amazon, 2017) to $41 (Cohen & Mannarino's TF-CBT) (Amazon, 2017). In addition, the Medical University of South Carolina offers a free on-line course on how to provide TF-CBT (Medical University of South Carolina, 2017). This additional cost-free resource adds another mode of training toward using the TF-CBT manual which could increase the practitioner's sense of knowledge about the intervention as well as a sense of confidence in being able to deliver the intervention.

A manual can also provide inexperienced therapists with techniques and strategies that are evidence-based and can assist the therapist to include the vital components of the treatment (Marques, 1998; Strosahl, 1998). As the novice transitions into a more experienced therapist, the manual then provides a fallback when exploring new strategies for furthering CBT implementation. For example, many experienced CBT therapists combine other approaches, such as Motivational Interviewing (MI) (Miller & Rollnick, 2012), into their direct interventions. Having a base knowledge of CBT can allow for easy addition of other strategies such as MI to enhance the intervention.

Practitioner Role

The roles of counselors and psychologists share some similar overlapping responsibilities, but important differences exist between the two types of professionals in their day-to-day activities that could impact the ability to provide mental health EBPs. The results of this study showed that a significant difference exists between the roles in the likelihood of implementing CBT. When District Resources, Skill Level, and Manual use are all controlled, the predicted implementation rate vaults up to 73.53%, which constitutes about a 35% increase for counselors over psychologists. Based on the literature review and the participants' responses to the open-ended survey questions, 3 potential causes for the increased likelihood of counselors implementing CBT. These include: a) The role of special education evaluator, b), The number of professionals (training costs), and c) Caseload differences.

Approximately 44% of the psychologists reported that the most common barrier to providing CBT included the evaluation process taking precedence over direct intervention services, as compared to 2% of counselors. This is consistent with other reports that school

psychologist are often relied on to use their expertise in assessment (Hosp, & Reschly, 2002; Splett, Fowler, Weist, McDaniel, & Dvorsky, 2013).

Washington State, employs approximately 1,700 school psychologists. In contrast, there are nearly 4 times more counselors in Washington State (4,740). This discrepancy may be due to to the training requirements for school psychologists. The majority of school psychology programs require either an extended Master's degree, or a specialist degree as a minimum. A specialist degree for most programs requires generally two years of course-work and then a yearlong internship (National Association of School Psychologists, 2017b). Also, some within the American Psychological Association argue that school psychologists be required to have a doctorate to practice in schools (Skalski, 2009). For many, an extra year or several years for a Ph.D., can be a considerable cost and can deter some from obtaining the school psychologist credentials. In contrast, most school counselor programs provide a 2-year Master's degree (American School Counselor Association, 2017b). This shortage is likely one reason school psychologist focus primarily on assessment thus leading to significant caseload differences between the two roles.

A rough estimate of the psychologist to student ratio in this study's sample population indicates about a 1:1200 ratio, which exceeds the NASP maximum recommended ratio of 1:700. As a potential outgrowth of the training levels and funding mechanisms for school psychologists leading to high student to provider ratio, school psychologists are often staffed on an as-needed basis which leads to spreading their time across several schools. This leads to very tight schedules that are easily disrupted by crises and additional meetings. This lack of consistency in schedules can greatly interfere with the ability to be available to provide CBT to students on a regular basis. The itinerant nature of some school psychologists' jobs also create issues with a

lack of suitable space for providing services. Several participants indicated that offices and conference rooms may be shared by several different individuals throughout the week. Approximately 61% of the school psychologists in the survey sample responded that their workload or caseload produced a significant barrier toward implementing CBT.

In the responses, the role of the school psychologist appeared as a barrier toward CBT implementation, but counselors also reported barriers to implementation based on their role. As with psychologists, counselors reported that their caseloads also impede the potential for implementation. Although a better ratio that psychologists, counselors in this sample showed an approximate ratio of 1:502, which is twice the ratio of 1:250 that ASCA recommends. Approximately 40% of counselors also reported in the open-ended question about barriers that caseload/workload constitutes an impediment toward delivery.

In addition to issues with the caseload, counselors reported that many administrators encouraged counselors to engage in brief counseling sessions rather than engage in sustained counseling intervention. This perspective has most likely been taken up by both building-level and district-level administrators as indicated in the finding that nearly 19% of the counselors reported that their leadership does not support the use of CBT. Along the same vein, nearly 21% report that providing CBT is not within the definition of their role. Instead, 12% of the counselors report that a primary focus of their role should be focused on academic remediation and support and 17% of the counselors reported that the policy is to refer students with significant mental health needs are referred out to agencies or private practitioners. Unfortunately, this leads back to the problem of access to mental health quality care described in the introduction of this study.

The previously described results of the survey show some clear areas for intervention in order to increase the potential implementation of CBT. The next section attempts to examine these barriers and provide ways to ameliorate their effects by providing better access for students to EBPs such as CBT.

Recommendations

A majority participants in this study generally agreed that providing mental health supports to students within the school setting is within the purview of schools within Washington State. However, there it is unclear whose role and how these services will be implemented. As and EBP, CBT has potential to be implemented in schools. In order to do so, school leaders will need to develop a plan that focuses on providing practitioners the resources and skills to assist implementers. The results of the open-ended questions relating to administrator directives toward counselors and psychologists taking a more academic focus show that a district and build administrators have not either been convinced that CBT can be an effective tool, or they have not had the ability to create a plan for implementing the use of CBT on a wide-scale basis. As shown by a previous pilot study (Taylor, 2015), most districts have relied on individual providers to implement CBT at their own discretion. This leads to inconsistency and sporadic adoption. In order to ensure that CBT becomes a commonly used tool for school psychologists and school counselors to help with social emotional functioning and consequently academic functioning, administrators need to work with the providers of CBT to create a well-crafted implementation plan that provides for progress monitoring towards goals and benchmarks.

Roles and time. One of the most common responses as to why providers have not implemented CBT, involved competing priorities that lead to a lack of time to work directly with students. Six potential changes to "the business as usual" may help free up additional time for

providers. Resources are continually scarce in school districts, as such, we should closely align their job responsibilities with their expertise and training. For example, it may be more efficient to hire staff to take on filling out paperwork, scheduling meetings, or the administration of assessments, reducing the amount of time spent in assessments.

Another approach to allowing for more time to provide CBT, is to limit the quantity and scope of the special education evaluations completed by school psychologists. Employing more academic and social-emotional interventions within a Multi-Tiered System of Support can reduce the number of evaluations in which school psychologists participate. In fact, CBT can be a specific intervention used in an attempt to prevent a student with social-emotional needs qualifying for special education in the first place.

If we believe it is within the purview of the schools to provide supports for students with mental health needs, then it is clear that we need to identify the most qualified person to do this work. The most likely candidates would be the participants in this study, school psychologists and counselors. It was clear from the data in this study that several issues related to role clarification that hindered the use of CBT, counselors did not believe it was their job, administrators did not encourage counselors to provide ongoing therapy but rather a short dosage, and assigning tasks to counselors and psychologists such as scheduling that do not require a Master's degree. A well-defined role for both school psychologist and counselors will likely lead to them making more time for the delivery of CBT, and shield these individuals from role creep. For instance, approximately 17% of counselors reported in the open-ended questions that "other duties as assigned" prevented them from providing CBT. These other duties often include scheduling, classroom coverage for absent teachers or administrators, crisis management, and participation on school-wide or district-wide teams. Clarifying roles and removing this set of

responsibilities from a counselor can free up a significant amount of time for the counselor to provide direct mental health intervention

Lastly, another approach to limiting the time and responsibility barriers is to off-set the working hours of those likely to provide mental health supports, and CBT in particular. This might mean changing the schedule of a provider to work a swing shift one or two days a week. This would allow the provider to meet with students and families when other school staff are not in the building thereby limiting interruptions and distractions that typically occur during the school day. This approach could work well especially when combined with a dedicated role of providing mental health services. As a side-benefit, working during non-school hours could also increase access to parents and guardians of the students, thereby potentially increasing the effectiveness of the intervention.

Provide more training. Most of the study's participants (84%) had received some form of training, yet 30% of the overall sample indicated that one barrier to providing CBT to students is the lack of training. The results also showed that positive perceptions about CBT and perceptions of being skilled at CBT were positively associated with implementation. This means the more knowledgeable and skilled providers are with CBT, the more likely they are to implement the intervention. To address the need for increased professional development, several changes within current practices at both pre-service training institutions and within school districts can increase the skills of providers so that implementation will be more likely. Within training institutions such as graduate schools, CBT needs to be included in the preparatory curriculum. Of the present sample, 67% of the practicing school psychologists and school counselors had received training at the university level. Obviously, this number is not akin to how many institutions currently provide CBT training, but a reflection of the experiences of

individuals within the sample; however, ensuring that this number steadily increased over time is crucial to gaining increased implementation.

In their 2013 article, Spelt, Fowler, Weist, McDaniel, & Dvorsky provide eight recommendations to increase the capacity of school psychologists to provide mental health services. Of these eight recommendations, five in particular resonate with the results of this study. Some of them are provided for pre-service institutions while the others are for school districts. The recommendations are as follows:

1. Pre-service programs should specifically recruit students who are interested and motivated in providing mental health services in schools.
2. Pre-service institutions need to ensure that the institution provides a broad variety of classes to learn different modalities to mental health service delivery including such as groups, individual counseling, family therapy, crisis prevention, and psychopharmacology.
3. Encouraging preservice institutions to intentionally integrate school mental health activities in the psychologist's field experiences.
4. Encouraging school, university, and community agencies to partner more to provide additional training and guided skill development for novice practitioners
5. School districts to provide more opportunities for professional development.

The first two recommendations are primarily for pre-service institutions to encourage students interested in mental health service delivery to apply to their programs and capitalize on their interests by providing a breadth of learning opportunities. The next three recommendations from Spelt et al., (2013) align more closely with the results of this study, more specifically with District Resources and Skill Level. A typical training practice within pre-service institutions is to

pair their students up with practitioners in the school setting. This may be in the form of specifically partnering an intern with an experienced school clinician to lead a CBT group such as the CBITS or engage in the use of Modular CBT for Anxiety with several students. Providing more opportunities for pre-service practitioners can help increase their skill set and their sense of self-efficacy toward providing EBPs such as CBT. In order to make these partnerships happen, district administrators need to understand the value of providing learning opportunities for interns to expand their learning and experiences. Helping school and district administrators see the value clearly falls within the realm of leadership support of the use of CBT in school settings.

Along the same line of reasoning, the next recommendation from Splett et al. (2013), which includes encouraging school, university, and community agencies to partner more to provide additional training and guided skill development for novice practitioners also relates to the District Resources and Skill Level factors. In this case the novice practitioners are not completely released "into the wild" without mentorship and support. Continuing a partnership between training institutions or community agencies with schools can provide for a higher level of nurturance of skills and efficacy relating to the provision of EBPs. Including district and building administrators in this process, also allows for administrators to learn more about the interventions and help provide the necessary resources and procedures to support CBT delivery.

The last pertinent recommendation from Splett et al.'s (2013) article is for school districts to provide more opportunities for professional development. Recall from the results that the second most reported form of training for CBT involved professional development within the K-12 school setting. Clearly schools are providing professional development, but anecdotal reports indicate that much of the training involves "sit and get" training with limited follow-up for skill development. Past research has shown that these types of professional development do not

widely change participants' behaviors (Joyce & Showers, 2002). Instead, Owens et al. (2014) suggest providing "ongoing coaching and consultation... constructive performance feedback, encouragement of self-reflection on one's own performance, and access to problem-solving and supports to refine and develop mastery of new skills (p.102)" will greatly enhance the uptake of the intervention.

Incorporating both the preservice and in-service training opportunities along with frequent and consistent supervision and consultation can help practitioners feel both more knowledgeable about the CBT, but also feel a greater sense of self-efficacy about being able to deliver CBT effectively. To continue with the professional development theme, providing instruction in implementation science to pre-service professionals and building & district level administrators will likely help with CBT and EBP implementation. As the CFIR and other implementation science frameworks have shown, a robust knowledge of the variables associated with implementation can help individual practitioners, once in the field, to advocate for adequate resources and supports.

In addition to increased focus on CBT training in pre-service preparation and training through districts directly, providers need to be offered additional opportunities for training and support through outside resources and professional networks. School districts can facilitate CBT training by encouraging practitioners to seek out outside training opportunities and purchasing training materials. In addition, school districts can provide on-going support and training by establishing continual consultation, supervision, and coaching mechanisms and structures. As mentioned previously, a Technical Assistance Team is one method of providing on-going support for CBT providers. The specifics of a Mental Health Technical Assistance Team will be discussed later in this section; however, one approach toward providing instruction utilized in a

TAT is to schedule frequent consult groups to allow CBT providers to meet and discuss challenges within their work with specific students. Incorporating existing experience and knowledge of staff within a district can be a low-cost and effective method of providing additional training.

One last approach to providing high-level training is to focus initially on using manual-based CBT programs. The survey results showed that 43% of the participants had used some type of manual. Since CBT is a complex intervention, manuals can provide very concrete steps and materials toward providing the intervention (Chorpita, 2007). By breaking the intervention into manageable steps and providing handouts, strategies, and worksheets, this may reduce the level of training needed initially to provide the intervention. Additional consultation and support is needed, but using manual-based CBT can mitigate the amount of initial training.

Increase leadership support. As mentioned earlier, none of the survey participants reported that their district created a comprehensive plan for implementing CBT. A lack of administrative support was also noted in previous studies as well as in the qualitative results in this study. In order to ensure that CBT becomes used more frequently, school leaders need to understand how CBT can benefit students and then create implementation plans that includes engaging existing staff by identifying opinion leaders and champions as well as potential external change agents, and by appointing formal implementation leaders. Creating a series of implementation benchmarks and progress monitoring tools can assist with understanding how the implementation plan is progressing. As with practitioners, this requires that administrators have some knowledge about implementation science concepts, which could be incorporated into pre-service training for them as well.

Engaging leaders in discussions about CBT implementation can also help address the issues mentioned previously regarding time and competing priorities. For upper level administrators hiring administrators who possess similar credentials or experience as a counselor, psychologist, or social worker can help with CBT implementation. Leaders dictate the majority of the activities in which mental health providers engage. By securing leadership support for CBT use, providers have more support for shedding some of the other activities of their roles. Budgets are frequently limited, but again prioritization of CBT over other intervention strategies can encourage administrators to shift funding to match their priorities.

Engage outer settings. Not all changes can be made within the Inner Setting of the school districts. Although the outcomes of this research did not specifically examine the outer setting, logically the political and financial landscape does affect leadership priorities and thus practitioner roles. External policies and incentives can also spark the increased use of CBT. As mentioned previously, professional organizations can help encourage implementation by providing on-going training and support, but federal, state, and local governments can allocate additional funding for interventionists that can provide CBT. They can also help with providing reforms to special education law that reduce the amount of compliance paperwork that attempts to mitigate legal challenges.

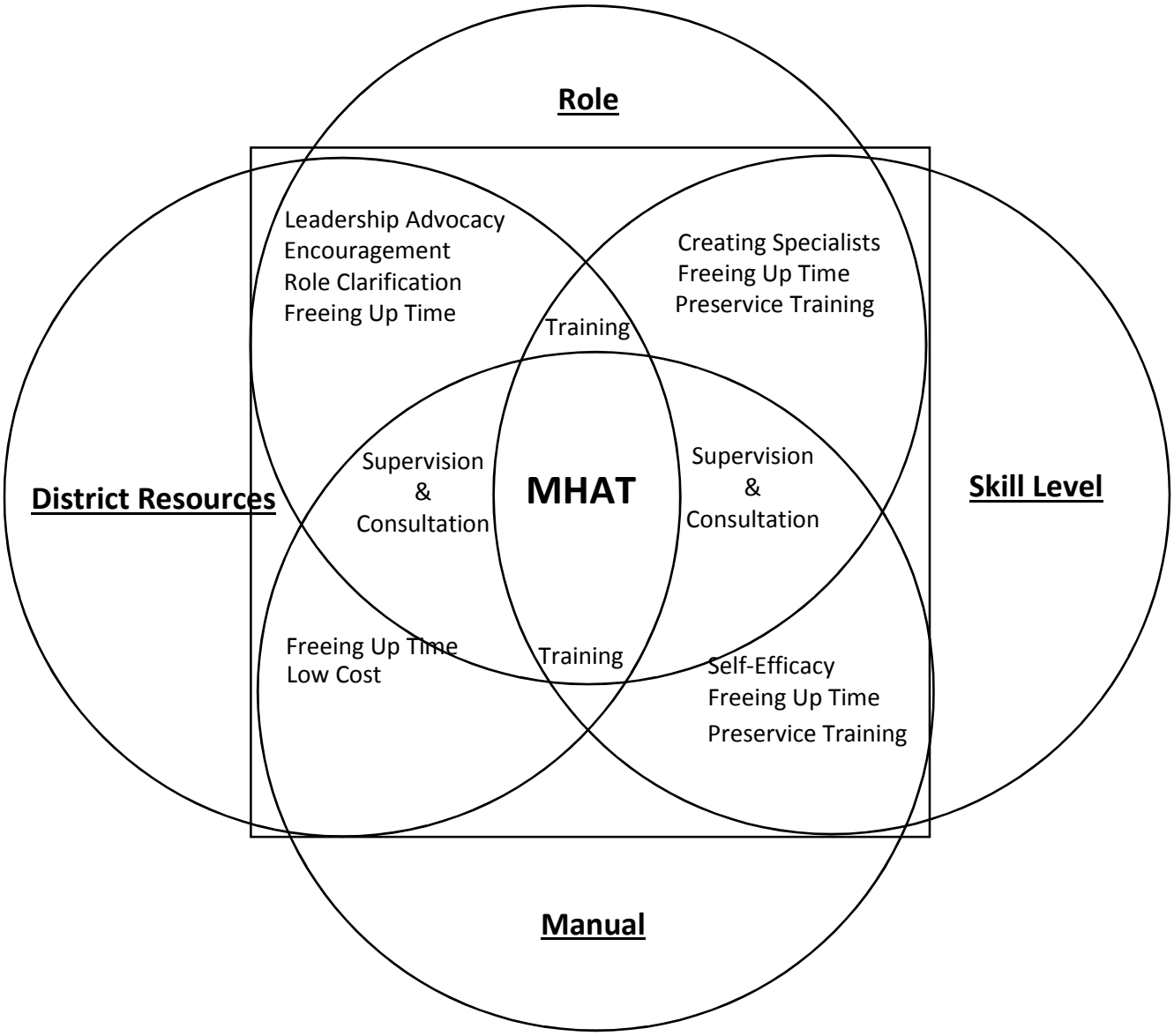


Figure 2. Research to Implementation- The MHAT

Putting the results and recommendations together. Figure 8 above shows a graphic representation of how the results of the study and recommendations interact. Although the EFA showed discrete categories and the multilevel modeling did not show significant interactions, some of the concepts do have logical connections. The fact that the modeling does not show this may be to a variety of factors such as measurement error or multicollinearity, but the similarities are worth noting in explaining the how the relationships between the 4 factors lead to the recommendations provided earlier. For example, district resources and role have some overlap when it comes to the question of "My district level administrator encourages me to provide CBT." The EFA showed that this question aligned with questions relating to the district providing training. Additionally, the training questions logically relate to the skill level factor. So, attempting to show how these results align with the recommendations proved challenging unless looking at it from an overlapping perspective. The Venn diagram in Figure 8 demonstrates how these contracts overlap and how the recommendations nestle in between the results of the research.

One challenge to figure out how to logistically manage the recommendations based off the overlapping results. At the center of the convergence of these results and recommendations the concept of a Technical Assistance Team may allow for a logical implementation of these recommendations. The following sections describes how this could be accomplished.

Create a Mental Health Technical Assistance Team (MHAT). A district-wide Technical Assistance Team (TAT) (McEvoy, Davis, & Reichle, 1993) is one way to address the factors discovered in the study and incorporate many of the recommendations described earlier. A TAT is comprised of a small number of professionals knowledgeable about interventions related to a specific student need. These team members are typically service providers that are

released from their building assignments one to two days a week to provide consultation or direct services to staff and students in other schools. Technical Assistance Teams have some emerging evidence that shows the potential for helping teachers reduce challenging behaviors for students (Chitiyo & Wheeler, 2008). Therefore, a "Mental Health TAT" (MHAT) can provide both direct services to students as well as serve as a consultant or coach to school-based mental health providers.

The goal of the MHAT is to provide a higher level of mental health services to students through school-based, and employed, mental health providers. The plan attempts to construct a series of structures that will help improve service delivery, while also focusing on sustainability through consistent professional development, consultation, and supervision. In order to achieve this goal a systematic implementation process is needed. The following content describes how this process could work, along with detailing specific structures and procedures to ensure comprehensive support.

Many districts may not have the resources to provide comprehensive mental health services all at once. In order to ramp up mental health services, the MHAT implementation process calls for a 3 to four year phase-in. The ending point for the implementation plan is to be able to have at least one mental health service provider (School Counselor, School Psychologist, School Social Worker) within each building who could provide individual or group-based mental health EBPs. Trainings have been provided in the past for all school providers, but research has shown that the decision to implement a mental health EBP is based largely on the individual provider's comfort-level, ability, and caseload (Taylor, 2015). The development of the MHAT and the progression toward empowering individual providers is shown in Figure 1. A Theory of Action is provided in Figure 2. The Theory of Action is based on the Ecological Systems Theory

and takes into consideration the individual within the Mesosystem, Microsystem, and Exosystem. Urie Bronfenbrenner is accredited with being the primary developer of the ecological systems theory, which stems from Vygotsky's socio-cultural theory (Shaffer, & Kipp, 2013).

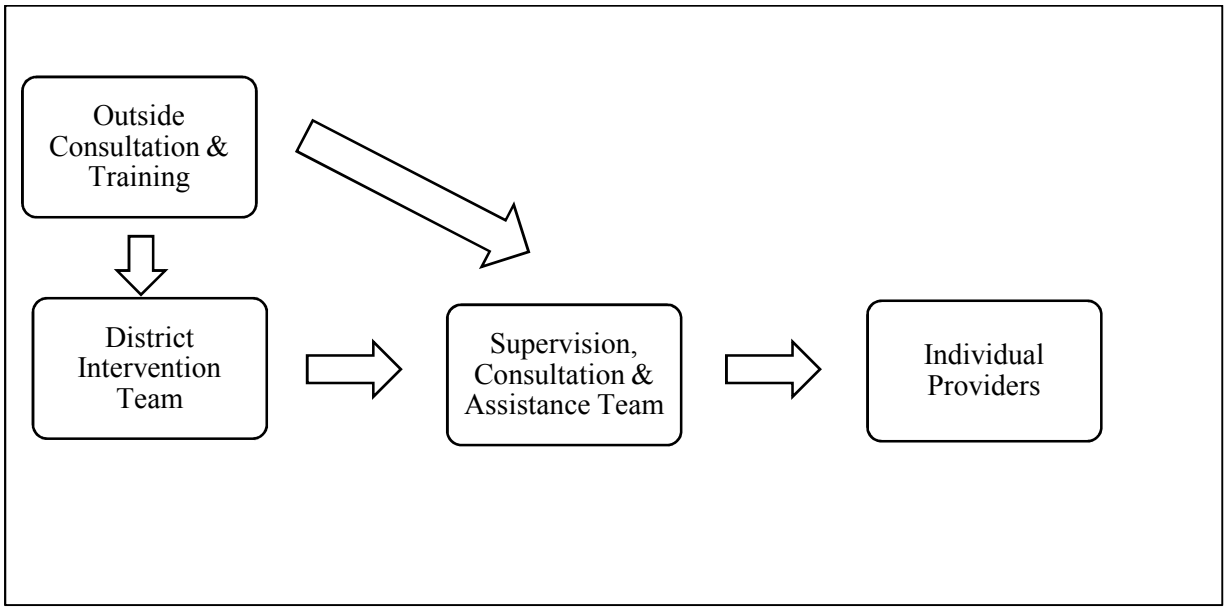
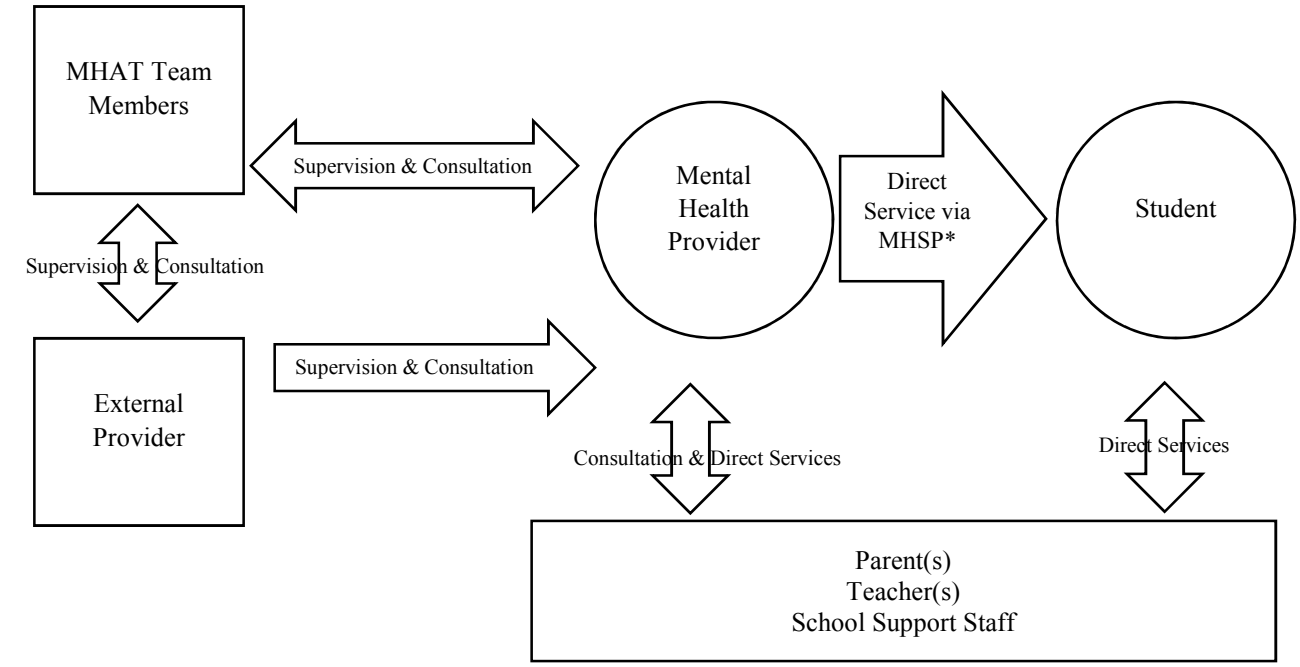


Figure 3. Progression of MHAT Roll-Out



*Mental Health Support Plan (MHSP) Contents

- Manualized EBP of choice
- Therapy skills generalization strategies for teachers/staff
- Therapy skills generalization strategies for Parents
- Accommodations/Modifications
- Crisis Plan
- Progress Monitoring Plan

Figure 4. MHAT Theory of Action

The first step in implementation is to work toward creating a small District Intervention Team (DIT). The role of the District Intervention Team is to provide direct services to students across the district based on identified need. A small number of either psychologists, counselors, or social workers would be released 0.2 to 0.4 FTE from their normal building-based contracts to work with students across the district (in schools other than their own). To provide appropriate

professional development and on-going consultation and supervision, the members of the District Intervention Team will partner with an outside provider. Individuals from the outside organization can provide initial training and on-going support on a variety of EBPs such as those listed in Tables 1 & 2. Additional outside resources may be necessary based upon the intervention and its origin.

The District intervention Team will work with a variety of schools, but primarily at the secondary level to start. In a moderately sized district with approximately 20,000 students, roughly 4,000 students may benefit from mental health services. This large estimate is based on a 2014 report by the National Institute of Mental Health that showed that approximately 20% of students will experience some form of mental health disorder while in school. Clearly, 4,000 students is probably a high estimate, but if mental health services are situated in the MTSS framework, even Tier 3 at 5% gives us 1000 students. A District Intervention Team will only be able to support a small number of students, but as the team changes roles to one involving supervision, consultation, and assistance, the number of students it can support through school-based providers increases.

The role of the District intervention Team will be to initially provide direct mental health services to students identified through teacher, parent, and support staff referral. School-based staff may choose to use screening tools outlined in Table 3. Once a referral is made, the DIT member will provide an initial assessment based upon the presenting concerns from the referral. The potential assessment tools are listed in Table 3. After the initial assessment and prior to implementing the intervention, the DIT member will create a Mental Health Support Plan (MHSP) which outlines the following elements of the intervention: 1) The manual-based EBP chosen, 2) The session schedule, 3) Any Accommodations/Modifications the student may need

based upon the initial assessment, 4) A crisis plan during the intervention, and 5) A progress monitoring plan. At the end of the intervention cycle, the service provider provides a brief summary of the skills learned, the results of the progress monitoring, and recommendations for any additional supports needed. The summary of the skills that the student learned in the intervention is of particular note to teachers and school staff. Having selected staff know the specific skills a student has learned can help with generalization of those skills to other environments through prompting and encouraging.

Once the DIT member has created a Mental Health Support Plan the provider will work with the student, or students, through the intervention timeline specified in the EBP. For example, the Cognitive Behavioral Intervention for Trauma in Schools (CBITS) program requires 10-12 sessions. At the end of the intervention a reassessment will be made on the progress of the student using similar tools involved in the initial assessment (Table 4). Depending upon the student(s) outcomes, further interventions may or may not be necessary.

The anticipated caseload for each DIT member is 2 groups of 6-8 students, plus 10 individual students per intervention cycle. If a full referral, assessment, and intervention cycle takes approximately 15 weeks, about 2 intervention cycles could occur during one school year, assuming some weeks of the school year do not involve direct intervention and instead focus on organization of the team, professional development, and communication with school-based providers. With these numbers and time frames in mind, a beginning DIT member would be able to serve approximately 36 students per year with 2 intervention cycles and a more experienced member could serve 52 students with 3 intervention cycles. Clearly, this does not meet the mental health needs of the students based on the conservative Tier 3 estimate of approximately 1000 students.

To increase the number of students offered support, the next phase of the Mental Health EBP Implementation Plan is to move toward having at least one service provider based in each school where his or her primary role is to provide mental health EBPs. To achieve this goal, the DIT transforms into the Supervision, Consultation, and Assistance Team and takes on more of a support role for the building-based providers. Over time, the MHAT will require less outside consultation and supervision, so the support from those organizations lessens. The MHAT essentially takes on the role of outside providers initially provided for the DIT- one of professional development, consultation, and supervision. The ending goal for each MHAT member is to eventually provide support to providers in at least 2-4 schools.

Initially, the MHAT will assist with identifying and training the individual providers at each site. The team members will also help establish the referral system at each building and may help with co-facilitating group interventions, creating the MHSPs, communicating with school staff, and monitoring student progress. The expectation is that the MHAT member continues to provide a minimum of weekly communication and support to the building-based service provider. This level of communication and contact provides for not only support, but also accountability and assurance that students are being provided with a consistently high level of mental health services.

In order to fully support at least one building-based mental health EBP provider, a number of adjustments may be needed to support the individual tasked with that role. School counselors and school psychologists perform a variety of duties that do not require an ESA certification. Activities such as scheduling (students in classes and meetings), writing letters of recommendation, college and career counseling, registration, assessment, and crisis management are specific duties that take up valuable time and may be provided by classified individuals.

Study Limitations & Future Research

Limitations. Several limitations exist in this study with regard to extrapolating or generalizing the results. Based on hindsight there appear to at least five specific limitations including the potential for nonresponse error, not asking more in-depth questions, the need for better alignment of the survey questions with the CFIR & additional questions, the potential for multicollinearity with the CFIR questions, and finally potential for measurement error in at least one open-ended question.

The first limitation to the study includes the potential for non-response error leading to spurious results. Non-response error involves potential erroneous results that occur from having not everyone in the sample respond to the survey (Dillman, Smyth, & Christian, 2009). Individuals who have more motivation to discuss their views on CBT may have swayed the results. Based on a review of the literature on survey research, several potential factors could have led to the low response rate.

Tourangeau (2004) presents a variety of common problems with response rates to surveys. His list includes the perceived decline in the level of civic engagement, the potential for less free time, concerns about privacy and security, and a "rising hostility toward telemarketers (p. 783)." With respect to this sample, the recruitment emails were sent to the participants' work email accounts, which may exacerbate some of the factors that Tourangeau describes. In particular, the factors of less time, concerns about privacy, and potential hostility toward marketing emails could be a factor in this study. Anecdotal reports suggest that education related businesses intentionally target school websites for scraping email addresses and then send emails to market their products and services. This leads to a large volume of emails to educational professionals. It is likely, that some potential participants deleted the emails or chose not to

respond before understanding the content. It may also be likely that for some participants the recruitment emails were lost in the volume of emails that school professionals receive on a daily basis. The researcher attempted to avoid this potential by scheduling the sending of the emails in the morning- just before work starts for most psychologists and counselors- to ensure that the email would be near the top of the deluge of emails; however, this approach may not have prevented non-responses.

With respect to the lack of time that individuals have that Tourangeau reports as a barrier, the length of the survey was potentially a factor in at least 73 cases. The Qualtrics application allows researchers to ascertain how many participants started the survey, but did not complete it. As mentioned in the results section, the completion rate for the survey was 69%. One potential cause for the lack of these individuals not completing the survey is the survey length. Although a wide variety of factors affect survey completion besides survey length (Fan & Yan, 2010), it is possible that in this case some participants may have chosen to not continue due to a lack of time.

In retrospect, two approaches that should have been considered was to add a small token of appreciation automatically to the recruitment email and to use a mixed modes approach to the survey (Dillman, Smyth, & Christian, 2009). For this study, the costs associated with these two approaches proved unfeasible, but using these strategies would likely increase the participant response rate.

Despite the majority of the participants indicating that they have had some form of training in CBT, how much training they received was not asked. Finding out this information may assist in understanding the potential correlation of the amount of training and the providers' sense of Self-Efficacy. Those professionals that provided CBT felt a higher sense of Self-

Efficacy toward the use of CBT, and it is assumed that this may be related to the amount of training, but further investigation is warranted to find out what leads to a high sense of Self-Efficacy.

Another potential limitation involves the alignment of the survey questions with the CFIR factors. The questions were developed with the factors in mind, but it is possible that some questions do not clearly or accurately reflect the intent of the CFIR construct. In some cases, the CRFIR construct included multiple concepts and variables and the challenge was to incorporate these questions into two questions. In addition, the EFA showed that several questions loaded onto factors that did not align with the CFIR construct. For example, the District Resources factor uncovered in the first EFA contained questions about the district providing adequate CBT training as well as the district level administrators supporting the use of CBT. On face value these questions appear to measure different constructs, yet they were found to both load into the same factor, District Resources. It may be that there is no perceived difference between providing training and support because both concepts represent district leadership priorities or areas of focus, which may be the overarching issue, that CBT is best implemented when there is comprehensive leadership support. For example, the construct of Learning Climate mentioned in the results section contains multiple potential elements. Summarizing this construct into an easily understandable question about CBT proved challenging. For CFIR areas such as this, multiple questions were designed. Future research in this area might attempt to create several questions per construct. With an adequate number of questions, a principle component analysis might be able to be conducted to determine the predictive quality of the survey.

Along the same lines of the congruence between the CFIR constructs and the questions, additional questions should have been developed to assess each CFIR construct. For the sake of

parsimony, two questions were developed per construct. As mentioned in the results section, the generalizability of the study is limited by the low participant to variable ratio in the EFA process. The ratio of 5:1 clearly does not meet the standard of 20:1; yet the results are not completely invalidated.

Another limitation found in the data analysis process involved the potential for multicollinearity with the 9 factors distilled from the CFIR constructs. Examining the zero-order correlations showed a majority of the factors correlated with each other, indicating a significant overlap of variance between the factors. This means that some of the CFIR-related questions may not have been constructed in a manner that would have provided for more discrimination between the constructs. Adding more questions per CFIR construct and having a higher number of participants might have mitigated the potential for multicollinearity and shown some additional factors to be significant.

Another limitation to the research that was discovered during the data analysis process involved the potential for measurement error, specifically with respect to one of the open-ended questions. As noted in the results section, the results of the question asking about facilitators for CBT use were considered unreliable due to the high number of participants reporting that they did not understand the question. Due to the potential for measurement error, this question was omitted from the results and not taken into consideration in the context of the overall study. Unfortunately, this limited the scope of the study slightly in that it did not allow for a deeper investigation of the variables that the participants report as important to facilitating their use of CBT. A potential corrective action for the problem with this question would be to conduct a more comprehensive cognitive interviewing process prior to using the question in the survey (Dillman, Smyth, & Christian, 2009).

Despite these limitations, the results of the study to provide some provocative clues as to what factors are linked with the use (or non-use) of CBT in schools. Future researchers in this area could account for these limitations and choose to conduct additional studies to provide more definitive and more in-depth knowledge as to the implementation of mental health EBPs such as CBT.

Future research. The results of this study open up the potential for several other lines of research to understand CBT implementation in school settings. At least four different potential avenues of research will be briefly discussed. The first involves the need for a deeper understanding of what the factors of District Resources and Skill Level mean specifically to school providers and administrators. Using qualitative methods, or even a mixed method approach, may shed more light on what these factors mean. Focus groups and interviews with school counselors, psychologists, building administrators, and district administrators would likely allow for further in-depth analysis of these two factors, as well as other potential CFIR constructs that may be subject to Type II errors due to possible multicollinearity, non-response error, or measurement error.

The results of this study also lend themselves to the potential for a use in a Randomized Control Trial (RCT) experimental design. Clearly, using a CBT manual showed an increased likelihood of CBT implementation for both roles surveyed. Randomly assigning participants to a business as usual group and a manual group would provide for more definitive evidence to support the notion that providing a manual does indeed increase the uptake of CBT. Changing independent variables in this RCT, specifically around the results obtained in this survey, could also include training with or without a manual, designating one person as a CBT provider, specifically instructing providers on how to incorporate CBT into daily activities, and varying

the level of consultation and supervision for providers. Altering additional independent variables related to the practitioners' Skill Level could include the type of training involved such as whether or not a group is co-led by an experienced therapist, the effectiveness of large group instruction for CBT, or using a role plays as a primary instructional tool, just to name a few. Each of these potential variables manipulated through an RCT could add further evidence to support the implementation of CBT in the future.

Another question that arose from the results of this study involves the former role of the providers' building or district-level supervisor, especially with it relates to the CFIR construct of Leadership Engagement. In the open-ended questions some of the participants noted that their building level, or district-level, administrators do not support the use of CBT and actively work to have providers engage in other activities that have a more academic or career focus, while encouraging them to refer students in need to outside agencies. Since one finding from the CFIR-related questions demonstrates that district leadership support is a likely factor in CBT implementation, further evaluation of this condition as a factor of Leadership Engagement, could shed more light on the variables needed to increase CBT implementation.

Lastly, another area for potential further research includes evaluating the MHAT service delivery model proposed earlier. Multiple lines of inquiry exist ranging from merely evaluating the number of students supported versus care as usual, to assessing the mental health outcomes from the direct services, as well as the potential for academic and behavioral gains. A variety of evaluative tools exist to measure student progress in mental health functioning, including the Screen for Child Anxiety Related Emotional Disorders (SCARED), the Revised Children's Manifest Anxiety Scale: Second Edition (RCMAS-2), the Beck Depression Inventory II (BDI-II), the Reynolds Adolescent Depression Scale 2 (RADS2), and the Child PTSD Symptom Scale

(CPSS). Additionally, an array of academic measures exist ranging from the Woodcock Johnson, and WIAT to Curriculum Based Measures (CBM) such as the DIBELS (University of Oregon Center on Teaching and Learning, 2017). Behavior can be measured through Office Discipline Referrals and the use of Direct Behavior Rating forms (Chafouleas, Riley-Tillman, & Crist, 2009). Each of these measures would allow for researchers to evaluate the effectiveness of the MHAT on different aspects of children's lives.

CHAPTER 5: CONCLUSION

CBT is a well-established intervention that has helped numerous children and adults cope with mental disorders. The results of this study show that despite this fact, CBT is not provided frequently in the school setting by school-based providers. The results of this study show that approximately 52% of the participants could be considered non-implementers of CBT, yet 88% of the participants have received some form of training in how to provide CBT.

In conclusion, this study demonstrates that at least four different factors affect the implementation of CBT in school settings. CBT is a complex intervention that requires individuals skilled and confident enough, along with support from their district leadership and appropriate curriculum to deliver the therapy. Lastly, the role-based mandates placed on the provider by local administrators, professional organizations, and governments have a significant effect on the likelihood of the use of CBT in school settings.

In order to make CBT a more prominent intervention schools and districts need to provide school psychologists, counselors, and social workers with adequate resources, incentives, supervision and clinical consultation, parent and teacher support, and relief from competing responsibilities. In order to make these changes, leaders need to establish CBT as a priority by providing a specific implementation plan that aims toward providing a stable coaching and support network that allows for sustainability, otherwise, CBT will still be an EBP that is implemented primarily at the discretion of the individual provider.

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APPENDIX

Table A1. *Survey Demographic, CBT Use, and Open-Ended Items*

Item	Item Stem/Question	Response
1	What is your gender?	Multiple Choice
2	What is your primary role in the school setting?	Binary
3	How many years have you been in your current position?	Single Choice
4	In which district do you primarily work?	Open-ended
5	I have had the following training on how to use CBT...	Multiple Choice
6	With approximately how many students have you used CBT?	Single Choice
7	I have used a manual-based CBT protocol such as Coping Cat, MATCH, Modular CBT for Anxiety, or Trauma-Focused CBT.	Multiple Choice
8	Mark any of the CBT manuals you have used.	Multiple Choice
9	What are some barriers that have prevented you from delivery of CBT in schools?	Open-ended
10	What are some facilitators that have allowed you to deliver CBT in schools?	Open-ended
11	Do you have any other comments related to CBT not covered in this survey?	Open-ended

Table A2. *Survey Items for CFIR Inner Setting Construct*

CFIR Sub-construct and Item Stem	Item	Response
B. Networks & Communications		
1 *I regularly have good clinical support/consultation from my supervisor(s).*	12	Rating 1-7
2 *It is easy to communicate with my administrators.*	13	Rating 1-7
C. Culture		
1 *The culture in my school supports me providing therapy for students.*	14	Rating 1-7
2 *Teachers would be fine with me pulling a student out of a class to receive CBT.*	15	Rating 1-7
D. Implementation Climate		
1. Tension for Change		
1 *CBT is needed in my school.*	16	Rating 1-7
2 *I feel pressure to provide CBT.*	17	Rating 1-7
2. Compatibility		
1 *CBT fits well with the goals of my school.*	18	Rating 1-7
2 *CBT is compatible with the goals of my school(s).*	19	Rating 1-7
3. Relative Priority		
1 *Providing CBT is a priority for me.*	20	Rating 1-7
2 *Too many other initiatives are occurring in my school to prevent providing CBT.*	21	Rating 1-7
4. Organizational Incentives & Rewards		
1 *I am or would be rewarded and/or respected for providing CBT.*	22	Rating 1-7
2 *I would receive positive feedback from colleagues for providing CBT.*	23	Rating 1-7
5. Goals and Feedback		
1 *Providing CBT is an expressed goal across the district for my role.*	24	Rating 1-7
2 *Administrators have set goals to provide CBT.*	25	Rating 1-7
6. Learning Climate		
1 *I have been well trained to provide CBT.*	26	Rating 1-7
2 *I feel safe within my district to try new therapeutic methods.*	27	Rating 1-7
E. Readiness for Implementation		
1. Leadership Engagement		
1 *My district level administrator is supportive of my providing CBT.*	28	Rating 1-7
2 *My district level administrator encourages me to provide CBT.*	29	Rating 1-7
2. Available Resources		
1 *My district provides resources such as clerical support, manuals, materials, and training for me to be able to provide CBT.*	30	Rating 1-7
2 *My caseload prevents me from delivering direct intervention services to students.*	31	Rating 1-7
3. Access to knowledge and information		
1 *My district has provided me with adequate training on CBT.*	32	Rating 1-7
2 *My district has provided me with methods of how to incorporate CBT into my work.*	33	Rating 1-7

Table A3. *Survey Items for CFIR Characteristics of Individuals Construct*

CFIR Sub-construct and Item Stem	Item	Response
A. Knowledge & Beliefs about the Intervention		
1 *I feel skilled enough to provide CBT.*	34	Rating 1-7
2 *CBT fits well with my theoretical orientation.*	35	Rating 1-7
B. Self-efficacy		
1 *I feel I can be successful supporting students by using CBT.*	36	Rating 1-7
2 *I have the ability and skill to provide CBT.*	37	Rating 1-7
C. Individual Stage of Change		
1 *It is highly likely that I will provide CBT in the future.*	38	Rating 1-7
2 *I enjoy, or will enjoy, providing CBT.*	39	Rating 1-7
D. Individual Identification with Organization		
1 *I feel committed to staying with my district/LEA.*	40	Rating 1-7
2 *I like working for my district/LEA.*	41	Rating 1-7

Figure A1. Initial Survey Email for Recruiting Participants

In today's schools, anxiety and depression are more prevalent than ever before and school mental professionals continue to search for effective interventions for these students. Cognitive Behavioral Therapy (CBT) is one method of treatment often used with individuals with these types of mental health needs. CBT examines thoughts, feelings, and behaviors and how to change thoughts and behaviors to affect feelings. These areas are places where a therapist can help. CBT interventions can be in the form of one-to-one therapy, group therapy, workbooks, and online modules. Several CBT manuals such as the "Coping Cat" exist and CBT principals are also included in a number of popular interventions for emotional regulation such as Aggression Replacement Therapy, The Alert Program, The Incredible 5-Point Scale, etc. For this survey, however, the focus is on therapeutic interventions that specifically mention CBT as an orienting approach.

CBT was developed in the late 20th century and has a great body of research to support its use as an effective treatment for emotional disorders, but is not often used in school settings. The purpose of this survey is to understand some of the barriers and supports to school mental health providers using CBT. The survey should take approximately 5-10 minutes to complete.

As an appreciation for considering to take the survey, you can enter into a drawing for a 10 dollar gift certificate. If you are interested in participating in the random drawing, please email jaredt2@UW.Edu with an email address and the gift certificate will be sent directly to the email account. Email addresses will not be associated with the survey responses and completing the survey is not a requirement to enter the drawing.

This survey is part of the requirements for the completion of the doctoral program in Special Education at the University of Washington by student, Jared Taylor. If you have specific questions or concerns about the survey and/or wish obtain final results, Jared can be contacted at jaredt2@UW.Edu. If you have additional concerns about the survey, you may contact the University of Washington Human Subjects Division which approved this exempt study. The Division can be contacted through the following information:

4333 Brooklyn Ave. NE, Box 359470
Seattle, WA 98195-9470
Telephone 206.543.0098
Fax 206.543.9218
hsdinfo@u.washington.edu
www.washington.edu/research/hsd

The survey is voluntary and any question may be skipped to complete the survey. All responses to this survey are anonymous and by continuing with this survey you are providing consent to continue.

Thank you very much for your time!

Please click the Next to start.

Figure A2. Reminder Survey Email for Recruiting Participants

Hello ${e://Field/FirstName} ${e://Field/LastName},

My name is Jared C. Taylor and I am emailing to request your participation in a survey (see link below) that is highly relevant to your work as a school counselor or school psychologist. I am currently a doctoral student at the University of Washington and am conducting research on the implementation of Evidence-Based Practices in Mental Health. More specifically, I am focusing on the implementation of Cognitive Behavioral Therapy (CBT) in the school environment by school-based providers. The purpose of this survey is to understand some of the barriers and supports to school mental health providers using CBT.

The survey consists of 40 total questions, with all but three questions being a rating scale. The remaining three questions are open-ended questions asking for your input. The survey should take approximately 5-10 minutes to complete.

As an appreciation for considering to take the survey, you can enter into a random drawing for a 10 dollar gift certificate. Email addresses will not be associated with the survey responses and completing the survey is not a requirement to enter the drawing.

I am sending this survey as part of the requirements for completion of the doctoral program in Special Education at the University of Washington. If you have specific questions or concerns about the survey and/or wish obtain final results, I can be contacted at jaredt2@UW.Edu. If you have additional concerns about the survey, you may contact the University of Washington Human Subjects Division which approved this exempt study. The Division can be contacted through the following methods:

Address: 4333 Brooklyn Ave. NE, Box 359470
Seattle, WA 98195-9470
Telephone: 206.543.0098
Fax: 206.543.9218
Email: hsdinfo@u.washington.edu
Website: www.washington.edu/research/hsd

Thank you very much for your time!

Jared C. Taylor
University of Washington Doctoral Student
jaredt2@uw,edu

Follow this link to the Survey:
${l://SurveyLink?d=Take the survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Figure A3. Example of Qualtrics Survey Item Layout