Feasibility and effectiveness of MATCH-ADTC on ninth-grade students presenting symptoms of depression, and anxiety

by

Samantha Marie Kriley Holloway

B.S., Washburn University, 2011
M.S., Kansas State University, 2014

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Special Education, Counseling and Student Affairs
College of Education

KANSAS STATE UNIVERSITY
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Abstract

Anxiety and depression symptoms in school-aged children are highly prevalent and can be comorbid. Mental health interventions are promising in decreasing anxiety and depression symptoms as well as learning healthy coping techniques. MATCH-ADTC is a transdiagnostic intervention grounded in cognitive-behavioral therapy and designed for children ages 6 to 15. The current study investigates the feasibility and effectiveness of MATCH-ADTC intervention on 15 ninth grade students that included both student self-reports and teacher reports. Students found MATCH-ADTC to be feasible ($M = 1.89$, $SD = 0.34$). Individual graphs of Internalizing Problem and Total Problem from the Brief Problem Monitor (BPM) found eight and seven student self-reports decreased over the course of MATCH-ADTC intervention, respectively. Individual graphs of Internalizing Problem and Total Problem from the Brief Problem Monitor (BPM) found five and ten teacher reports decreased over the course of MATCH-ADTC intervention, respectively. Results from the longitudinal multilevel modeling found an intercept range of $59.42 – 66.7$. Intercepts below 65 indicate individuals did not have severe enough symptom of depression or anxiety as indicated by the Brief Problem Monitor. No statistically significant difference was found on the pre-and-post-test Beck Depression Inventory (t (14) = 0.68, p = 0.51) and Beck Anxiety Inventory ($t(14) = 1.17$, p = 0.26). The transdiagnostic intervention of MATCH-ADTC has provided evidence of potential for reduction in symptoms of anxiety and depression in school-aged children. However, more research should be completed on the effectiveness of MATCH-ADTC of school-aged children.

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Dedication

I dedicate this dissertation to the enhancement of school counselors implementing interventions for students with depression and anxiety symptoms. Further, I dedicate this dissertation to the many hard-working school counselors who are providing quality work while supporting and giving services to one of our most vulnerable populations.

To my son, Gabriel Adam Holloway, you are loved and missed.

Chapter 1 - Introduction

The analysis of the 2000 research conducted by the U.S. Department of Health and Human Services indicated that by 2020, youth mental health concerns would grow in greater intensity by upwards of 50% (Jenkins, 2019). Addressed in this chapter is an overview of mental health in school-aged children, developmental concerns, role of the school counselor, and research on interventions to help and support school-aged children exhibiting symptoms of depression and anxiety. A rationale, purpose, research questions, and defined terms are provided for the current study.

Mental Health and Treatment in School-Aged Children

Mental health concerns in school-aged children are described as serious changes in the way children typically learn, regulate, or handle their emotions (Centers for Disease Control and Prevention, 2020). Mental health concerns in youth predict poor educational achievement, physical ill health, substance misuse and conduct problems (Chan, et al., 2018). Anxious and depressive symptoms (i.e, internalizing symptoms) are common (Loevaas, et al., 2020). Internalizing symptoms consist of trouble concentrating, feeling worthless or inferior, fearful or anxious, guilty, unhappy, sad, or depression, and worry Achenbach, 2011). Approximately 7.1% of children aged 3-17 years old have diagnosed anxiety while 3.2% of children aged 3-17 have diagnosed depression (Centers for Disease Control and Prevention, 2020). Anxiety concerns among school-aged children are common with a prevalence of roughly 15-20% having the concern throughout their lifetime (Chan, et al., 2017). A depression concern among school-aged children has a lifetime prevalence of 11% (Chan, et al., 2017). It is common for multiple mental health symptoms to occur together also known as comorbidity (Loevaas, et al., 2020). Comorbidity rates between diagnosed depression and anxiety is connected in up to 75% of

clinical cases (Johnstone et al., 2020). Roughly three in four children aged 3-17 years old with depression also have anxiety (Centers for Disease Control and Prevention, 2020). In the same way, one in three children aged 3-17 years old with anxiety have depression (Centers for Disease Control and Prevention, 2020). Outcomes for comorbidity of depression and anxiety tend to be poorer than those of a singular condition, with greater impairment, longer duration of symptomology, and poorer response to treatments (Johnstone, et al., 2020). Comorbidity of depression and anxiety are associated with suicidality (Chan, et al., 2017). School-aged children of color and those from families with low income are at greater risk for mental health concern (Himmelstein, et al., 2016). Despite the high prevalence of anxiety and depression in school-aged children, the World Health Organization (2018) reported mental health concerns remain underdiagnosed and undertreated (Johnstone, et al., 2020)

Depression and anxiety rates among school-aged children between the ages of 6-17 years old has increased from 5.4% in 2003 to 8% in 2007 and 8.4% in 2012 (Centers for Disease Control and Prevention, 2020). The global prevalence of mental health concerns in youth is estimated at 10-20% (Chan, et al., 2017). Rates of depression and anxiety symptoms of school-aged children have increased, while treatment rates have only increased for actual diagnosed depression and anxiety leaving many symptoms undertreated (Johnstone et al., 2020). Nearly, 80% of children aged 3-17 with diagnosed depression receive treatment while only 60% of children aged 3-17 years old with diagnosed anxiety receive treatment (Centers for Disease Control and Prevention, 2020). However, accessing and receiving mental health treatment without a diagnosis is relatively low, with a significant portion of children receiving no mental health treatment even though they exhibit signs and symptoms of a mental health concern (Ghandour, et al., 2020). Treatments in rural areas of the country are oftentimes difficult to

locate and not within a reasonable driving distance (Centers for Disease Control and Prevention, 2020). Another barrier to seeking treatment stems from direct cost and low mental health literacy (Ghandour, et al., 2020). Parents of children with mental, behavioral, and developmental disorders in rural areas more often report having trouble getting by on their family's income than parents of children with these disorders in urban areas (Centers for Disease Control and Prevention, 2020). Traditionally, rural areas have fewer of these professionals than urban areas (CDC, 2020). The shortage combined with the unique socioeconomic and cultural factors associated with rural residence, including higher poverty rates and geographic isolation, make it more challenging for rural children to access behavioral health services (CDC, 2020). These school-aged children in rural areas of the country often go without treatment or receive treatment but do not reach full recovery (Ghandour, et al., 2020). Going without treatment can lead to deficits and barriers to success in school-aged children and through adulthood (Centers for Disease Control and Prevention, 2020).

Developmental Concerns of School-Aged Children with Mental Health

Twenty percent of youth in schools have a mental health concern and 75% of those students do not receive treatment or receive inadequate treatment (Appling, et al., 2020). A mental health concern is a broad term referring to a noticeable decline in academics, increased rate of absenteeism, decrease in social activities, or as reported by results of a self-reporting diagnostic instrument administered in a school setting (Ghandour, et al., 2019). Students mental health concerns have characteristics that affect performance in fundamental areas of functioning included but not limited to behavior, social interactions, social skill fluency, and academic achievement (Hodgkinson, et al., 2017). Additionally, these students have difficulty developing and maintaining appropriate interpersonal relationships, adhering to basic rules of conduct, and

acquiring and performing age-appropriate academic skills (Hodgkinson, et al., 2017). Similarly, mental health concerns can negatively affect healthy development by interfering with the student's ability to achieve social, emotional, cognitive, and academic milestones (Ghandour, et al., 2019). Research suggests that significant mental health problems among students can lead to failure to complete school, incarceration, unemployment, underemployment, and significant interpersonal difficulties (Hodgkinson, et al., 2017). It is also common to see a peak in absenteeism, lower ACT and SAT scores, as well as higher suspensions (Parzych, et al., 2019). If left untreated, these mental health problems tend to become chronic and can be associated with negative outcomes later in life. Common negative outcomes include substance abuse issues, increased risk for suicidal behaviors, and overall a decreased quality of life (Johnstone, et al., 2020). The school counselor is uniquely qualified to support and nurture the social emotional growth of school-aged children and addressing the school-based mental health concerns that impact school success.

School Counselor Role

Professional school counselors are team leaders who implement comprehensive school counseling programs that are integral to the mission and vision of the total school district. School counselors design and deliver school counseling programs that nurture a positive and safe climate, advocates for access and equity for all, and enhances student learning and behavioral outcomes (Goodman-Scott, et al., 2015**;** Carey & Dimmitt, 2012). School counselors design and implement comprehensive and developmental P-12 school counseling programs designed to promote academic, career, and social emotional success for all students (American School Counseling Association, 2020). Additionally, school counselors recognize and respond to the need for mental health services that promote social emotional wellness and development for all

students (ASCA, 2020). Proactive and preventative school-based mental health, behavioral strategies, and interventions are essential to help support students in academic, career, and social/emotional development. Counseling strategies and interventions are integrated through direct services in classroom lessons, small and large groups, and individual counseling (ASCA, 2020). Teaching perseverance, resilience, and healthy coping skills within a standards-based framework and curriculum provides student a foundation of positive life skills. Successful implementation of evidence-based practices creates the potential to reduce the severity and persistence of symptoms for those affected and to decrease the incidence of new diagnosable cases (Loevaas, et al., 2020). Students in school districts that have P-12 school counselors implementing comprehensive programs produce higher graduation rates, higher college entrance and persistence rates, lower chronic absenteeism rates, and fewer out-of-school suspensions (Parzych, et al., 2019; Lapan, et al., 2012; Goodman-Scott, et al., 2018). Access to a school counselor should not be an amenity reserved for students with privileged backgrounds (Parzych, et al., 2019). Regular access to a school counselor is a necessity, especially for students in need of an intervention (Parzych, et al., 2019).

School counselors are intentional with their skills, time, and energy implementing direct services for students (ASCA, 2017). Direct student services include instruction, appraisal and advisement, and counseling. Counselors deliver direct services designed to help students develop the knowledge, attitudes, and skills in the ASCA *Mindsets and Behaviors for Student Success: K-12 College-and Career-Readiness Standards for Every Student* (ASCA, 2020). School counselors provide services in a comprehensive program through instruction, large and small groups, individual counseling, and classroom lessons in the domains of academic, social emotional, and career based on assessed student and school needs (ASCA, 2020). In the school

setting group counseling is particularly effective as an intervention for students with mental health concerns (Johnstone et al., 2020).

Transdiagnostic Intervention for Students with Presenting Symptoms of Depression and Anxiety

Transdiagnostic interventions represent a relatively new approach designed to be applicable and effective to a combination of mental health issues and unhealthy behaviors (McEvoy, et al. 2009). The research-based components are delivered in such a way to account for the comorbidity that may be present (Hersh, et al., 2016). Transdiagnostic interventions are interventions that apply the same underlying treatment principals across mental health concerns, without tailoring the protocol to a specific diagnosis (McEvoy, et al. 2009). In contrast, other evidence-based treatment interventions are designed to focus on a single problem or disorder, and they tend to have comorbidity that shift the treatment (Askeland, et al., 2019). These approaches are developed based on the common comorbidity of these disorders and similarities between the disorders in terms of etiology, risk factors, and treatment strategies (Loevaas, et al., 2020). Transdiagnostic interventions have the advantage of targeting both anxious and depressive symptoms concurrently, reaching a broader population and simplifying implementation for professions (Loevaas, et al., 2020). Transdiagnostic interventions have been used with adult participants and found to be effective. These interventions can be modular in design and seek to reduce some of the barriers to counselor's use of empirically supported intervention (Askeland, et al., 2019). Transdiagnostic intervention would be a best fit for a school due to the diverse student population that has multiple symptoms of mental health concerns.

Rationale for Current Study

Depression and anxiety rates of school-aged children are increasing each year (Centers for Disease Control and Prevention, 2020). School-aged children are commonly in the school setting for roughly 8 hours a day for 5 days a week. In the domain of social emotional, a school counselor delivers instruction designed to proactively enhance awareness of mental health and remove the stigma associated with mental health concerns; promote positive well-being; and, teach healthy behaviors and coping skills (ASCA, 2020). School counselors implement a variety of best practices and interventions to address student mental health concerns. A relevant approach to mental health concerned in school is the Multi-Tiered System of Supports (MTSS). Multi-tiered System of Supports is a culturally responsive, evidence-based framework that is data driven and organized in a continuum of Tiers 1, 2, and 3 (Sugai & Horner, 2009). In a context of prevention, tier 1 is the universal or primary tier that includes instructions and interventions for the majority of students (75-90%). The school counselor serves as an educator, supporter, intervener, and facilitator (Cavin, et al., 2016). Tier 2 is designed for 10-25% of students who need a limited amount of support or assistance in meeting academic, social emotional, and/or behavioral goals Sugai & Horner (2009). Tier 2 interventions are often delivered in a small group setting. Tier 3 interventions are targeted toward the less than 10% of students who need more intensive and individualized counseling interventions, behavioral modifications and/or academic scaffolding (Goodman-Scott, et al., 2015). When implementing MTSS, P-12 school counselors engage in interventionist roles to provide individual and group counseling interventions (Cavin, et al., 2016).

The needs of the targeted tier level are the focus of the interventions implemented to address academic and behavioral concerns with a goal of student success (ASCA, 2018).

Transdiagnostic interventions pose great potential to provide instruction, support, and strategies appropriate for students exhibiting or expressing tier 2 needs. However, there lacks sufficient research on a transdiagnostic intervention as a tier two school-based intervention for students experiencing symptoms of depression and anxiety.

School counselors address the social emotional and mental health concerns of all P-12 students. For the current study, the targeted population was students exhibiting symptoms of depression and anxiety, with specific investigation on internalizing behaviors. It should be noted school counselors do not diagnose, but identify students demonstrating changing patterns and behaviors that might be indicative of negative mental health.

Purpose and Research Questions

The purpose of this study was to further the research on transdiagnostic intervention of MATCH-ADTC by researching the feasibility and effectiveness when taught to ninth grade students reporting symptoms of depression and anxiety. In this study, social validity, treatment fidelity, longitudinal feasibility analyses, and a paired sample t-test was completed. The research questions follow:

1. Can MATCH-ADTC be delivered with adequate amounts of fidelity by school counselors?

2. How acceptable was MATCH-ADTC for students?

3. Does MATCH-ADTC decrease depression symptoms of ninth grade students?

4. Does MATCH-ADTC decrease anxiety symptoms of ninth grade students?

Definition of Terms

Acceptability –based off a specific question on the Children's Usage Rating Profile and on the

category Acceptability on the Usage Rating Profile-Intervention Revised

Anxiety (Generalized Anxiety Disorder)

- Diagnostic Criteria

    - A. Excessive anxiety and worry, occurring more days than not for at least

      6 months, about a number of events or activities.

      B. The individual finds it difficult to control the worry.

      C. The anxiety and worry are associated with three (or more) of the

      following six symptoms (with at least some symptoms having been

      present for more days than not for the past 6 months):

      Note: Only one item is required for children.

          1. Restlessness or feeling keyed up or on edge

          2. Being easily fatigued.

          3. Difficulty concentrating or mind going blank.

          4. Irritability.

          5. Muscle tension.

          6. Sleep disturbance.

      1. D. The anxiety, worry, or physical symptoms cause clinically

         significant distress or impairment in social, occupational, or other

         important areas of functioning.

      E. The disturbance is not attributable to the physiological effects of a

      substance or another medical condition.

F. The disturbance is not better explained by another mental disorder.

(American Psychiatric Association, 2013)

Cognitive Behavioral Therapy (CBT) – a time-sensitive, structured, present-oriented psychotherapy that helps individuals identify goals that are most important to them and overcome obstacles that get in the way (Beck Institute, 2020).

Depression (Major Depression Disorder) – Diagnostic Criteria

- A. Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest Note: Do not include symptoms that are clearly attributable to another medical condition.

    1. Depressed mood most of the day, nearly every day, as indicated by either subjective report or observation made by others

    2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.

    3. Significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day.

    4. Insomnia or hypersomnia nearly every day.

    5. Psychomotor agitation or retardation nearly every day.

    6. Fatigue or loss of energy nearly day

7. Feelings of worthlessness or excessive or inappropriate guilt nearly every day.

8. Diminished ability to think or concentrate, or indecisiveness, nearly every day.

9. Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

- B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

- C. The episode is not attributable to the physiological effects of a substance or another medical condition.

  Note: Criteria A-C represent a major depressive episode

  Note: Responses to a significant loss may include the feelings of intense sadness, rumination about loss, insomnia, poor appetite, and weight loss noted in Criterion A, which may resemble a depressive episode. Although such symptoms may be understandable to the normal responses to a significant loss should also be carefully considered. This decision inevitably requires the exercise of clinical judgement based on the individual's history and the cultural norms for the expression of distress in the context of loss.

- D. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder,

> > delusional disorder, or other specified and unspecified schizophrenia
> >
> > spectrum and other psychotic disorders.
>
> - E. There has never been a manic episode or a hypomanic episode
>
>   (American Psychiatric Association, 2013).

Dialectical Behavior Therapy (DBT) – is grounded in the belief that emotions are transactional

events where both context and response are integral parts of the emotional system. This means

the emotional response of the person is not separated from the emotionally evocative of the

contact and both are seen to reciprocally influence each other (Bohus, et al., 2017).

Individual Psychology – is characterized as a value-based, fully- integrated theory of personality,

and a mission to encourage the development of psychologically healthy and cooperative

individuals (Adler, 1925).

Internalizing Symptoms - problems of withdrawal, somatic complaints, and anxiety and

depression (Achenbach, 1966). The current study targeted trouble concentrating, feeling

worthless or inferior, fearful or anxious, guilty, unhappy, sad, or depressing, and worry as

internalizing symptoms (Achenbach, et al., 2011).

Mental Health Concern- a broad term referring to a noticeable decline in academics, increased

rate of absenteeism, decrease in social activities, or as reported in the results of a diagnostic

instrument used in a school district that declares a student at risk based on questions answered by

the school-aged student (Ghandour, et al., 2020).

Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct

Problems (MATCH-ADTC)– transdiagnostic intervention that combines modules for cognitive

behavioral treatment of anxiety, depression, conduct problems, and trauma, taken from known

evidence-based protocol. Empirically derived algorithm for making decisions regarding which

module should be used when (Chorpita & Weisz, 2009).

Solution-Focused Brief Therapy (SFBT) – is characterized by utilizing what the client brings

with him/her to meet the needs in such a way that the client can make a satisfactory life for

himself (de Shazer, 1985)

Transdiagnostic Intervention –Targets psychological processes or core vulnerabilities that have

been observed to contribute to the development and maintenance of classes of disorders (Bovin,

et al., 2016). These intervention protocols enlist a core set of treatment principles to address a

range of psychiatric disorders at once within one intervention (Bilek & Ehrenreich-May, 2012).

Chapter 2 - Review of Literature

Internalizing Symptoms

Internalizing symptoms refer to problems of withdrawal, somatic complaints, anxiety, and depression (Achenbach, 1966). As a result, internalizing symptoms can be expressed by individuals as general, social, and separation anxiety and worry, fear, depression, fatigue, social withdrawn, sleep disturbance, and self-consciousness (Fornander & Kearney, 2020). In addition, it is common to see internalizing symptoms in the school age population as well as the student's having high comorbidity (Fornander & Kearney, 2020). Depression and anxiety are two disorders that have an influx of internalizing symptoms. In this study the focus is on internalizing symptoms. However, the majority of research focuses on diagnosed depression and anxiety. For that reason, diagnostic information for generalized anxiety disorder and major depressive disorder has been provided.

Anxiety

Anxiety disorders tend to share features of fear and anxiety. Fear is an emotional response to real or perceived imminent threat whereas; anxiety is the anticipation of a future threat (American Psychiatric Association, 2013). There are seven anxiety disorders in the DSM-V. The current study focused on symptoms of generalized anxiety disorder.

Depression

Depression disorders have a common feature of presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect individual's capacity to function (American Psychiatric Association, 2013). There are four depressive disorders in the DSM-5. The current study focused on the symptoms from major depressive disorder.

Prevalence

Anxiety

The prevalence of an anxiety problem in children ages 3-17 years old has been found at 7.1% (Ghandour, et al., 2019). An estimated 2.2% of adolescents have generalized anxiety disorder, and an estimated 0.9% of those adolescents have severe impairment (National Institute of Mental Health, 2020). Females are twice as likely as males to experience generalized anxiety disorder (American Psychiatric Association, 2013). Among adolescent females, 3.0% more likely to have generalized anxiety disorder compared to the 1.5% adolescent males (National Institute of Mental Health, 2020).

Depression

Research indicates that 3.2% of children aged 3-17 years old have been diagnosed with depression (Ghandour, et al., 2019). It is estimated that 3.2 million adolescents aged 12-17 in the United States have had at least one major depressive episode (National Institute of Mental Health, 2020). In addition, the prevalence of major depressive episode was highest among adolescents reporting two or more races (National Institute of Mental Health, 2020). Females experience major depressive disorder at 1.5 to 3.0 higher rates than males beginning in early adolescents (American Psychiatric Association, 2013). In the same way, the prevalence of a major depressive episode among adolescent females was 20% while males were 6.8%.

Detrimental Effects

There are detrimental effects to adolescents who have symptoms of depression and anxiety. If students are in a serious depressive episode it can cause material distress or impairment to the adolescents' work, school performance, social life, or other areas of

functioning (Morrison, 2014). In the same way, excessive worry that connects to generalized anxiety disorder impairs the individual's capacity to function in a timely and efficient manner, whether at home, school, or at work (American Psychiatric Association, 2013). Excessive worrying can impair the ability to instill confidence and self-efficacy in children and adolescents (American Psychiatric Association, 2013). It has also been found that the individuals who do not meet the diagnostic material may still suffer from irritability, trouble concentrating, unhappiness, and anger issues. When not addressed, these feelings and emotions are often correlated to thoughts of suicide (Auger, 2011).

Current Methods of Treating

There are a variety of approaches to counseling students who have symptoms of depression and anxiety. To be effective, a counselor must have supervised experiences and sound knowledge of counseling theories and techniques (Corey, 2014). Dialectical behavioral therapy, individual psychology, solution focused brief therapy, and cognitive behavioral therapy are the recommended evidence based most effective counseling approaches for individuals with symptoms of depression and anxiety.

Dialectical Behavioral Therapy

Dialectical behavioral therapy was created by Marsha Linehan in 1993 (Linehan, et al., 2007). DBT is a comprehensive cognitive-behavioral treatment originally developed for suicidal individuals meeting criteria for borderline personality disorders (Bohus et al., 2017). Furthermore, the therapy has been expanded to treat other mental health issues whose behaviors are functionally related to problems in emotion regulation (Bohus, et al., 2017). Dialectical behavioral therapy is grounded in the belief that emotions are transactional events where both context and response are integral parts of the emotional system (Bohus, et al., 2017). This means

the emotional response of the person is not separated from the emotionally evocative of the contact and both are seen to reciprocally influence each other (Bohus, et al., 2017). Patterned actions are associated with emotional responses rather than consequences the emotion (Bohus, et al., 2017). The focus of DBT asserts the client's emotional and behavioral dysregulation are elicited and reinforced by the transaction between an invalidating rearing environment and biological tendency towards emotional vulnerability (Linehan et al., 2007). The counselor views the individual's behaviors as natural reactions to environmental reinforce (Linehan, et al., 2007). There are five functions of DBT: Enhance capabilities, increase motivation, enhance generalization to the national environment, structure the environment, and enhance counselor capabilities and motivation to treat effectively (Linehan, et al., 2007). These can be completed using interventions such as behavioral skills training, psychoeducation, and cognitive modification (Linehan, et al., 2007). Although identified as one of the most effective approaches for mental health concerns, it may be more intensive than necessary for a select group of individuals exhibiting signs of internalizing symptoms of depression and anxiety (Comtois & Linehan, 2006). While DBT is young in the perspective of other theoretical approaches discussed in the review of literature, a strong body of empirical data reports the effectiveness of DBT with adolescents who demonstrate or express signs of depression and anxiety.

Dialectical behavior therapy is commonly used with adolescents who demonstrate signs of deliberate self-harm (Booth, et al., 2014). As an example of how DBT is used, *Living Through Distress* is a DBT program that delivers four, one-hour session a week over a six-week period, providing 24 hours of intervention (Booth, et al., 2014). Using *Living Through Distress* session involved skills teaching, in session practice, homework review, and assignment of homework practice (Booth, et al., 2014). In the same way, DBT is used with adolescents who have

Borderline Personality Disorder features (Cheavens & MacPherson 2013). The form includes

theoretical framework, functions, treatment targets, treatment modes, and strategies (Klein &

Miller, 2013). The strategies are skills modules that consist of mindfulness, interpersonal

effectiveness, emotion regulation, and distress tolerance (Cheavens & MacPherson 2013).

Individual Psychology

Another effective treatment for adolescents addressing depression and anxiety is

Individual Psychology. Individual psychology was created by Alfred Adler. He built a

framework on a foundational concept of prevention and education regarding one's mental health

(Watts, 2012; Watts, 2015). He believed that all humans possess strength, assets, and ability that

can be utilized to confront and overcome their life difficulties (Watts, 2012; Watts, 2015). Adler

believed in the assumption of the unity of the individual, an attempt to obtain a picture of the

unified personality regarded as a variant of individual life-manifestations and forms of

expressions (Adler, 1925). Facilitating change is completed by the counselor and the client

focusing on behaviors and attitudes from a problem or failure focus to a focus on solutions or

successes and discover and develop assets, resources, and strengths that may have been

overlooked by the client (Watts, 2017). Adler believed individuals are motivated by a need to

overcome the sense of inferiority and strive for a higher sense of development (Adler, 1925).

Adler defined success as how individuals adjust to our environment and communities while

being our authentic self (Adler, 1925). Techniques such as acting as if, encouragement, and

paradoxical intention are used to allow the individual to gain insight and make behavioral

changes. Encouragement is one of the main techniques of Individual Psychology and is used to

increase a person's internal evaluation (Dinkmeyer, 1972). Individual psychology emphasizes

the recognition of effort and improvement, and acceptance, faith, or confidence (Dinkmeyer &

Losoney, 1996). The three dimensions of encouragement are a positive view of self, a sense of belonging, and the courage to be imperfect (Daglet, et al., 1999). These techniques are integral to effective counseling with the students experiencing mental health concerns.

Solution-Focused Brief Therapy

Solution-focused brief therapy was created by Steve de Shazer and Insoo Berg in 1985. The approach is strengths-based and founded in the belief that it is important to build on the resources, capacities, and motivations of individuals. Solution focused interventions are grounded in the belief that individuals are the experts in discovering the problems and generating solutions to solve their own problems (Miller & de Shazer, 2000). Solution focused counseling sessions address the changes determined by the individual that need to occur for resolution of identified concerns. Solution focused strategies assess the individual's readiness and willingness to make those changes and maintain the changed behavior (Halbur & Halbur, 2015). Sessions should follow simplicity to allow the individual and counselor to take advantage of the idea that a change in one person can change the test of the system under construction (de Shazer, 1985). There are specific techniques and core components used in solution-focused brief counseling (Franklin & Kim, 2009). The counselor uses the miracle question which is a question that moves immediately to viewing what the client wants to be different (Franklin & Kim, 2009; Halbur & Halbur, 2015). In the same way scaling questions are used to understand changes in feelings, moods, or communication to assist the client in recognizing that they are not completely defeated by their problems (Franklin & Kim, 2009; Prochaska & Norcross, 2014). The next component of solution focused is a consulting break and giving the client a set of compliments, assigning homework tasks, looking for strengths or solutions, and goal setting (Franklin & Kim, 2009). The final component is looking for exceptions to the problem which refers to how De Shazer

believed that exceptions to the rules are very similar to past success, except that exceptions are clearly within the realm of the Complainant and that nothing always happens and nothing is always the same (de Shazer,1985). De Shazer believed the main difference between his therapy and others was that no matter how complex the situation, a small change in one person's behavior can make a profound change (de Shazer, 1985). Techniques associated with SFBT are widely implemented and integrated in other approaches to address students at the tier 2 level of MTSS and experiencing depression and anxiety.

Over the past 10 years SFBT has been used with adolescents in a variety of ways. *PratenOnline*, a brief web-based solution-focused synchronous chat intervention has been used to help adolescents with depressive symptoms (Kramer, et al., 2014). *PratenOnline* is offered as an online chat by a mental health care foundation in the Netherlands (Kramer, et al., 2014). Chats consist of the adolescent talking with a trained health care professional who is using SFBT techniques such as the miracle questions, setting goals, looking for strengths or solutions, keeping focused on what is going well, giving compliment, looking for exceptions the problem, and asking the client to indicate on scales from 1-10 on what progress has been made in obtaining the specific goals (Kramer, et al., 2014). At the conclusion of the counseling session, adolescent decided if the intervention goal has been reached; if it has not, a new session is scheduled (Kramer, et al., 2014). Single counseling sessions have been found to reduce depressed mood (Hamza, et al., 2015). Using scaling questions, miracle questions, and discovering the adolescents' resources (Hamza, et al., 2015). However, SFBT was compared to CBT and it was found that CBT performed slightly better than SFBT (Hamza, et al., 2015).

Cognitive Behavioral Therapy

Cognitive-behavioral therapy was created by Aaron Beck and in a broad sense is any technique whose major mode of action is the modification of faulty patterns of thinking (Beck, Beck, 2016; Halbur & Halbur, 2015). Research indicated the CBT is the best practice to address depression and anxiety and have been named the *gold* standard for treatment (David, et al., 2018). CBT today has been referenced as an umbrella term for a family of research-based interventions including a more trans-diagnostic process-based and personalized approach, with the ultimate goal of linking the intervention to the process and the individual (Hayes & Hoffman, 2017). Strong empirical support exists for CBT in addressing anxiety disorders, somatoform disorders, bulimia, anger control problems, and general stress (David, et al., 2018). Beck expressed that meaning provides the richness of life, it transforms a simple event into an experience (Beck, 1979). Cognitive behavioral therapy can be described as a set of core principles focused on an individual's cognitions (verbal or pictorial) and on the premises, assumptions, and attitudes underlying those cognitions (Beck, 2016). These principles include unhealthy or dysfunctional behaviors. CBT is founded in belief that if an individual is taught more effective coping skills one will experience less psychological distress (Beck, 2016). Interventions generally involve teaching individuals to change their thinking patterns to recognize distortions. A primary cognitive technique is teaching the individual to recognize automatic thoughts (Beck, 1963). Overgeneralization, magnification, and cognitive deficient are all techniques used in CBT. Overgeneralization refers to the process of making an unjustified generalization on the basis of a single incident (Beck, 2016). Magnification refers to the propensity to exaggerate the meaning or significance of a particular event (Beck, 2016). Reframing creates the opportunity for the counselor to help the individual view situations with a different lens (Beck, 1979). Positive reframing involved challenging and confronting negative

thoughts into a more positive perspective. One goal of CBT is to help the individual discover

meaning for insight into faulty thinking and the consequence of the faulty thinking (Beck, 1979).

Given the brain development of children and adolescents and realizing the developing stage of

the pre-frontal lobe, CBT interventions are quite appropriate and effective for school counselors

to integrate into individual and group counseling (David, et al., 2018). Cognitive behavioral

therapy dominates the international guidelines for psychosocial treatments making it a first line

treatment for therapist and school counselors (David, 2018).

Cognitive Behavioral Therapy programs have demonstrated significant benefits in the

decrease of depression and anxiety. *Cool Teens*, a CD-ROM based program has eight modules,

30 minutes in length, free access to all content with recommended order, and includes all anxiety

disorders (Cunningham, et al., 2012). *Cool Teens* teaches techniques to manage anxiety through

cognitive restricting and graded exposure (Cunningham, et al., 2012). The program included

case studies of adolescents discussing different anxiety problems and applying skills to their

particular problem (Cunningham, et al., 2012). Online Social anxiety Cognitive therapy for

Adolescents (OSCA) is a 14-week program where users receive a core set of modules to work

through (Clark & Leigh, 2019). During the 14-week program a therapist would release CBT

modules that they deemed a best fit for each adolescent (Clark & Leigh 2019). In addition, there

has been progress within the area of camp –based CBT delivered through a primary care setting

(Barlow, et al., 2011). This is completed using creative strategies and incorporates play to deliver

the key components (Barlow, et al., 2011). One example is a camper participating in a treasure

hunt which is a game upon arrival to reinforce separation from parents, identify somatic

symptoms of anxiety on a life-size traced picture of themselves, and engage in naturalistic

exposure activities that are often avoided by children with separation anxiety (Barlow, et al., 2011).

Current School Counseling Approaches for Anxiety and Depression Presenting Symptoms

Anxiety and depression symptoms can be visible in a variety of different forms in the educational setting. It could be seen in low academic performance, outburst in class, withdrawn behavior, or perfectionism (McCormac, 2016). There is a broad array of presenting issues and symptoms exhibited by students experiencing anxiety and depression. Consequently, there are different approaches and evidence-based practices school counselors use to treat these presenting symptoms. The initial step in helping these struggling students is a multi-tiered system of support. Multi-tiered system of support is an effective and efficient approach to improving students' academic and behavioral experience in schools (Sugai, et al., 2014). School counselors are intentional in the interventions selected to implement at each tier in the multi-tiered system of support. In addition to cognitive behavioral and solution-focused techniques, expressive arts interventions such as, creative arts, music, vision boards, and mindfulness are implemented to help students effectively address symptoms of depression and anxiety.

School counselors conduct small group activities for students who have symptoms of depression and anxiety. Expressive techniques including creative arts and music are often implemented in a comprehensive counseling program as psycho-educational techniques. These techniques help students in expressing their feelings verbally or nonverbally (Healy & Nelson, 2007). Expressive expressions can help the student develop positive self-esteem and enhance the overall quality of life (Healy & Nelson, 2007). Similarly, music helps elevate moods, counteracts

depression, promotes movement, calms and counteracts fear (Weiler, 2013). Furthermore, music helps soothe and allow students to cope and relax (Weiler, 2013). Additionally, vision boards have been utilized to focus a child's goal and create a life they imagine (Burton & Lent, 2013). A vision board is a collage of images representing the things one wants in their life (Burton & Lent, 2013). These boards help students set and visualize goals while also figuring out what is important to them (Burton & Lent 2013). Mindfulness activities are often implemented by school counselors to address student experiencing anxiety and depression internalizing symptoms. Mindfulness strengthens executive control functions while down-regulating emotional interference (Paterson, 2016). Mindfulness teaches students to become more self-aware, self-manage, and self-regulate (Paterson, 2016). More self-aware individuals have greater capacity to recognize emotions, concentrate and diminish the negative emotions, and react thoughtfully in stressful situations (Paterson, 2016). Overall, there are a variety of techniques school counselors use to help demise the internalizing symptoms of depression and anxiety in school age students.

Students on average are required by statute to be in school for 180 days a year (National Center for Educational Statistics, 2018). Furthermore, pairing the amount of time at school with the high percentages of children who display mental health concerns, schools are a prime place to conduct interventions to assist these individuals in developing skills to overcome their mental health concern (Ohmann, et al., 2016). Counseling techniques can be implemented by school counselors in a group population exhibiting similar mental health concerns (O'Connor, et al., 2017). While these techniques are beneficial and indicate improvement in decreasing depression and anxiety symptoms, there are limited set interventions for schools to follow when addressing increasing numbers of students who present similar symptoms of depression and anxiety. In the last 10 years the development of transdiagnostic interventions has presented an innovative

approach to addressing these concerns. Transdiagnostic interventions focus on multiple symptoms and pair a theoretical orientation with corresponding techniques.

Transdiagnostic Intervention

There is substantial research that indicates comorbid anxious and depressive symptoms are associated with an increased risk of developing anxiety and depressive disorders in the future (Loevaas, et al., 2020). Therefore, transdiagnostic development is key to allow these individuals the support needed to be active members of society. Transdiagnostic treatments are intervention protocols that enlist a core set of treatment principles to address a range of psychiatric disorders (Bilek & Ehrenreich-May, 2012). A transdiagnostic intervention targets psychological processes or core vulnerabilities that have been observed to contribute to the development and maintenance of disorders (Bovin, et al., 2016). A valid transdiagnostic approach draws from a unifying theoretical model that explains disorder conditions via common mechanism (Chu & Ehrenreich-May, 2013).

Modular

The modular or common elements approach consists of counseling strategies and elements that have demonstrated effectiveness across approaches (Bovin, et al., 2016). Strategies include cognitive restructuring and exposure techniques. Modular or common elements approach apply to empirically supported strategies selectively to each individual based on the presenting problem, demographic factors, and contextual setting that are unique to the patient (Bovin, et al., 2016). This allows the counselor to design more individualized treatments for each individual by selecting from a set of evidence-based elements (Bovin, et al., 2016). Modular or common elements approach has been the most utilized with children in low-and middle-income countries (Bolton, et al., 2014).

Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems

One example of a transdiagnostic intervention is Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems (MATCH-ADTC). Modular or common elements approach to a transdiagnostic intervention. MATCH-ADTC combines modules for cognitive behavioral treatment of anxiety, depression, behavior problems, and trauma. Sessions are taken from known evidence-based protocol, with an empirically derived algorithm for making decisions regarding when each module should be administered (Chorpita & Weisz, 2009). MATCH-ADTC allows decisions regarding selection of appropriate modules to be administered, at what point in the intervention, and for the duration that will garner the greatest impact prior to progressing to the next module. They are guided by a regular flow of response to intervention information in the form of a one's dashboard (Chorpita & Weisz, 2009). While MATCH-ADTC is grounded in cognitive behavioral therapy includes techniques from individual psychology and solution focused brief therapy. Encouragement is used at the beginning and end of each session and scaling questions are used during each intervention to gauge how the individual is handling his/her presenting issues and personal situation. For additional information on specific sessions in the anxiety group and depression group see Appendix G and F, respectively.

Previous Reviews

There are many reviews focusing on the effects of cognitive behavioral therapy on symptoms of depression and anxiety (David, et al., 2018). Hofmann, Impala, Kazantzis, Kim-Luong, & Ying-Yew (2018) The Hoffman study included 4938 studies, of which 15 were

duplicates, and 178 were not available in English and were excluded (Hofmann, Impala, Kazantzis, et al., 2018). The meta-analysis focused on psychological therapy, focused on process-outcomes relations, and involved CBT (Hofmann, et al., 2018). Anxiety revealed small to large effects size with a large effect size associated with panic disorders and social phobia (r=1.41, d=0.76) Whereas, medium effect size as reported for youth anxiety disorder using cognitive processes (d= 0.50). Similar to anxiety, depression also indicated a positive effect size for CBT. Depression revealed small to medium effect size in modifying cognitive processes (Hofmann, et al., 2018). Problem solving produced larger effect size (g=1.14). However, small effect size was reported with thought suppression (d=0.30). In the same way, a meta-analysis was completed on multimodal cognitive behavioral therapy and its effectiveness.

Twomey, O'Reilly, and Byrne (2015) focused a review of literature on multimodal cognitive behavioral therapy. The results of their analysis found that multimodal CBT was more effective than no primary care treatment (d=0.59), and primary care treatment-as-usual (d=0.48) for anxiety and depression symptoms. Moreover, multimodal CBT in addition to primary care treatment-as-usual was indicated to be more effective than primary care treatment-as-usual for depression symptoms with no comparisons available for anxiety.

There are additional reviews that report support for cognitive behavioral therapy. However, there is lack of sufficient research on transdiagnostic cognitive behavioral therapy with school-aged student exhibiting symptoms of depression and anxiety. Therefore, an updated meta-analysis was completed for the current study.

Adolescent Transdiagnostic Cognitive Behavioral Therapy Intervention Review of

Literature

There is a gap in the literature for school-aged children and transdiagnostic cognitive behavioral therapy intervention. The literature gap focuses on if a transdiagnostic intervention on symptoms of depression and anxiety has been completed during the school day and if it was effective for the school-ages children A database search of PsychINFO, ERIC, and PubMed was conducted on December 5, 2019 using the Boolean phrase: ("transdiagnostic") AND ("cognitive behavioral* therapy") AND ("children* or adolescent"). To be included in the review of literature, studies had to meet specific criteria. Included studies had to present results from a quantitative study. Participants in the study had to be (a) between the ages of five to 18 and (b) have internalizing symptoms of depression and or anxiety. The intervention included a cognitive behavioral therapy strategy as the independent variable, and at least one dependent variable has to be used to measure the internalizing symptom(s). The initial search yielded 23 articles. Duplicates were removed, 22 articles remained. Following coding, five articles were identified for inclusion (See Figure 1.1). While there are more studies of transdiagnostic interventions on symptoms of depression and anxiety the studies did not generate through from the database search on December 5, 2019 from PsychINFO, ERIC, and PubMed.

Figure 2.1.

Article Flowchart

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                                  ┌──────────────────────────┐
                                  │  Records identified       │
                                  │  through database         │
                                  │  search (n=23).           │
                                  └──────────────────────────┘
┌──────────────────────────┐                  │
│  Records excluded (n=1)   │◄─────────────────┤
│                           │                  ▼
└──────────────────────────┘      ┌──────────────────────────┐
                                  │  Records screened         │
                                  │  (titles and abstract     │
                                  │  read) (n=22).            │
                                  └──────────────────────────┘
                                               │          ┌──────────────────────────┐
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                                  │  Articles reviewed by     │
                                  │  rater (n=5)              │
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                                  │  Articles included in     │
                                  │  the synthesis (n=5)      │
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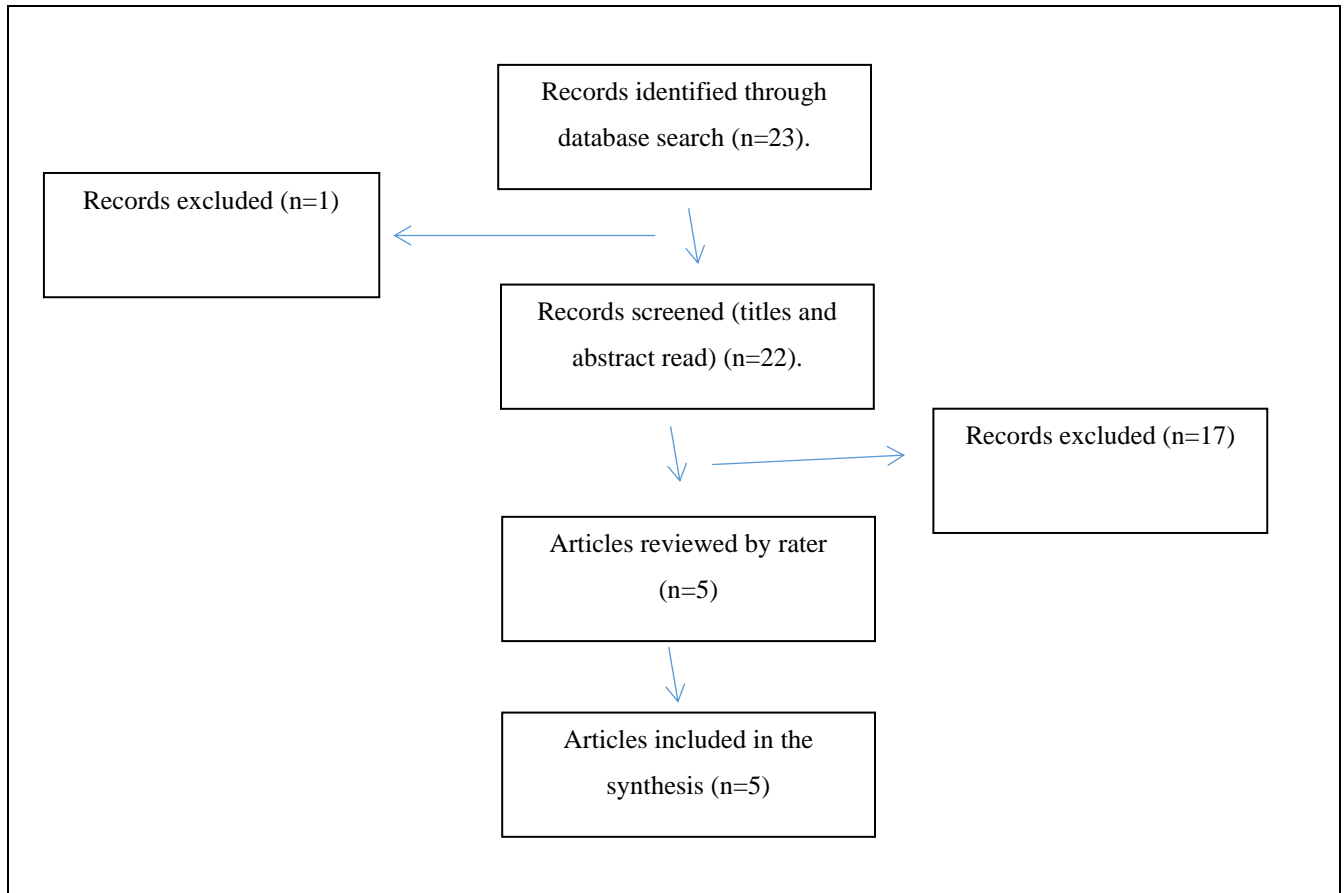
Of the four articles, there were a total of 254 children or adolescents. All of the studies gave an average age of students with a range of 6.9 years old to 10.2 years old and a mean of 8.8 years old. The number of females slightly exceeded males in each study (n=133 and n=121 respectively). Only two of the four studies provided information about ethnicity with White Hispanic being the most common (n= 28), followed by White Non-Hispanic (n=18), African American (n=1), and Asian Pacific Islander (n=1). To be screened in for any of the studies student either presented emotional symptoms, emotional problems, or were referred by a teacher.

Information about the setting of the intervention were collected from all studies. The studies were split in two different settings. Three were in clinical setting (CAMHS outreach facility, others are unknown) and two were in school setting (Caritas Diocese of Salford). All settings conducting the intervention in a group style.

The intervention agent in the studies included a researcher (n=2), clinical counselor (n=1), and educational personal (n=2). The dependent variable measured in all studies was a transdiagnostic cognitive behavioral therapy intervention. There were a variety of ways the anxiety and depression levels were measured. SCARED (Screen for Child Anxiety Related Disorders) (n=3) while SCAS-P (Spence Children's Anxiety Scale, Parent) (n=1), MFQ-P (Mood and Feelings Questionnaire)(n=1), SDQ-I (Self-Description Questionnaire)(n=1), SDQ (Strength and Difficulties Questionnaire)(n=1), CDI (Child & Parent Reports) (n=1), CEMS (Children's Emotion Management Scales) (n=1), ERQ-CA (Emotion Regulation Questionnaire for Children & Adolescents) (n=1).

The effects of the five studies were all positive. The cognitive behavioral intervention significantly reduced the total anxiety symptoms and depression symptoms in the school setting studies. The results from the clinical setting found the participants no longer meeting the criteria for specific depression and anxiety disorders.

 The review of literature examined the effects of studies investigating the use of transdiagnostic cognitive behavioral interventions on children and adolescents who are experiencing anxiety and depression internalizing symptoms. Overall, transdiagnostic cognitive behavioral interventions focusing on internalizing symptoms of anxiety and/or depression on adolescents or children seems to be effective. These interventions seem to be effective from an individual counseling viewpoint as well as the group counseling viewpoint. However, of the four

reviewed studies, only one was conducted in a school. Therefore, more research should be conducted with transdiagnostic cognitive behavioral therapy as a school-based intervention.

Altogether the results of the current literature review suggest that a transdiagnostic cognitive behavioral intervention on children with symptoms depression and anxiety is effective. However, there is insufficient research to suggest it would be effective in a school setting as a tier two intervention for students with symptoms of depression and anxiety. Therefore, the current study will be a feasibility and effectiveness study of MATCH-ADTC on school-aged children with depression and anxiety symptoms.

Chapter 3 - Methods

The purpose of the current study was to determine the feasibility and effectiveness of the Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems (MATCH-ADTC) on school-aged children who exhibit symptoms of depression and anxiety. The research primarily investigated implementation fidelity and social validity (acceptability) through assessment of key stakeholders including facilitators and students. Secondary analysis of the effectiveness of the intervention was performed on individual participants through visually analyzing graphed data, analyzing group differences using a longitudinal multilevel modeling design, and paired sample *t*-test. The following research questions informed the study:

1. Can MATCH-ADTC be delivered with amounts of fidelity by school counselors?
2. How acceptable was MATCH-ADTC for students?
3. Does MATCH-ADTC decrease depression symptoms of ninth grade students?
4. Does MATCH-ADTC decrease anxiety symptoms of ninth grade students?

Setting

The participating school district was located in the Midwest portion of the United States. The district was in the infancy stage of a multitiered system of support. The high school was selected based on its desire to implement a tier two intervention for school-aged students exhibiting symptoms of depression and anxiety. A tier two intervention is an intervention that provides specialized services to some students. All students in the district are screened three times a year in social and emotional development. The district used Social, Academic, and Emotional Behavior Risk Screener (SAEBRS), an online computer testing program (Kilgus, et

al., 2018). SAEBRS is a validated scale for identifying students who could benefit from behavior and mental health supports (Kilgus, et al., 2018). Internal consistency was estimated for each scale with a range of 0.79 to 0.94 (Kilgus, et al., 2016). Inter-rater reliability ranged from 0.41 to 0.48 for the overall academic behavior and social behavior scales (Kilgus et al., 2015).

The demographics of the rural high school were as follows: 86.5% White, 5.4% African American, 0.01% Asian, 0.001% Native Americans, 4.5% Multiethnic, and 2.2% unclassified. Of that population, 55.2% were male, 44.8% were female. Additionally, 7.2% were on free and reduced lunch.

Figure 3.1.

Participant Flowchart
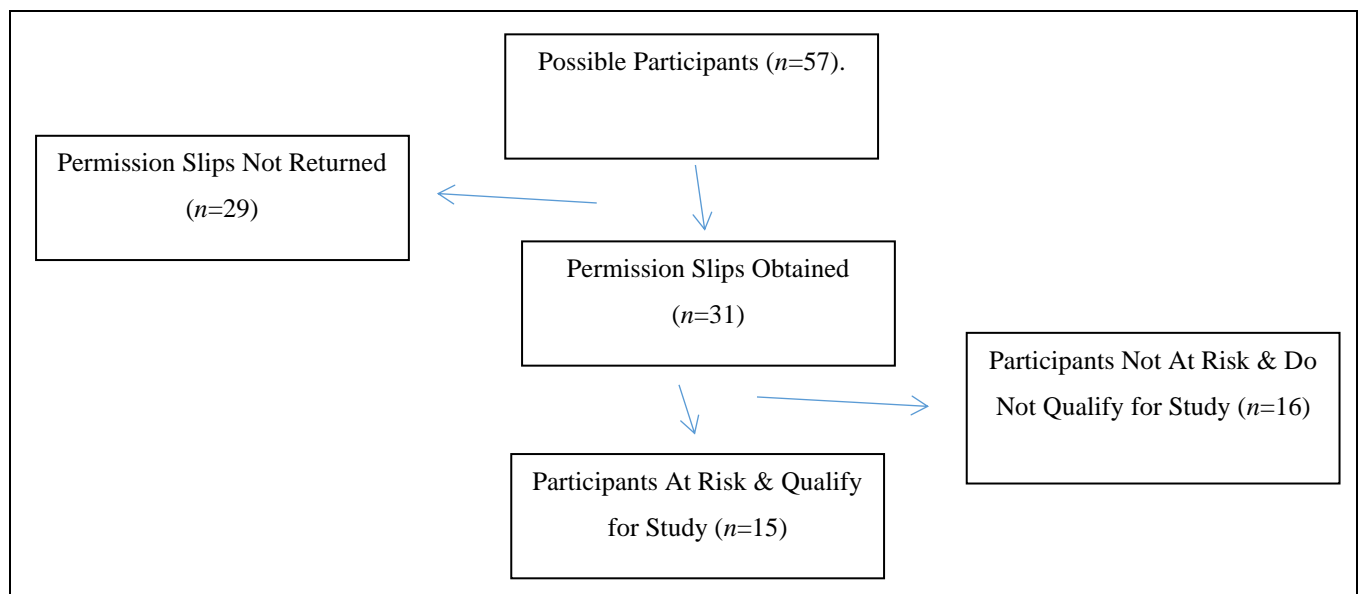
Participants

Students were informed about the current study during the fall semester in their seminar hour at school. Parents and guardians of the students were invited to an orientation night at the start of the school year and information was given about the current study. Students were invited

to participate in the study if they met the following criteria: (a) enrolled in the participating high school; (b) were a ninth grade student; and (c) labeled as "moderate risk" or "high risk" during the first screening on either the self-reported assessment or the teacher reported assessment for SAEBRS; (d) obtained informed consent.

There were 57 ninth grade students at the high school. Of the 57, 31 returned an informed consent. Of the 31 returned informed consents, 15 qualified based on the criteria for the current study. The population was composed of 15 adolescents, ages 13 to 15. Participants were enrolled in ninth grade. There were 10 females and 5 males. Of the participants, 75% were White, 18.75% African American, and 6.25% Asian. The average age was 14.63 years old.

Table 3.1.

Descriptive Statistics

Student	Gender	Age	Race-ethnicity	Free or Reduced Lunch	Disability	SAEBRS	Pre BDI%	BAI%
Anxiety Group								
Tacitus	M	14	W	N	--	MR	97.5	96.5
Sahib	M	14	W	N	--	HR	90.9	89.9
Jakayla	F	14	W	N	--	MR	72.8	68.8
Lady	F	14	W	N	--	MR	49	33.7
Hadwin	M	14	W	N	--	MR	<1	2
Olena	F	15	A	N	LD	HR	5.9	2.5
Earl	M	14	AA	N	--	HR	44.9	44.9
Tahoe	M	15	W	N	--	MR	5.6	33.7
Depression Group								
Kaiya	F	14	W	N	--	HR	95	87.6
Gabby	F	14	AA	N	--	MR	72.8	67.3
Hadassah	F	15	W	N	LD	HR	99.5	97
Sahar	F	15	W	Y	LD	HR	99.5	99.5
Lagina	F	14	AA	N	--	MR	67.3	54.5

| Jaleesa | F | 15 | W | N | -- | HR | 49 | 28.8 |
| Jamesina | F | 15 | W | N | -- | HR | 99.5 | 77.2 |

Note. AA- African American; A-Asian; F=Female; HR=High Risk; LD=Learning Disability; M=Male; MR=Moderate Risk; N= No; W= White; Y=Yes

Intervention Agent

The intervention agent was responsible for delivering MATCH-ADTC and collecting data following intervention sessions. The intervention agent was a 31-year-old, White female who held a Bachelor's degree in Biology, a Master's degree in School Counseling, was a third-year doctoral student in Counselor Education and Supervision, and in her sixth year of being a school counselor. The intervention occurred during each student's seminar time which was built into the daily schedule of the school. The intervention agent was educationally prepared in MATCH-ADTC by reading the MATCH-ADTC booklet and following the treatment checklist provided by MATCH-ADTC.

Materials

Materials used in this study were *MATCH-ADTC: Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems* (Chorpita & Weisz, 2009). MATCH-ADTC combines modules for the cognitive behavioral treatment of anxiety, depression, behavior problems, and trauma, taken from known evidence-based protocols (Chorpita & Weisz, 2009). MATCH-ADTC allows decisions regarding which model to implement, when, and what length of time is needed before transitioning to different a model. MATCH-ADTC is guided by a regular flow of response to intervention information in the form of a client dashboard (Chorpita & Weisz, 2009). While MATCH-ADTC is grounded in cognitive behavioral therapy, it has techniques from individual psychology (Adler, 1925) and solution-focused brief therapy (de Shazer & Berg, 1985). The research implemented encouragement at the

beginning and end of each session. Scaling questions are implemented during each intervention to measure how the student is handling their personal situation. Using the flowcharts from MATCH-ADTC, specific lessons were implemented, and checklists were created to be utilized during the intervention and are presented in Appendix A.

Treatment Fidelity

Treatment fidelity can be described as the strategies that monitor and enhance the accuracy and consistency of an intervention to ensure that it is implemented as planned and that each component is delivered in a comparable manner for all ninth-grade students (Hancock & Mueller, 2011). The strategies applied in the current study to assess treatment fidelity were conducted via a completion of daily checklist by the intervention agent. The checklist contained specific instructions of the lesson steps and student prompts. The intervention agent completed the check list for 100% of the MATCH-ADTC lessons and reported if there was an irregular event causing a step to not be completed; the checklist is located on Appendix B. In order to collect valid treatment fidelity data, another member of the school staff was educationally prepared to complete the fidelity checklist and listen to a recording of sessions on 30% of the lessons throughout the entire MATCH-ADTC intervention. Treatment fidelity was calculated by dividing the number of completed steps on the checklist by the number of actual steps on the checklist each session. The number of steps varied for each session and weekly treatment fidelity was completed each week. An example of a completed checklist is located on Appendix C.

Social Validity

Social validity refers to the acceptability of and satisfaction with intervention procedures. This is commonly assessed by soliciting opinions from people who receive and implement the specific intervention (Field, 2013). Two methods were utilized to assess MATCH-ADTC social

validly. MATCH-ADTC acceptability and satisfaction were completed using *Children's Usage Rating Profile* (CURP; Briesch, & Chafouleas, 2009) and the Usage Rating Profile-Intervention Revised (URP-IR; Chafouleas et al., 2011). The URP-IR was completed by the intervention agent while the CURP was completed by the participants of the intervention.

Children's Usage Rating Profile and Usage Rating Profile-Intervention Revised

CURP (Briesch & Chafouleas, 2009) is composed of 21 self-reporting items that assess contextual included that may affect the participant's use of an intervention. Items on the CURP are rated on a scale of 1 (*totally disagree*) to 4 (*totally agree*). CURP measures the internal and external influences that may have an impact on participant engagement with the intervention including personal desirability, feasibility, and understanding of the intervention (Losinski, et al., 2019). CURP was used to measure participants usage related to the intervention. The CURP is directly connected to the participant's thoughts on the intervention; whereas the URP-IR is directly tied to the intervention agent. URP-IR (Chafouleas et al., 2011) is composed of 29 self-reporting measures given to staff to measure attitudes and feelings toward the intervention. Items on the URP-IR are rated on a scale of 1 (*strongly disagree*) to 6 (*strongly agree*) URP-IR measured the understanding, willingness to change, feasibility, family-school collaboration, and external support of the intervention. URP-IR was implemented to measure how the intervention agent reflected on the intervention.

Instruments

Three instruments were utilized to assess the outcome measures of the current study. They were Brief Problem Monitor (BPM; Achenbach et al., 2011), Beck Depression Inventory (BDI; Beck et al., 1996), and Beck Anxiety Inventory (BAI; Beck et al., 1993). The BPM was

utilized to review how effective the intervention was while the BDI and BAI were utilized to focus on the symptoms of depression and anxiety.

Brief Problem Monitor

The BPM is composed of 19 self-reporting questions that monitor children's function and response to interventions as well as a child's response to different intervention and control conditions (Achenbach, et al., 2011). Assessment that covers internalizing, externalizing, attention, and total behaviors (Losinski, et al., 2019). The BPM has a teacher and children self-report form, which have demonstrated adequate reliability and validity (Birkett, Gray, Piper, & Raber, 2014). The internal consistency of the BPM was 0.91 and high satisfactory for the Internalizing (0.78), Externalizing (0.86), and Attention (0.87) scales (Birkett, et al., 2014). Two versions of the BPM (Achenbach et al., 2011) were implemented in this study. The child's version was administered to all participants as a pre-and post-test and a teacher version was administered to corresponding teachers connected to the participant.

The BPM was administered each group session to participants. Once completed by the participants it was administered to the participants corresponding teacher. Scoring of the BPM is divided into two sections for the current study. The two sections are Internalizing Problem and Total Problem. The Internalizing Problem and Total Problem T score of below 65 are considered to be in the normal range and the T scores greater than or equal to 65 are sufficiently elevated and to be of concern. The Internalizing Problem's highest T score is 75 (99.4 percentile) and the Total Problem highest T score is 80 (99.9 percentile) (Achenbach et al., 2011).

Beck Depression Inventory

BDI (Beck, et al., 1996) was administered to all participants as a pre-and post-test. The BDI is composed of 21 self-report questions that measure characteristic, attitudes and symptoms

of depression. The BDI has been developed in different forms, including several computerized forms, a card form (Groth-Marnat, 1990). The BDI takes approximately 10 minutes to complete; it does require a fifth-sixth grade reading level to adequately understand the questions (Groth-Marnat, 1990). The internal consistency of the BDI ranges from 0.73 to 0.92 with a mean and alpha coefficient of .86 and .81 for psychiatric and non-psychiatric populations respectively (Beck et al., 1988).

The BDI was given before the intervention began and again once the intervention was completed. The results from the initial BDI helped sort the participants into specific groups for the intervention. The scoring of the BDI was completed by adding the responses for all items and recording a raw score. The raw score was then transferred to a data sheet that provided a *T* score. The breakdowns of T scores are as follows: 70+ = Extremely elevated, 60-69 = Moderately elevated, 55-59 = Mildly elevated, <55 = Average.

Beck Anxiety Inventory

BAI (BAI; Beck, et al., 1993) was given to all participants as a pre-and post-test. The BAI is composed of 21 self-reported questions that measures characteristic attitudes and symptoms of anxiety. The 21 items responses are on a Likert scale ranging from 0-3 and raw scores ranging from 0-63 (Halfaker, et al., 2011). Reading level for the BAI is 8.3 and oral instructions should be delivered orally (Halfaker, et al., 2011). BAI may provide useful clinical information, it is not specific and can't be used diagnostically (Halfaker, et al., 2011). The internal consistency of BAI is 0.92 and the test retest reliability after one week is 0.75 (Beck, et al., 1988).

The BAI was given before the intervention began and against once the intervention was completed. The results of the initial BAI helped sort the participants into specific groups for the

intervention. The scoring of the BAI was completed by adding the responses for all items and recording a raw score. The raw score was then transferred to a data sheet that provided a *T* score. The breakdowns of T scores are as follows: 70+ = Extremely elevated, 60-69 = Moderately elevated, 55-59 = Mildly elevated, <55 = Average.

Procedures

At the beginning of the school year, all ninth-grade students at the high school were universally screened using SAEBRS (Kilgus, et al., 2018). Students in the "high risk" and "moderate risk" categories who turned in their informed consent were placed in the feasibility and effectiveness study. Based on the pre- BDI and BAI scores, students were placed in presenting symptoms of depression group or presenting symptoms of anxiety group dependent upon their highest scores on the BDI and BAI. All students reported symptoms in both depression and anxiety but were placed in which ever group has the highest score on the corresponding inventory. Sessions were conducted in the high school conference room during seminar time once a week.

The two groups completed their corresponding flow chart from Appendix D and Appendix E of MATCH-ADTC. Both groups had one session cross over intervention day where the presenting symptoms of depression group completed a session for anxiety symptoms and the presenting symptoms of anxiety group completed a session for depression symptoms. The intervention took place for 9 weeks. At the close of each session participants completed the BPM and the participants corresponding teacher completed their version of the BPM. The corresponding teacher was educationally prepared on the BPM by attending a school professional development session before the intervention began. Seminar teachers observed and interacted with the participant every day between first and second block during the school day.

These teachers were selected for BPM teacher collection because of their constant contact with the participant. After the completion of all MATCH-ADTC session the BDI and BAI were completed as post test data. If a participant missed an intervention session they were caught up during the week and attended regular group session the following week. All data were collected and stored in the Kansas State University encrypted computer system to ensure confidentially. Collected data were kept locked and secured in the school counselors office. All legal, ethical, and FERPA guidelines were followed.

Treatment Condition

Following the collection of pre-test data, students began MATCH-ADTC. MATCH-ADTC is a collection of 33 independent therapeutic procedures that can be arranged to guide a course of individualized, evidence-based therapy for children (Chorpita & Weisz, 2009). The assigned primary protocol of anxiety and depression was used and determine the sequence of modules administered (Askeland et. al, 2019). There are five flow charts. One being the main flowchart and the other four consisting of the four areas of concern. The four areas of concern have core evidence-based practices pertaining to the specific area (Chorpita & Weisz, 2009). Each core area flowchart has a collection of recommended procedures that can be applied if a challenge arises (Chorpita & Weisz, 2009). There was termination at which each flowchart returns to the main flowchart (Chorpita & Weisz, 2009). If there is another area of concern, one can proceed to another area of concern.

Data Analysis

Feasibility and social validity data were primarily descriptive in nature. Analysis of the BPM, used visually analyzed graphs were created, noting changes in level, trend, and variability of data points. All group analyses were conducted in the R statistical package (version 3.4.1).

Longitudinal weekly self-reports data (BPM) were analyzed using a multilevel linear growth model (Raudenbush & Bryk, 2002). First, a null model where time was treated as a continuous step variable was identified. Next, a random intercept to the model was added and compared to the null using X^2 derived from the Log-Likelihoods of the respective models. Each model was tested against the previous model to determine if there had been a measured effect. Data from the BDI and BAI were analyzed at pre-to post-intervention using the paired sample t-Test.

Chapter 4 - Results

Social validity and treatment fidelity were completed with whole group and individual groups, respectively. Next, individual graphs were created to report the effects from the BPM of the intervention on Internalizing Problems and Total Problems. The group data were reviewed using longitudinal multilevel modeling. Finally, a paired sample *t*-test was conducted on the whole group's BDI and BAI.

Social Validity and Treatment Fidelity

Children's Usage Rating Profile and Usage Rating Profile-Intervention Revised

The result of the CURP found students thought the intervention was feasible ($M =1.89$, $SD =0.34$). The lower mean score presents the students view of levels of intrusiveness and difficulty. Alternatively, for understandability ($M = 2.59$, $SD = 0.23$) and personal desirability ($M = 2.38$, $SD = 0.36$), the high means represent the students' levels of intrusiveness and difficulty. Within the feasibility category the lowest average reported was over the statement "This took too long to do" ($M = 1.47$, $SD = 0.74$). In contrast the feasibility category with the highest reported mean scores were the statements "I felt like I had to use this method too often" and "There are too many steps to remember" ($M = 2.33$, $SD = 1.11$). For the category of understandability, the statements with the highest average were "It is clear what I had to do" and "I was able to do every step of this method" ($M = 2.87$, $SD = 0.83$). The statements with the lowest averages in the category of understandability were "I understand why the problem needed to be fixed," "It is clear what the adult needed to do," and "I was able to use this method correctly" ($M = 2.4$, $SD = 0.99$). The category of personal desirability the lowest mean score statement was "I would not want to try this method again" ($M = 2.0$, $SD = 0.93$). Alternatively, the statement with the

highest average was "If my friend was having trouble, I would tell him/her to try this" ($M = 2.7$, $SD = 0.88$). Finally, eight of the fifteen participants agreed to the question "I liked this method" ($M = 2.4$, SD = 1.12).

Intervention agent provided feedback using the URP-IR. URP-IR accessed six categories. The six categories are acceptability, understating, home/school collaboration, feasibility, system climate, and system support. The intervention agent rated the feasibility ($M = 4.70$, $SD = 0.41$) as high. The other categories of acceptability ($M = 5.33$, $SD = 1.66$), understanding ($M = 4.33$, $SD = 2.87$), home/school coloration ($M = 4.00$, $SD = 2.00$), and system climate ($M = 4.75$, $SD = 2.50$) were all high with system support ($M = 3.33$, $SD = 2.31$) being low compared to the previous results.

Treatment fidelity was calculated by the intervention agent who completed 100% of the checklists for MATCH-ADTC lessons. Another member of the high school staff was educated to complete the fidelity checklist and listen to an audio tape of session for 30% of the lessons throughout the intervention. Checklist were combined from the high school staff member and the intervention agent. Treatment fidelity for the depression group was found at $M = 97.45$, $SD = 3.69$. Treatment fidelity for the anxiety group was found at $M = 98.08$, $SD = 3.58$. The $M = 98.08$ is a reflection of session times where there were multiple steps of similar items and those items were completed in consolidation but did not receive a completion mark due to it not being a fully completed step. The $M = 97.45$ is a representation of one session where many students were out with sickness and the group was small enough to skip a few steps because we did not need to be so specific or in depth in the understanding of the intervention.

Table 4.1.

Treatment Fidelity and Social Validity

	Treatment fidelity	CURP		
	IA completed	PD	F	U
	M (SD)	M (SD)	M (SD)	M (SD)
Anxiety Group	98.08(3.58)			
Depression Group	97.45(3.69)			
Whole Group		2.38(0.36)	1.90(0.34)	2.59(0.23)

Note. CURP = Children's Usage Rating Profile, F = Feasibility; IA = Intervention Agent; PD = Personal

Desirability; U = Understanding

Individual Data

The symptoms of anxiety and depression groups were sorted by individuals within each

group. There were no dropouts during the MATCH-ADTC intervention. From the groups each

individual was graphed based on their BPM scores. Individuals were only graphed from the

Internalizing Problems and Total Problems throughout the intervention. Externalizing Problems

were not graphed individually because the data was not reflective of what the current study was

researching. The Internalizing Problem and Total Problems T score of below 65 are considered

to be in the normal range and the T scores greater than or equal to 65 are sufficiently elevated

and to be of concern. The Internalizing Problem's highest T score is 75 (99.4 percentile) and the

Total Problem highest T score is 80 (99.9 percentile) (Achenbach et al., 2011). The solid black

line is the student self-report and the black dashed line is the teachers report.

Depression Group

Kaiya.

Kaiya's initial Internalizing Problem read was 73 and her final read after completing MATCH-ADTC was 57. She and her seminar teacher both noticed a slight peak during the intervention around the same week. However, Kaiya's initial Total Problem read was 68 and final Total Problem read was 53. In contrast, her seminar teacher's initial Total Problem read was 66 and final Total Problem read was 65.
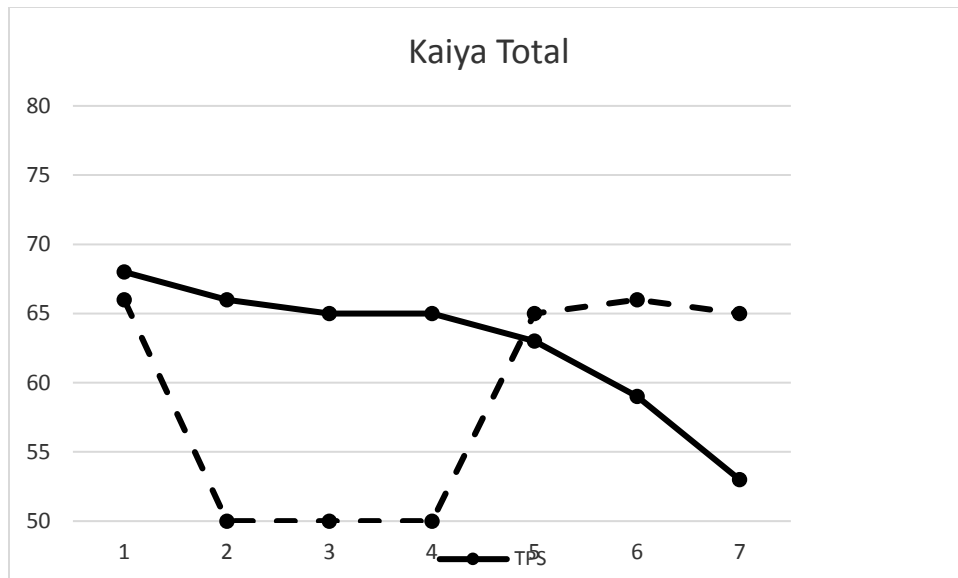
Figure 4.1.

Kaiya's Internalizing Problem BPM
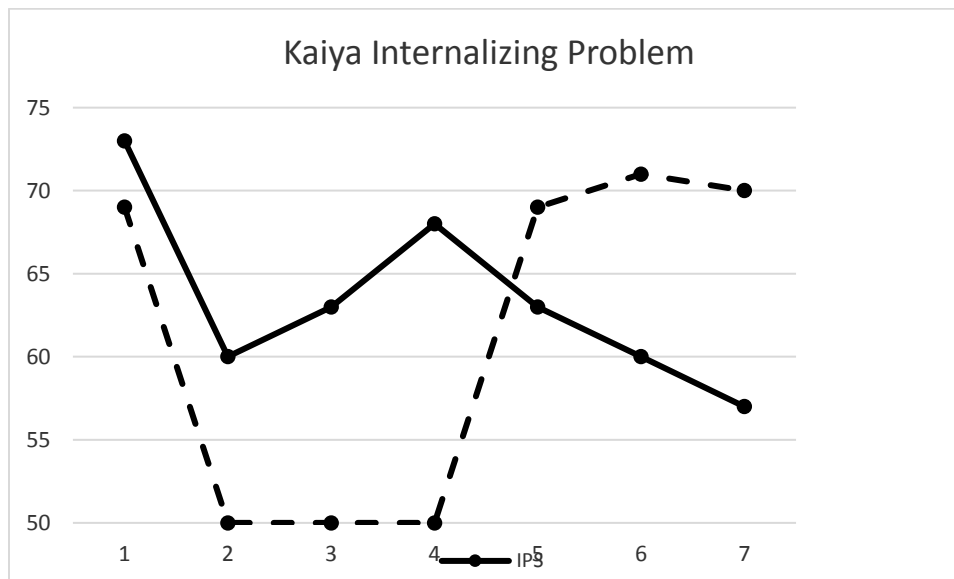
Note:

Figure 4.2.

Kaiya's Total Problem BPM

Kaiya Total

Note:

Gabby.

Gabby's initial Internalizing Problem read was 51 and her final read was 50. These scores

indicate that Gabby did not have internalizing problems from the beginning of the intervention.

In the same way, her seminar teacher only rated her Internalizing Problem above 60 two times.

Gabby's initial and final Total Problem reading indicated she did not have any problems.

Gabby's teacher only rated her above 60 twice on the Total Problem reading.
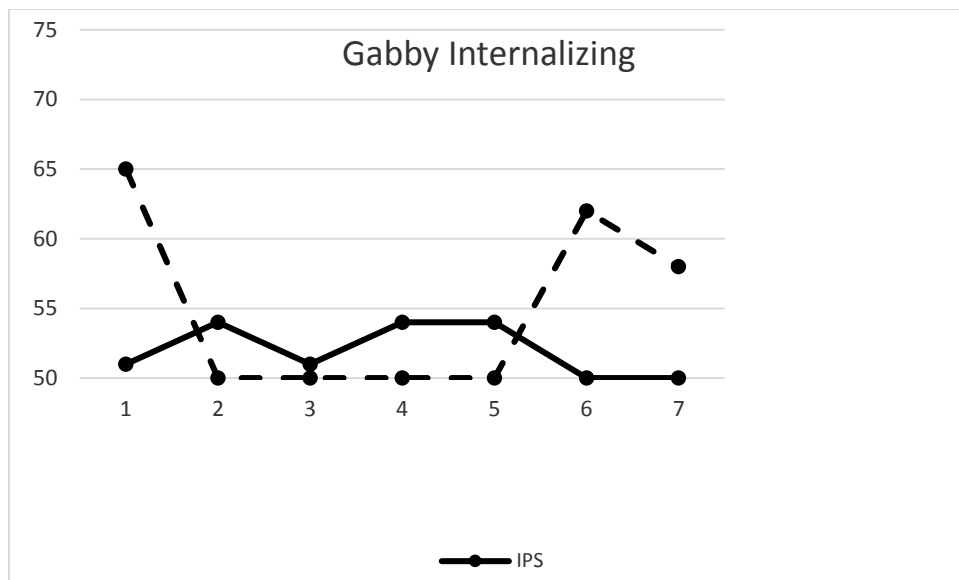
Figure 4.3.
Gabby's Internalizing Problem BPM
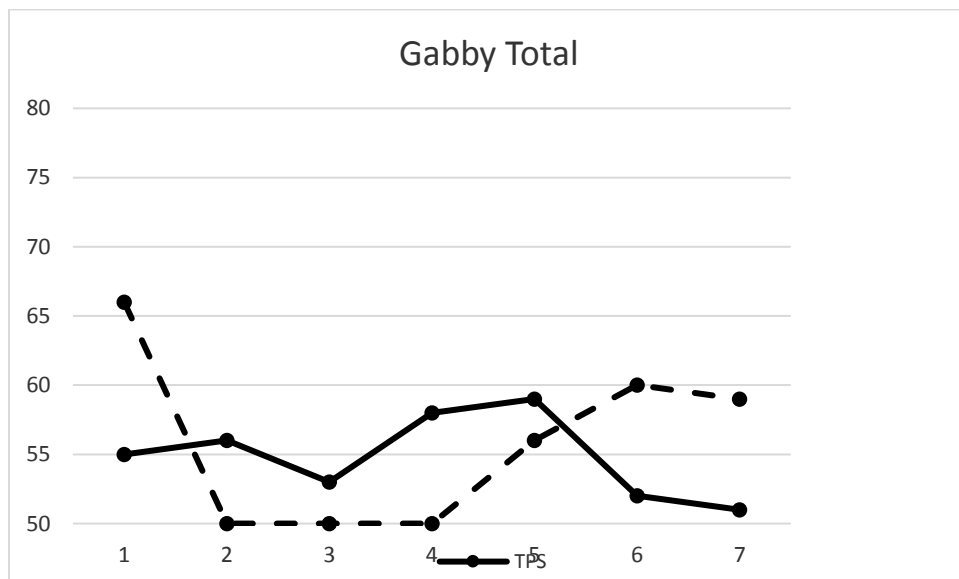
Figure 4.4.

Gabby's Total Problem BPM

Figure 4.5.

Jamesina's Internalizing Problem BPM
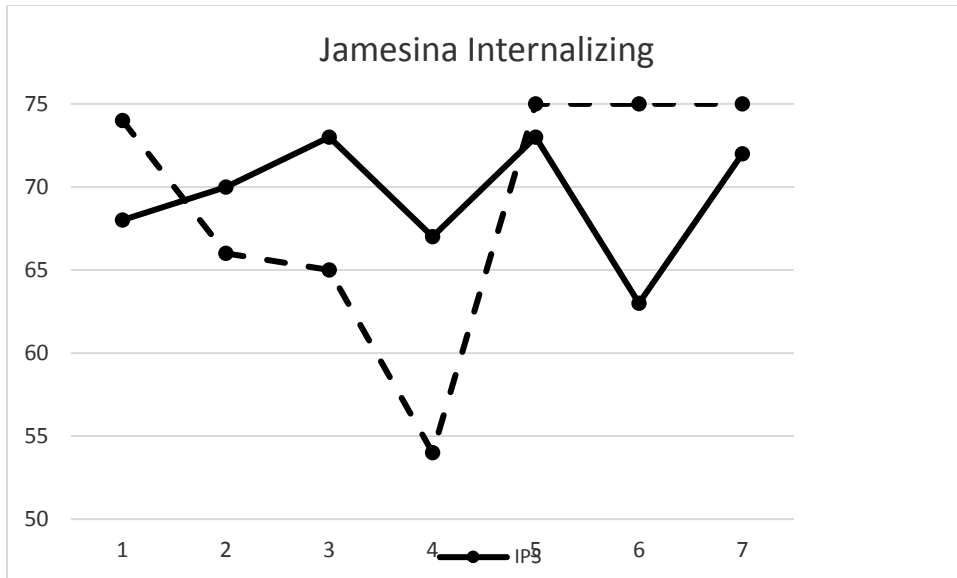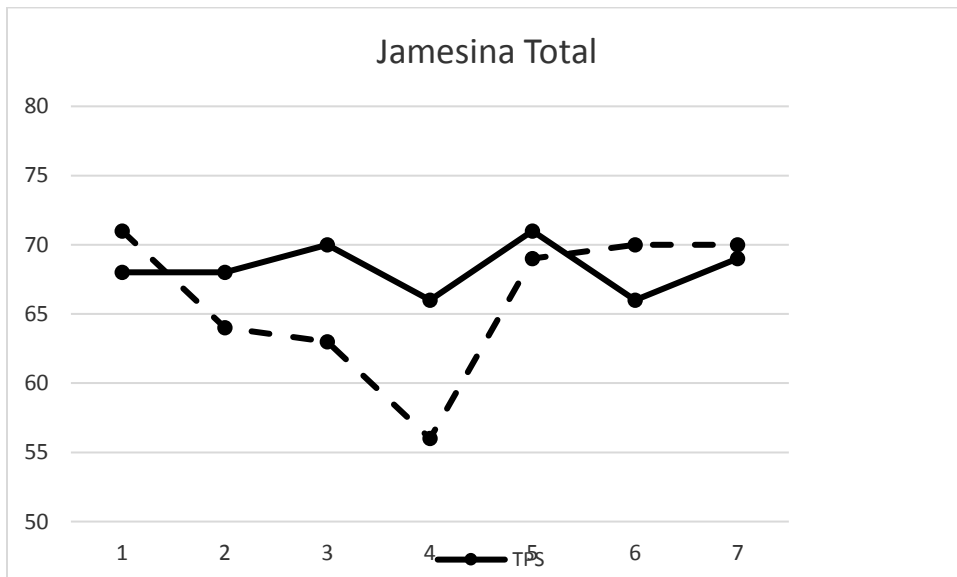
Jamesina Internalizing

Figure 4.6.

Jamesina's Total Problem BPM

Jamesina Total

   Jamesina.

Jamesina's initial Internalizing Problem reading was 68 and it increased throughout the

intervention with the highest being 73. In the same way, Jamesina's teacher rated her initial

Internalizing Problem at 74 and every week with the exception of one it increased during the

intervention. Jamesina's initial Total Problem reading was 68 climbing or staying the same until

the end of the intervention. However, Jamesina's initial Total Problem read from her seminar

teacher was 71 and continued to decrease during the intervention until the last two weeks and the

Total Problem reading remained at 70.

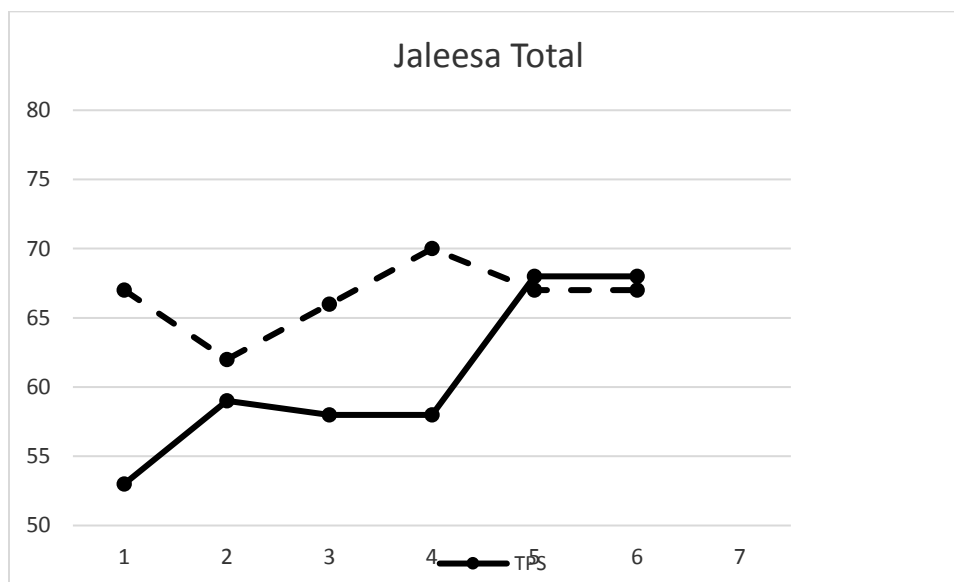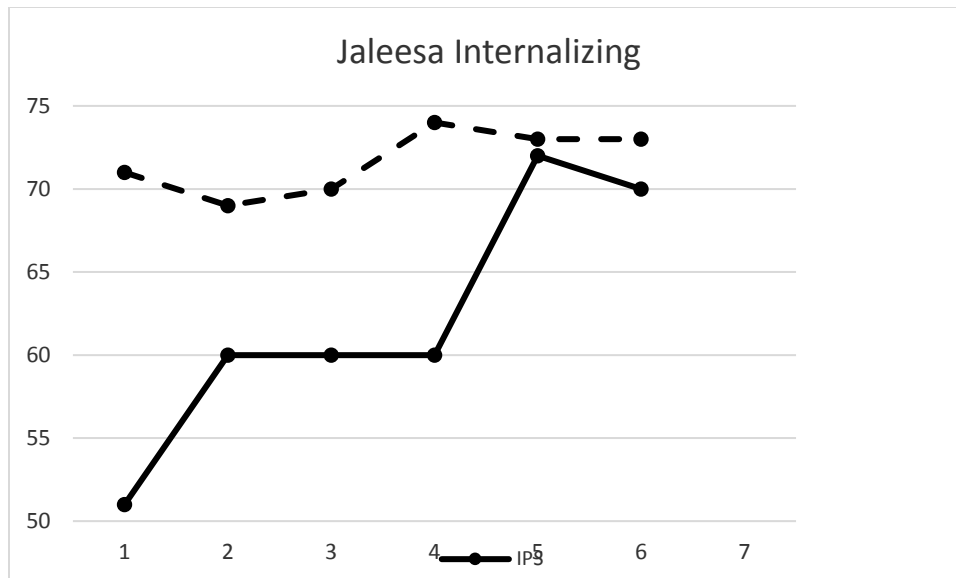**Figure 4.7.**

Jaleesa's Total Problem BPM

Figure 4.8.

Jaleesa's Internalizing Problem BPM

Jaleesa Internalizing

Jaleesa.

Jaleesa's initial Internalizing Problem reading was 51. This would mean she would not qualify as having an Internalizing Problem. However, her seminar teacher's initial Internalizing Problem reading was 71. Both individuals' Internalizing Problem readings at the end of the intervention were 70 and 73, respectively. In the same way, Jaleesa's Total Problem initial reading was 53 while her seminar teacher was 67. Jaleesa and her seminar teacher final Total Problem readings were 68 and 67, respectively.

Figure 4.9.
Hadassah's Internalizing Problem BPM

Hadassah Internalizing
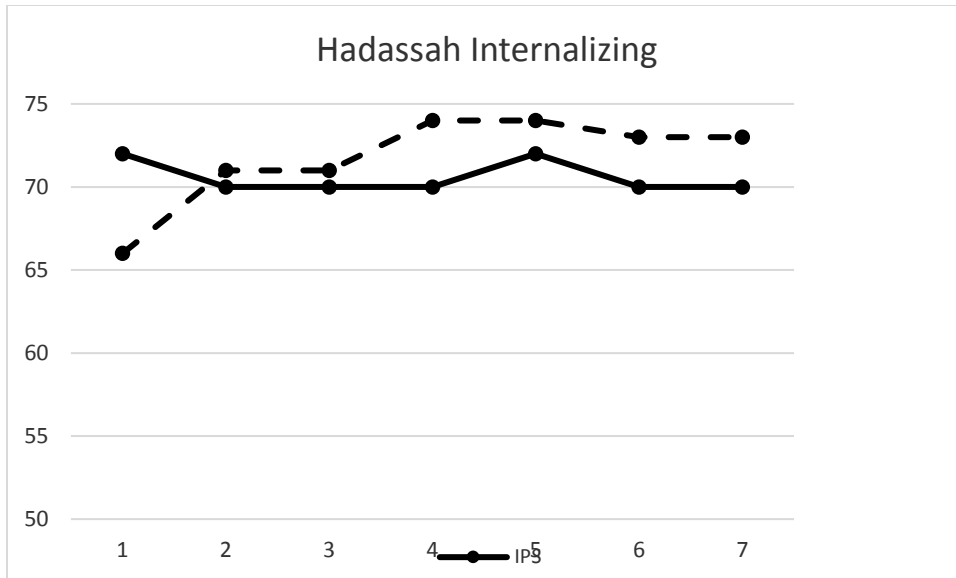
Figure 4.10.

Hadassah's Total Problem BPM

Hadassah Total
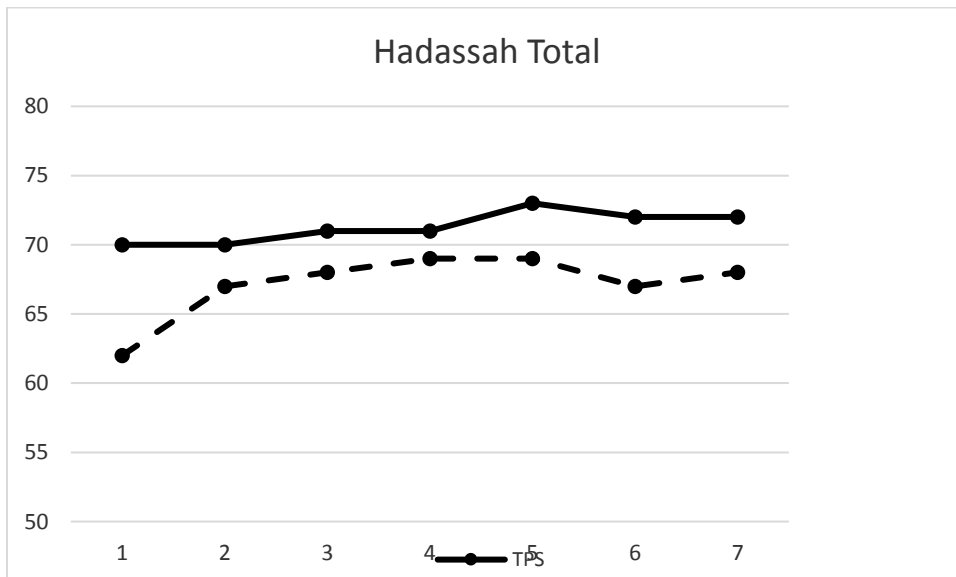
Hadassah.

Hadassah's initial Internalizing Problem reading was 72 and her seminar teacher's initial

Internalizing Problem reading was 66. The readings continued to stay in the 70's for most of the

intervention with Hadassah and the seminar teachers ending their Internalizing Problem readings

with 70 and 73, respectively. In the same way, Hadassah Total Problem initial reading was 70

and the seminar teacher's Total Problem was 62. Both scores increased throughout the

intervention from the graphs.

Figure 4.11.

Lagina's Internalizing Problem BPM
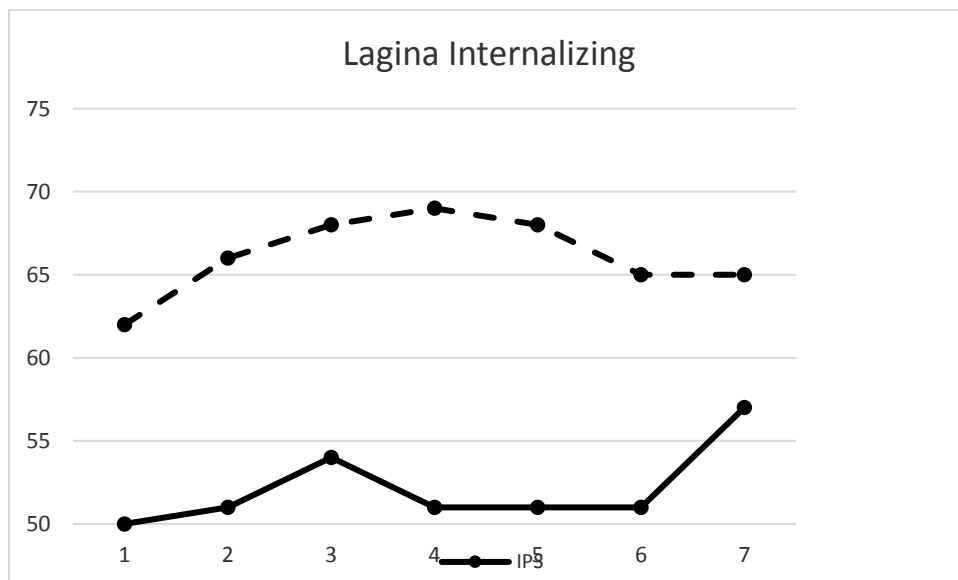
Figure 4.12.

Lagina's Total Problem BPM

Lagina Total
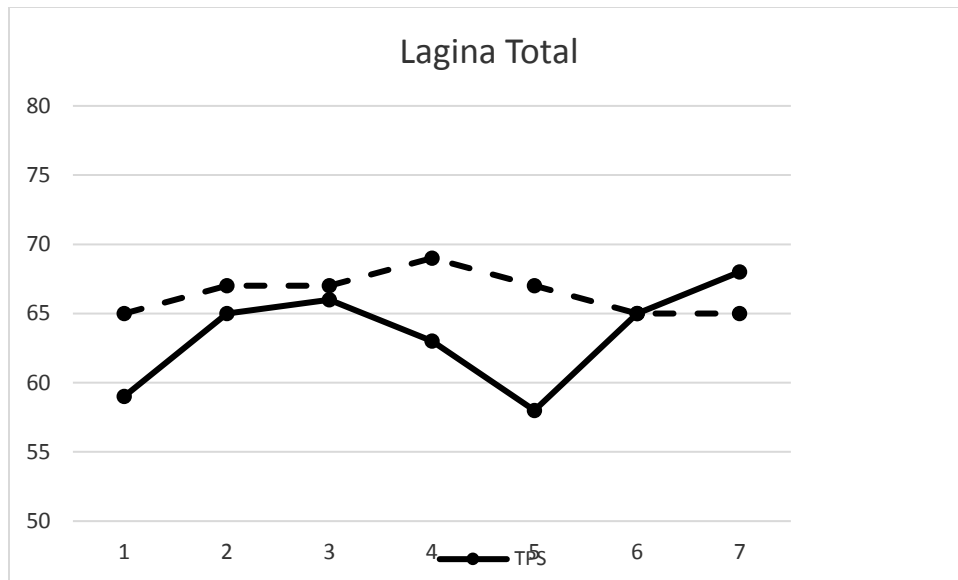
Lagina.

Lagina's initial Internalizing Problem reading was 50. She stayed within 50 on all self-reports throughout the intervention. She would not qualify as having an Internalizing Problem. However, her seminar teacher rated her initial Internalizing Problem reading at 62 and continued to increase until the last two weeks of the intervention with a final reading of 65. In the same way, Lagina rated her initial Total Problem reading at 59 and her seminar teacher rated her Total Problem at 65. They both ended the intervention with a Total Problem score of 68 and 65, respectively.

Figure 4.13.
Sahar's Internalizing Problem BPM
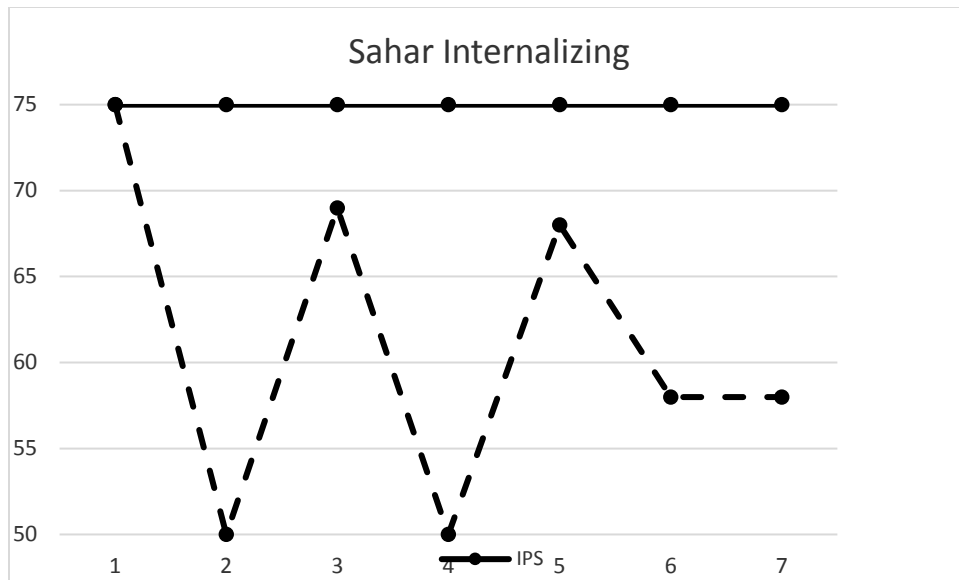
Figure 4.14.

Sahar's Total Problem BPM
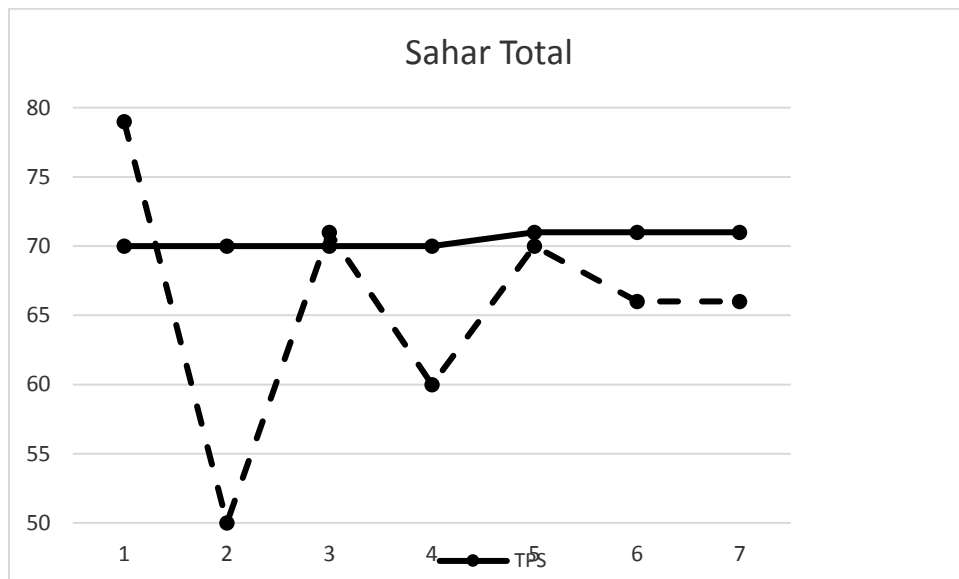
   Sahar.

Sahar's readings stayed the same throughout the whole intervention. The reading of

Internalizing Problem was 75 every week. However, the seminar teacher rated her Internalizing

Problem at 75 the first week and then had fluctuating readings until the last two weeks with a

final reading at 58. In the same way, Sahar's initial Total Problem reading was 70 and remaining

consistent with that reading only increasing to 71 in the last three weeks. The seminar teacher's

initial Total Problem reading was 79 decreasing and increasing every week until the final two

weeks with the final Total Problem reading being 66.

Anxiety Group

Sahib.

Sahib's initial Internalizing Problem reading was 68 and his initial Total reading was 72.

Sahib's Internalizing Problem reading decreased and then plateaued until it dropped the final 3

weeks with the last reading being 50. Sahib's seminar teacher's initial Internalizing Problem

reading was 55, only peaking to 69 and ending the intervention with a 55. Similarly, both

individuals saw a decrease in Total Problem throughout the completion of the intervention.

Figure 4.15.
Sahib's Total Problem BPM
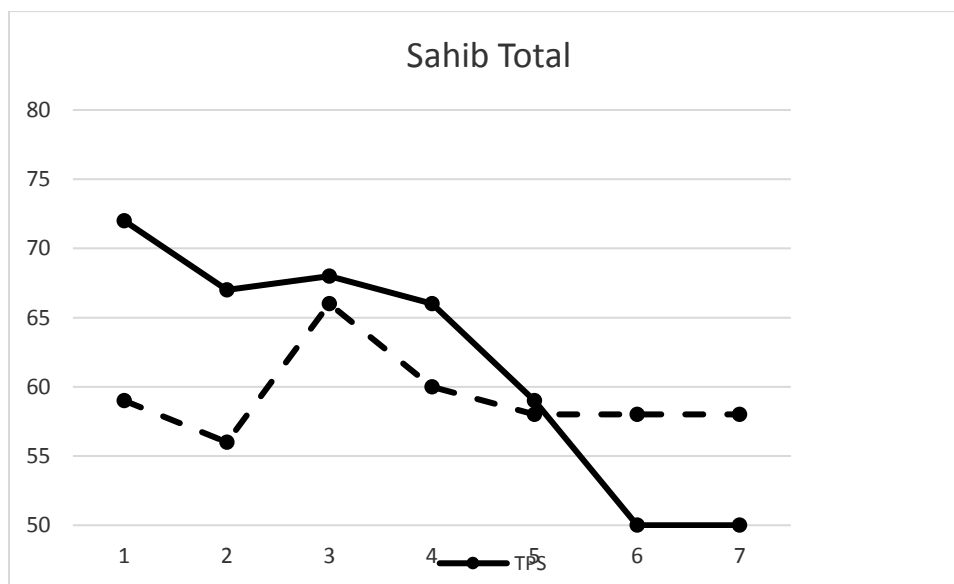
Figure 4.16.

Sahib's Internalizing Problem BPM
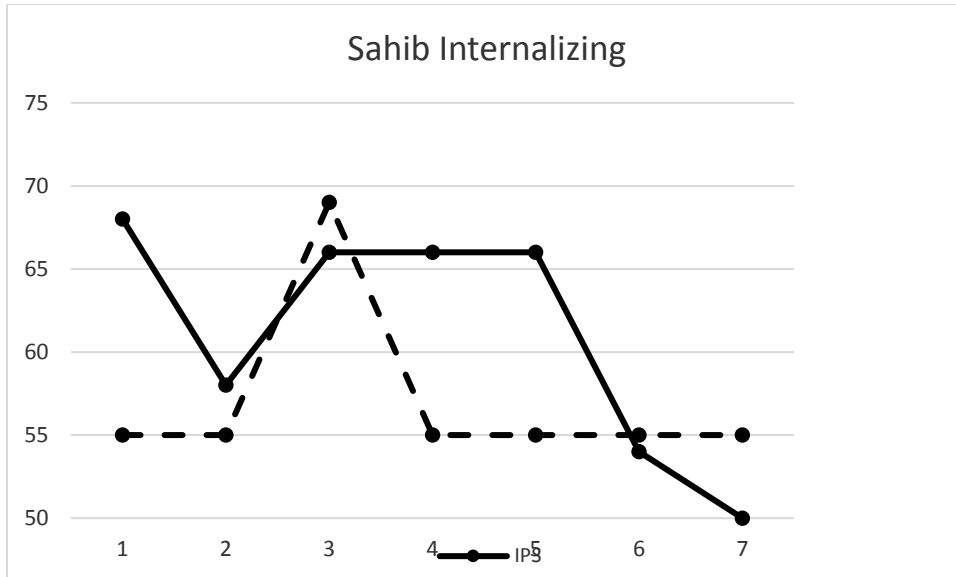
Figure 4.17.

Hadwin's Internalizing Problem BPM
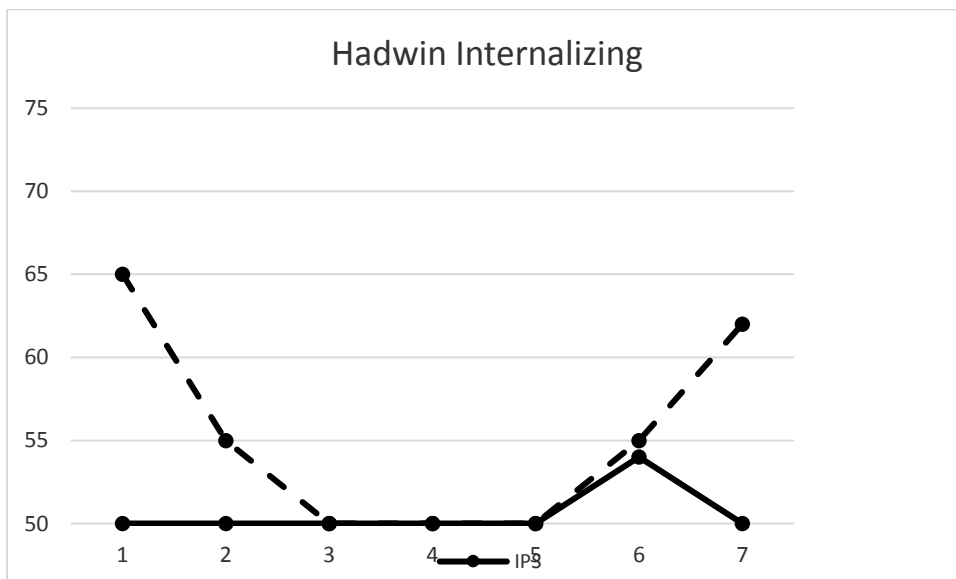
Figure 4.18.

Hadwin's Total Problem BPM
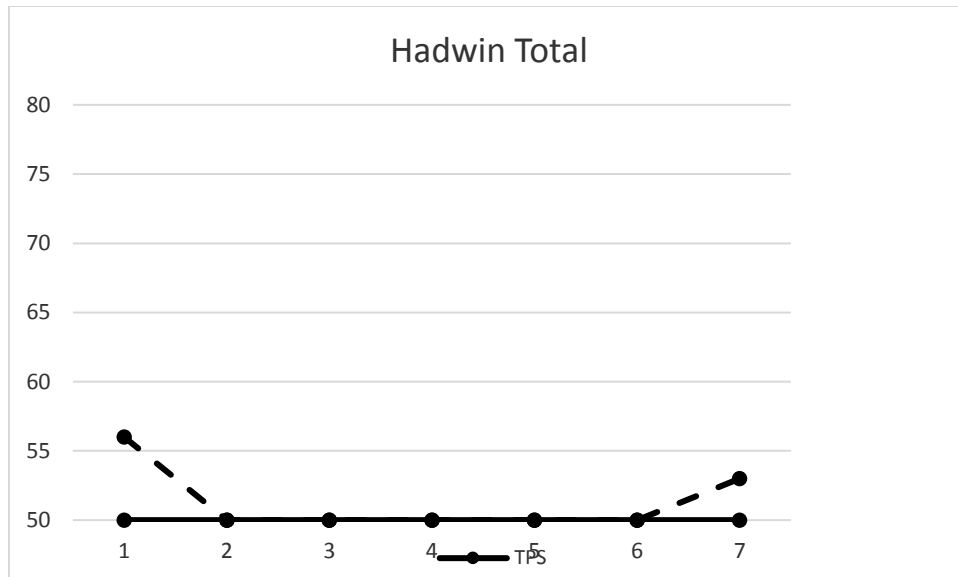
Hadwin Total

Hadwin.

Hadwin's initial reading on Internalizing Problems was 50 and stayed around 50 throughout the whole intervention. Similarly, Hadwin stayed at 50 on all readings for Total Problem. His seminar teacher also had very low readings on both Internalizing Problem and Total Problem during the intervention.

Figure 4.19.

Earl's Total Problem BPM

Earl Total
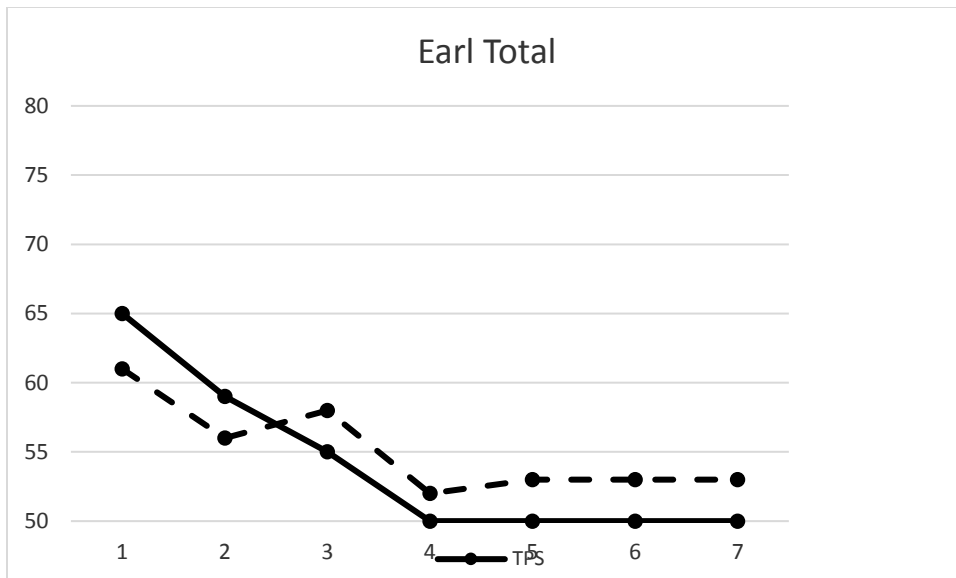
Figure 4.20. Earl's Internalizing Problem BPM

Earl's Internalizing Problem BPM

Earl Internalizing
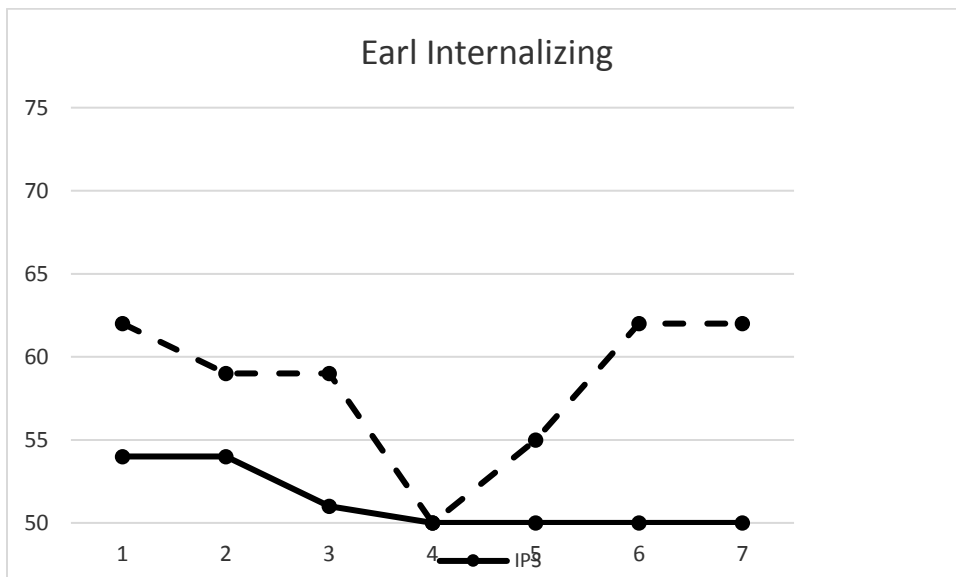
Earl.

Earl's initial reading for Internalizing Problem was 54 with his final reading being 50. In the same way, Earl's seminar teacher Internalizing Problem readings stayed between 50 and 62

throughout the intervention. Both Earl and his seminar teacher had close ratings on Total

Problem. Earl started the intervention with Total Problem of 65 while his seminar teacher rated

Total Problem at 61. Both scores went down for the Total Problem final reading.

Olena.

Olena started and stayed with the same Internalizing Problem reading of 50 throughout

the intervention. However, her seminar teacher's initial Internalizing Problem reading was 62

and the final reading of Internalizing Problem was 54. Olena's Total Problem readings were

different with her initial Total Problem reading being 58 and final reading being 56. Olena's

seminar teacher started her Total Problem reading at 69 and final Total Problem reading at 65.

Figure 4.21.

Olena's Total Problem BPM
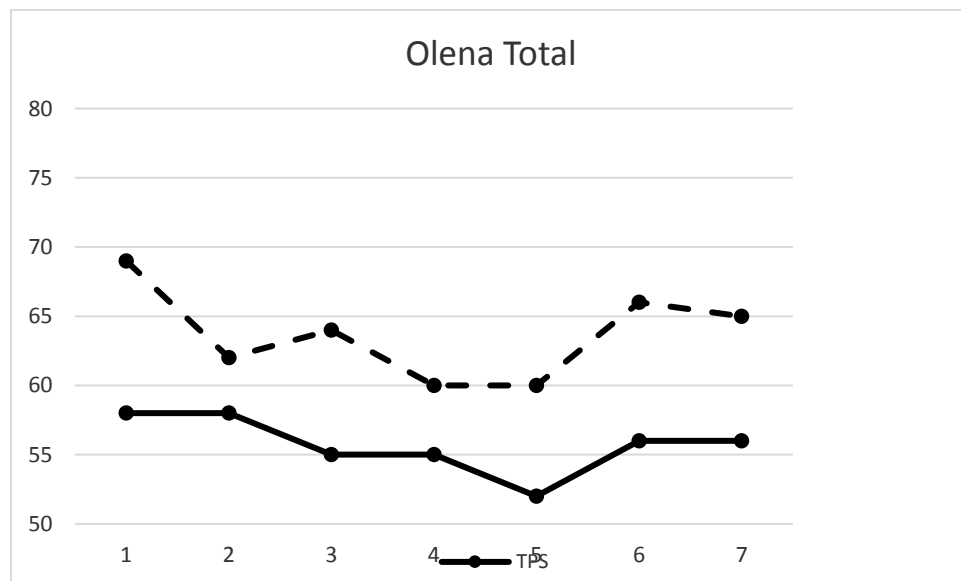
Figure 4.22.

Olena's Internalizing Problem BPM

Olena Internalizing
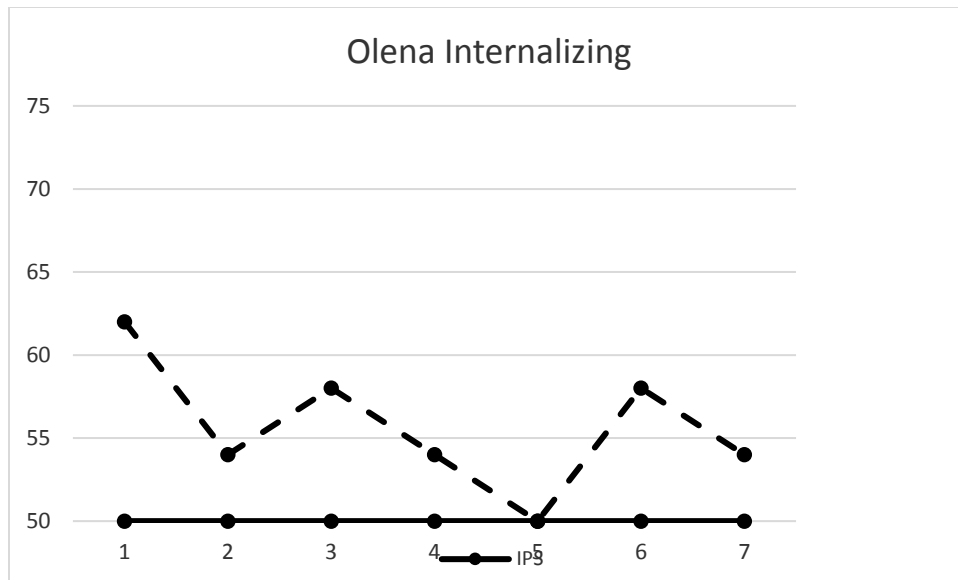
Jakayla.

Jakayla's initial reading for Internalizing Problem was 63. She stayed consistent at 63 until midway through the intervention and ended the intervention with Internalizing Problem of 57. However, her seminar teacher rated her initial Internalizing Problem score at 62 and it climbed throughout the intervention with a final Internalizing Problem reading of 68. Both Jakayla and the seminar teacher had similar reports on Total Problem. Jakayla's initial Total Problem score was 68 and the seminar teacher's Total Problem score was 62. They ended the intervention with a Total Problem of 65 and 69, respectively.

Figure 4.23.
Jakayla's Internalizing Problem BPM
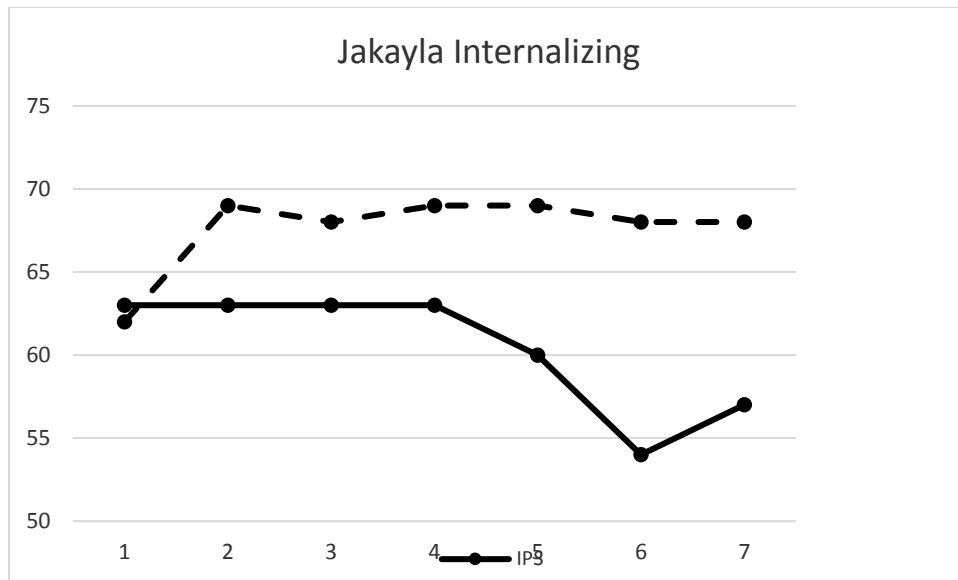
Figure 4.24.

Jakayla's Total Problem BPM
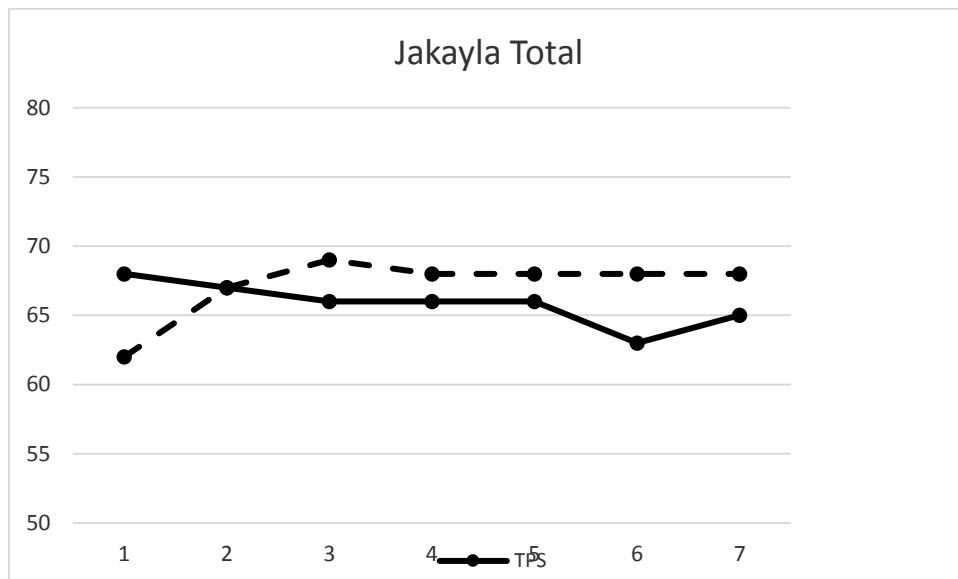
Figure 4.25.

Lady's Internalizing Problem BPM
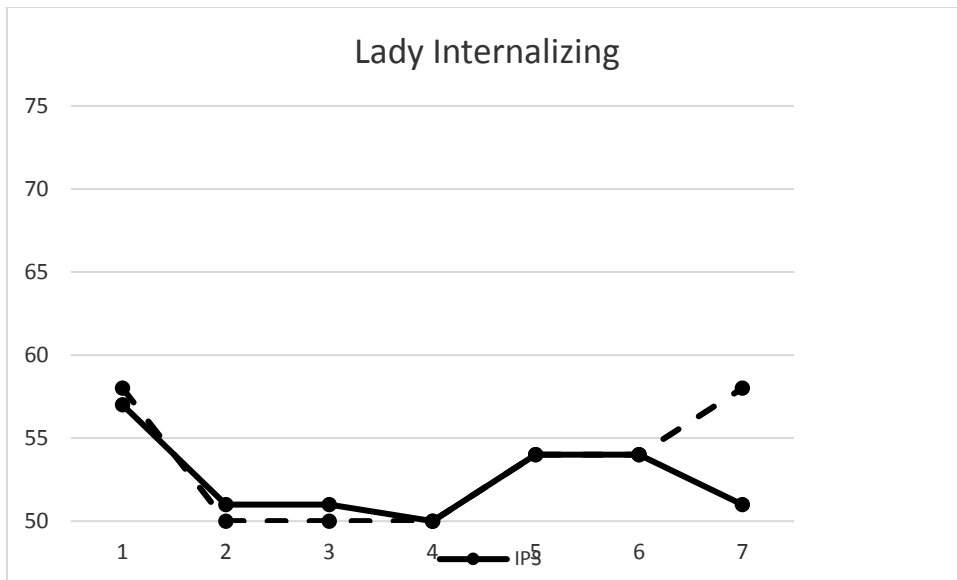
Figure 4.26.

Lady's Total Problem BPM
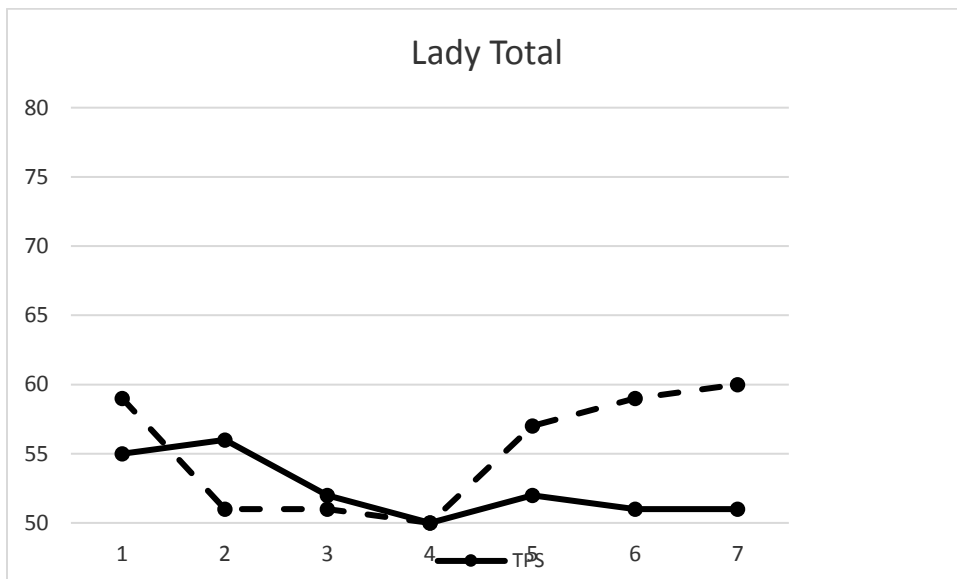
    Lady.

       Lady's initial Internalizing Problem reading was 57 and her seminar teacher's score was

58 for initial Internalizing Problem reading. All scores of Internalizing Problem between lady

and her seminar teacher stayed below 60. In the same way, Lady's initial score was 55 on Total

Problem and her seminar teacher's initial Total Problem score was 59. Lady's Total Problem

scores continued to go down throughout the intervention and Lady's seminar teacher never had a

Total Problem score over 60.

Figure 4.27.

Tacitus's Total Problem BPM
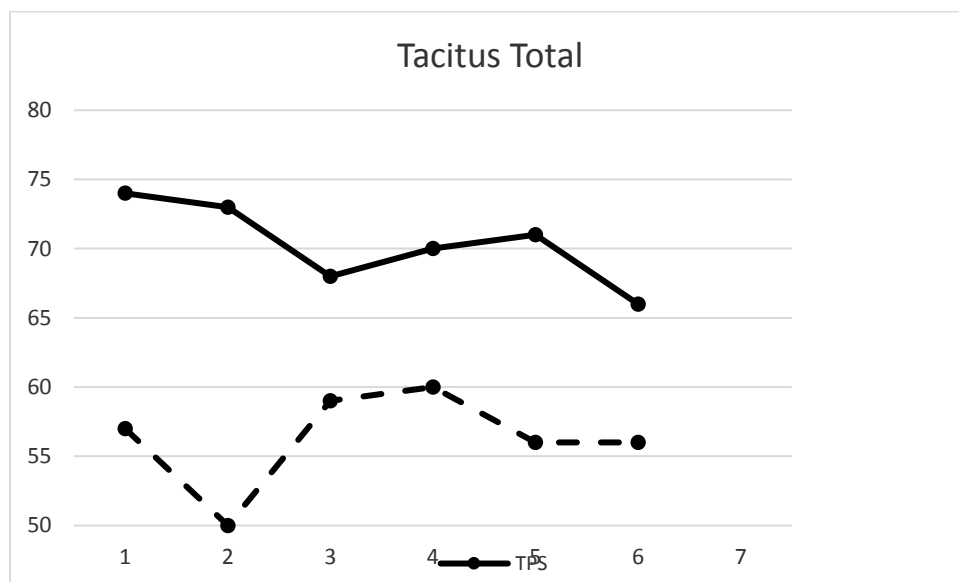
Figure 4.28.

Tactius's Internalizing Problem BPM

Tacitus Internalizing

Taticus.
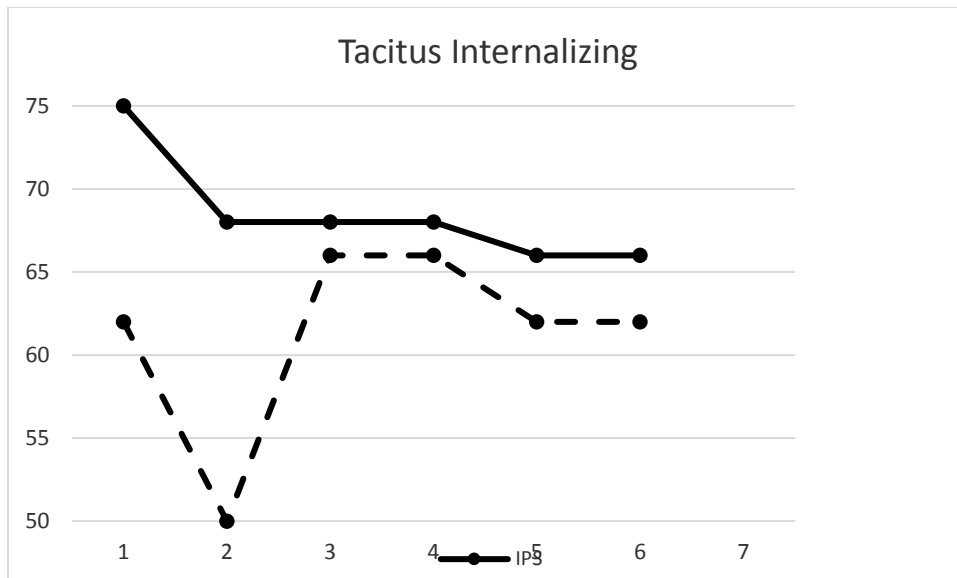
Taticus's initial Internalizing Problem score was 75. He continued to decrease his score over the intervention and had a final Internalizing Problem score of 66. In the same way, Tatitus seminar teacher gave an initial and final Internalizing Problem score of 62. Tacitus had an initial Total Problem reading of 74 decreasing to a Total Problem score of 66 at the end of the intervention. In the same way, Tatitus's seminar teacher had an initial Total Problem reading of 57 going up to 60 half way through the intervention and the ending at 56 for the final Total Problem reading.

Tahoe.

Tahoe's initial reading for Internalizing Problem was 50 and his final Internalizing Problem reading was 51. All readings were under 60 throughout the intervention. His seminar teacher's initial Internalizing Problem reading was 70 decreasing down to 66 for the final Internalizing Problem reading. Tahoe stayed at 50 for all of his Total Problem readings.

Figure 4.29.
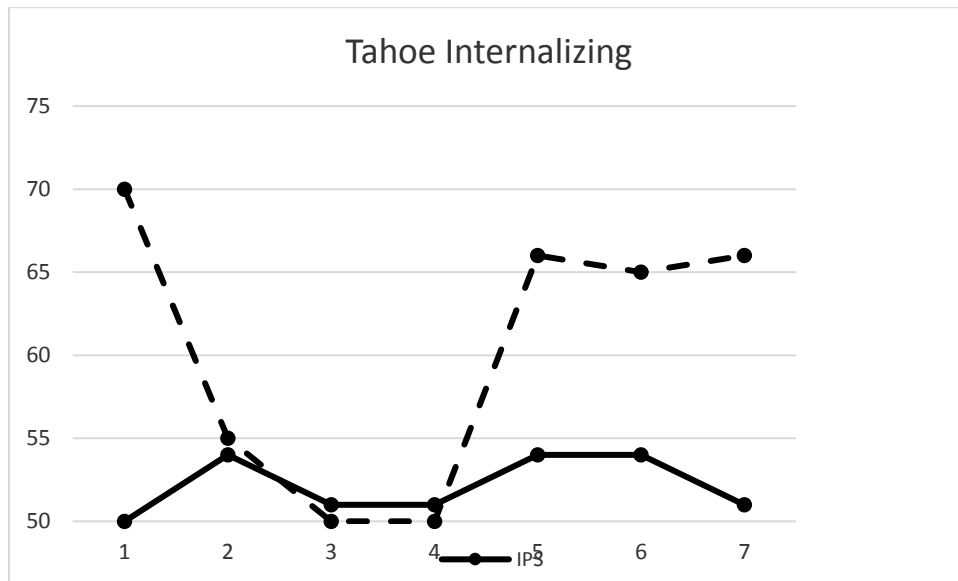
Figure 4.30.

Tahoe's Total Problem BPM
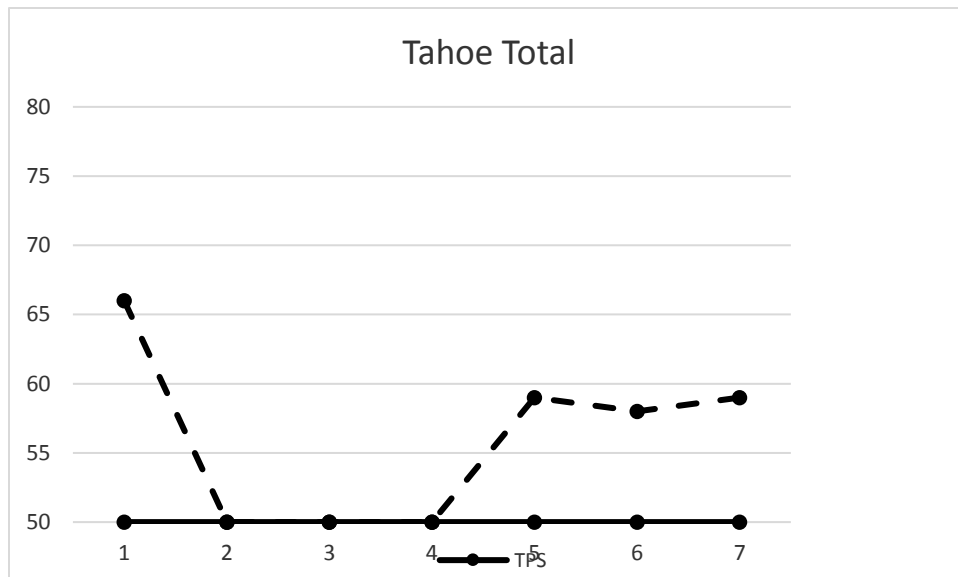
Group Data

Longitudinal Multilevel Modeling

Longitudinal multilevel modeling was completed for four of the six areas in the BPM. The four areas are Internalizing Problem Student, Internalizing Problem Teacher, Total Problem Student, and Total Problem Teacher. The Externalizing Problem Teacher and Student were not included because it was not connected to the current study. Results of the longitudinal multilevel modeling analysis found most intercepts between 59.42 and 66.7 for Internalizing and Total Problem for both student and teacher. The BPM recognizes an internalizing problem at a score of 65. Therefore, the majority of the study did not have an internalizing problem based off the diagnostic instrument BPM. In the same way, 4 models were completed for each of the four areas of the BPM. The first model was an unconditional means model which investigated at how much the intercept differs from zero. The second and third models were unconditional growth models which investigated at fixed intercept and random intercept. Fixed intercepts were investigating data following a pattern and random intercept was investigating all individual data. The final model was a conditional growth model which included the group as a predictor.

Internalizing Problem specific to students revealed an intercept at 59.42 in unconditional means model, Model 1as noted in Table 4.2. With an intercept of 59.42 the null hypothesis can be rejected because it is greater than zero. Model 2 and Model 3, of the unconditional growth model for setting the slope, Internalizing Problem for students found an intercept 60.20, and 65.36, respectively. Model 2 was a fixed intercept patterns and investigated data following a pattern. It was found to be not significant ($p = 0.14$) and not capturing the fit of the model. A random intercept investigating the individual data found to be not significant ($p = 0.42$). However, there was a significant change from Model 2 and Model 3 Log-Likelihoods and found a positive change from -303.4 to -291.7 which indicated a significant fit. Model 4, a conditional

growth model which included the group as a predictor were completed. The Log-Likelihoods

was -287.0 which correlates to significance when looking at the predictors.

Table 4.2.

Results of Internalizing Problems (student)

	Model 1 (null)	Model 2	Model 3	Model 4
AIC/BIC/logLik	613.3/621.2/-303.6	614.7/625.2/-303.4	594.5/611.2/-291.7	588.0/606.3/-287.0
Fixed effects				
Intercept (SE)	59.42 (2.2)	60.20 (2.3)	60.20 (2.47)	65.36 (3.22)
Time (SE)	-	-0.26 (0.18)	-0.25 (0.31)	-0.25 (0.32)
Group (SE)	-	-	-	-9.68 (3.82)
Random Effects				

Internalizing Problems specific to teachers revealed an intercept at 61.7 in the

unconditional means model, Model 1 as noted in Table 4.3. With an intercept of 61.7 the null

hypothesis can be rejected because it is greater than zero. Model 2 and Model 3, the

unconditional growth model for setting the slope, Internalizing Problem for teachers found an

intercept 60.7, and 62.4, respectively. Model 2 was a fixed intercept patterns and investigated

data following a pattern. It was found to be not significant ($p = 0.30$) and not capturing the fit of

the model. A random intercept investigating the individual data found to be not significant ($p =$

0.16). However, there was a significant change from Model 2 and Model 3 Log-Likelihoods

found a positive change from -345.1 to -275.2 which indicated a significant fit. Model 4, a

conditional growth model which included the group as a predictor was completed. The Log-

Likelihoods was -319.7 which is not statistically significant.

Table 4.3.

Results of Internalizing Problems (teacher)

	Model 1 (null)	**Model 2**	**Model 3**	**Model 4**

AIC/BIC/logLik	696.9/704.8/-345.5	698.3/708.7/-345.1	562.4/578.1/-275.2	653.4/671.6/-319.7
Fixed effects				
Intercept (SE)	61.7 (1.6)	60.7 (1.8)	62.4 (2.14)	63.3 (1.97)
Time (SE)	-	0.33 (0.30)	-0.54 (0.38)	0.18 (0.24)
Group (SE)	-	-	-	-5.81 (2.53)
Random Effects				

Total Problems specific to students revealed an intercept at 60.8 in unconditional means model, Model 1as noted in Table 4.4. With an intercept of 60.8 the null hypothesis can be rejected because it is greater than zero. Model 2 and Model 3, the unconditional growth model for setting the slope, Total Problem for students found an intercept 62.4, and 62.4, respectively. Model 2 was a fixed intercept patterns and investigated data following a pattern. It was found to be significant ($p = 0.003$) capturing the fit of the model. A random intercept investigating the individual data found to be not significant ($p = 0.16$). There was a significant change from Model 2 and Model 3 in Log-Likelihoods found a positive change from -303.9 to -275.2 which indicated a significant fit. Model 4, a conditional growth model which included the group as a predictor was completed. The Log-Likelihoods was -271.1 which correlates to significance when looking at the group as a predictor and previous Log-Likelihoods.

Table 4.4.

Results of Total Problems (student)

	Model 1 (null)	**Model 2**	**Model 3**	**Model 4**
AIC/BIC/logLik	621.1/628.9/-307.5	615.9/626.4/-303.9	562.4/578.1/-275.2	566.2/574.4/-271.1
Fixed effects				
Intercept (SE)	60.8 (1.9)	62.4 (2.0)	62.4 (2.14)	66.7 (2.9)
Time (SE)	-	-0.54 (0.18)	-0.5 (0.38)	-0.54 (0.38)
Group (SE)	-	-	-	-7.99 (3.50)
Random Effects				

Total Problem specific to teacher revealed an intercept at 60.7 in unconditional means

model, Model 1as noted in Table 4.5. With an intercept of 60.7 the null hypothesis can be

rejected because it is greater than zero. Model 2 and Model 3, the unconditional growth model

for setting the slope, Total Problem for students found an intercept 60.2, and 62.4, respectively.

Model 2 was a fixed intercept patterns and investigated data following a pattern. It was found to

be not significant (p = 0.44) not capturing the fit of the model. A random intercept looking at the

individual data found to be not significant (p = 0.16). However, there was a significant change

from Model 2 and Model 3 in Log-Likelihoods found a positive change from -323.9 to -275.2

which indicated a significant fit. Model 4, a conditional growth model which included the group

as a predictor was completed. The Log-Likelihoods was -319.7 and not statistically significant.

Table 4.5.

Results of Total Problems (teacher)

	Model 1 (null)	Model 2	Model 3	Model 4
AIC/BIC/logLik	653.4/661.3/-323.7	655.8/666.3/-323.9	562.4/578.1/-275.2	653.4/671.6/-319.7
Fixed effects				
Intercept (SE)	60.7 (1.4)	60.2 (1.6)	62.4 (2.14)	63.3 (1.98)
Time (SE)	-	0.18 (0.24)	-0.54 (0.38)	0.18 (0.24)
Group (SE)	-	-	-	-5.81 (2.53)
Random Effects				

Paired Sample T Test

A paired sample *t*-test was completed on the whole group BDI and BAI. It was found that

the BDI was not statistically significant *t* (14) = 0.68; p = 0.51, with a mean difference of 1.73. A

second paired sample t-test was completed on the BAI and results also found failure to meet

statistical significance; *t* (14) = 1.17, p=0.26, with a mean difference of 3.53.

Chapter 5 - Discussion

In today's schools, students have increasingly diverse academic and behavioral needs that require the implementation of effective interventions (Olsen, et al., 2017). The current study investigated the feasibility and effectiveness of MATCH-ADTC on school-aged children with symptoms of depression and anxiety. Addressed in this chapter is an overview of research question results, limitation, implications for practice, and recommendations for future research.

1. Can MATCH-ADTC be delivered with amounts of fidelity by school counselors?

2. How acceptable was MATCH-ADTC for students?

3. Does MATCH-ADTC decrease depression symptoms of ninth grade students?

4. Does MATCH-ADTC decrease anxiety symptoms of ninth grade students?

The feasibility of MATCH-ADTC was completed using treatment fidelity and social validity. Treatment fidelity was completed successfully finding that MATCH-ADTC can be delivered with adequate fidelity. Additionally, MATCH-ADTC was acceptable for students by their response to CURP. The CURP reported eight of the fifteen students liked MATCH-ADTC as a method for helping with symptoms of depression and anxiety.

A Longitudinal Multilevel Modeling test was used to determine the effectiveness of the cognitive behavioral treatment, MATCH-ADTC for at risk students identified by (SAEBRS), an online computer testing program (Kilgus, et al., 2018). MATCH-ADTC involved cognitive restructuring, relaxation techniques, and exposure sessions. These interventions were administered with students exhibiting presenting symptoms of depression or presenting symptoms of anxiety with a crossover session for anxiety and depression, respectively. Results

from both groups had intercepts in the range of 59.42 and 66.7. Intercepts below 65 indicate that these individuals did not have an internalizing problem based off of the BPM. Due to intercepts being in the range of 59.42 - 66.7 the significant values and the Log-Likelihoods from Models 2, 3, and 4 are acceptable and positive but additional research with intercepts consistently above 65 would provide more favorable conclusion for effectiveness of MATCH-ADTC.

A paired sample *t*-test was completed on pre-and-posttest Beck Depression and Anxiety Inventories. The tests were not statistically significant. Finally, individual graphs were developed to discover how each individual within each group started and completed the intervention in regards to the BPM. The graphs focused on Internalizing Problem and Total Problem from the BPM. Eight students from the intervention rated their final Internalizing Problem from the BPM lower than their initial. Five of the corresponding teachers rated their students final Internalizing Problem from the BPM lower than their initial. Similarly, seven students from the intervention rated their final Total Problem from the BPM lower than their initial. Ten of the corresponding teachers rated their students final Total Problem from the BPM lower than their initial. The individual graphs were mostly positive in terms of effectiveness of MATCH-ADTC on depression and anxiety symptoms. Results indicated a decrease in both teacher and student self-reports on Internalizing Problem and Total Problem.

Limitations of the Study

There are a number of possible limitations that should be considered when deciphering the results of the current study. Setting, participants, and study design are three main limitations. The current study was in a rural Midwest school where there are limited participants. This could be due to the small size school but also the stigma on mental health concerns in the community. In addition, this study was only administered at one setting. Another possible reason for a low

sample size is due the diagnostic instrument SAEBRS. SAEBRS was a new diagnostic

instrument for the school district. User error and instructional error could have caused fluctuation

in participation. The corresponding seminar teacher was heavily involved in deciding if the

participant qualified for the study as well as if there was an effective change. It is possible there

was a bias of rating. The current study would have benefited from a larger sample size. Adding a

comparison study to the current research could have helped in different areas. The different areas

where additional data would be helpful include but are not limited to, demographics such as

socioeconomic status, race-ethnicity, gender, counseling referrals, parent referrals, and teacher

referrals. Finally, if one is able to increase the sample size, and add in comparisons studies from

other schools, then the methodology could be a randomized control trial.

Another limitation to the study was the COVID-19 pandemic. The intervention was

completed before schools went to an online format. However, the impending threat and impact of

COVID-19 was discussed in group sessions before the intervention time began. With these

students having internalizing symptoms of depression and anxiety, it is possible BPM, BDI, and

BAI scores increased at the end of the intervention.

Implications for Practice

The implications from the current study reflect the importance of multitier system of

support. MATCH-ADTC was completed as a Tier 2 intervention for students experiencing

symptoms of depression and anxiety. While the study was not statistically significant, MATCH-

ADTC provided evidence of being a practical approach to reducing symptoms of depression and

anxiety. The major implications for practice are the importance multi-tiered system of supports

and the positive results from the intervention.

The implementation of a multitiered system of support is a process involving the whole school district. First, there must be alignment with the school and district on mission and vision statements (Goodman-Scott et al., 2020). Alignment of mission and vision statements then allows investigation into baseline data to develop and create goals (Goodman-Scott et al., 2020). The baseline data in commonly completed on all students to determine need (Ziomek-Daigle, 2016). Goals are developed and lead to evidence-based interventions. MATCH-ADTC in the current study would be considered a Tier 2 intervention using the scale of multitiered system of support. A Tier 2 intervention must collect and use multiple data sources, disaggregated data, set goals with high expectations, and collaborate with teachers and families. The Tier 1 intervention given to all students is most commonly in classroom instruction (Goodman-Scott et al., 2016). In the current study the school counselor gave the Tier 1 intervention as a class instruction in the areas of communication, resilience, critical thinking, and adaptability. Within each tier, students are all monitored using formative assessments and a review of reports (Goodman-Scott et al., 2020). The monitoring can be completed by consulting and collaborating with teachers (Ziomek-Daigle, 2016). Evaluation is key to determine the effectiveness of the interventions and discover any gaps in achievement (Goodman-Scott et al., 2020). The evaluation leads to advocating and initiating new programs which in turn lead to a school-wide systemic change (Goodman-Scott et al., 2020).

A multi-tiered system of supports framework is effective and efficient approach to improving students' academic and behavioral experiences in school (Olsen, et al., 2017). Data-driven framework help promote safe schools and student learning (Goodman-Scott, et al., 2015). Research indicates that a best meaning most effective practice for addressing students at risk for academics and behavioral issues is when school counselors implement a multi-tiered system of

support framework with fidelity integrated within a comprehensive school counseling program (Lane, et al. 2013). Furthermore, it is well documented that mental health concerns are on the rise for children and adolescents (Centers for Disease Control and Prevention, 2020). Children aged 4-11 years old with mental health concerns identified several barriers to seeking psychological treatment (Johnstone, et al., 2020). Using a multi-tiered system of supports for school-aged children exhibiting mental health concerns can help increase academics and behaviors as well as decrease symptoms connected to mental health (Olsen, et al., 2017). More research should be completed to find valid and reliable interventions for students suffering from symptoms of depression and anxiety. MATCH-ADTC is a step in the right direction for school-aged children exhibiting symptoms of depression and anxiety. In addition, current school counseling interventions mentioned previously could be implemented into MATCH-ADTC. Creative arts could be used when describing how students feel in relationship to their bodies. The creative arts were one type of intervention included in a MACT-ADTC session. Calming strategies and music were another focus in a session of MATCH-ADTC.

The implementation of MATCH-ADTC did indicate positive effects. The positive effects were the ability to recognize their emotions, implement a resilient skill strategy, and continue to function appropriately during the school day. While the current study did not give the statistically significant results, it did indicate positive results for individuals. The intervention reported positive effects of decreasing internalizing problems. Teachers and educational leaders reported a positive difference in students from the time the intervention started to the time it ended. Two of those students did not necessarily have a significant change on their Internalizing Problem and Total Problem graphs but was noticed in the academic setting from their specific seminar teacher.

Recommendations for Future Research

The current study posed a number of recommendations for future research. For the purpose of providing more information concerning the effectiveness of MATCH-ADTC on internalizing symptoms of depression and anxiety more research needs to be conducted; more research in the areas of different grade levels, diversity, sample size, randomized control setting, educational setting, research design, and additional CBT techniques.

A few of the areas that need adjustment for future research are grade levels diversity and sample size. MATCH-ADTC could be conducted from middle to high school. Targeting these grade levels will allow for common language and possible help in a transition from middle school to high school. More diversity in terms of race-ethnicity, socioeconomic status, free and reduced lunch, and gender would be beneficial to discover trends MATCH-ADTC. An increase in sample size with comparison studies completed at rural and urban schools would provide more support for transferability. Increasing the sample size would also allow for different methods such as a randomized control trial to be tested and the greater opportunity for results to be statistically significant.

The educational setting is also key in making in measuring the effectiveness of the intervention. Creating and abiding by a standardized organizational schedule to implement the interventions are critical to the validity and reliability of the process. The times allotted for the interventions need to be communicated to and respected by the teachers and other educational stakeholders. The designated amount of time for each intervention session should be held to a high standard and not be interrupted to each intervention session. Thirty to forty-five-minute sessions appeared to be most effective for interventions during this study.

The research design should designate the first three weeks to recording BPM scores without completing intervention specific to MATCH-ADTC. Participants who do not score over 65 on the BPM should be excused from the study. It is recommended to include parent or guardian reports on the BPM which would add additional data from another environment other than the school setting. Multiple data points would strengthen the validity and reliability of the approach.

Research indicates that CBT is a *gold* standard of care for depression and anxiety (David, et al., 2018). Cognitive behavioral therapy was the first form of psychotherapy tested with the most stringent criteria (e.g., randomized trials and active comparator) of evidence-based framework (David, et al., 2018). With MATCH-ADTC being grounded in CBT there should be more intentional techniques used in each session. Additional techniques not used in MATCH-ADTC that could be beneficial are guided discovery, exposure counseling, journaling, and role playing. Being intentional with these techniques during MATCH-ADTC session could help in the decreasing of depression and anxiety symptoms of depression and anxiety as well as provide life-long coping skills.

Conclusion

Previous research has indicated that MATCH-ADTC is an effective method at decreasing depression and anxiety symptoms. The current study provided additional research on the feasibility and effectiveness of MATCH-ADTC with school-aged students who are at-risk for symptoms of depression and anxiety as identified from SAEBRS. In the current study, statistically significant results were found on the Log-Likelihoods. However, the intercepts stayed between 59.42 – 66.7. An intercept range of 59.42 – 66.7 indicated these participants did not have internalizing problems according to the BPM. While effectiveness being statistically

significant is difficult to prove due to the intercept range from 59.42 – 66.7, feasibility produced

significantly results. Students reacted positively to the intervention and eight students from the

intervention rated their final Internalizing Problem from the BPM lower than their initial. With

all the positive results from the current study there needs to be more research on the effectiveness

with school-aged students at risk for symptoms of depression and anxiety. This can be

accomplished by ensuring participants are above an intercept of 65 on the BPM. Having an

intercept above 65 will give a more valid and reliable reading on effectiveness than what was

found in the current study. In addition, grade levels, diversity, sample size, randomized control

setting, educational setting, and research design need to be adjusted to best fit the study. All of

these areas will help provide a solid foundation for further evidence regarding the MATCH-

ADTC effectiveness for school-aged children exhibiting symptoms in depression and anxiety.

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Appendix A - Main Flowchart

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Appendix B - Checklist

Problem Solving

Use This

To teach the child steps to solve problems more effectively.

For Child

Goals

- The child will know the five steps for effective problem solving
- The child will know how to generate a variety of ideas and possible solutions prior to evaluating them or acting on them
- The child will know how to apply these problem solving skills to real problems in his or her life

Materials

- *Fear Thermometer* and *Fear Ladder* (2 unrated copies for anxiety/trauma), *Feelings Thermometer* (for depression), or *Behavior Rating Scale* (for disruptive behavior)
- *Five S-T-E-P-S to Problem Solving* worksheet
- *Helping Your Child Solve Problems* parent handout

> ⏳ **If time is tight:** Teach the child a procedure for solving problems using the S-T-E-P-S acronym.

Main Steps
Remember to start by setting an agenda together and reviewing any practice assignments.

☐	**Obtain Weekly Ratings**	If the main focus is traumatic stress or anxiety, use the 0 to 10 scale of the *Fear Thermometer* to obtain *Fear Ladder* ratings from both the child and his or her parent. If the main focus is depressed mood, use the *Feelings Thermometer* to take a rating. If the main focus is disruptive behavior, take a parent rating with the *Behavior Rating Scale*.
☐	**Introduce Problem Solving**	Discuss the fact that we all have problems every day. Note that solving them can make us feel good or keep us out of trouble, and not solving them can make us feel bad or get us in trouble. Let the child know you will be talking about a new way to solve problems, called "S-T-E-P-S."
☐	**Discuss Types of Problems**	Discuss some examples of problems people often deal with on a daily basis. Use examples the child is likely to have experienced and that can be solved through direct action. This can be done by using calculated self-disclosure; that is, share with the child *appropriate* information about problems you have encountered and how you solved them.

☐	**Introduce Problem Solving S-T-E-P-S**	Describe each part of problem solving S-T-E-P-S: **S: Say what the problem is.** State the problem as specifically as possible. **T: Think of solutions.** Brainstorm at least three solutions without judging their feasibility or quality at this point. **E: Examine the solutions.** Identify the pros and cons of each suggested solution, including the likely consequences of each. **P: Pick one and try it out.** Use the pros and cons to choose the best solution. **S: See if it worked.** What was the outcome? If it didn't work, choose another solution to try.
☐	**ACTIVITY** *Solve a Problem Using S-T-E-P-S*	Present the child with a fun problem to solve that can be solved in the session together. Write down the process in terms of the problem solving S-T-E-P-S, and then point out to the child that you followed a process to solve the problem and that this is how S-T-E-P-S can be used. Example fun problems include: • Problem: move an object from one part of the room to another without using hands • Problem: keep a balloon in the air for 60 seconds without hands • Problem: Move from one chair to another without letting feet touch the ground Alternatively, use a problem from your own life and enlist the child as a helper to work through the problem-solving S-T-E-P-S.
☐	**Apply S-T-E-P-S to Child's Life**	Help the child identify a problem from his or her life that the two of you can work on using the problem solving S-T-E-P-S procedure. Practice using S-T-E-P-S to address a relatively simple problem in the child's life. Provide the child with the *Five S-T-E-P-S to Problem Solving* worksheet and help him or her to apply each part of the strategy to the identified problem.
☐	**Review Problem Solving S-T-E-P-S**	With the worksheet out of sight, discuss this new problem-solving strategy with the child to ensure that he or she (a) knows when it might be helpful to use the S-T-E-P-S strategy, (b) understands how to use this strategy, and (c) knows each of the five parts of S-T-E-P-S.

Example script

You: So, when would someone want to use these S-T-E-P-S?

Child: Well, when they're feeling bad about a problem, or feeling like they're stuck.

You: And if they felt like they had a problem or couldn't figure something out, what would you tell them to do?

Child: To think about their problem and some ways to try to solve it by going through the S-T-E-P-S.

You: Great. But what if they're not familiar with solving problems by using S-T-E-P-S? How would you get them started? What would be the first thing that they would need to do?

Child: Well, they would need to start by saying what the problem is...

You: Perfect! Then what? (continue asking similar questions, walking the child through the problem solving process)

☐	🏠 **PRACTICE ASSIGNMENT** *Practice at Home*	Ask the child to practice using problem solving S-T-E-P-S on his or her own. The child should identify a problem in his or her life and fill out a *Five S-T-E-P-S to Problem Solving* worksheet for that problem at home. The child should then try one of the solutions and tell you how it worked in the next session. Remind the child to bring the completed worksheet to the next session for discussion. Be sure to help the child pick a relatively simple problem for this practice assignment, rather than something big or complicated. Appropriate problems might include resolving a disagreement with a parent over a minor matter or with a friend about what to do over the weekend.

Leave 'Em Laughing

End the session on a fun note, with a game, activity, or other exercise that will leave the child feeling really good about the work you have done together today.

Share with Parent (if possible)

At the end of the session, if a parent is available, it can be helpful to brief him or her on the materials covered.

☐	**Consider Privacy**	Before bringing the parent into the room, it is important to ask the child if there is anything that he or she told you today that he or she does not want you to tell the parent. Be sure to honor the child's confidentiality within the appropriate limits of safety.
☐	**Review Concepts**	Have the child explain to the parent what concepts he or she has learned in the session. You can add information as necessary.
☐	**Introduce S-T-E-P-S**	For this session, the parent should also be introduced to the problem solving S-T-E-P-S. The parent should understand that this is a tool to solve problems that arise in the child's life.
☐	**Encourage Monitoring and Praise**	Ask the parent to be on the lookout for times when the child uses problem-solving S-T-E-P-S over the upcoming week and to support the child with praise for trying to solve problems.
☐	**Give Parent Handout**	Give the *Helping Your Child Solve Problems* handout to the parent. Make sure the parent is familiar with the concepts so that he or she can assist the child at home if needed.

Helpful Tips

- If the child is reticent or having difficulty identifying a problem, you may use a story to illustrate a problem and then have the child apply the S-T-E-P-S to that problem. Alternatively, some children may be able to apply the S-T-E-P-S to a problem of someone they know or are close to, such as a friend or family member. The primary goal of this module is to teach the child a new skill for solving problems—not necessarily to solve a specific problem at hand. Eventually, this skill can be used to address problems specific to the child, even if the child is not ready at this point to discuss his or her unique problems during the session.
- Check in on goals: Does the child feel that he or she is making progress? How does the material you covered today relate to the goals you set together?

Special Cases

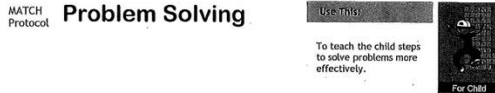|	
Depression	If the child enters the session in a bad mood, or seems tired, lethargic, or uninterested, this is an opportunity to introduce a mood booster: take a brief mood rating using the *Feelings Thermometer*, spend a few minutes engaging in a pleasant activity, and then take another mood rating. If the activity was successful, highlight to the child that what we do changes how we feel and then move on to covering the problem solving skill.

How's Your Style?

- Did you praise often?
- Did you review often, by asking questions?
- Did you simplify the steps as needed?
- Did your pace match that of the parent?
- Did you stay on track?

Appendix C - Completed Checklist

MATCH Protocol

Problem Solving

Use This!

To teach the child steps to solve problems more effectively.

For Child

Goals

- The child will know the five steps for effective problem solving
- The child will know how to generate a variety of ideas and possible solutions prior to evaluating them or acting on them
- The child will know how to apply these problem solving skills to real problems in his or her life

Materials

- *Fear Thermometer* and *Fear Ladder* (2 unrated copies for anxiety/trauma), *Feelings Thermometer* (for depression), or *Behavior Rating Scale* (for disruptive behavior)
- *Five S-T-E-P-S to Problem Solving* worksheet
- *Helping Your Child Solve Problems* parent handout

> ⧖ *If time is tight: Teach the child a procedure for solving problems using the S-T-E-P-S acronym.*

Main Steps	*Remember to start by setting an agenda together and reviewing any practice assignments.*
☑ **Obtain Weekly Ratings**	If the main focus is traumatic stress or anxiety, use the 0 to 10 scale of the *Fear Thermometer* to obtain *Fear Ladder* ratings from both the child and his or her parent. If the main focus is depressed mood, use the *Feelings Thermometer* to take a rating. If the main focus is disruptive behavior, take a parent rating with the *Behavior Rating Scale*.
☑ **Introduce Problem Solving**	Discuss the fact that we all have problems every day. Note that solving them can make us feel good or keep us out of trouble, and not solving them can make us feel bad or get us in trouble. Let the child know you will be talking about a new way to solve problems, called "S-T-E-P-S."
☑ **Discuss Types of Problems**	Discuss some examples of problems people often deal with on a daily basis. Use examples the child is likely to have experienced and that can be solved through direct action. This can be done by using calculated self-disclosure; that is, share with the child *appropriate* information about problems you have encountered and how you solved them.

58   MATCH: Problem Solving

☑ **Introduce Problem Solving S-T-E-P-S**	Describe each part of problem solving S-T-E-P-S: **S: Say what the problem is.** State the problem as specifically as possible. **T: Think of solutions.** Brainstorm at least three solutions without judging their feasibility or quality at this point. **E: Examine the solutions.** Identify the pros and cons of each suggested solution, including the likely consequences of each. **P: Pick one and try it out.** Use the pros and cons to choose the best solution. **S: See if it worked.** What was the outcome? If it didn't work, choose another solution to try.
☑ **ACTIVITY** *Solve a Problem Using S-T-E-P-S*	Present the child with a fun problem to solve that can be solved in the session together. Write down the process in terms of the problem solving S-T-E-P-S, and then point out to the child that you followed a process to solve the problem and that this is how S-T-E-P-S can be used. Example fun problems include: • Problem: move an object from one part of the room to another without using hands • Problem: keep a balloon in the air for 60 seconds without hands • Problem: Move from one chair to another without letting feet touch the ground Alternatively, use a problem from your own life and enlist the child as a helper to work through the problem-solving S-T-E-P-S.
☑ **Apply S-T-E-P-S to Child's Life**	Help the child identify a problem from his or her life that the two of you can work on using the problem solving S-T-E-P-S procedure. Practice using S-T-E-P-S to address a relatively simple problem in the child's life. Provide the child with the *Five S-T-E-P-S to Problem Solving* worksheet and help him or her to apply each part of the strategy to the identified problem.
☑ **Review Problem Solving S-T-E-P-S**	With the worksheet out of sight, discuss this new problem-solving strategy with the child to ensure that he or she (a) knows when it might be helpful to use the S-T-E-P-S strategy, (b) understands how to use this strategy, and (c) knows each of the five parts of S-T-E-P-S. **Example script** *You: So, when would someone want to use these S-T-E-P-S?* *Child: Well, when they're feeling bad about a problem, or feeling like they're stuck.* *You: And if they felt like they had a problem or couldn't figure something out, what would you tell them to do?* *Child: To think about their problem and some ways to try to solve it by going through the S-T-E-P-S.* *You: Great. But what if they're not familiar with solving problems by using S-T-E-P-S? How would you get them started? What would be the first thing that they would need to do?* *Child: Well, they would need to start by saying what the problem is...* *You: Perfect! Then what?* (continue asking similar questions, walking the child through the problem solving process)

MATCH: Problem Solving   59

☑ **PRACTICE ASSIGNMENT** *Practice at Home*	Ask the child to practice using problem solving S-T-E-P-S on his or her own. The child should identify a problem in his or her life and fill out a *Five S-T-E-P-S to Problem Solving* worksheet for that problem at home. The child should then try one of the solutions and tell you how it worked in the next session. Remind the child to bring the completed worksheet to the next session for discussion. Be sure to help the child pick a relatively simple problem for this practice assignment, rather than something big or complicated. Appropriate problems might include resolving a disagreement with a parent over a minor matter or with a friend about what to do over the weekend.

Leave 'Em Laughing

End the session on a fun note, with a game, activity, or other exercise that will leave the child feeling really good about the work you have done together today.

Share with Parent (if possible)

At the end of the session, if a parent is available, it can be helpful to brief him or her on the materials covered.

NO PARENT

☐ **Consider Privacy**	Before bringing the parent into the room, it is important to ask the child if there is anything that he or she told you today that he or she does not want you to tell the parent. Be sure to honor the child's confidentiality within the appropriate limits of safety.
☐ **Review Concepts**	Have the child explain to the parent what concepts he or she has learned in the session. You can add information as necessary.
☐ **Introduce S-T-E-P-S**	For this session, the parent should also be introduced to the problem solving S-T-E-P-S. The parent should understand that this is a tool to solve problems that arise in the child's life.
☐ **Encourage Monitoring and Praise**	Ask the parent to be on the lookout for times when the child uses problem-solving S-T-E-P-S over the upcoming week and to support the child with praise for trying to solve problems.
☐ **Give Parent Handout**	Give the *Helping Your Child Solve Problems* handout to the parent. Make sure the parent is familiar with the concepts so that he or she can assist the child at home if needed.

Helpful Tips

- If the child is reticent or having difficulty identifying a problem, you may use a story to illustrate a problem and then have the child apply the S-T-E-P-S to that problem. Alternatively, some children may be able to apply the S-T-E-P-S in terms of someone they know or are close to, such as a friend or family member. The primary goal of this module is to teach the child a new skill for solving problems—not necessarily to solve a specific problem at hand. Eventually, this skill can be used to address problems specific to the child, even if the child is not ready at this point to discuss his or her unique problems during the session.
- Check in on goals: Does the child feel that he or she is making progress? How does the material you covered today relate to the goals you set together?

60   MATCH: Problem Solving

Special Cases

Depression	If the child enters the session in a bad mood, or seems tired, lethargic, or uninterested, this is an opportunity to introduce a mood booster: take a brief mood rating using the *Feelings Thermometer*, spend a few minutes engaging in a pleasant activity, and then take another mood rating. If the activity was successful, highlight to the child that what we do changes how we feel and then move on to covering the problem solving skill.

How's Your Style?

- Did you praise often?
- Did you review often, by asking questions?
- Did you simplify the steps as needed?
- Did your pace match that of the parent?
- Did you stay on track?

8 STEPS

8 STEPS COMPLETED

8 ÷ 8 = 1.00

MATCH: Problem Solving   61

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Appendix D - Depression Flowchart

Depression
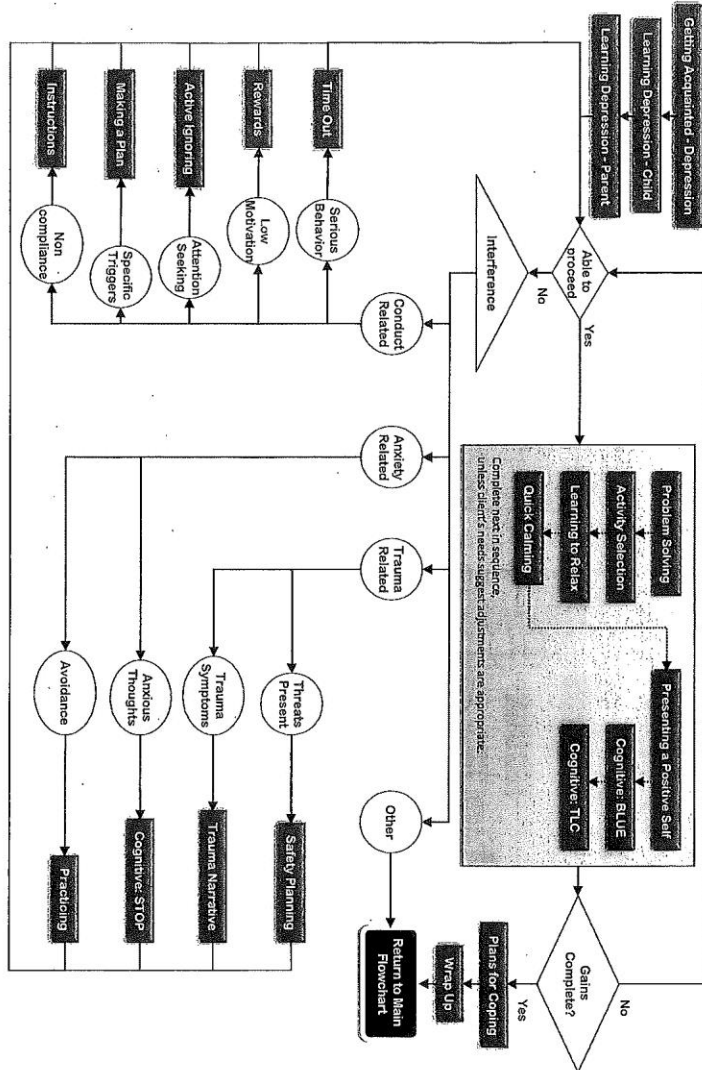
Appendix E - Anxiety Flowchart

Anxiety

Getting Acquainted - Anxiety
Fear Ladder
Learning Anxiety - Child
Learning Anxiety - Parent

Ready to practice? — Yes → Practicing
No

Gains Complete? — Yes → Maintenance → Wrap Up → Return to Main Flowchart
No

Interference

Conduct Related
- Time Out — Serious Behavior
- Rewards — Low Motivation
- Active Ignoring — Attention Seeking
- Making a Plan — Specific Triggers
- Instructions — Non compliance

Trauma Related
- Safety Planning — Threats Present
- Trauma Narrative — Trauma Symptoms

Mood Related
- Anxious Thoughts — Cognitive: STOP
- Depressive Thoughts — Cognitive: BLUE — Still a problem — Cognitive: TLC
- Somatic Arousal — Learning to Relax — Still a problem — Quick Calming
- Aversive Events — Problem Solving — Still a problem — Activity Selection
- Social Skills — Presenting a Positive Self

Other

Appendix F - Anxiety MATCH-ADTC Session

1. Getting Acquainted: Anxiety

   a. Goals of Session

      i. The child will feel more comfortable through introductory get-acquainted activities

      ii. The child will understand basic information about the treatment of anxiety

      iii. The child will learn about the importance of confidentiality, take-home assignments, and regular attendance

      iv. The child will know how to use the Fear Thermometer

2. Fear Ladder

   a. Goals of Session

      i. The child will identify situations that make him or her anxious

      ii. The child will describe his or her reactions to signs of anxiety

      iii. Together you will produce a list of feared items that will guide the practice exercises for subsequent modules

3. Learning About Anxiety

   a. Goals of Session

      i. The child will understand how anxiety works and will have a rationale for exposure practice

      ii. The child will be optimistic about his or her situation

      iii. The child will be interested in participating in and learning more about treatment

4. Practicing

   a. Goals of Session

      i. The child will practice exposure to feared items or situations

      ii. Over the course of several attempts, the child will provide evidence of decreased rating for these items or situations

      iii. The child will understand the relationship between the practice performed and the decreased anxiety

5. Maintenance

   a. Goals of Session

      i. The child will recognize that gains have been made and receive praise for his or her hard work in treatment

      ii. The child will be able to review the main points covered in previous sessions, identify his or her new skills, and explain how to apply them to real life problems and conditions

      iii. The child will understand that even though some concerns may remain at this point, continued practice after therapy has ended will lead to further improvement over time

6. Cognitive- Stop

   a. Goals of Session

      i. The child will learn to identify feelings that may be signs of anxious thinking

      ii. The child will learn how different thoughts can lad to different ways of feeling and acting

        iii.   The child will recognize his or her self-talk in anxiety provoking

               situations

        iv.   The child will learn four steps to modify anxious self-talk into coping

               self-talk

7. Presenting Positive Self: Depression Connection

    a.   Session Goals

        i.   The child will learn that being positive and optimistic can improve

               mood and have a positive effect on relationships with others

        ii.   The child will practice positive-self skills in session

8. Wrap Up

    a.   Goals of Session

        i.   The child will review skills learned and discuss how to apply them to

               anticipated future challenges

        ii.   The child will prepare a "commercial" or advertisement for the child's

               treatment program

        iii.   The child will engage in a fun activity that leaves the child feeling

               positive and successful about the progress that he or she has made

Appendix G - Depression MATCH-ADTC Session

1. Getting Acquainted- Depression

    a. Session Goals

        i. The child will feel more comfortable through introductory get- acquainted activities

        ii. The child will understand how the program can meet his or her goals

        iii. The child will learn about the importance of confidentiality, take0home assignments, and regular attendance

        iv. The child will know how to use the feelings thermometer

2. Learning About Depression

    a. Session Goals

        i. The child will understand the nature of depression

        ii. The child will learn that individuals can control their mood by changing how they act and how they think

        iii. The child will be optimistic about his or her situation and the likelihood of improving

        iv. The child will be interested in participating in and learning more about treatment

3. Problem Solving

    a. Session Goals

        i. The child will know the five steps for effective problem solving

        ii. The child will know how to generate a variety of ideas and possible solutions prior to evaluating them or acting on them

   iii. The child will know how to apply these problem solving skills to real problems in his or her life

4. Learning to Relax

  a. Session Goals

   i. The child will understand that staying calm and relaxing are good ways to affect the way we feel

   ii. The child will identify somatic cues that provide evidence when he or she is tense

   iii. The child will learn how to do self-calming through deep breathing, deep muscle relaxation, and guided imagery

5. Quick Calm

  a. Session Goals

   i. The child will understand that learning to stay calm and relaxed can have a positive effect on the way he or she feels

   ii. The child will learn Quick Calming, a relaxation technique to use when time is short, when in a public place, or when caught off-guard by a stressful situation

6. Presenting A Positive Self

  a. Session Goals

   i. The child will learn that being positive and optimistic can improve mood and have a positive effect on relationships with others

   ii. The child will practice positive-self skills in session

7. Cognitive- Stop: Anxiety Connection

a. Goals of Session

    i. The child will learn to identify feelings that may be signs of anxious thinking

    ii. The child will learn how different thoughts can lad to different ways of feeling and acting

    iii. The child will recognize his or her self-talk in anxiety provoking situations

    iv. The child will learn four steps to modify anxious self-talk into coping self-talk

8. Wrap Up

a. Goals of Session

    i. The child will review skills learned and discuss how to apply them to anticipated future challenges

    ii. The child will prepare a "commercial" or advertisement for the child's treatment program

    iii. The child will engage in a fun activity that leaves the child feeling positive and successful about the progress that he or she has made