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School-Based Implementation of a Prevention of Depression Program With Urban At-Risk Adolescents

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SCHOOL-BASED IMPLEMENTATION OF A PREVENTION OF DEPRESSION PROGRAM WITH URBAN AT-RISK ADOLESCENTS

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As schools become more increasingly involved in the provision of mental health services, the need for evidence-based therapeutic programs is crucial. This study is an investigation into the school-based implementation of a depression prevention course targeting students at-risk for depression in an urban school setting. Utilizing a convenience sample of adolescents who were randomly assigned to intervention and treatment-as-usual groups, pretest, posttest and progress monitoring measures of depressive symptoms were the dependent variables of this study. Self-report ratings suggested a significant reduction in depressive symptomology over time and from pre- to post-intervention. Teacher ratings of depressive symptoms yielded no significant differences between groups. This study adds to the school-based mental health literature by examining an adapted version of the POD-TEAMS Coping with Stress (Clarke, 2003) course as a depression prevention intervention. Further research is recommended to ascertain more conclusive findings for what may be an efficient cognitive-behavioral program with efficacy in an applied school setting.

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"…with men this is impossible, but with God, all things are possible." Matthew 19:26

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"…who can say but that God has brought you into the palace for just such a time as this?" Esther 4:14 (TLB)

I know that I have been prepared and am gifted for such a time as this. Thank you all.

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CHAPTER ONE

THE PROBLEM

It is estimated that one in ten youth will suffer from a major depressive episode at some point in their development. However, it is estimated that only one-third of these children and adolescents in need of mental health support for the disorder will actually receive treatment (Avenevoli et al., 2015; Brauner & Stephens, 2006; Merikangas, Nakamura & Kessler, 2009). Untreated mental illness in children and adolescents can have a detrimental impact on individual and school functioning. Schools are able to support these students in need through the provision of school-based mental health programs. These programs can provide a framework of effective services, supports and interventions for addressing the mental health needs of children and adolescents who might not otherwise receive treatment. In particular, empirically-validated interventions are needed to address depression in children and adolescents. Research suggests that prevention and early intervention of depression are considered effective strategies for addressing this mental illness (Froiland, 2014). Interventions deemed to be effective are those that have an evidence-base of efficacy; in other words, those interventions are systematically evaluated and determined to have the desired effect when implemented in both controlled and applied settings. This study uses a quantitative, experimental design to examine and add to the research base of an empirically-validated cognitive-behavioral intervention that is designed to reduce depressive symptomology in adolescents, which may be implemented within the context of a school-based mental health program.

Statement of the Problem

The paucity of community-based mental health providers and the rising needs of children and adolescents in need of mental health support highlight an important role for school-based mental health (SBMH) services and practitioners (Carter Center, 2003). Schools are in a unique position to provide these services because of the amount of time that children spend within the school setting, the reduced stigma attached when receiving services in school and consideration of the impact or level of impairment in the context of the student's environment (Bruns et al., 2016; Dunn et al., 2015; Zirkelbak & Reese, 2010). There are several frameworks for providing mental health services within schools, each allowing for multi-tiered levels of intervention based on the presenting level of need and the targeted audience. School psychologists can play a significant part in advancing the tools utilized within the SBMH framework through evaluation and review of evidence-based programs and strategies (Nastasi, 2004; Perfect & Morris, 2011; Splett, Fowler, Weist & McDaniel, 2013).

One of the most common psychiatric disorder to be faced by children and adolescents during the developmental period is major depression (Merikangas et al., 2009; 2011). It is a disorder that can impair the individual's functioning in multiple domains (e.g., emotional, physical, social, academic/school performance) and manifest across multiple settings (e.g., home, school and/or community involvement). Implicated in the majority of attempted or completed suicides among adolescents each year (Centers for Disease Control and Prevention [CDC], 2015), research findings suggest that prevention and early intervention of depression are effective strategies for addressing this mental illness (Froiland, 2014; Garber, 2006). Cognitive-behavioral therapy programs have been found to be most effective in reducing depressive symptoms in adolescents with elevated, but not yet clinical, symptoms of depression (Hayes &

Morgan, 2005; Possel, Martin, Garber & Hautzinger, 2013; Stice, Rohde, Seely & Gau, 2008). These interventions can be provided within an SBMH model of service provision.

School-based mental health and depression prevention researchers have empirically examined numerous cognitive-behavioral programs, including methodology and content of preventive and early intervention programs, effectiveness of specific programs within community and school settings, applications of programs to diverse ethnic and socioeconomic populations and cost-effectiveness of preventive intervention, as well as risk factors and post-intervention outcomes (Calear & Christensen, 2010; Faramand, Grant, Polo & Duffy, 2011; Garber, 2006; Harrington & Clark, 1998; Horowitz & Garber, 2006; Sutton, 2007). Meta-analytic study findings support preventive program implementation in schools, while implementing programs of a brief nature (8-12 sessions) resulted in a larger proportion of interventions deemed successful in reducing depressive symptoms and scripted programs tend to result in greater fidelity (Calear & Christensen, 2010). Though school studies have employed self-report of depressive symptoms, which tend to be cost-effective and valid, studies also utilize other informants, such as parents and clinicians to assess the level of symptomology and impact of interventions in adolescent participants (Calear & Christensen, 2010; David-Ferdon & Kaslow, 2008). It has also been found that while ethnically diverse adolescents are at an increased risk for depression, sex, ethnicity and socioeconomic status are likely moderators of the efficacy of depression prevention programs, resulting in diverse program effect sizes among researchers but generally lower effect sizes with ethnically and socioeconomically diverse youth (David-Ferdon & Kaslow, 2008; Faramand et al., 2010; Horowitz & Garber, 2006; Thomas, Temple, Peres & Rapp, 2012)

One program that stands out as having a strong evidence-base of effectiveness and attempts to incorporate effective aspects and features of research into the program is the POD-TEAMS Coping with Stress course (Clarke, 2003). This cognitive-behavioral program is designed to prevent major depressive episodes in adolescents who are at-risk for, but not yet clinically diagnosed with, the disorder (Clarke, 2003; Garber et al., 2009). Implemented in a large field study at community mental health settings and found to be effective, this specific program has not been implemented within the school setting according to published literature.

The POD-TEAMS Coping with Stress course is an eight-session program that is implemented for 90-minutes per session "depending on site capability and needs" (Clarke, 2003). It is an evolution of the Adolescent Coping with Depression (CWD-A; Clarke, Lewisohn & Hops, 1990) which was developed for the treatment of depression and the Adolescent Coping with Stress (CWS; Clarke & Lewisohn, 1995) program that was modified as a program to prevent depression in adolescents, respectively. The goal is to ameliorate depressive symptoms in at-risk youth by teaching cognitive restructuring strategies and utilizing behavioral modification methods in order to better cope with stressors that increase the likelihood of depression. The CWD-A program and its successors have an empirical support of efficacy in both clinical settings by the authors of the program (Clarke, Hornbrook, Lynch, Polen, Gale, Beardslee, O'Connor & Seeley 2001) and large scale field study of implementation within community mental health settings (Garber et al., 2009).

The current study is being proposed because there remains a need for further empirical research on the implementation and efficacy of prevention of depression interventions in practical school settings. The utilization of multiple information and informant sources to evaluate the effectiveness of a formal program on reducing depressive symptoms is a

recommendation that has been highlighted by multiple researchers (Garber et al., 2007; Gladstone & Beardslee, 2009; Possel et al., 2013). This study will elicit teacher ratings of depressive symptomology in adolescents for identification and determination of program effectiveness.

Statement of Purpose

The focus of this study is to determine if the POD-TEAMS Coping with Stress program is effective in preventing depression in adolescents by reducing their levels of depression as measured by self-report and teacher rating scales and as compared to a treatment-as-usual (TAU) group. This study will compare the ratings of adolescents within the TAU group to those in the intervention group. The comparison and analysis will provide information to determine if the observed differences between the groups are statistically significant which could provide further support of the effectiveness of the POD TEAMS Coping with Stress program. Likewise, effectiveness will also be determined by the amount of change observed in the intervention group participants based upon the adolescents' self-ratings of themselves. This investigation fits into the larger context of evidence-based intervention research because it is extending the research of an already empirically-validated program. The intervention will be implemented in an urban school-based setting by the principal investigator who is a practicing school psychologist with experience in providing group counseling to adolescents. Evaluating the POD-TEAMS program under these conditions may provide support for the program's effectiveness and application to educational settings as well as with diverse adolescent populations. Another relevant feature of this study is that this study will include teacher observational ratings of the adolescent participants' emotional functioning, specifically in the area of depression. Most studies of child and adolescent depression in a school setting do not include teacher ratings or observations of

emotional functioning. However, in a practical sense, teacher observations are often included in the assessment and monitoring of emotional disturbances in youth, particularly in the context of SBMH service provision.

Research Design, Questions & Hypotheses

This study will utilize a randomized, experimental design that will compare an intervention group with a treatment group. Referred participants will be eligible to be a part of the study as a result of being determined "at-risk" for depression, based on a self-report measure and receiving parent consent and student assent. Participants will be randomly assigned to the intervention or TAU groups. The TAU group members will participate in weekly check-in sessions with the school-based guidance counselor or social worker. These mandatory sessions will occur during the school day, for 15-30 minutes. The students will be allowed to speak freely about their mood and/or emotional concerns. The intervention group members will participate in the POD-TEAMS Coping with Stress course. Both groups will complete pre- and post-intervention self-report measures of depression to assess if there is a statistically significant difference in pre- versus post-test scores and to determine if statistically significant differences occur between group post-test scores measuring depressive symptoms experienced by the participant. Teachers of adolescents in each group will complete a pre- and post-measure regarding the level of depressive symptomology observed in their students. This measure will also be examined to determine if there is a reduction in the level of the adolescent participants' depression, as reported from the teacher's perspective. Lastly, adolescents in both the TAU and intervention groups will complete weekly self-report measures to determine if their ratings of depression changed significantly over the course of the intervention period.

The research questions in this study are:

1. Do adolescents in the Adapted POD TEAMS Coping With Stress ("Adapted POD") intervention group have significantly different post-test scores on two self-report rating scales of depression (Center for Epidemiologic Studies of Depression-Revised (CESD-R) raw scores; Behavior Assessment Scale for Children-2nd Edition Self-Report Scale (BASC-2 SRP) - Depression scale standard scores) when compared to the TAU group?
2. Do adolescents in the intervention group have significantly different scores on a post-test teacher rating scale (Behavior Assessment Scale for Children-2nd Edition - Depression scale standard scores) compared to those in the TAU group?
3. Did the depression scale scores collected from the adolescents in the Adapted POD group change significantly over the intervention period?

The research hypotheses pertaining to this study are:

1. Adolescents who participate in the Adapted POD intervention group will demonstrate significantly decreased ratings of depression compared to adolescents in the TAU group.
2. Teachers of adolescents who participate in the Adapted POD intervention group will report significantly decreased symptomology of depression compared to teacher ratings of adolescents in the TAU group.
3. Adolescents who participate in the Adapted POD intervention will report significantly fewer symptoms at the end of the intervention than at the beginning of the intervention.

Definition of Terms

The terms used in this study include:

Depression is defined as a psychiatric condition marked by depressed mood or a loss of interest or pleasure in daily activities for more than two weeks; impaired social, occupational, or educational functioning; and a mood that is significantly different from the individual's usual state (American Psychiatric Association, 2013).

At-Risk for Depression aka Subclinical Depression defines a condition in which a person has elevated levels depressive symptoms but does not meet the criteria for a depressive disorder.

Prevention/Preventive Intervention refer to interventions that are provided before the initial onset of a disorder and are designed to prevent the occurrence of the disorder (Coie et al., 1993; Gladstone & Beardslee, 2007; Sutton, 2008).

Cognitive Behavior Therapy is a therapeutic intervention that combines cognitive and behavioral therapy to address problems by modifying one's cognitions and employing behavioral techniques to increase reinforcement (Rohde, 2011).

School-based Mental Health Services (SBMH) refer to the provision of mental health services within a school setting, designed to encompass a broad, holistic view of the child, encourage a preventative focus and an expanded treatment context. There are a variety of SBMH models that differ in design, but present with similar focuses on implementation in a naturalistic setting, embracement of varying levels of treatment application and monitoring of service efficacy and efficiency (Gutkin, 2012; Heathfield & Clark, 2004; Motes et al., 1999)

Summary

The consequences of untreated mental health in children and adolescents can be lifelong. Specifically, the implications of depression in youth are far-reaching and yet, often go

unaddressed due to numerous factors. Limited access and community resources place schools in a unique position to address these needs. Through a SBMH framework, school psychologists can evaluate, organize and deliver preventive support and intervention in a cohesive and empirically-driven manner to address the mental health needs of children and adolescents.

As a preventive treatment for youth at risk for depression, cognitive-behavioral therapy is an effective approach that can be implemented within the school setting. The POD-TEAMS Coping with Stress course is a program that employs this approach and will be implemented in a naturalistic setting to reduce symptoms of depression in adolescent youth. The randomized study design will employ screening and treatment phases that will rely on adolescent self-reporting and teacher referrals and observations in evaluating the effectiveness of the course in comparison to a treatment-as-usual condition.

CHAPTER TWO

LITERATURE REVIEW

The need for and provision of school-based mental health services is an evolving issue in the scheme of public health policy and the field of education. This evolution is both timely and necessary to address the significant gap between the number of children and adolescents in need of mental health services and those who actually receive the services they need (Avenevoli et al., 2015; Merikangas, Nakamura & Kessler, 2009). It is estimated that one in five children and adolescents suffer from serious emotional disturbances that impact their daily functioning, but less than half of them receive treatment for any specific disorder (Merikangas et al., 2010). Schools are in a unique position to provide these services because of the amount of time that children spend within the school setting, the reduced stigma attached when receiving services in school and consideration of the impact or level of impairment in the context of the student's environment (Bruns et al., 2016; Dunn et al., 2015; Zirkelbak & Reese, 2010). Although varying levels of community and medically-based services exist to meet these needs, there are limited service providers to meet the overwhelming demand which results in a significant void between those in need and those who receive mental health support.

Background on School-Based Mental Health

Public health policy at the inception of the 21st century brought new attention to the science of mental health treatment, the contexts of impairment and treatment and the role that schools can play in the milieu of treatment options. The Surgeon General's 1999 report on mental health highlighted the notions that "mental health is fundamental to general health" (p. 453) and that "mental disorders are valid, treatable health conditions" (p. viii) that have far-reaching consequences across many contexts of life. Therefore, the treatment of mental disorders is imperative to the mental health of the individual. In pressing towards the goal of

mental health and well-being, the stigma and myths of mental disorders have to be dispelled; the public's understanding of mental health must increase; and effective treatments need to be determined and implemented. An extensive research base of documented, effective treatments exists, as does a range of treatment for most health disorders. This report addressed the basis of mental health disorders, mental health across the lifespan, and the numerous aspects of life impacted by the mental health of the individual. It also emphasized the beneficial aspect of treatment, promoting the ideal that a mentally ill individual can recover and can be mentally well. In reviewing mental health through the lens of an individual's stage of life, the Surgeon General's report also gave conceptualization to the idea that mental health or disorders in children is not of the same ilk as it is in adults. On the contrary, it must be examined within the developmental context as well as through social, physical and cultural lenses.

The 2003 President's New Freedom Commission report expanded the considerations of how to make mental health services more accessible and impressed the notion of implementing evidence-based interventions in the treatment of mental illness. The prevalence of mental disorders in children and adolescents is high, but yet, less than half of them receive treatment nationally (Merikangas et al., 2009.). Despite evidence for interventions for specific disorders in youth, there continues to be overreliance on institutional care for children, such as hospitals, residential treatment programs, boot camps and detention centers. However, the evidence suggests that institutionally-based treatment is not effective for many childhood mental disorders (The Carter Center, 2003). This presents the need for other options to be explored.

The manifestation or presentation of mental health symptoms can have a significant impact on multiple domains of an individual's functioning. Schools have been proposed as accessible places to provide mental health services, and more specifically, depression prevention

and early intervention opportunities (Crisp, Gudmundsen & Shirk, 2006). Dunn, Milliren, Evans, Subramanian and Richmond (2015) discussed that "schools service more than 95% of the nation's young people for approximately 6 hours per day (or upward of 40% of students' waking time during the school year) and at least 11 continuous years of their lives" (p. 732). Schools offer increased supervision and monitoring of students' emotional and academic performance which can yield information on the manifestation or emergence of mental health symptoms (Crisp, Gudmundsen & Shirk, 2006). Therefore, school-based mental health services are a natural consideration for identifying and addressing the needs of emotionally vulnerable students who may not other seek or have access to mental health services.

School-Based Mental Health Models

Models of school-based mental health services vary in the theory and focus of approach, but are common in that there is a decided shift from the medical and categorical models of service provision. The medical models of mental health were isolated, inaccessible and disconnected from the context and progression of the client, where the focus was on diagnosis and remediation of the individual and utilized treatments that lacked efficacy, reliability or validity (Atkins, Graczyk, Frazier & Abdul-Adil, 2003; Gutkin, 2012; Healthfield & Clark, 2004). New models, however, would operate to promote greater accessibility, support and accountability for programming and services (Bierman, 2003). They encourage a preventative focus and are designed to address the mental health status and needs of the entire population, not just the needs of those who were diagnosed with a mental disorder.

As suggested by the National Institute of Mental Health's Task Force on Model Programs in Service Delivery in Child and Family Mental Health (Pfeiffer & Reddy, 1992) and later, the New Freedom Commission report (The Carter Center, 2003), seven characteristics were found to

be common to effective mental health service delivery programs. These program characteristics became the prevailing recommendations for all school-based mental health programs. They are: (a) focus on the ecology of the child (i.e., employing a holistic view of the child); (b) collaboration for comprehensive, yet versatile services; (c) clearly defined program goals; (d) reduction in barriers to service; (e) replicability and adaptability; (f) demonstrated accountability and effectiveness; and (g) strong dynamic leadership (The Carter Center, 2003; Pfeiffer & Reddy, 1992).

Another shift from the old model of service provision was in the focus of the intervention. Previously, treatments were geared only toward the individual to correct the singly diagnosed problem (Gutkin, 2012; Heathfield & Clark, 2004; Pfeiffer & Reddy, 1998). The newer models consider preventive application as an action to take into account the needs of the entire population and looks at planning for service delivery from a broader context. Resource allocations are made for prevention and early intervention and utilize a broader array of service providers in a broader treatment context that include members of the home and school environments (Motes, Melton, Simmons & Pumariega, 1999). Links with community services are developed to alleviate strain resources and facilitate sustainability. The new models utilize the tripartite, or three-tier public health policy approach to addressing a range of needs for mental health service delivery from an ecological perspective that takes a holistic view of the child (Doll, Spies & Champion, 2012; Domitrovich et al., 2010; Kutash, Duchnowski & Lynn, 2006; Motes, 1999).

The tripartite model was developed from public health policy of prevention science and presents the multi-tier framework of service provision in applying preventive and treatment interventions for a given population (Domitrovich, Bradshaw, Greenberg, Embry, Poduska &

Ialongo, 2010; Kutash, Duchnowski & Lynn, 2006; Splett, Fowler, Weist & McDaniel, 2013; Sulkowski & Michael, 2014). Also known as a multi-tiered systems of support (MTSS) approach, the framework is a scaffold through which service delivery is organized to be efficiently and effectively applied for the most impact (Cook et al. 2015; Sulkowski & Michael, 2014). Organized into universal, selective and indicated service levels, the MTSS approach is applicable to all models, guiding the type of assessment (if any), service, resources and primary focus or client for treatment.

The universal level is assessment and treatment applied to the entire population and aims to influence all of the students in a school environment. This universal level is designed to prevent problems before they arise and is not implemented as a function of risk. Resources are broadly applied to the entire population to enhance general well-being and are generally of low cost and low intensity per individual. The types of treatment that would be included from a mental health standpoint are those that include community-, class- or school-wide instruction or general curriculum implementation.

The selective level of services address the assessment and intervention needs of a subgroup of the population with a significantly higher risk of mental illness. The types of treatment that would be included from a mental health standpoint are those that include a class-wide instruction or curriculum implementation. Covering 10-15% of the population, early detection and screening are critical for focusing services toward a subgroup of the population who do not respond to interventions provided at the universal level of service or present with factors that put them at risk for a particular disorder. Resources are moderately intensive, warranting interventions that are more individualized or targeted toward a specific higher risk group that has been identified through screening, assessment or risk factors and warrant more

stringent program and outcome monitoring strategies. The types of treatment that would be included from a mental health standpoint are those that include small group intervention and/or individual tutoring.

The indicated, or intensive, levels of service are described as the highest levels of service provision. At this level, 2-5% of the population has been found unresponsive to universal and selective treatments and demonstrate a need for intensive mental treatment and intervention (Kutash, Duchnowski & Lynn, 2006). Resources are expensive, laborious and geared specifically toward the individual; requiring implementation with a high level of specificity and expertise. The types of services at this level may include individual counseling, residential treatment and wraparound program services.

Each model of SBMH operates as multi-tier framework of service provision and reflects the priorities and recommendations from the research. The key features of each model include: an ecological paradigm of service provision (i.e., implemented in a naturalistic setting); a design that embraces a broad array of service providers and varying levels of treatment application; and employs the use of evidence-based practices and monitoring of services (Heathfield & Clark, 2004; Motes et al., 1999). With those guidelines in place, there are three conceptual models of school-based mental health service. Though there is overlap, the models differ in design as a function of theoretical base, the focus, and organization of the interventions at each level, all of which will be discussed.

Interconnected or Expanded SBMH Services Model

The interconnected or expanded model of service provision links various social service systems to create multiple systems of programming to provide a continuum of mental health support on multiple topics and brings those services into the school setting to the greatest extent

possible (Cook et al., 2015; Domitrovich et al., 2014; Kutash, Duchnowski & Lyn, 2006). The goal is to combine systems of prevention, early intervention and treatment/care through collaborative relationships with school and community partnerships to balance the demands of meeting mental health needs with available resources. By incorporating multiple systems and strategies, a broader approach to service delivery is applied, increasing intervention impact and reduction of burnout, and overload of any one system is avoided (Becker & Domitrovich, 2011; Domitrovich et al., 2009).

The universal level of service offers systems of prevention such as community- and school-level programming through classroom-based social emotional curriculum instruction, parental involvement and opportunities for general information on general mental health topics through recreational, faith-based and social community organizations. At this level, there is no level of impairment indicated.

Selective levels of service, known in this model as systems of early intervention, offers more targeted intervention using agencies within the system to specialize services and "prevent deeper penetration into the system" (Kutash, Duchnoski & Lynn, 2006, p. 24). At this level, impairment may exist in a single setting or context, or there is an increased probability of impaired functioning in the future. Intervention strategies are developed based upon and may target risk factors. For example, referrals can be made by school staff to a community mental health service provider to address specific issues of the individual; the school may include families by making home visits and/or eliciting participation in parent-training groups; and/or implement academic tutoring or small group counseling or social skills programs.

The indicated level of service, also known as the system of care/treatment, is the most intensive level of provision for the individual and is designed to treat chronic and persistent

mental health problems that cause significant impairment across multiple settings. Highly individualized programming and intensive treatment could include residential treatment, out-of-home placement, intensive family preservation and/or special education services. Coordinated services are considered wraparound with the understanding that systems and agencies are interwoven with the goal of services to be layered as supports for the individual. The focus of the level in this approach is the collaboration and coordination of multiple systems and stakeholders to develop the tools to intervene efficiently and effectively on behalf of the individual (Splett, Fowler, Weist & McDaniel, 2013)

Mental Health Spectrum Service Model

The mental health spectrum model of service provision focuses strategies and services based on specific disorders, the child and risk status (Kutash, Duchnowski & Lynn, 2006). Concerns or target behaviors are first identified and then strategies are designed at each multi-tier support level to address the concern. Because this model is based on high risk factors or a diagnosis, the strategies and programming are already geared for the selective and indicated levels of intervention. Preventive programs are developed at the environmental and curricular levels.

Examples of the preventive or universal levels of service provision in this model include the Good Behavior Game and the Promoting Alternative Thinking Strategies (PATHS) (Domitrovich, Bradshaw, Greenberg, Embry, Poduska & Ialongo, 2010). Examples of selective levels of service in this model include the Coping Power and Coping With Stress courses (Atkins et al., 2003; Domitrovich et al., 2010). Examples of indicated service programs in this model include the Penn Resilience Program (Gillham, Hamilton, Freres, Patton & Gallop, 2006) and the Coping with Depression programs (Lewinsohn, Hoberman & Clarke, 1989).

In an extension of the mental health spectrum model, Domitrovich and colleagues (2009) proposed an integrated model of school mental health service provision. The model postulates that integrating the most effective aspects of multiple independent strategies and programs into a cohesive, single intervention may synergize to create a broad-reaching, multi-faceted approach to an identified concern. The intent is for the application of content horizontally within risk levels and vertically across contexts and risk levels. The theory is based on the assertion that mental illness has a variety of risk and protective factors and environments which contribute to the presentation and manifestation of symptomology. As such, a combined program of effective risk-reducing and protection-enhancing strategies would be applied to the target population across multiple settings.

School-Wide Positive Behavior Supports Model

The school-wide positive behavior supports model of school-based mental health services emphasizes a comprehensive, ecologically-based, system-wide process approach to the prevention and intervention of social behavior by creating positive and predictable environments and the practices of behavioral modification, data collection and decision-making and the implementation of evidence-based strategies (McGraw & Koonce, 2011; McIntosh, Ty & Miller, 2014). Inherent in the design is a multi-tier service model which is proactive in design and attempts to meet the needs of all students, as those students who are at greater risk are exposed to increasing levels of support based on their response to an existing service level. The process of decision-making and implementation of targeted concerns and intervention strategy is conducted through agreement by school personnel who are also the change agents. The focus of the intervention is on modifying the environment around the needs of the child. As higher levels of support are needed, increasing resources are invested in the individualization and evaluation of

the interaction between the child and the environment. At the highest level, the intensity of the plan and coordinated services are tailored to the significance of the child's need.

At the universal level, known within the positive behavior supports framework as Tier 1, school personnel are invested in creating an academic and behavioral environment that is positive and conducive to learning. Prosocial behaviors are explicitly taught and reinforced throughout all school contexts and are applied to every student as a treatment, regardless of risk or presentation of challenging behavior. Increasing home-school communication, conducting staff development and parent education workshops, and implementing school-wide skills curricula and lessons are all examples of Tier 1 universal interventions (Desrochers, 2014).

At the selective level, known as Tier 2 interventions, students who have not responded to the universal level of supports are escalated to this higher level of concern. Processes are enacted to assess challenging behaviors with greater specificity and emphasis on the contextual variables of the behavior. Typically, these behaviors are determined through the application of another process known as functional behavior assessment. Interventions within the school environment are then applied to address the specific variables and function of the behaviors. These may include a behavior intervention plan within the classroom, academic tutoring and/or small group social skills training (Splett, Fowler, Weist & McDaniel, 2013)

At the indicated level, also known as Tier 3, students who continue to be unresponsive through the universal and selective levels, are considered to be in need of intensive level of services. The procedures and planning are highly specific, taking into account a comprehensive view of the student by incorporating more stakeholders (e.g., family, community mental health service agencies) and developing a plan with greater accountability. Eligibility for

individualized services is considered in school (i.e., special education) and/or out of school (e.g., day treatment or partial hospitalization programs).

Future Roles for Professionals Who Want to Expand SBMH Services

School psychologists have the potential to play an integral role in the expansion of school-based mental health services. Given a unique set of knowledge, skills and training, school-based clinicians are in a position to serve in direct and indirect capacities to support schools as they apply mental health models and develop a continuum of care to meet the needs of the students through the development, administration, implementation and evaluation of services (Meyers & Swerdlik, 2003; Nastasi, 2004; Perfect & Morris, 2001; Splett et al., 2013).

As the new models of school-based mental health service require a change in the perspective lens of how services and resources are designed and implemented, a new perspective is necessary on the applications of the school psychologist's skills. Nastasi (2004) discussed typical practitioner skills that include consultation, research, intervention and collaboration, which, according to Splett et al. (2013), can be applied across MTSS levels. School psychologists can provide consultation to establish team processes, identifying needs, establishing goals and developing action plans for addressing the full continuum of mental health needs. At the preventive universal level, a consultation role may include systems level program planning to prevent mental health problems, school leadership or intervention team planning team and/or participation in data-based decision-making (Nastasi, 2004; Perfect & Morris, 2011; Splett et al., 2013). At the selective level, consultation can include screening, intervention development, and teacher and team consultation to support implementation and progress monitoring. At the indicated level, consultation may look like modeling strategies and techniques to be implemented by other school personnel.

The understanding and application of research is another valuable role to school-based mental health service applications from the school psychologist toolkit. School psychologists are in a unique position to interpret the evidence-based intervention literature and in turn, translate it into practice for school staff (Meyers & Swerdlik, 2003). This may occur in supporting the school leadership team in choosing practices that have a base of being practical and effective and/or providing training to staff.

Another aspect of the research-practitioner role for school psychologists is in formative and action research. In supporting a school-based mental health program, school psychologists can pursue activities such as: engaging in program evaluations; monitoring treatment integrity; interviewing teachers to determine treatment acceptability and feasibility; and developing and implementing procedures for screening and identification of students in need (Nastasi, 2000; 2004).

School psychologists can also have a role in school-based mental health service expansion by encouraging collaboration among stakeholders and forming partnerships across organizational and disciplinary lines as agency liaisons or mental health team leaders (Nastasi, 2004). Considered to be a critical component to developing relationships among professionals in various school, medical and community mental health sectors (Weist, Mellin, Chambers, Lever, Haber & Blaber, 2012), collaboration can foster positive working relationships among professionals and agencies to create an effective network of service. Perfect and Morris (2011) also highlighted the importance of collaboration with other professionals to ensure that services are not duplicated, information about available services are disseminated and lines of communication are opened up to "help fill the gap between services needed and services provided" (p.1052).

As direct interventionists, school psychologists can apply their expertise in developing and implementing classroom-, small group and individual intervention treatment protocols directly to students in need of mental health interventions. Indirect interventions by school psychologists can include presentation of educational training programs servicing target populations such as teachers, parents, students and community members. These activities can enhance the school psychologists' role and involvement in school-based mental health programming and supports.

Internalizing Mental Health Concerns in Children

Internalizing, or affective, disorders consist of cognitive processes that are directed inwards toward the individual self (Callahan, Panichelli-Mindel & Kendall, 1996; Kovacs, 1989; Liu, Chen & Lewis, 2011; Marsh 2016; Sanders, Merrell & Cobb 1999). Internalizing disorders are defined into three broad categories, manifesting impaired functioning in the individual: anxiety-related, somatic and mood disorders (Liu, Chen & Lewis, 2011; Wilkinson, 2009). Major depression, a mood disorder, has the highest lifetime prevalence in the population and among children and adolescents at 11% (Avenevoli et al., 2015; Merikangas et al., 2010).

Diagnosing Depression in Children

Major depression is considered to be one of the most common major psychiatric disorders (Avenevoli, 2015; Hankin, 2005; NIMH, 2015). The *Diagnostic and Statistical Manual-5th Edition* (DSM-V) defines major depressive disorder as a condition marked by depressed mood or a loss of interest or pleasure in daily activities for more than two weeks; impaired social, occupational, or educational functioning; and a mood that is significantly different from the individual's usual state (American Psychiatric Association, 2013). Depression is diagnosed with at least five of nine specific symptoms that are present "nearly every day:"

depressed mood and/or irritability, less interest or pleasure in daily activities, significant weight gain or loss related to changes in eating habits, sleeping too much or too little, change in physical activity or movement, fatigue or loss of energy, feeling guilty or worthless, difficulty maintaining concentration, and/or thoughts of death or suicide (American Psychiatric Association, 2013). In children and adolescents, other symptoms may include: vague, non-specific physical complaints, frequent absences or poor performance in school, being bored, alcohol or substance abuse, increased irritability, anger or hostility and/or reckless behavior.

As highlighted by Emslie & Mays (1999), "Depression is a diagnosable condition in children and does not have to be inferred from an array of behaviors." (p. 182) Diagnosing depression in children is an evaluative process that compares individual symptoms with the prescribed criteria of the disorder which results in a determination of whether the child meets the classification criteria for depression based on concordance of symptomology (Reynolds, 1990). Historically, the DSM is most widely used diagnostic clinical criteria in identifying depression and its subtypes (Callahan, Panichelli-Mindel & Kendall, 1996; Kovacs 1989). However, there is a slight difference in both the criteria and process of diagnosis between adults and children. The feature of irritability is unique to childhood and adolescent depression, but is one that youth may not necessarily be able to report or display (Bhatia & Bhatia, 2007). In a similar vein, they can provide information but are not necessarily reliable informants of symptomology and levels of impairment, so multiple informants are employed as part of the diagnostic process (Emslie & Mays, 1999; Klein, Dougherty & Olino, 2005)

The diagnostic process requires a multimethod approach, employing multiple sources of information and multiple methods of data collection (Emslie & Mays, 1999; Klein, Dougherty & Olino, 2005; Sanders, Merrell & Cobb, 1999). The primary methodological tools applied in

collecting evidence regarding the frequency and type of symptomology and levels of impairment are clinical interviews, observations, self-report and behavior rating scales (Bagnato, Mattison & Hayes, 1989). Clinical interviews are designed to elicit specific information about the presence and significance of symptoms and other clinical features. They may be unstructured, structured or semi-structured reflecting the level of flexibility the interviewer possesses in administration, though the most often recommended method is the semi-structured interview (Klein, Dougherty & Olino, 2005). With regard to the sources of information, standard practice recommendations for children suggest gathering information from multiple informants, including the parent, child and teachers for accurate diagnosis (Emslie & Mays, 1999; Klein, Doughtery & Olino, 2005; Reynolds, 1990; Sanders, Merrell & Cobb, 1999). Rating scales and self-report measures are administered to these multiple informants to gather data regarding the manifestation of depressive symptoms and relative severity. These scales can be specific to symptoms of depression or be more comprehensive in examining a broad spectrum of behavior and emotional symptoms, which can be helpful in assessing the comorbidity of other disorders (Ruderman, Stifel, O'Malley & Jimerson, 2013).

Manifestations of Depressive Symptoms in Children and Adolescents

Depression in children and adolescents manifest as a cluster of symptoms, not as a singular symptom of sadness (Callahan et al., 1996; Reynolds, 1990). These symptoms tend to manifest into four primary categories, including emotional, cognitive, motivational and physical/somatic symptoms (Ruderman et al., 2013). Emotional manifestations refer to changes in feelings or overt behavior, which may include sadness, irritability, crying spells or tearfulness. Cognitive manifestations may include lowered self-esteem, poor academic performance and difficulty completing schoolwork, poor coping skills and a decreased ability to cope with the

everyday demands of the classroom (Callahan et al., 1996; Marsh, 2016; Reynolds, 1990; Ruderman et al., 2013). Motivational manifestations may include decreased interest in or generally not enjoying activities. Somatic manifestations of depression may include vague complaints of stomachaches and/or pain.

As discussed by Bhatia & Bhatia (2007), manifestations of depression may present as other psychiatric conditions, which can increase the probability of misdiagnosis and poor treatment recommendations. For example, irritability may appear as angry, hostile behavior; impaired attention, poor concentration and anxiety may present as attention deficit hyperactivity disorder, while "substance abuse may be a means of self-medication" for the depression (p. 74). Younger children may be more likely to display symptoms of anxiety, somatization, tantrums and irritability or other problem behavior, while older children may display boredom, guilt or hopelessness. Adolescents may display more sleep and appetite disturbances and may engage in reckless behavior and have suicide ideation (Dopheide, 2006). This highlights the importance of a comprehensive diagnostic approach to identifying and treating depression in children and adolescents.

Cultural Aspects

The prevalence of depression in gender, ethnic and cultural minority groups is also a consideration when planning school-based mental health services for the identification, diagnosis and treatment of depression. According to Avenevoli et al. (2015), adolescents in the United States present with combined mild/moderate and severe major depressive disorder at a lifetime rate of 11% and 12-month prevalence rate of 7.5%. Female adolescents of any ethnicity or cultural background are two to three times more likely than male adolescents to be diagnosed with depressive disorders (Merikangas et al., 2010; Thomas, Temple, Perez & Rupp, 2011).

Multiple researchers have found that ethnocultural minority adolescents are at an increased risk for depression (Choi, 2002; Choi, Meininger & Roberts, 2006; Wagstaff & Polo, 2012). Hispanic-American adolescents, in particular, have been found to be at an increased risk of depression (Choi, Meininger & Roberts, 2006).

Thomas et al. (2011) found that non-minority adolescents were more likely to receive a prior diagnosis of and receive mental health treatment for depression compared to ethnic minority youth. These results are also consistent across studies examining accessibility and use of services by various ethnic and cultural groups. Minority adolescents presenting with major depressive disorder were even less likely to receive disorder-specific treatment (Avenevoli et al., 2015; Wagstaff & Polo, 2011).

Given the increased prevalence and decreased diagnosis and treatment provisions for depression in minority youth, attention turns to examining cultural differences in the expression or severity of depressive symptomology. Cokley, Cody, Smith, Beasley, Miller & Hurst (2014) discuss the black students' over-identification for behavior issues and under-identification for mental health concerns. It is proposed that the typical sadness and irritability as a diagnostic symptom may often present in an externalizing manner, which then pushes referrers towards diagnosis and treatment for a different disorder (Choi, 2006; Cokley et al., 2014; Stein et al., 2010). Stein et al.'s (2010) research found that ethnic minority youth, rated by both themselves and others, presented with more severe behavioral symptoms of depression.

As the manifestation of the symptoms of depression must be considered within multiple contexts and levels of development, the ethnic and cultural symptom expressions of depression warrant examination as well. Given these considerations, it is important to understand that cultural competency is also a skill for school personnel within a school-based mental health

setting. Personnel need to understand that cultural factors may impact their evaluations of the behavior of ethnic minority youth (Stein et al., 2010).

Co-Morbidity

Angold, Costello and Erkanli (1999) defined comorbidity as the co-occurrence of two or more disorders. Although the "precise mechanism of comorbidity is not known," it is "not the product of any methodological problem or bias," (p. 68) as previously discussed in this chapter regarding the manifestation and misinterpretation of depressive symptoms. The most common psychiatric conditions that present co-morbidly to major depression as the primary disorder are: anxiety, conduct disorder, attention deficit hyperactivity disorder and substance abuse (Angold, Costello & Erkanli, 1999; Avenevoli et al., 2011; Costello et al., 2002). Anxiety is noted to be the most common comorbid condition, noted to be eight times more common in depressed than non-depressed individuals (Avenevoli et al., 2015).

When diagnosing depression in children and adolescents, it is important to also address any comorbid psychiatric conditions that may exist (Avenevoli et al., 2015; Bhatia & Bhatia, 2007; Lewinsohn, Rohde & Seeley, 1998). High rates of comorbidity with other psychiatric conditions are related to increased symptom severity, prolonged clinical course, and poorer treatment outcomes (Avenevoli et al., 2015).

Avenevoli et al. (2015) found that adolescents presenting with co-morbid disorders manifested more severe impairment and were more likely to receive treatment. The service utilization and treatment they received, however, tended to be for behavioral disorders. Although a large percentage (60.4%) of adolescents received emotional and/or behavioral treatment in a mental health, medical, school or community treatment, only slightly more than half of those (33.9%) received treatment specifically for major depression (referred to as

"disorder-specific treatment"). Thus, while most adolescents will receive some form of treatment for a comorbid emotional or behavioral problem, far fewer of them will receive treatment specifically for a presenting depressive condition.

Etiology

The current etiological models of depression vary significantly in nature and the disorder is most often considered to be multi-factorial. Theories of depressive etiology reflect genetic, cognitive and environmental variables that can predispose one to depression. These predisposing risk factors include family history of depression, previous episodes of depression, history of child abuse or trauma, and the presence of other psychiatric disorders (Avenevoli, Stolar, Li, Dierker & Merikangas, 2001; Maughan, Collishaw-Dphil & Stringaris, 2013). For children in particular, a transactional approach is viewed as the prevailing theory of how these variables interact to create impaired mood functioning.

The genetic etiology model of depression reflects a genetic cause for the manifestation of depressive symptomology in individuals. In other words, depression is a heritable condition that is common to people sharing genetic material. Researchers examine this hypothesis by examining twin, adoption and family studies to determine the heritability estimates, also known as the proportion of variation due to genetic factors, for depression. It is also significant that, in examining the genetic etiology of depression, a review of the role that the environment plays in the expression of these genes is imperative. The gene-environment correlation and the gene-environment interaction theories will be discussed after an examination of the genetic linkages of depression.

According to Rice's (2009) review of the genetics of depression, it was summarized that "most twin studies find evidence for a significant genetic component to depression" (p. 169).

However, that evidence is significant for the development of depression in adolescent identical twins, but not in children.

Adoption studies provide evidence for environmental factors in the etiology of depression. In these studies, the parents and adolescent offspring are genetically unrelated but share a substantial portion of the same environment. In an examination of the lifetime prevalence of Major Depressive Disorder (MDD) with samples of adopted adolescents and unrelated adoptive parents compared to biological children and their non-adoptive parents, the adolescents whose "adoptive (unrelated) parents had experienced a lifetime occurrence of MDD showed elevated rates of depression compared with adopted children whose adopted parents had not experienced depression." (Rice, 2009, p. 170)

Family studies of depression have reflected that MDD tends to cluster in families, meaning, that there is likely to be a higher frequency of depression and/or report of depressive symptomology among individuals who are genetically related in some way. Multiple studies (Dunn, Uddin, Subramanian, Smoller, Galea & Koene, 2011; Maughan et al., 2013) have found that higher rates of MDD are reported in the offspring of depressed parents compared to the offspring of parents with no psychopathology. Thus, the probability of an individual developing depressive symptomology is increased significantly when they are the offspring of a depressed parent and are at greater risk for developing the disorder. Because of these findings, early interventions are often geared toward this population.

Evidence-Based Interventions for Depression

Evidence-based interventions are treatments and strategies that have been implemented and found to be efficacious in randomized clinical trials (David-Ferdon & Kaslow, 2008; Probst, 2008). For an intervention to have a "well-established" evidence-base, the examination of studies pertaining to the specific treatment must reflect the highest methodological rigor, demonstrated improvement in depressive symptomology and be evaluated by at least two unrelated research groups (David-Ferdon & Kaslow, 2008; Probst, 2008). "Probably efficacious" interventions are those that have been examined under randomized, controlled conditions, shown improvement in symptoms, but have been evaluated by only one interrelated research group. An "experimental" classification indicates that an intervention has been implemented and found to be effective in symptom improvement, but the studies implementing the treatment may not have employed randomization or comparison groups. Pharmacotherapy and psychotherapy are the most highly researched and efficacious treatments for intervening with depression and have been found to be effective over placebos (Brent & Maalouf, 2009; Cox, et al., 2014; Curry, 2001; Dopheide, 2006; Springer, Rubin & Beevers, 2011).

Evidence-based interventions for depression include pharmacological, cognitive-behavioral (CBT) and interpersonal therapeutic (IPT) approaches (Curry, 2001; David-Ferdon & Kaslow, 2008; Dopheide, 2006). Hankin (2005), Michael & Crowley (2002) and the TADS study (2008) discussed findings that the most efficacious treatment for clinical depression was a combination of antidepressant medication and cognitive-behavioral therapy. However, the use of antidepressant therapy with children and adolescents is strongly cautioned because of clinical trial data finding an increased risk of the presentation of suicidal behavior (Dopheide, 2006).

The landmark Treatment for Adolescents with Depression Study (TADS; NIMH, 2008) sponsored by the National Institute of Mental Health examined the short and long-term effectiveness of treatments for major depressive disorder. Pharmaceutical treatment, cognitive-behavioral therapy, a combination of medication and therapy and a pill placebo were implemented as treatments in the randomized study. It was found that medication alone or in combination with therapy resulted in the most rapid recovery. Given time however, CBT alone yielded a similar rate of response to medication alone and to combination therapy much later. Thus, aside from medicinal intervention, there is strong empirical support for psychotherapeutic interventions with internalizing disorders, particularly depression (Southam-Gerow & Kendall, 2000; Waslick, 2007). Psychotherapeutic approaches are of particular relevance and within the scope of practice for school-based mental health models and school psychologist practitioners.

Two psychotherapeutic interventions have been found to meet the criteria for designation as "probably efficacious" and "well-established" treatments for depression (David-Ferdon & Kaslow, 2008). IPT is typically an individually administered treatment intervention for depression that focuses on skill-building of interpersonal skills and deficits, while CBT is typically a group administered treatment for depression that teaches the application of behavioral change to affect emotional change. Both interventions have been found to be more efficacious than alternative treatments or treatment controls (David-Ferdon & Kaslow, 2008; Michael & Crowley, 2002). CBT has been found to be at least as effective as medication therapy and may be useful for individuals who refuse, cannot take or do not respond to medication (Lewinsohn, Hoberman & Clarke, 1989). Within a school-based mental health program, CBT may present as an effective, targeted intervention that could address child and adolescent depression in those youth demonstrating elevated symptoms (Maag & Swearer, 2005).

Cognitive-Behavioral Therapy

CBT is the most empirically-supported treatment and has been found to be superior in effectiveness compared to wait-list controls and psychological placebos (Curry, 2014; Rohde, 2011; Watanabe, Hunot, Omori, Churchill & Furukawa, 2007). Numerous studies have found that cognitive behavioral prevention programs have the most documented effectiveness in decreasing depressive symptoms (Calear & Christensen, 2010; Clarke, et al., 1995; Clarke, et al.; 2001; Garber, 2006; Gladstone & Beardslee, 2009; Hayes & Morgan, 2005; Possel et al., 2013; Stice, et al., 2008; Sutton, 2007; Thoma, Pilecki & McKay, 2015). Clarke and various colleagues (1995; 2001) found that implementing cognitive-behavioral prevention programs with teens result in decreasing depressive symptoms compared to usual care/treatment-as-usual conditions.

CBT combines the primary goals of cognitive therapy and behavioral therapy to address manifestations of symptomology that are commonly characterized in individuals with depression (Rohde, 2011). Cognitive therapy addresses the pessimistic and negative thoughts and attributions that are inherent to depression. The goal of cognitive therapy is to become aware of these thoughts and then develop and substitute more realistic cognitions in order to effectively modify one's mood. Behavioral therapy seeks to increase an individual's involvement in behavioral activities that "elicits positive reinforcement or avoid negative reinforcement from the environment" (Rohde, 2011, p. 23).

Calear and Christensen's (2010) systematic review of school-based prevention and early intervention programs found that most programs were of a cognitive-behavioral orientation. Indicated, also known as targeted, programs for preventing depression were the most effective in reducing depressive symptoms. Targeted programs are preventive programs that are designed

for implementation with populations that demonstrate higher risk for depression due to increased risk factors or presentation of subclinical symptomology. The authors' review also reported that a larger proportion of preventive and early intervention programs were more successful when the sessions were 8-12 in length. Less success was reported in studies when the length was longer or shorter in duration.

Given CBT's strong research-base for treating and preventing depression, there are multiple meta-analyses of adolescent depression prevention programs that found targeted or indicated programs were more effective in reducing depressive symptoms than universal programs (Calear & Christensen, 2010; David-Ferdon & Kaslow, 2008; Stice, Shaw, Bohon, Marti & Rohde, 2009). Two targeted programs with the strongest empirical investigation in the literature (Bellon et al., 2014) are the Penn Resiliency (Gillham et al., 1990) and Coping with Depression (Clarke & Lewinsohn, 1995) programs. A discussion of these programs follows.

The Penn Resiliency Program (PRP; Gillham et al., 1990) is a targeted cognitive-behavioral program that teaches adolescents the connection between life events, their beliefs about how life events relate to them and the emotional impact that those beliefs can have on their mood. The program is a school-based curriculum that has been implemented as a universal and targeted depression prevention program. A meta-analysis of the program indicated that the PRP was effective in reducing levels of depressive symptoms in youth compared youth who received no intervention, both post-intervention and at 12-month follow-up (Brunwasser, Gillham & Kim, 2007). The PRP was found to demonstrate a significant preventive effect among high-symptom adolescent participants, but not otherwise among those in the primary care setting (Gillham, Hamilton, Freres, Patton & Gallop, 2006). However, in Gillam et al.'s (2007) study of the PRP compared to a no-intervention control and an active behavioral therapy condition, PRP showed

significant results of preventing the onset of elevated symptoms compared to no-intervention controls but was not significantly effective at doing so compared to the active alternative intervention (Gillham et al., 2007).

The Coping with Depression (CWD) and Adolescent Coping with Depression (CWD-A) courses (Clarke, 1990; Clarke & Lewinsohn, 1995) are targeted cognitive-behavioral therapy programs that have been implemented as both treatment and preventive programs. The CWD-A is an evolution of the CWD program, which was originally developed as a program for adults. The CWD-A was created specifically for an adolescent population. Demonstrating consistent results in treating and preventing depression, both programs teach behavioral coping strategies that affect one's emotions and cognitions. The evidence-base, theoretical orientation and applications of the CWD and CWD-A programs will be discussed in further detail in the following sections.

Review of Studies Evaluating the CWD Course

According the program manuals (Clarke, 1990; Clarke & Lewinsohn, 1995), the CWD and CWD-A courses are psychoeducational, cognitive-behavioral interventions for the treatment of depression. Cuijpers, Munoz, Clarke & Lewinsohn (2009) noted that it was "one of the most widely available and best studied psychological treatments for depression" (p. 450). Evolved from the Coping with Depression (CWD) program that was originally developed for adults (Clarke & Lewinsohn, 1995), the adolescent course is designed to help youth learn how to control their depression by employing strategies to change depressive thoughts and develop behaviors to manage problematic situations and enhance one's mood. It is recommended to be administered in a group, but may also be administered individually. Consistent with CBT strategies for skill practice and reinforcement, homework assignments, interactive discussion and

role-playing strategies are employed. A strong research base exists with regard to both programs and will be explored.

The evidence-base for the CWD courses is extensive (Cuijpers et al., 2009). As the original program for treating depression, the CWD has been adapted for use in various age and developmental groups, culturally diverse populations and countries outside of the United States (Garvik, Idsoe & Bru, 2014; Kuhner, Angermeyer & Veiel, 1996; Listug-Lunde, Vogeltanz-Holm & Collins, 2013; Rosello, Bernall & Rivera-Medina, 2008). The CWD and CWD-A, in particular, have been included in numerous meta-analyses and reviews as a cognitive-behavioral intervention for adolescents who have been diagnosed as clinically depressed and as a preventative treatment for those who are at-risk for depression or demonstrate subsyndromal or subthreshold levels of depression.

Cuijpers et al. (2009) summarized the existing research on the CWD program, examining the treatment and preventative efficacy of it with adults, older adults, adolescents and minority groups, as well as whether the program was administered as a guided or unguided self-help intervention. A meta-analysis indicated that when used as a preventive means, participants in the CWD program had a 38% less chance of developing a depressive disorder than people in the control conditions. It was found that CWD was effective, in comparison to control groups and in treating depression for specific target populations, including adolescents, older adults and minority groups. The researchers also examined whether the program was administered as a guided self-help intervention versus a self-help intervention without professional support. The program was more effective when administered with professional support than without guidance for the participants involved. The benefits of the program, based on Cuijpers, et al. (2009) research, lie in its flexibility and adaptability in use with different populations. Critiques of the

program included the following observations: small effect sizes were noted despite clear evidence of treatment efficacy when the program was utilized as a treatment for those with depression; few studies compared the CWD program to pharmacological or other psychological treatments; and differential models of treatment in the form of abbreviated program versions compared to the full course may be required or applicable because of evidence that condensed treatment modules are not less effective than full versions of the program for adults.

Theoretical Basis of the CWD and CWD-A Courses

The theoretical orientation of the CWD-A course is based on an integrative stress-vulnerability model of depression (Clarke, Lewinsohn & Hops, 1990; Cuijpers et al., 2009; Efthimiou & Psom, 2012; Lewinsohn, Hoberman & Clarke, 1989). It is hypothesized that depression is an "end-product of multiple risk factors acting to transform the affects, actions and cognitions of individuals facing adverse conditions" (Lewinsohn et al., 1989, p. 473). Creating the state or experience of depression starts with environmental changes or situations that significantly disrupts the functioning of an individual. These situations may be further amplified by the existing risk or predisposing vulnerabilities. This negatively affects the individual's behavioral reactions and interactions and emotional responses. The disrupted behavioral patterns, actions and emotions lead to fewer positively reinforcing (i.e., "feel good") experiences and/or a higher number of negative experiences. These experiences result in an increased state of personal awareness, self-criticism and critique of oneself. This depressive rumination leads to increased mood disruption and depression, which results in further cognitive, behavioral, emotional, physical and interpersonal actions and reactions that further perpetuate the individual's feeling and cycle of depression. This cycle continuously reinforces the maladaptive

thoughts, patterns and behaviors and accentuates the predisposing characteristics that make the individual more susceptible to the depressive state.

Given this theoretical model of depression as stated, the CWD program takes a multi-dimensional approach to address the various factors and components creating the depressive state and seeks to teach individual coping strategies to counteract these aspects, resulting in improved mood, behavior and cognitions. Operating on the premise of Bandura's Social Learning Theory (Bandura, 1971), which surmises that individuals learn by direct or indirect experiences that provide rewarding or punishing consequences, the CWD program seeks to teach individuals how to modify their thoughts and mood from the depressive state by increasing positively reinforcing experiences and activities. The specific methods and skills taught in the CWD program to achieve this goal include: relaxation, increasing pleasant activities, controlling negative or irrational thinking, social skills and communication, negotiation and conflict resolution skills (Clarke et al., 1995).

The CWD-A Research with Children and Adolescents with Clinical Depression

The CWD-A program was created for children and adolescents with clinical depression and has been found to be effective across multiple studies. Clarke's initial study of implementing the CWD-A program with adolescents found that post-treatment, self-ratings of depression dropped significantly and 20 out 21 participants did not meet criteria for any affective disorder (Clarke, 1985).

The second outcome study of the program compared various treatment conditions of the CWD-A program for adolescents (Lewinsohn, Clarke, Hops, Andrews & Williams, 1990). Clinically depressed adolescents were randomly assigned to a CWD-A group for adolescents only, a CWD-A group for adolescents coupled with a group for their parents and a wait-list

control group. Results indicated no significant differences between the CWD-A group with and without parental involvement. In both groups, there was a significant reduction in the number of adolescents who met criteria for any depressive disorder. At the one and six month follow-ups, there was also further reduction in the number of adolescents who had participated in the CWD-A treatment conditions meeting criteria for any depressive disorder.

Listug-Lunde, Vogeltanz & Collins (2013) implemented a school-based, culturally modified version of the CWD-A program with rural American-Indian youth. Compared to students receiving individualized treatment-as-usual (TAU) interventions within the school or community, it was found that both groups had significant decreases in depressive symptoms. Relevant to school psychology is the observation that the program utilized therapist time more efficiently in the group setting than it would have in individual counseling and required fewer school and community resources.

Evaluation of the CWD-A/CWS Program with Individuals At-Risk

Implementation of the CWD-A program has also been found to demonstrate significant post-intervention effects when used as a preventative intervention. Initially developed as a treatment for depression program, it was eventually modified and implemented into a 12-session preventive program as the Coping with Stress (CWS) program, an application to reduce symptoms and delay the onset of depression in adolescents with subclinical levels of symptomology. The CWD-A program was implemented as a preventive treatment by Clarke and his colleagues (1995; 2001) and the CWS program was implemented by Garber and her colleagues in 2009. In a randomized controlled study of the program, Clarke and colleagues (1995) found that this targeted intervention significantly prevented depressive disorders and significantly reduced self-reported depressive symptoms in an adolescent population.

Clarke, Hornbrook, Lynch, Polen, Gale, Beardslee, O'Connor and Seeley (2001) conducted a group cognitive intervention to prevent depressive symptoms in medium-severity (also referred to as subsyndromal youth) groups of adolescents. The youth were randomly assigned to the experimental intervention condition or the usual-care condition. The intervention condition was an abbreviated version of the adolescent depression treatment program, teaching cognitive restructuring techniques in 15 one-hour sessions. Parent (e.g., Achenbach Child Behavior Checklist (CBCL)) and child (e.g., SADS for School-Age Children, Epidemiological Version, Center for Epidemiologic Studies of Depression (CES-D) and the Hamilton Depression Rating Scale (HAM-D)) assessments were completed to monitor intervention effects. There were significant main effects (group x time) on the CES-D experimental condition. At the 12-month follow-up, there was significant preventive advantage for the experimental group youth reflecting less development of depression in the experimental intervention group. Further areas of study presented by the study included program implementation with more diverse population samples and usage in non-research settings.

As previously discussed, the second generation of the CWS program is the POD-TEAMS Coping with Stress (CWS) Course (Clarke, 2003; Garber et al., 2009). The POD-TEAMS CWS is a cognitive-behavioral program designed to prevent major depressive episodes in adolescents at an increased risk for depression. As an early intervention to prevent depression, this program is not meant for adolescents who have a diagnosis of depression or have clinically significant symptoms of depression. As described in the manual, the eight-session program is intended to be implemented within the school setting, as a class or an afterschool therapy group. Garber et al. (2009) extended the program's efficacy research by conducting a large scale field study of the CWS course to examine the effectiveness of the program across diverse geographic locations.

Results indicated that adolescents in the various sites demonstrated significantly lower reports of depressive symptomology compared to usual care controls. Conclusions by the authors suggested that the program is effective as a tool in community mental health settings to decrease depression in adolescents aged thirteen to seventeen compared to usual care. In particular, it found that there was an 11% reduction in future depressive episodes among adolescents in the prevention program. This is the only published research study on this particular program.

Conclusion

School-based mental health services are an integral part of meeting the needs of students with internalizing mental health disorders who would otherwise not receive any services. These services can be provided in a variety of ways and can be applied to the student population in a universal, targeted or indicated manner, depending on the nature and severity of the problem and whether or not the focus of the interventions are to treat or prevent problems. This is particularly true in the case of major depression. Its deleterious effects can be observed in children and adolescents manifesting in difficulties across multiple areas of functioning, including personal development, academics, social and home interactions. Depressive conditions most often develop during the adolescence, but have been shown to manifest in childhood as well. Depression can be a life-long, chronic condition that negatively impacts one's quality of life. A number of risk factors including biological, cognitive, genetic and environmental variables can predispose an individual to depression, making them more susceptible to developing the disorder. Given the quality of life impact of clinical depression and the poor course trajectory, strategies to prevent and intervene with depression in adolescents is highly recommended. Cognitive-behavioral programs and strategies have a strong base of evidence in addressing the treatment and preventive needs of adolescents with or at-risk for depression. The Adolescent

Coping With Depression (CWD-A) program is a targeted cognitive-behavioral program with a wide-ranging and consistent research base of efficacy that teaches adolescents to increase positive behavioral experiences in order to modify depressive emotions and cognitions that are creating and maintaining the depressive condition. According the Substance Abuse and Mental Health Services Administration's (SAMSA) National Registry of Evidence-Based Programs and Practices (NREPP), the program has documented effectiveness for improving social connectedness, is "promising" for reducing depression and depressive symptoms and suicidal thoughts and behaviors (Substance Abuse and Mental Health Services Administration, 2016). Able to produce an evidence base as both a treatment and prevention intervention, the CWD-A has been implemented with diverse ethnic groups and outside of the United States. The CWD-A program is psycho-educational in nature, group-based and adaptable, lending itself to implementation within the school setting. School psychologists are in a unique position as school-based personnel to provide program evaluation, consultation and direct and indirect intervention supports within a school-based mental health system that adequately evaluates and employs strategies and programs such as the CWD-A.

Rationale for Current Study

The purpose of this study is to examine the effectiveness of an adapted version of the POD-TEAMS CWS (Clarke, 1994, 2003; Garber, et al., 2009) program on reducing symptoms of depression in adolescents at-risk for the disorder who attend school in an urban setting. The rationale for this study is that adolescents in urban school settings are at an increased risk for depression and effective treatments are needed to address these concerns (Wickrama & Bryant, 2003). Although the program has been implemented in an urban health-care setting with a small population of ethnically diverse youth, it has not been examined in an urban, school-based

setting. Likewise, while most studies have relied on adolescent self-report and/or parental report measures of the levels of depressive symptomology, this study will utilize teacher reports of depressive symptoms, in addition to adolescent self-report ratings. This is the first study of its kind; there is no other published investigation of the POD-TEAMS CWS program that has occurred in a naturalistic setting and includes teacher ratings as an efficacy measure. This study would add to the evidence base of efficacy for the POD-TEAMS CWS program and provide further information for school psychologists in urban settings regarding the application of a school-based mental health resource.

CHAPTER THREE

METHODS

The purpose of this study was to examine the effectiveness of the POD TEAMS Coping with Stress program in decreasing symptoms of depression in adolescents when compared to a treatment-as-usual group. This randomized, experimental intervention study was implemented in an urban middle school setting using a convenience sample of students identified as at-risk for depression by their teachers and endorsed by adolescent ratings of their own depressive symptoms. The independent variable in this study was implementation of the Adapted POD TEAMS Coping with Stress (Adapted POD; Clarke, 2003) program compared to in-school Treatment-As-Usual (TAU) procedures. The dependent variables of the study were measures of depression status, including: raw scores on the Center for the Epidemiologic Study of Depression-Revised (CESD-R; Eaton, Muntaner, Smith, Tien, & Ybarra, 2004) and standard scores on Behavior Assessment Scale for Children-Second Edition Self-Report-Adolescent (BASC-2 SRP-A; Reynolds & Kamphaus, 2004) and Teacher Rating Scale-Adolescent (BASC-2 TRS-A; Reynolds & Kamphaus, 2004). This research study sought to investigate the hypothesis that the Adapted POD (Clarke, 2003) program would be effective in reducing depressive symptomology in adolescents who are at-risk for depression compared to TAU procedures.

Study Setting

This research study was conducted in a middle school setting. The entire student body is made up of 8th and 9th grade students, totaling 106 students in the population. The school is located in an urban township of 30,000 residents in the northeastern United States. Based on 2010 Census data, the racial makeup of the town is 13% White, 72% Black or African-American, 22% Hispanic, 10% from other races, 3% from two races and less than 2% combined Native

American, Asian and Pacific Islander (U.S. Census Bureau, 2010). The POD TEAMS Coping with Stress program has been previously implemented with adolescents in community mental health facilities and consisted of a proportionately smaller sample of ethnically diverse individuals (Garber et al., 2009). Garber's study found that the program could be "reliably and effectively delivered in different setting by clinicians outside the group who originally developed the intervention" (p.2221). Therefore, implementation within the school setting is a natural research extension to determine if the program would, in fact, be effective when delivered within this setting. Relatedly, research has found that adolescents in urban environments are at greater risk and tend to have higher prevalence rates of depression, in addition to being less likely to seek and utilize facilities-based mental health support (Avenevoli et al., 2015; Wagstaff & Polo, 2011). To that end, there is a greater likelihood that adolescents with at-risk levels of depression may be found within the urban school setting and could potentially benefit from an intervention targeting the amelioration of depressive symptoms.

Rationale for Research Approach

The design of this study was an experimental, randomized trial to determine effectiveness of the POD TEAMS Coping with Stress program in decreasing symptoms of depression in adolescents when compared to a TAU group. Effectiveness research studies examine the application or implementation of an intervention in real world settings (Boruch, Weisburd, Turner III, Karpyn & Littell, 2009; Chambless & Hollon, 1998; Singal, Simmons & Waljee, 2014). This study was implemented within a school setting and eligible study participants were randomly assigned to intervention and TAU groups.

Research Design

This randomized study was quantitative and experimental in design. It included the following procedures: referral for pre-screening by school staff, pre-screening of potential adolescent participants to determine depressive status based on self-ratings of depression; random assignment of participants to the Adapted POD and TAU groups using an online random assignment generator; two pre/post adolescent self-report measures (e.g., BASC-2 SRP-A and CESD-R); one pre/post teacher rating measure (e.g., BASC-2 TRS-A); and one adolescent self-report of progress monitoring (e.g., CESD-R). The dependent variables are depression subscale standard scores on the BASC-2 and the CESD-R raw scores. The independent variable is the implementation of the Adapted POD TEAMS CWS program for the intervention group and treatment-as-usual procedures. The program was targeted specifically towards the adolescent population it is designed to serve due to the pre-intervention screening measures. The data collected was analyzed using the Statistical Package for the Social Sciences (SPSS; version 24). It was expected that the adolescents participating in the intervention group would demonstrate a significantly greater reduction in depressive symptomology than adolescents in the TAU as reported on self-report and teacher rating scales.

Participants

This investigation used a convenience sample based on referral, qualification to participate, parental consent and student assent. Nineteen students provided assent to participate in the intervention phase of the study and were randomly assigned to the TAU and Adapted POD groups. Three students left the study due to moving out of the district and revoked parental consent. There were a total of 16 students, ranging in age from 13 years to 15 years of age,

included in the final analysis of the study. The majority of the sample was female. The following sections further detail the characteristics of participants in the sample.

Sex

There were twice as many females in the total sample than males. In the Adapted POD intervention group, three-quarters of the sample was female, while in the TAU group, slightly less than two-thirds of the sample was female. The sex distribution of the sample is presented in Table 1.

Table 1

Sex Distribution of the Sample

Sex	Adapted POD Frequency (Percentage)	TAU Frequency (Percentage)	Total Sample Frequency (Percentage)
Male	2 (25.0)	3 (37.5)	5 (31.3)
Female	6 (75.0)	5 (62.5)	11 (68.8)
Total (n)	8 (100.0)	8 (100.0)	16 (100.0)

Ethnicity

The study sample was comprised of self-identified Black, Hispanic and Multiracial adolescent students. Sixty-nine percent of the entire sample was Black, consistent with the population statistics. In the Adapted POD intervention group, half of the group was Hispanic and the other half of the group was Black. In the TAU group, the seven-eighths of the population was Black. Table 2 presents the ethnicity distribution of the sample.

Table 2

Ethnic Distribution of the Sample

Ethnicity	Adapted POD Frequency (Percentage)	TAU Frequency (Percentage)	Total Sample Frequency (Percentage)
Black	4 (50.0)	7 (87.5)	11 (68.8)
Hispanic	4 (50.0)	0 (0.0)	4 (25.0)
Multiracial	0 (0.0)	1 (12.5)	1 (6.3)
Total	8 (100.0)	8 (100.0)	16 (100.0)

Age

The age of participants in this study ranged from 13 to 15. The mean age for students in the Adapted POD group was 13.6 years of age. The mean age for students in the TAU group was 14.13 years of age. Frequency counts for participants by age within each treatment condition is presented in Table 3. There was no significant difference in age between the groups.

Table 3

Frequency Counts of Age Within Each Treatment Condition

Age	Adapted POD Frequency (Percentage)	TAU Frequency (Percentage)	Total Sample Frequency (Percentage)
13	3 (37.5)	2 (25.0)	5 (31.3)
14	5 (62.5)	3 (37.5)	8 (50.0)
15	0 (0.0)	3 (37.5)	3 (18.8)
Total	8 (100.0)	8 (100.0)	

Instrumentation

The instruments used in the study were the CESD-R and the BASC-2 Self-Report and Teacher Rating Scales. The scores on these instruments are the dependent variables and the data which will be utilized to determine the levels and frequency of depressive symptomology.

Center for Epidemiologic Studies Depression Scale-Revised (CESD-R)

The CESD-R is a 20-item screening test that measures symptoms for major depressive episode, as defined by the DSM-V. Developed in 1976 (known at that time simply as the CES- D) and revised in 2004 (Van Dam & Earleywine, 2011), it is a self-report questionnaire that is used to detect depression in the general population and in specific populations, including adolescent, elderly, ethnic and clinical populations (Perreira, Deeb-Sossa, Harris & Bollen, 2005, p.1572). Although the CESD-R is used to identify populations at risk of developing clinical depression, "it is not intended as a clinical diagnostic tool" (Perreira, Deeb-Sossa, Harris & Bollen, 2005, p. 1568). The items address nine symptom areas of depression, including: sadness (dysphoria), loss of interest (anhedonia), appetite, sleep, thinking/concentration, guilt (worthlessness), tired (fatigue), movement (agitation), and suicidal ideation. Ratings are provided on a scale from 0 to 3 measuring the frequency with which the stated symptoms are experienced by the rater over the last week. The total score is a sum of the responses to all 20 questions. Score ranges between 0 (ratings of 'not at all or less than one day to all 20 questions' and 60 (report of experiencing symptoms '5-7 days' or 'nearly every day for 2 weeks' for all 20 questions).

An overall score of less than 20 on the CESD-R reflects symptomology of "no clinical significance," and one of at least 16 reflects "subthreshold depression symptoms," but none of the criteria for "possible," "probable" or "meets criteria for major depressive episode" is met. It was also discussed in multiple reviews of the measure that in utilizing the CESD-R for screening and case finding purposes, the cut-off threshold may be as low as 12, in order to minimize missed cases (Vilagut, Forero, Barbaglia & Alonso, 2016; Smarr & Keefer, 2011; Young, Miller & Khan, 2013). A "possible major depressive episode" is considered with "anhedonia or dysphoria nearly every day for the past two weeks, plus symptoms in an additional 2 other DSM

symptom groups reported as occurring nearly every day for the past two weeks, or 5-7 days in the past week" (Center for Innovative Public Health Research, 2017). The criteria for "probable major depressive episode" and "meets criteria for major depressive episode" both include anhedonia or dysphoria nearly every day for the past two weeks, but differ in the number and frequency of symptoms reported in additional DSM groups. Within these categories, reporting of symptoms in more groups occurring over longer, more consistent periods of time indicate more pervasive symptomology and severity impairment (Eaton et al., 2004).

According to systematic review and meta-analysis, the CESD-R was found to have acceptable screening accuracy and high sensitivity for detecting major depression (Vilagut et al., 2016). It was also found to have good internal reliability and consistency and is good for progress monitoring in various populations (Stockings, Degenhardt, Lee, Mihalopoulos, Liu, Hobbs & Patton, 2014; Van Dam & Earleywine, 2011). It is also internally consistent within ethnocultural groups, with Cronbach's alphas ranging from .85 to .89 (Perreira, Deeb-Sossa, Harris & Bollen, 2005). Though having sufficient sensitivity for screening and progress monitoring in adolescent populations, this instrument is not designed for clinical or differential diagnosis and does not provide an adequate level of discrimination and sensitivity for such decision-making at the point cut-offs outlined previously for determining symptomology levels of depression (Stockings, Degenhardt, Lee, Mihalopoulos, Liu, Hobbs & Patton, 2014; Vilagut et al., 2016)

A review by Smarr and Keefer (2011) reported that user training required to administer, score and interpret the CES-D is minimal. It is freely available to the public as a screening and research measure with explicit scoring criteria to identify individuals at high risk for depression.

The author of this study is a certified school psychologist who has received training to score, administer and interpret informal and formal social-emotional assessments and screening tools.

Behavior Assessment System for Children-Second Edition (BASC-2)

According to the manual, the BASC-2 is "a multi-method, multi-dimensional system used to evaluate the behavior and self-perceptions of children and young adults aged 2 through 25" (Reynolds & Kamphaus, 2004, p.1). It is used to assess numerous areas of behavior and emotional functioning of both problematic and adaptive natures. The BASC-2 is designed to support educational classification and facilitate differential diagnosis and provides information on the student from a variety of sources, including parent, teacher and self-report. The instrument has good to excellent internal consistency and test-retest reliability for composite scores (Tan, 2007). For the purpose of this study, the Depression scales on the BASC-2 Adolescent Teacher Rating Scale (BASC-2 TRS-A; Reynolds & Kamphaus, 2004) and Adolescent Self-Report Forms (BASC-2 SRP-A; Reynolds & Kamphaus, 2004) are being utilized as pre- and post-measures.

The Depression scales on both forms are aligned with the *DSM-IV* (American Psychological Association, 2013) symptomology and includes inquiries regarding feelings of loneliness, sadness, and an inability to enjoy life. Scores in the At-Risk range may represent significant levels of depression, while scores in the Clinically Significant range are associated with broad problems of adjustment in the adolescent (Reynolds & Kamphaus, 2004). Internal consistency for the TRS-A and SRP-A forms is deemed to be acceptable at .86 and .88, respectively. Test-retest reliabilities are adequate, at .76 for both the TRS-A and SRP-A forms. These data suggest adequate consistency and sensitivity for progress monitoring use with adolescent populations.

According to the manual, “users are expected to have “completed a recognized graduate training in psychology; to have received formal academic training in the administration, scoring, and interpretation of behavior-rating scales and personality scales; and to have received supervised experience with such instruments. Most clinical, school, pediatric, counseling, neuro-, and applied developmental psychologists will have received such training (Reynolds & Kamphaus, 2004, p. ii). As a certified school psychologist who regularly administers this instrument and many other behavior-rating scales as a routine function of her employment, the lead researcher of this study fully meets the test developer’s user qualification criteria.

Intervention

The intervention and focus of this investigation are an adaptation of the POD-TEAMS Coping with Stress course (Clarke, 2003). The program is described by the author as a “psycho-educational, cognitive-behavioral intervention for the prevention of unipolar depression in high school adolescents who have an increased risk of depression” (Clarke, 2003, p. i). The program is not meant to treat depressive episodes and is designed to be offered in school-based or healthcare settings. This indicated intervention is an eight-session program whose target population is those adolescents who are identified to be at-risk for experiencing major depression. According to the manual, this increased risk status may be due to: (a) having a parent already diagnosed with depression; (b) having a past history of experiencing a depressive episode; (c) reporting subsyndromal symptoms of depression (Clarke, 2003). Other factors not directly cited in the manual but are linked to an increased risk for depression include: gender, neurobiology, temperament/personality, negative cognitions, stress/response to stress interpersonal relationships (Garber, 2006).

The course is designed to be 90-minutes per session and is highly structured and scripted. The number of sessions is consistent with Hetrick, Cox and Murray's (2015) meta-analysis findings of depression prevention programs indicating that "delivery of eight or more sessions resulted in a significantly greater reduction in symptoms or depressive disorder" (p.4787). The same study found no difference in outcomes when fewer than eight sessions were delivered. Calear & Christensen (2010) also determined that the majority of successful intervention programs implemented between 8-12 sessions. This suggests that there is data to support the number of sessions implemented within this program and provides a likelihood of success pertaining to this variable of the program.

The POD TEAMS Coping With Stress course intervention course curricula includes an overview of depression and its relationship to stressful situations, how to identify these feelings, teaching strategies and skills and techniques on how to change irrational and maladaptive thoughts. The methods of instruction include: lecture by the group leader, discussions, group and team-based activities, role-playing exercises and practice assignments. Qualifications are outlined for group leaders implementing the program to ensure that the course is conducted in a therapeutically responsible and effective manner. It is assumed that a mental health profession would have the necessary skills and "prior training in the assessment and treatment of mood disorders in youth or adults" (Clarke, 2003; p.vii). The author of this study is a certified, practicing school psychologist with years of experience in evaluating, treating and counseling adolescent youth.

For the sake of making the material relevant and engaging for students, researchers may modify the material, but are asked to retain the basic terms and teaching points of the lessons, employ changes that encourage more student interaction and add new exercises if they provide

an alternative method for teaching the skills. Activities in sessions 3, 4 and 5 sessions were modified by using cartoons found online through a Google search of "problem-solving" or "cognitive behavioral therapy" the same name, using updated cartoons that the students were better able to relate to and comprehend, utilizing examples from their everyday lives and situations, encouraging them to share their personal coping strategies with the group, and encouraging them to support one another and apply those skills across settings. A task of changing their thoughts in session number 7 was added/modified to encourage the students to use technology for finding positive and encouraging quotes on the internet and/or social media.

For the purpose of this study, the POD TEAMS Coping With Stress course was decreased in length from 90 minutes to 60 minutes per session. The reason for this modification was that students were not allowed to remain on school premises beyond 4:00p.m., and had to be released at that time. The groups met one day of the week, immediately after school when students are released at 2:40pm. To remain within time constraints, the sharing activities at the end of each session in the program were omitted and the length of the major activities were shortened. Because of this modification, the program will be referred to as the Adapted POD TEAMS Coping with Stress ("Adapted POD"; Clarke, 2003) program.

Procedures

There were two implementations of the screening and intervention phases of this study. The screening phase was implemented to obtain a convenience sample of students. The intervention phase entailed implementation of the treatment and control conditions. The first implementation round employed the original CESD-R criteria for being determined 'at-risk' (i.e., a score of at least 16). The second round of implementation occurred to ascertain an adequate sample size for analysis, using a lowered CESD-R threshold score of 12.

Screening Phase

For the screening phase, a presentation was made to the teachers, building administrators and school-based instructional support staff members (e.g., school or child study team social worker, guidance counselor, school nurse) during an afterschool staff meeting. The 30-minute presentation was conducted by the principal investigator of this study, who is also a certified school psychologist. The principal investigator was not a primary service provider in the target school nor was she an employee of the school district. The content of the presentation included: a rationale for the study; discussion of the general symptoms of depression in students, such as seeming sad or "feeling blue," irritability, increasingly poor school attendance, and decreased academic and social engagement, in addition to answering any questions or concerns. The staff were then asked to consider their students' behavior against the criteria presented and make anonymous referrals of students who may be exhibiting any of the behaviors discussed, suggesting that these students may be at-risk for depression. Referrals were taken immediately after the presentation and for up to ten days after the presentation for those who needed more time or wanted to make further observations of their students. There were no referral sources from outside of the school setting.

After the lists of referred students were created for the screening phases of the study, the principal investigator contacted the parents of those students by phone to introduce herself, discuss the study and request a meeting for screening consent. The parents were invited to the school when they were available for meeting with the principal investigator and community engagement specialist to review the details for screening and provide consent for screening participation. For parents who could not come to school, they were offered an opportunity to have the informed consent letters for screening participation sent home with their child or via

postal mail for a signature and a plan to be returned to school the next day. The letters were given to individual students by the investigator at the end of the school day to take home to their parents, with a brief explanation that their parents were expecting the information. Follow-up phone calls were made to ensure that the documents were given to parent, signed and returned to school the following day. Parents were informed that consent is voluntary and they or their children may refuse to participate or revoke consent to participate at any point in time.

Adolescents whose parents provided consent were presented with information about the study, details of confidentiality and adolescent assent for participation were then sought and documented via informed assent forms. The assent process was conducted with the students individually. These meetings took place during homeroom periods in the morning. The community engagement specialist asked for specific students to be sent to her office at various times to meet with the investigator. Immediately after gaining assent, the CESD-R was administered. Adolescents who scored less than 12 on the CESD-R were excluded from the study. Adolescents whose scores meet the criteria for 'possible major depressive episode," "probable major depressive episode," or "major depressive episode" were referred to the school counselor or social worker for school and community-based mental health supports. Adolescents who scored at least 12 and did not meet the criteria for possible depressive episode, were considered to be "at-risk" or using the CESD-R terminology, "subthreshold for depressive symptoms." These adolescents became potential participants for the second phase of the study.

As previously mentioned, there were two implementations of this study, which both included referral, screening and intervention phases. During the initial screening phase, 24 students were referred by school staff. Parental consents to screen for depressive status using the CESD-R were obtained for 20 students. Student assent for screening was obtained from 20

students, who were immediately administered the CESD-R. Using the initial cut-off criteria of 16 and above to be determined as 'at-risk' in depressive status, 8 students were found eligible for study participation. Informed consent and assent for study participation was obtained from 4 of the parents and students.

Another round of referral and screening was implemented using the same informed consent and assent procedures. Prior to this event, the research literature was reviewed for any discussion of the CESD-R examining cut-off points for identification of individuals in the at-risk category. Young, Miller & Khan (2013) discussed that "various cutoff scores ranging from 12 to 24 have been recommended" (p.88) in adolescents. In reviewing cut-off scores in research using the CESD-R, Smarr & Keefer (2011) reported that a lower CESD-R threshold range of 13-21 used in studies have allowed for detection of 80-90% reliable change in depressive symptomology. This criteria was applied to the new referrals as well as the screening results previously obtained during the first round of screening. Twenty new students were referred during the second screening round. The same screening and consent procedures were implemented, yielding 12 new students who were screened. That number, plus 4 students who had previously been screened and were eligible to participate based on the lowered at-risk threshold, resulted in 16 students producing scores finding them eligible to participate in the intervention phase of the study. This yielded a total of 24 students from both the first and second rounds of screening who were found eligible to participate in the intervention phases of the study.

Intervention Phase

There were also two rounds of the intervention phase. After the first and second screening phases, parental consent was sought for a total of 24 students who were determined to

be at risk and found eligible to participate in this phase of the study. The primary researcher again spoke with the parents, invited them in for a conference regarding their child's eligibility to participate in the intervention phase of the study and review the informed consent letters. At parent request, the same information was sent home via the student and discussed over the phone at the parent's convenience. Parental consent and student was sought according to the aforementioned procedures. Three of the parents did not consent to study participation and one student did not assent. This resulted in 20 students who participated in both implementations of this study's intervention phase.

In the first implementation of the intervention phase, 4 students (randomly assigned equally to the Adapted POD and TAU groups) began in the intervention; 1 student left due to homelessness. In the second implementation of the intervention phase, 16 students participated (also randomly assigned equally to groups); 2 moved out of the district and 1 parent revoked consent for study participation. This resulted in complete participation and data collection for 3 students in the first session and 13 students in the second session, yielding a total of 16 students included in the final data analysis for the study (i.e., 8 students each in the Adapted POD and TAU groups).

During the teachers' grade level preparation periods, the investigator met with the homeroom teachers as a group to determine if they were interested in participating in the study by providing ratings of depressive symptoms for students who were eligible for the intervention phase. To protect the adolescent participants' privacy, teacher interest in participation was elicited prior to revealing the names of the students. Those teachers who were not interested were asked to leave the meeting prior to revealing the names of the students. The name(s) of the specific adolescents were shared with his/her homeroom teacher(s) and the details of the research

study were reviewed. At that time, informed consent (see Appendix E) was obtained and expectations of confidentiality were reviewed. Teachers were informed that consent was voluntary and they could refuse to participate or withdraw from participating at any point in time. Participating teachers were not informed of which treatment group the students were assigned. Four teachers participated in the study, ranging from 34 to 64 years of age. As the students' homeroom teachers, the raters interacted with the students twice daily during homeroom at the beginning and end of the day and for one period daily during the academic subject taught by the teacher.

Once the sample of adolescents and teachers participating in the study was obtained, the experimental design was implemented. The adolescents were randomly assigned to TAU or Adapted POD treatment groups. In the random assignment process, the initials of individual students were entered into an internet-based random assignment generator. Random assignment is an aspect of experimental design dictating that study participants to be assigned to treatment and control groups, allowing for conclusions about the effect of an intervention to be attributed to the intervention and not to unintended variables. The procedure minimizes bias that could favor one group over another and "serves as a basis for estimating the role of variability in any observed result" (Witte & Witte, 2007, p. 7). The list that was generated was split in half; the first half of the generated list was assigned as the treatment or Adapted POD group and the second half of the list was assigned as the control or TAU group. After being assigned to a group, the investigator met with the adolescents individually to discuss their group assignment and responsibilities.

The first week of the intervention, students in the TAU and Adapted POD groups completed the BASC-2 SRP-A Depression scale and the CESD-R at the beginning of the

session. The teacher participants completed the BASC-2 TRS-A Depression scale for all participants. The raters in this study were blind; they did not know which group (whether TAU or Adapted POD) the students had been assigned. Teachers were given the rating scale form by the principal investigator during individual meetings to explain the rating task. Each teacher returned the form the same day, directly to the investigator. For the sake of confidentiality, each student and teacher was assigned a random number that were labeled on the student and teacher documents. Students and teachers were given their individual numbers to keep for reference and labeling of their responses.

The TAU group was referred to the school social worker for the standard protocol of procedure and intervention that is provided to students who are determined to be at risk. The social worker checked in with a student at a scheduled time, monitoring the student's mood status and offering emotional support on a weekly basis via 15-minute informal discussions. Other students were not aware that the student was part of the TAU group; visits with the social worker is a strategy that is employed and encouraged as part of the school culture. The alternative treatment of this TAU group is designed to address the concern expressed by David-Ferdon and Kaslow (2008) that the lack of this type of control group "limits the ability to rule out that positive results may be due to nonspecific factors such as attention" (p. 94).

In both implementation rounds, the Adapted POD groups participated in the intervention program with the principal investigator of this study, a certified school psychologist. A member or designee of the administrative team was available on site during all after-school activities and implementation of the program sessions. For both rounds, the Adapted POD intervention program was delivered for 8 weeks, once per week for 60 minutes. It was slightly modified from the comprehensive POD TEAMS Coping with Stress program (Clarke, 2003). As designed, the

program implementation consists of 90-minute sessions. However, students were not allowed to remain on school premises beyond 4:00p.m., thus the program was modified to a 60-minute time limit. The sharing activities at the end of each session in the program were omitted and the length of the major activities were shortened. However, the designated conceptual skills and content knowledge were presented during the lessons as prescribed. Minor modifications were made to the instructional materials utilized in this program as suggested by the program designers, to elicit student interest and engagement (Clark, 2003). However, the conceptual content of the lessons remained intact. To ensure that the conceptual content was implemented to the fullest extent possible, treatment fidelity measures were created the principal investigator of this study. The full POD TEAMS content and treatment fidelity checklist were reviewed with a certified teacher, who made independent observations during Adapted POD sessions. Details of this process are discussed in the treatment fidelity section of this report.

At the beginning of each session, the Adapted POD participants completed the CESD-R (Eaton et al., 2004) as a progress monitoring tool. The CESD-R was scored on an ongoing basis and monitored. If any of the adolescent participant's depression increased to clinical levels, as assessed by ratings that escalated to the level of a possible, probable or full criteria met of a major depressive episode, the parent and school social worker/school counselor were notified to seek and/or provide mental health support for the student. This event occurred with one student; in accordance with the procedures set forth by the Indiana University of Pennsylvania (IUP) Institutional Review Board (IRB), the parent and school personnel were notified of this status and encouraged to seek support for the student. However, the parent refused to take the student for a mental health evaluation and requested that the student remain in the intervention program. The student also wanted to remain in the intervention group. When the school administrator was

informed of this situation, the parent was required to document the refusal and request in writing. After doing so, the administrator allowed that, if appropriate, the student may continue to participate and be monitored through the intervention process. The alternative option was to dismiss the student and allow them to be serviced by the school social worker in the same manner as the check-in/check-out procedures outlined for the TAU group. The decision to continue the student in the structured intervention program was requested by the parent and in compliance with the district and school policies given that no outside intervention would be introduced. Although it was proposed in the IRB that the student would be dismissed from the program in the case of such an event, it was unforeseen that the parent would refuse to follow-up on the concerns. Therefore, the continuance of this student in the study was determined to be an adequate solution in the best interest of the student.

During the last week of program implementation, the Adapted POD and TAU groups completed the BASC-2 SRP-A and the CESD-R rating scales. The teachers once again completed the BASC-2 TRS for all participants. For research purposes, only the Depression scale standard score was utilized from the BASC-2 SRP-A and the BASC-2 TRS-A. All documents contained only the student and teacher identification numbers.

All data were entered and analyzed by the principal investigator using the current version of SPSS. If the data suggested that the program is effective in reducing symptoms of depression in the Adapted POD (Clarke, 2003) group, the intervention will be offered to the parents and members of the TAU group.

Intervention Fidelity

Intervention, or treatment, fidelity, "refers to the methodological strategies used to monitor and enhance the reliability and validity of behavioral interventions" and are designed "to

ensure that a research study reliably and validly tests a clinical intervention" (Bellg, et al., 2004, p. 443). As a method to avoid one of the threats to internal validity, monitoring that an intervention has been implemented consistently is valuable. Assessing the integrity of the intervention implementation in research provides evidence that the program was executed as designed and that results may be associated with the implementation of the program rather than unaccounted variables. It is also associated with greater treatment effects and allows for greater confidence in study results and decision-making (Barnett, Hawkins, McCoy, Wahl, Shier, Denune & Kimener, 2013; Bellg, et al., 2004; Borrelli, 2011; Collier-Meek, Fallon, Sametti & Maggin, 2013).

Implementation of the Adapted POD program was monitored by three aspects of fidelity of implementation as discussed by several authors (Ruiz-Primo, 2005; Schoenwald, Garland, Chapman, Frazier, Sheidow & Southam-Gerow, 2011): adherence (the extent to which the specified program components are delivered as program prescribes), participant responsiveness (extent to which participants are engaged), and exposure (the amount of the program content received by participants). Adherence and participant responsiveness were measured by the Fidelity of Treatment Implementation documents (see Appendix F) developed by the principal investigator based on the agenda and objectives for each session. An independent observer, certified in teaching, completed the checklist during live sessions of each session of the treatment program. The procedure for the observer is described below. Exposure was measured by participant attendance. Participants who missed a session were "caught up," as recommended by the program manual to ensure this aspect of fidelity. When participants missed a session, they were presented the content on an agreed upon day later in the week. This happened for three different students on four different occasions due to absences from school. Participants were

provided with the key content instruction of the missed lesson(s), covering all of the areas identified as observed during the fidelity monitoring for that lesson. Because there was no compensation for involvement in this study, there was no guarantee that the students would consistently attend the afterschool sessions. The sessions were scheduled on a day of the week that there were no conflicting afterschool activities for the students participating in the intervention. For adolescents in the TAU group, the social worker utilized a sign-in log to document her meetings with students to ensure that they were seen weekly.

As mentioned, adherence and participant responsiveness were measured by an independent observer. The observer was given a manual and fidelity documents prior to the first session. The study investigator and observer reviewed each lesson and the corresponding fidelity document to discuss how to document observations. At each session, the observer referenced both the leader manual and the fidelity document. If an activity or worksheet was presented or lesson objective content explicitly discussed according to the text in the manual (either verbatim or with minor modifications), the observer circled "yes" (i.e. that the content was observed). If the activity or worksheet was not presented, or the lesson objective content was not explicitly discussed as outlined in the manual, the observer circled "no" on the corresponding fidelity document. Training occurred in mock presentations of the sessions that were presented by the principal investigator and rated by the observer. During the mock presentation, the principal investigator checked off the content presented and the observer documents observations as dictated by the fidelity document.

Data Collection and Analysis Procedures

The CESD-R was individually administered during the screening phase of the study. The measure was hand-scored by the principal investigator of the study. The raw scores of this self-

report scale were utilized to screen referred adolescents as potential participants for the implementation phase of the study.

Once the study participants were determined and the study was ready for implementation, data was collected in the following manner. During the first week of the intervention, students in the TAU and Adapted POD groups completed the BASC-2 SRP-A scale and the CESD-R during the initial session. The teacher participants completed the BASC-2 TRS scale for all participants. At the beginning of each treatment session, the Adapted POD participants completed the CESD-R as a progress monitoring tool. The TAU group did not complete any progress monitoring assessments. During the last week of program implementation, the Adapted POD and TAU groups completed the BASC-2 SRP-A and the CESD-R rating scale. The teachers will also complete the BASC-2 TRS for all participants. Whenever data was received throughout the study, the participants' identification numbers were utilized and the student names were redacted. Data from the returned rating scales were scored by hand or entered for computer scoring by the principal investigator, coded and analyzed using the SPSS program (version 24).

Raw scores on the CESD-R were utilized for analysis. Standard scores were used to analyze the data provided on the BASC-2 SRP and BASC-2 TRS. Preliminary descriptive statistics were used to review and summarize the data, as well as to assess for meeting the assumptions for inferential statistical analyses. Inferential statistical procedures included both parametric and nonparametric measures, due to sample sizes and normality of the data. The Analysis of Covariance (ANCOVA) and Wilcoxon Signed Rank Test statistical methods were used to examine whether there are significant main effects among the variables, as well as

differences between and within the intervention and TAU groups on the CESD-R and BASC-2 self-reports and the BASC-2 teacher rating scale measures.

Protection of Human Rights and Study Benefits

Approval by the IUP Institutional Review Board was obtained prior to the implementation of this project as documented on the parent and teacher consent and student assent forms found in Appendices A, B, C, D, and E. The implementation of this investigation was also approved by the school district (Appendix G). Additionally, the principal investigator participated in the Human Subjects Research Curriculum Coursework administered by the Collaborative Institutional Training Initiative (CITI; Appendix H). Several potential benefits are anticipated as a result of this study. This program has documented efficacy within the clinical, community and school settings (Garber et al., 2009; Gladstone & Beardslee, 2009; Hayes & Morgan, 2005). If shown to have efficacy when implemented within a school setting, it has the potential to reach more adolescents who are at-risk for depression but who do not present with clinical levels of depression. This would mean that adolescents at-risk for depression could be screened and provided with intervention support in a proactive manner before their depression becomes more severe, deteriorating into a major depressive episode, and "also as a way to ameliorate existing levels of distress and dysfunction" (Garber, 2006, p. S108).

CHAPTER FOUR

RESULTS

The purpose of this study is to examine the effectiveness of the POD TEAMS Coping with Stress program in decreasing symptoms of depression in adolescents when compared to a treatment-as-usual group. This chapter presents the results of data analyses to answer the hypotheses posed for this study. Sections of the chapter will present characteristics of the study participants, details of the statistical analyses and treatment of the data, preliminary descriptive statistics of the sample, results pertaining specifically to the research questions and a summary of findings.

Participants

After both rounds, 44 students were referred for screening by school staff. Informed parental consent and student assent for screening were obtained for thirty-two of those students. In the first round, 4 students were found eligible to participate based on the original at-risk CESD-R score of 16. In the second round, 20 students were found eligible to participate based on the at-risk CESD-R score of at least 12. Therefore, twenty-four students were eligible to participate in the study based on an at-risk CESD-R score of at least 12. Study participation consent and assent was obtained from 20 parents and students. One student did not provide assent because they did not want to participate in the study. Nineteen students provided assent to participate in the intervention phase of the study and were randomly assigned to the TAU and Adapted POD groups. In the middle of the study, two students left due to moving out of the district and one student's parent revoked consent. After both rounds of screening and implementation, there was a final group size of 16 students participating in the study with 8 students each randomly assigned to the TAU and Adapted POD groups.

There were twice as many females in the study than males, consistent with prevalence estimates of the disorder (Merikangas et al., 2010; Thomas, Temple, Perez & Rupp, 2011). The majority of the study sample participants were Black (70%; n = 11). Twenty-five percent of the sample participants were Hispanic (n = 4) and one student identified as Multiracial (6%). This sampling distribution was consistent with the ethnic distribution of the city, according to the 2010 Census data.

Statistical Analyses

Statistical analysis of data is conducted to answer the research questions proposed in a given study and when making observations and inferences about natural phenomena (de Smith, 2015; Pallant, 2011). Samples of information were collected and systematically examined in a multi-stage process. The first level of analysis involves reviewing simple summaries of collected data for accuracy and/or exceptions (e.g., errors, outliers), describing characteristics of the sample and checking the data for characteristics that must be in place to conduct levels of further analyses (i.e., testing of assumptions). This process may be identified as preliminary, or exploratory data analysis of the descriptive statistics (de Smith, 2015; Pallant, 2011).

The second level of analysis involves choosing and applying the statistical techniques that address the research question(s) at hand, based on the available data. This process is identified as inferential statistical analysis. In general, there are two types of techniques: those that that examine relationships among variables (i.e., correlation) and those that compare differences between groups (i.e., parametric and non-parametric; Pallant, 2011). This study is a comparison of intervention and treatment-as-usual groups, therefore the second type of statistical techniques discussed are most applicable for answering the research questions.

Parametric tests have more stringent criteria about the original population and the nature of the data collected because they seek to make broad generalizations about the population when examining a research question. Non-parametric tests are less stringent, lending themselves as more suitable for small data samples, seeking to examine specific hypotheses but not necessarily to make assumptions about the population from which the sample was drawn (Rossi, 2004; Pallant, 2011). The decision of which tests to use are contingent upon the nature of the data available for analysis.

There are assumptions about the sample and population in question when using parametric and non-parametric statistical tests. The test assumptions, addressed and evaluated during study design, preliminary analysis and inferential statistics application, are: level of measurement, random sampling, independence of observations, normal distribution and homogeneity of variance (Pallant, 2011). In designing a research study, the levels of measurement, or rather, type of data to be collected is determined at the inception. This is also true of random sampling, a concept that refers to choosing sample members from a population at random. As this is a convenience study, a random sample was not possible; however, random assignment of participants was used. The last three assumptions are tested during and after data collection. Independence of observations is a concept delineating that any observation or data collected is independent, i.e., not influenced by any other participant, observation or measurement. Normality of distribution refers to the assumption that the population from which the sample is taken has a normal distribution, with the majority of scores in the middle and fewer, more extreme occurrences on either end of the middle. Finally, homogeneity of variance is the assumption of equal variances in the population, reflecting similar variability in scores for each group. The process and results of the statistical analyses are presented in the next sections.

Preliminary Analyses

Descriptive statistics were employed as preliminary analyses to describe and summarize the characteristics of the sample and data. The procedures include a visual analysis of data to ensure that the information that was collected is entered into the data correctly, deciding what to do about extreme data values, reviewing the descriptive statistics to evaluate the nature of the data and begin assumption testing for inferential analysis. The data collected for this study were age, ethnicity and sex of the participants, raw scores on the CESD-R, mean scores on the BASC-2 SRP and BASC-2 TRS from the Adapted POD and TAU groups and weekly (repeated measures) raw scores for the Adapted POD intervention group. The descriptive statistics include measures that tell the basic characteristics of the sample, such as size, mean, median, variance, frequency distribution, normality and relationships among variables. There was a final total of 16 students (5 male and 11 female), ranging in age from 13 years to 15 years, included in the analysis. Those characteristics were previously presented in the Methods section of this report. The mean is the average of scores, while the median is the middle or center of the data when it is ordered from least to most. The variance is an average of the squared deviations from a data point to the mean. The frequency distribution is the grouped organization of observations that show their frequency of occurrence. Normality is likened to the normal distribution of scores that reflect a majority of scores symmetrically surrounding a central value. Skewness of data is identified when the majority of scores crowd to the right or left of the central value in a normal distribution. Relationships among variables are known as correlations, which describe to the extent to which variables are related (Witte & Witte, 2007). When variables are purported to measure similar constructs, they ought to be well correlated; however, this same strength can be a detriment during hypothesis testing.

Informal Visual Analysis

Histograms and boxplots are used to examine the distribution of scores on a particular variable. Histograms illustrate the normal or skewed distribution of scores. Visual inspection of the histograms reflected negatively skewed data for the BASC-2 SRP and TRS pretest scores, meaning that there tended to be a higher frequency of high scores for the Adapted POD groups. The posttest data was positively skewed for this group, reflecting a higher frequency of lower scores on these measures. This suggests a general shift of lower scores being reported on the posttest compared to the pretest. The CESD-R pretest scores reflected a relatively normal distribution and a positively skewed distribution on the posttest, suggesting an increased frequency of lower scores from pretest to posttest. The TAU group histograms reflected relatively normal BASC-2 SRP and TRS scores and positively skewed pretest and posttest scores on the CESD-R.

Boxplots are a more detailed method of visualizing the distribution of data where the length of the box contains 50 percent of cases and the line across the inside of the box indicates the median value. The lines extending from the perimeter go out to the smallest and largest values of the variable (Pallant, 2011). Visual inspection of boxplots from SPSS can help to identify unusual and/or possibly erroneous data entries. Outliers are unusually high or low scores that are particularly different from the general range of the sample. Using the SPSS criteria, outliers are defined as cases that are at least 1.5 standard deviations from the edge of the box (Pallant, 2011). Visual inspection of the scores indicated a consistent outlier case for each data point of the CESD-R repeated measures from a member of the Adapted POD group.

When outliers are observed and determined to be accurate data, a determination must be made in how this information influences the overall data and what to do with the information

moving forward (Pallant, 2011). In large sample sizes, extreme values may not have a large effect on the data (Witte & Witte, 2007). However, this study has a small sample size whose descriptive data and thusly, further statistical analysis results may possibly be unduly influenced by these extreme values. The decision for removing outlier data comes with considering if inclusion of the value helps to better understand the data or if there were extenuating circumstances that impacted the data observations in the first place (Witte & Witte, 2007). In this instance, it is noted that this particular participant sometimes responded to the weekly CESD-R questionnaire in a pattern without reading the questions. When observed, the participant was prompted to correct the responses, but it is unclear if this occurred on multiple occasions without being observed by the group leader and whether or not the new responses were accurate reflections of emotional status at that time. Because it is unclear whether this behavior occurred during other data collection periods and/or data measures, there is the possibility that more of the information from this participant is questionable or that it could possibly yield valid information. Therefore, descriptive analyses will be provided for the Adapted POD dataset that includes the outlier case (referred to as "Adapted POD-Full Dataset" or "full dataset" in the Discussion section) and with the outlier removed (referred to as "Adapted POD-No Outlier" or "adjusted dataset" in the Discussion section). The descriptive statistics for the TAU is unaffected because the student who engaged in this behavior was not within this group. The inferential statistics analyses are comparison of the groups, therefore, the TAU dataset will be compared to the Adapted POD-Full Dataset and the Adapted POD-No Outlier datasets. Both sets of results will be reported in the subsequent sections.

Descriptive Statistics

Preliminary analyses yield a description and summary of the data. For participants in the Adapted POD and TAU groups, there was a mean age of 13. Summaries of the emotional rating data are presented in Table 4. Based on this information, it appears that there is very little

Table 4

BASC SRP, BASC TRS, and CESD-R Pretest, Posttest and Change Difference Scores

Group/Measure	M	Median	SD	n
Adapted POD-Full Dataset				
BASC-2 SRP Pre	63.38	63.00	8.651	8
BASC-2 SRP Post	52.25	48.00	11.720	8
BASC-2 TRS Pre	67.00	68.50	10.744	8
BASC-2 TRS Post	62.00	63.50	10.823	8
CESD-R Pre	17.75	16.50	6.251	8
CESD-R Post	10.25	5.00	13.885	8
Adapted POD-No Outlier				
BASC-2 SRP Pre	63.71	65.00	9.286	7
BASC-2 SRP Post	49.71	43.00	10.012	7
BASC-2 TRS Pre	67.71	70.00	11.398	7
BASC-2 TRS Post	62.00	65.00	11.690	7
CESD-R Pre	16.43	15.00	5.412	7
CESD-R Post	5.86	5.00	6.694	7
TAU				
BASC-2 SRP Pre	59.38	59.00	16.405	8
BASC-2 SRP Post	59.00	57.00	11.464	8
BASC-2 TRS Pre	65.63	59.00	18.055	8
BASC-2 TRS Post	68.88	68.50	11.218	8
CESD-R Pre	19.13	16.00	11.231	8
CESD-R Post	16.88	15.50	9.125	8

difference between the BASC-2 SRP pretest scores or the BASC-2 TRS pretest and posttest scores for the Adapted POD-Full Dataset and the Adapted POD-No Outlier dataset. Normality was assessed using the Kolmogorov-Smirnov measures of normality for the score distributions of each variable. This characteristic is important for meeting assumptions for later analyses. Significance at the .05 level on this measure indicates that a score distribution is not normally distributed and violates an assumption for more advanced statistical procedures. The BASC-2 SRP pretest, BASC-2 TRS pretest and posttest measures and CESD-R scores for the Adapted POD-Full Dataset and Adapted POD-No Outlier datasets were found to be not significant, and thus, normally distributed. In the Adapted POD-Full Dataset, the BASC-2 SRP posttest scores were found to be normally distributed. In the Adapted POD-No Outlier dataset, the BASC-2 SRP posttest scores were found to be significant (p = .029), reflecting that the distribution was not normally distributed. In the TAU data set, the BASC-2 SRP and BASC-2 TRS Pretest and Posttest distributions were assessed to be normal, while the CESD-R Pretest and Posttest scores were found to violate normality assumptions, with significance levels of p = .006 and p = .012, respectively.

The CESD-R was also utilized as a repeated measures tool over the course of the 8-week intervention period for the Adapted POD group. Possibly most impacted by the outlier, the descriptive data for this variable are provided for both the Adapted POD-Full Dataset and the Adapted POD-No Outlier datasets in Table 5. Informal inspection suggests that there are some differences among the weekly data collected from the Adapted POD group when summarized by the full dataset or the dataset with the outlier removed. The impact of this information will be evaluated when both datasets are analyzed in comparison to the TAU group for the inferential statistical analyses.

Table 5

Descriptive Data for the CESD-R Weekly Scores

Adapted POD-Full Dataset				
Week No.	M	Median	SD	N
1	18.13	18.00	6.244	8
2	15.50	13.50	8.685	8
3	12.13	10.50	9.403	8
4	9.75	7.00	11.374	8
5	11.13	3.00	13.912	8
6	7.75	5.50	9.968	8
7	10.63	7.00	10.770	8
8	9.63	7.00	9.226	8

Adapted POD-No Outlier				
Week No.	M	Median	SD	N
1	16.86	16.00	5.521	7
2	15.57	12.00	9.378	7
3	9.71	9.00	6.993	7
4	6.00	6.00	4.435	7
5	8.57	2.00	12.843	7
6	4.43	4.00	3.599	7
7	7.43	6.00	6.321	7
8	7.00	5.00	5.916	7

Inferential Statistics

This level of statistical analysis is intended to compare group scores as a method of testing the hypotheses of this study. As previously discussed, there were assumptions that had to be met for employing various statistical analyses. Those assumptions are independence, normality and homogeneity of variance. In the following sections, how the current study's data meets these assumptions will be discussed. Afterward, a discussion of the statistical procedures is presented.

For the data in this study, all of the measures and collections are independent; in other words, this means that any particular data point is not influenced by any other variable.

Completion of the scales were done at the beginning of each session using their identification numbers, thus avoiding any session content influence and maintaining anonymity.

With respect to normality, the general linear model assumes that scores are normally distributed. As previously discussed in the descriptive statistics section, the Kolmogorov-Smirnov statistic was utilized to assess the normality of scores. In the Adapted POD-Full Dataset and TAU groups, the BASC-2 SRP and BASC-2 TRS pretest and posttest scores were normally distributed. In the Adapted POD-No Outlier, the BASC-2 SRP posttest scores violated this assumption. The TAU's CESD-R pretest and posttest scores also violate this normality assumption. Both Adapted POD groups' CESD-R scores are normally distributed. Despite the fact that some score distributions met the normality assumption and others did not, parametric procedures may still be applied because they "have been shown to be robust to violations of many of their underlying assumptions" (Rossi, 2004, p.663).

Homogeneity of variance refers to the assumption of equal variances in scores, rendering the groups relatively equal for comparison purposes. Levene's test of equality of error variances was used to examine the assumption that the Adapted POD and TAU groups were equal in the variability of the dependent variables. On all three of the dependent variables (i.e., BASC-2 SRP, BASC-2 TRS and CESD-R), the Levene statistic was not significant, determining that the independent groups were equal in variance.

Data that met these assumptions were analyzed using an analysis of covariance (ANCOVA) procedure, a parametric technique used to determine if there were differences between groups while statistically controlling for an additional variable that may be influencing the relationship between the independent and dependent variables (Dimitrov & Rumrill, 2003; Pallant, 2011). As a "preferred method for analysis of pretest-posttest data" (Dimitrov &

Rumrill, 2003, p. 164), this is reported to be useful in situations when there is a quite a small sample (Pallant, 2011). Additional assumptions for the ANCOVA procedure include measurement and reliability of the covariates (i.e., pretest measures were administered with good reliability statistics), correlations among covariates (the covariates are not too strongly (r=.8 and above) correlated with one another), linearity (visual inspection for general distribution of scores provides no indication of a curvilinear relationship), and homogeneity of regression slopes (results were not significant on all three measures).

Nonparametric Measures

Because of the small sample size, a non-parametric technique was applied to examine the data. The less stringent assumption criteria for the use of non-parametric procedures (i.e., random sampling and independent observations) have been met. There is no non-parametric alternative to the ANCOVA; therefore, a comparison of the post-test scores between groups could not be conducted. This would have answered the first and second research questions examining if there were significantly different post-test scores between the Adapted POD and TAU groups on the self-report and teacher ratings of depression. However, an analysis of the difference between the posttest and pretest scores between the groups could be conducted using the Mann-Whitney *U* statistical analysis.

Although posttest between group comparisons could not be ascertained due to assumption violations, within-group pretest to posttest comparisons could be made with respect to the research questions based on these analyses. The questions that can be answered pertain to whether there was a significant change from pretest to posttest self-report and teacher ratings of depression for each group and whether the difference in posttest-pretest scores were significant. Results of the Wilcoxon Signed Rank test indicated that for the Adapted POD-Full Dataset and

the TAU dataset, there were no significant differences between the CESD-R, BASC-2 SRP and BASC-2 TRS pretest and posttest scores. This suggests that there was no meaningful change in scores, according to this data. In light of the research questions, the Adapted POD-Full Dataset and the TAU groups did not demonstrate significantly different beginning and ending scores on self-report and teacher ratings of depression.

For the Adapted POD-No Outlier dataset, there was a significant difference found in the BASC-2 SRP and CESD-R pretest and posttest scores. This also was a within-group examination of the first research question, suggesting there was a meaningful decrease from the pretest to the posttest periods on both self-report measures of depression. The significant difference detected implies that within this dataset, the scores at the end of the intervention were significantly lower than the scores at the beginning of the intervention and implies lower self-reported symptoms of depression.

Lastly, there was no significance for the BASC-2 TRS scores; suggesting that for the second research question there was no meaningful difference between the beginning and ending teacher rating scores for the Adapted POD and TAU groups. Results for all three datasets are presented in Table 6.

Table 6

Wilcoxon Signed Rank Test for Within Group Posttest - Pretest Comparisons

	Adapted POD-Full Dataset		Adapted POD-No Outlier		TAU	
	z score	p value	z score	p value	z score	p value
CESD-R	-1.680	.093	-2.336	.018	-1.332	.183
BASC-2 SRP	-1.690	.091	-2.201	.028	-.338	.735
BASC-2 TRS	-1.625	.104	-1.625	.104	-.701	.483

The Mann-Whitney *U* analysis tests whether two independent samples are from the same distribution or in other words, whether observations from one sample tend to be larger than observations in the other (Mangiafico, 2016). The data for this analysis was a difference score calculated from the posttest and pretest scores. Results of this analysis are presented in Table 7.

Table 7

Mann Whitney U Test for Change Differences Between Groups

	Adapted POD-Full Dataset/TAU			Adapted POD-No Outlier/TAU		
	Difference Score (*U*)	z score	p value	Difference Score (*U*)	z score	p value
CESD-R	16.000	-1.680	.093	8.000	-2.315	.021
BASC-2 SRP	16.500	-1.631	.103	10.000	-2.087	.040
BASC-2 TRS	13.500	-1.952	.050	11.500	-1.915	.054

Based on the results of this test, it was found that when comparing amount of change score differences between the Adapted POD-Full Dataset and TAU groups, there was no significant difference in the amount of change on the CESD-R and BASC-2 SRP measures. There was however, a significant change between the teacher rating scale scores, suggesting that there was a greater amount of change in the Adapted POD-Full Dataset ratings. For the Adapted POD-No Outlier and TAU group comparison, the teacher ratings were not significant. However,

the change in scores between these groups were significant on the CESD-R and BASC-2 SRP, suggesting that the student ratings of their symptomology were greater in the Adapted POD-No Outlier group.

Research Question # 1

The first research question in this study was "Do adolescents in the Adapted POD intervention group have significantly different post-test scores on two self-report rating scales of depression when compared to the TAU group?" The two self-reporting measures were the CESD-R and the BASC-2 SRP. The null hypothesis of this study was that there are no differences in the post-test self-report scores between the groups. The hypothesis of this study was that adolescents who participated in the Adapted POD intervention group would demonstrate significantly decreased ratings of depression compared to adolescents in the TAU group. The hypothesis was tested and reported for the Adapted POD-Full Dataset compared to the TAU and the Adapted POD-No Outlier dataset compared to the TAU.

CESD-R. The posttest scores for the TAU group were not normally distributed, thus it did not meet one of the basic assumptions of the ANCOVA test and may not be analyzed in a parametric manner. However, results from the nonparametric tests, more tolerant of small samples sizes and not normal distributions, were available for this measure. The Wilcoxon Signed Ranks Test yielded results that indicated there was no significant difference between the pretest and posttest scores in this group ($Z = -.701$, $p > .05$). The self-rating scores provided by the participants at the end of the intervention period were no different than the self-ratings provided at the start of the intervention.

Based on the Adapted POD-Full Dataset, the Wilcoxon test revealed that no significant difference was found between the pretest and the posttest scores on the CESD-R ($Z = -.338$, $p >$

.05). Based on the full participant dataset, there was no meaningful change in the CESD-R scores.

Based on the Adapted POD-No Outlier subset, a significant difference was found in the results ($Z = -2.366$, $p < .05$). The posttest ratings on the CESD-R were lower than the pretest ratings.

As mentioned previously, the posttest scores could not be analyzed to compare the intervention and TAU groups; however, the Mann-Whitney *U* nonparametric test allowed for posttest-pretest difference comparisons between the groups. Examining the amount of change in CESD-R scores between the Adapted POD-Full Dataset and TAU groups detected no significant difference ($U = 16.00$, $p > .05$). When comparing the CESD-R posttest-pretest difference scores of the Adapted POD-No Outlier subset to the TAU, a significant difference was found ($U = 8.00$, $p < .05$). Participants in the Adapted POD-No Outlier subset presented with significantly lower rankings than participants in the TAU group, suggesting a more significant decrease in self-reports of depressive symptomology.

BASC-2 SRP (Adapted POD-Full Dataset/TAU). The one-way between-groups ANCOVA was conducted to compare the effectiveness of the Adapted POD program designed to reduce participants' self-report of depressive symptomology on the BASC-2 SRP. This was a comparison of the Adapted POD-Full Dataset and the TAU. After adjusting for the pretest scores, there was no significant difference between the two intervention groups on the BASC-2 SRP posttest scores, $F(1, 13) = 2.498$, $p = .14$, partial eta squared = .16.

BASC-2 SRP (Adapted POD-No Outlier/TAU). The BASC-2 SRP posttest scores for this adjusted set of data violated the normality assumptions of the parametric tests. However, using the Wilcoxon test, a significant difference was found in the results comparing the pretest

and posttest scores for this measure (Z = -2.201, p < .05). The posttest ratings on the BASC-2 SRP were lower than the pretest ratings, suggesting lower levels of depressive symptomology according to this measure.

Using the Mann Whitney *U* test to compare the amount of change between the groups, a significant difference was found between the subset and TAU score differences (*U* = 10.00, p <.05). Participants in the subset reported a greater amount of change in symptoms than participants in the TAU.

Research Question # 2

The second research question in this study was "Do adolescents in the Adapted POD intervention group have significantly different scores on a post-test teacher rating scale compared to those in the TAU group?" The null hypothesis was that there would be no significant difference between the posttest scores of the intervention and TAU groups. The hypothesis proposed for this study was that teachers of adolescents who participated in the Adapted POD intervention group would report significantly decreased symptomology of depression compared to teacher ratings of adolescents in the TAU group.

BASC-2 TRS (Adapted POD-Full Dataset/TAU). A one-way between-groups ANCOVA was conducted to compare the posttest scores on the BASC-2 TRS scores for the Adapted POD and TAU groups. Participant pretest scores provided by the teacher were used as the covariate in the analysis. Based on preliminary data checks, there were no violations of the required assumptions for the parametric statistical analysis. After adjusting for the pretest scores, results revealed no significant difference between two intervention groups on posttest scores on the BASC-2 TRS, F (1, 13) = 3.57, p = .08, partial eta squared = .22).

The Mann Whitney *U* test was used to analyze the transformed change scores between the Adapted POD-Full Dataset and TAU groups. A significant result found that the amount of change reported by teachers was higher in the Adapted POD group ($U = 13.50$, $p = .05$).

BASC-2 TRS (Adapted POD-No Outlier/TAU). The one-way between-groups ANCOVA was conducted to compare scores on the Adapted POD-No Outlier and the TAU datasets. After adjusting for the pretest scores, there was no significant difference between the two intervention groups on the BASC-2 TRS posttest scores, F (1, 12) = 3.416, $p = .089$, partial eta squared = .22.

Although there is no parametric alternative to the ANCOVA procedure, the transformed posttest-pretest change scores of the Adapted POD-No Outlier and TAU datasets were also analyzed. No significant difference was found in amount of change detected on the teacher rating scale ($U = 11.50$, $p > .05$).

Research Question # 3

The third research question in this study was "Did the depression scale scores collected from the adolescents in the Adapted POD groups change significantly over the intervention period?" The hypothesis of this study was that adolescents who participated in the Adapted POD intervention would report significantly fewer symptoms progressively throughout the intervention period. The null hypothesis was the assumption that there would be no significant change in scores over the course of the intervention. To evaluate this question, a repeated measures analysis was conducted.

Utilizing the Adapted POD-Full Dataset, a one-way repeated measures ANOVA was conducted. The aforementioned parametric assumptions apply and are met with this dataset as previously discussed in the preliminary analyses. This statistical technique is designed to

compare changes over time within a set of subjects and assesses whether there is a significant difference within the dataset. A significant effect was found for time, Wilks' Lambda value is .000, F (1,7) = 955.213, p = .025, but provided little further information about the effect size. A comparable statistic could not be run with the Adapted POD-No Outlier dataset because there were more data observations than subjects to adequately complete the analysis. However, the same measure was conducted with three data points signifying the beginning, middle and end of the intervention period.

The repeated measures test was conducted using the data for the beginning, middle and end points of the intervention period for both of the Adapted POD groups. Because there was no way to average the data for weeks 4 and 5 and there was no specific median, analysis data will be reported for both weeks as the midway point. The first analysis was conducted with the Adapted POD-Full Dataset, using weeks 1, 4 and 8. This dataset was significant in the statistic regarding sphericity, which violates a key assumption of this statistical measure and will not be reported. When the dataset was analyzed using weeks 1, 5 and 8, these measures met the required assumption. The Wilks' Lamba value of .263, F (2,6) = 8.424, p = .018, multivariate partial eta squared = .737, suggests that there was a significant change and a large effect size in scores over the course of the intervention period using these data points.

Using the Adapted POD-No Outlier dataset, the data weeks of 1, 4 and 8 also violated the sphericity assumption. Similar to the full dataset, when analyzed using weeks 1, 5 and 8, these measures met the required assumption. The Wilks' Lamba value of .134, F (2,5) = 8.424, p = .007, multivariate partial eta squared = .866, suggests that there was also a significant change in scores and a large effect size over the course of the intervention period using these data points.

Fidelity and Treatment Integrity

Fidelity and treatment integrity measures are designed to monitor and enhance the implementation of the Adapted POD program. Furthermore, the intent is to increase the reliability and validity of intervention study results by allowing greater confidence that observed change is a result of the actual program and not the result of other variables. As previously mentioned, fidelity was defined as adherence to the program content, participant engagement and exposure to the program content. Adherence and participant responsiveness were measured by the Fidelity of Treatment Implementation documents, providing information as to the amount of the program content observed being taught and the level of student participation during therapy sessions. The measurement of fidelity in this intervention can be examined in various contexts, as the measures were aligned to the original program and reflected observation of the full program content and activities. However, for the purpose of this study, the program was adapted to fit time constraints. The sharing activities were eliminated at the end of each lesson, resulting in fewer criteria in determining treatment fidelity. Another view for examining the treatment integrity of this investigation may be based on observation of the essential program topics/content, which included removal of the review and practice activities. Table 8 provides the percentages of adherence for each of these aspects and student engagement for each session.

Based on this data, almost two-thirds (63%) of the POD-TEAMS Coping with Stress original program content was presented, on average, during the implementation of this program. It was understood prior to implementation that this data would be less than optimal because of the time constraints and truncation of activities reflecting the adapted nature of the program. However, when examining the data through the adapted implementation framework lens program implementation increased to 81%. The final lens through which to evaluate treatment

fidelity was based solely on the essential skills and content outlined by the program (eliminating all activities), yielding an average fidelity adherence of 95%. This suggests a high level of treatment fidelity with regard to the essential content of the program and to a lesser extent to the adapted protocol of the program that was implemented during this study.

Table 8

Fidelity Percentages for Adapted POD Group – Original Protocol, Adapted Protocol and Critical/Essential Content

Session Number	Concept/Activity Observed (Original)	Adapted Protocol	Critical/Essential Content	Participant Engagement
1	86%	100%	100%	100%
2	56%	63%	100%	100%
3	67%	80%	100%	100%
4	63%	71%	80%	67%
5	50%	75%	100%	100%
6	67%	80%	100%	100%
7	57%	80%	100%	100%
8	60%	100%	100%	100%

CHAPTER FIVE

DISCUSSION

Addressing the needs of youth with mental health challenges in today's society is overwhelming, especially when community resources are shrinking (Carter Center, 2003). Major depression, in particular, can present individual youth with challenges that are detrimental to their current and future functioning (Merikangas et al., 2009; 2011). Research data suggests that cognitive-behavioral therapy techniques, strategies and programs provide quality outcomes in preventing and treating depression (Hayes & Morgan, 2005; Possel, Martin, Garber & Hautzinger, 2013; Stice, Rohde, Seely & Gau, 2008). However, the majority of youth in need do not receive the therapeutic services necessary to address their emotional difficulties (Avenevoli et al., 2015; Merikangas et al., 2010). Limited community resources have warranted an increased need for school-based mental health services and with it, a need for empirically-validated programs that can intervene and preferably, prevent these challenges from manifesting into clinical disorders (Curry, 2001; David-Ferdon & Kaslow, 2008). Targeted treatment programs, in pursuit of empirical validation, must be shown to have efficacy across diverse settings with various populations of youth. This is particularly true as they pertain to ethnically and socioeconomically diverse youth, who are higher risk for depressive disorders, but generally demonstrate lower effect sizes in the program research (David-Ferdon & Kaslow, 2008; Faramand et al., 2010; Horowitz & Garber, 2006; Thomas, Temple, Peres & Rapp, 2012). As school-based personnel, school psychologists are in a unique position to assess these needs, evaluate programs and deliver services to support students within the school setting (Nastasi, 2004; Perfect & Morris, 2011; Splett, Fowler, Weist & McDaniel, 2013). Clarke's (1994, 2003) Adolescent Coping with Depression program is a youth depression intervention with

documented effectiveness for improving social functioning, as well as for treating and preventing depression (Cuijpers et al., 2009). It has also been implemented in a variety of settings with diverse populations (Garvik, Idsoe & Bru, 2014; Kuhner, Angermeyer & Veiel, 1996; Listug-Lunde, Vogeltanz-Holm & Collins, 2013; Rosello, Bernall & Rivera-Medina, 2008). The current generation of this program is the POD-TEAMS Coping with Stress program, which is an 8-week cognitive behavioral therapy program that teaches youth strategies for managing depression. Seeking to add to the literature base of efficacy for this intervention, this study was designed to evaluate the program in a naturalistic school setting with an urban-based population of students, employing both teacher and student self-report ratings to consider the efficacy of the program under these conditions.

As mentioned, this investigation incorporated the variables of school-based implementation with an ethnically diverse population, a treatment-as-usual control group for comparison purposes, treatment fidelity measures, teacher referral and teacher ratings, the latter three of which have not frequently, if at all, been included in previous research of this nature. The study was conducted in two phases utilizing a convenience sample of students who demonstrated symptoms of being at-risk for depression. In the first phase, the 8th and 9th grade middle school students were referred for screening by their teachers. With parental consent and student assent, the students participated in completing a self-report measure of screening for elevated levels of depressive symptoms (i.e., at-risk for depression). Students whose symptoms fell into the clinical range were referred to community mental health agencies for follow-up. Those students who were found to be in the at-risk range for depression were eligible for participation in the intervention phase. With parental consent and student assent to participate, the students were randomly assigned to intervention or treatment-as-usual groups. The

intervention group participated in an 8-week therapeutic intervention with POD-TEAMS Coping with Stress program, while the treatment-as-usual participants had brief, weekly check-in/check-out sessions with the school social worker to discuss the students' emotional status. Those in the treatment-as-usual group were offered the option to participate in the intervention treatment if it was found to be effective. Both groups completed pretest and posttest self-report measures to assess the levels of depressive symptomology they were experiencing. Teacher volunteers provided pretest and posttest ratings of the students' emotional status. In addition to the aforementioned ratings, the intervention group provided weekly ratings of their emotional status as a progress monitoring measure. Another unique feature of this study is the utilization and reporting of treatment integrity procedures, which documents application of the intervention and lends greater support to the validity and reliability of the study's intervention implementation. Next, the research questions, findings, limitations of the study and future directions for research will be discussed.

Research Questions, Hypotheses and Findings

This present study was designed to investigate the effectiveness of a depression prevention program in decreasing symptoms of depression in adolescents when compared to a treatment-as-usual group. Effectiveness of the program is considered in light of reports and/or observations of depressive symptomology before and after the implementation of the 8-week intervention. Discussion will include findings and implications of the treatment-as-usual (TAU), full ("Adapted POD-Full Dataset") and adjusted ("Adapted POD-No Outlier) intervention data.

Research Question # 1

Do adolescents in the Adapted POD intervention group have significantly different post-test scores on two self-report rating scales of depression when compared to the TAU group? The

hypothesis proposed in this study is that there would be significant differences between the posttest scores of adolescents in the two groups. The null hypothesis is that there was no significant difference in the self-report posttest scores between the two groups.

Mixed results were found in response to this question and consistent with an observation in Hetrick, Cox & Merry's 2015 meta-analysis that while the Coping with Stress program has been shown to be effective in multiple studies, there is at least one real world study of the program which did not show a significant effect. Cujipers et al. (2009), when discussing the small effect sizes, also noted that in various implementations of the program, noted that "several studies did not find positive effects" (p. 456). Therefore, it is not highly unusual that positive effects where not consistently noted. What is unique to this study is that the differences in response to the first research question are linked to the results of which group was assessed. Results of the TAU group and the Adapted POD-Full Dataset found no significant differences between the CESD-R pretest and posttest or the difference scores. This means that no meaningful change was detected for either group after the intervention period, whether they received the intervention or not. There was also no significant difference in change scores between these groups for either the CESD-R or the BASC-2 SRP. A decrease was noted in the Adapted POD group, but was, as stated, not of any significance. However, a significant difference was found on the CESD-R pretest-posttest scores in the adjusted group without the outlier ("Adapted POD-No Outlier"). This suggests that there is a possibility that the intervention may have a positive effect on reducing depressive symptoms in the adolescents in the intervention treatment group. The reduction of depressive symptoms self-reported are consistent with Listug-Lunde, Vogeltanz & Collins (2013), Clarke et al. (1995; 2001) and Garber et al.'s (2009) findings.

The same phenomenon was observed for the BASC-2 SRP results. In the full Adapted POD and TAU groups, there was no significant difference in pretest to posttest ratings on the BASC-2 SRP. Similar to the CESD-R pattern, the adjusted Adapted POD-No Outlier group's results indicated a significant decrease in depressive symptoms, according the BASC-2 SRP ratings. Relatedly, the change scores between the Adapted POD-No Outlier and TAU group was significant, suggesting that there was a greater amount of change for students who participated in the intervention than those who were part of the treatment as usual group.

Although there was not enough evidence to support the hypothesis for this question, thus retaining the null hypothesis, further investigation is warranted. As expected, the TAU group did not report significantly lowered symptoms of depression at the end of the intervention period. However, the Adapted POD group, with the removal of the outlier, did report significantly reduced symptoms of depression. Although this was expected and consistent with previous research data (Clarke, 1995), the insignificant changes from pretest to posttest, even with the outlier's inclusion, cannot be ignored. This does not suggest that the program does not do what it purports; on the contrary, it suggests that the sensitivity of the data is important in this case and may show significant effects under different circumstances. The results obtained may be related to the small size of the sample which can be easily influenced by extreme values. Because these findings of significance appear to be contingent upon the removal a single outlier, it suggests that the further research is necessary to obtain more conclusive results.

Research Question # 2

"Do adolescents in the Adapted POD intervention group have significantly different scores on a post-test teacher rating scale compared to those in the TAU group?" The hypothesis proposed for this study is that teachers of adolescents who participate in the Adapted POD

intervention group will report significantly decreased symptomology of depression compared to teacher ratings of adolescents in the TAU group. The null hypothesis is that there would be no significant difference between the posttest scores of the intervention and TAU groups.

No significant differences were found between the intervention and control groups on the BASC-2 TRS. This result was consistent for both the full intervention group and the adjusted intervention group without the outlier. Failing to reject the null hypothesis in this instance suggests that the teacher's ratings of the student's depressive symptoms did not change significantly over the course of the intervention. The implications for the finding is that if the teachers did not perceive changes in their student's depressive symptoms, then a broader perspective, such as asking about other variables of school or student performance may reflect the changes in functioning that might be more noticeable.

Another aspect of these findings may relate to how well the teachers knew the students they were rating and their perceptions of student behavior. As noted in the study protocol for identifying teacher raters for the BASC-2 TRS, the teachers were self-selected to participate in this study. Each student's homeroom teacher volunteered to rate their own student(s), though they interacted with all of the students each day. The rating teachers interacted with their students at the beginning and end of the day for homeroom and for one academic subject daily. This limited contact may have impacted the ratings of the teachers, who may not have had enough contact with the students for a long enough time to adequately assess a range of depressive symptoms.

Teacher perceptions of student behavior may also have impacted the lack of significance noted in teacher ratings. It is possible that the teacher ratings, particularly for students of diverse ethnicities, as was represented in this sample, may not have indicated a severity of emotional

difficulties, but more so difficulties of a behavioral nature. Previous research (Cokley,et al., 2014; Stein et al., 2010) regarding the cultural aspects in the expression of depression in minority youth and how that expression is perceived by school personnel suggests that the ratings provided on the depression subscale may not be reflective of the severity of the symptomology observed by the teachers. Because minority youth are more likely to be identified for behavior, teacher ratings may be more skewed towards the more severe behavioral symptoms of depression. Future research in assessing depressive symptomology should consider both internalizing and externalizing measures when eliciting ratings from teachers. Clarke et al. (2001) refers to these as "nonaffective outcomes" (p. 1132). With regard to this study, it is possible that the teacher ratings might have shown significant change if other measures of behavior or student functioning had been included in the measurement procedures (Choi, 2002).

Research Question # 3

Did the depression scale scores collected from the adolescents in the Adapted POD groups change significantly over the intervention period? The hypothesis of this study is that adolescents who participate in the Adapted POD intervention will report significantly fewer symptoms progressively throughout the intervention period. The null hypothesis is the assumption that there would be no significant change in scores over the course of the intervention.

Based on the full intervention group, it was found that a significant decrease in depressive symptoms was observed over the course of the intervention period. The null hypothesis was rejected. These results are consistent with those of previous evidence studies.

The progress in reducing depressive symptoms during the intervention was assessed using the beginning, middle and end points of the intervention period. Weeks 4 and 5 were

utilized as the middle points of the intervention because the intervention data lasted 8 weeks and there was not a full median week for comparison purposes. The first set of results were obtained from the data using week 4 as the midway point of the intervention. It was found that in both groups, the full and the adjusted intervention group, there was a significant reduction in depressive symptomology over the course of the intervention. However in the full intervention group, there was no significant change between weeks 1 and 4 (beginning to middle) and weeks 4 and 8 (middle to end) of the program, but definitely a significant difference from week 1 to 8, the beginning and the end of the program. For the adjusted intervention group, there were significant changes detected between the beginning and the middle, but not from the middle to the end of the intervention period. This would suggest that the bulk of the change in this model occurred during the first half of the intervention period. Overall, the results suggested that depressive symptoms decreased significantly over the course of the intervention period. These overall results were expected; however, it is unclear why there was no significant change between weeks 1 and 4 for the full intervention group. This may be attributed to possible inconsistent responding on that week's measures by the outlier, again reinforcing the notion that with a small sample size, every data point can have an influential effect on the resulting conclusions.

The second set of results were obtained utilizing week 5 scores as the midway point for progress monitoring. The overall results were consistent with the findings previously mentioned; there was a significant decrease in depressive symptoms over the course of the intervention period. However, for both the full and adjusted intervention groups, there were no significant decreases in depressive symptoms between weeks 1 and 5. Neither group showed significant decreases from weeks 5 to 8. This would suggest there were was never any meaningful decrease

in depressive symptomology, yet there are significant differences from the beginning to the end of the intervention.

Fidelity Data

Clarke et al., (2001) and Garvik, Idsoe & Bru (2014) noted that further study on fidelity was necessary for examining the importance of fidelity to intervention and promotion or prevention of intervention effectiveness in real world studies. In this particular study, intervention fidelity was assessed via exposure, participant engagement, and adherence to the content. Exposure to content was assessed via student attendance to ensure that all intervention students were exposed to the content. The students attended each week; sessions were made up and the content was presented to those students who did not attend the scheduled group session. Engagement and participation were assessed by an independent observer, operationalized as answering and asking questions, working in their workbooks and participating in group activities. There was 100 percent engagement during every session, except session 4, during which group activities were truncated for the sake of time. Adherence to content was greatest in session 1 and the lowest in session 5, where the content was more complex and required more time for comprehension. This study provided noteworthy adherence data in that when measuring fidelity of the original program's content, at least two-thirds of the curriculum's content was presented to the participants during the sessions. However, when the fidelity measures were truncated and made consistent with the adapted nature of the program (as was implemented in this study), treatment integrity increased to 81%. This suggests a much higher level of treatment fidelity when the measurement tool is aligned to the adapted protocol's modifications when applicable. Another strategy for examining treatment integrity is consistent with Bellg et al.'s (2004) strategies for monitoring treatment delivery by ensuring adherence to treatment content

and demonstrates strong adherence to the content of the program. Analysis of the delivery of essential content was noted to be 95% on average. This information suggests that the majority, if not all, of the critical content knowledge and skills of the prevention of depression program were presented to the participants involved. This information is beneficial in manifesting the possible positive effects for the program, but the overall program outcomes may have been hindered due to the lack of skill reinforcement and practice noted by the full and adapted protocol percentages. Future studies and investigation into the varying levels and specificity of design of treatment integrity protocols for real world intervention studies is suggested.

Limitations

Limitations are those variables that may limit the generalizability of this study's results. These limitations would include concerns related to external and internal validity. External validity is a research concept that considers the generalizability of study results to the general population in question (Bracht & Glass, 1968; Drost, 2011). This study is a convenience sample that was based on a population of students in an urban middle school setting, populated by 8th and 9th grade students. The ability to generalize results may be limited because of selection bias. The sample was dependent upon non-clinical observations for referral which may have under-identified potential participants. Obtaining parent consent and student assent and the voluntary nature of participation may have limited members from the population, leaving a selection of students in the study who may be more motivated to participate and thus show more improvement in treatment. The first round of screening and implementation may have limited potential participants due to the narrowed at-risk criteria on the CESD-R screening measure. This concern was possibly addressed during the second round of screening, when the at-risk screening criteria was expanded based on research suggesting lowered criteria for inclusion in

intervention. Scheduling of the intervention was a threat to external validity because only those students who are able to stay after school could participate. Attrition was also a threat to external validity because students who are eligible to participate may leave the study by choice or due to factors beyond their control. Another variable related to selection bias could be a threat to external validity was the exclusion of students who were receiving mental health services outside of school for a diagnosed depressive condition and of students who met the criteria but did not fall within the parameters of the pre-screening criteria. These students are part of the general population, but not including them as potential participants limits the generalization of the results of this investigation.

Although stringent selection criteria are important for specifying the target population and is a protection against internal validity threats, these variables can have the undesired effect of yielding a small sample size. The challenge of a small sample size decreases the likelihood that the sample is representative of the population in question, thus limiting generalizations from the results of the sample. In this investigation, the effect of extreme values was noted on the results, particularly because of the small data size.

Other limitations of this study pertain to issues of internal validity. Internal validity is a research concept that considers whether the implementation of a treatment or condition has an effect on the variables being measured (Drost, 2011). Threats to the internal validity of this study would make it difficult to determine if the results were valid and due to the Adapted POD or TAU procedures or instead were confounded by the introduction of unexpected variables or poor implementation of intervention procedures.

Lack of fidelity may be a threat to the internal validity of the intervention because it speaks to the application of the intervention and treatment-as-usual procedures. If the

intervention is not applied, ineffective or inconclusive results may actually be a function of never having been presented to the participants. This may include poor fidelity of implementing the Adapted POD program or lack of consistency for the TAU procedure check in with the school social worker or counselor. The principal investigator is not an employee of the school district and cannot compel a staff employee to consistently meet with the students. However, fidelity measures and procedures were designed and implemented to minimize risk pertaining to Adapted POD program.

The use of subjective observation and self-ratings of teachers and students, as well as repeating measures may be a potential threat to internal validity. Ratings upon which results are based may be affected by the rater's desire to over-report or underreport symptoms in an effort to project a particular outcome. Likewise, how teachers perceived and rated student emotionality and behavior, particularly given the research on differences in the manifestation of depressive symptoms in ethnic minority youth may have affected measurement of student depressive symptoms, as well as the amount of time the teachers had to interact with their students.

For those students were excluded during the screening phase because they did not meet criteria for participation due to low or high levels of symptomology, this factor would be a challenge to both external and internal validity. Similarly, the lowered screening score may also introduce error in the form of falsely identifying students at risk for depression, who may actually be experiencing either situational depression or be demonstrating symptomology of another disorder. This would potentially be due to preliminary results that would have regressed to the mean in another measurement.

Efforts to protect from the threat of internal validity included the determination to exclude referred students that were receiving outside treatment for a depressive condition to

ensure that observed effects were the result of the intervention, the development and implementation of treatment integrity measures.

Implications for Future Research

The results of this study are promising. Therefore it is recommended that this study be replicated with a larger sample size to improve the generalization of the findings. Another suggestion for future research is for researchers to incorporate a semi-structured interview to adequately screen potential students who may be at-risk for depression, ruling out undiagnosed comorbid or alternative conditions. Future research study may also compare this intervention with other depression prevention programs.

Implications for the Practice of School Psychology

This study shows great promise for a cost-effective intervention with documented efficacy for ethnically diverse adolescent youth in an urban school setting. It adds to the research literature by incorporating a design that has variables that were lacking in published research for this program, such as school-based implementation and teacher raters (Cuijpers, et al. 2009; Garber, et al. 2009). This study also adds to the body of work related to investigations conducted with socioeconomically and ethnically diverse students. The needs within urban school settings require careful consideration when choosing therapeutic interventions because of resource limitations, such as time and finances. Further, because ethnically diverse students have tended to show greater risk but less responsiveness to therapeutic interventions, it is imperative that more research studies investigate programs and variables that can increase positive outcomes (Wagstaff & Polo, 2012).

The inclusion of school staff as the primary referral source and providers of information on student performance before and after the intervention was also unique in this study. Although

results did not indicate that teachers perceived any significant change in students' depressive status, it is nevertheless important to seek out the input of school personnel in the effectiveness of mental health interventions provided within the school setting. The day-to-day and multi-faceted functioning of students continue to be monitored by teachers who see and work with them on a daily basis; thus, a wide spectrum measure of the student's functioning may have been more sensitive to the teacher's observations and as a result, may have yielded more meaningful results and feedback on student performance and depressive status.

Summary

The results of this investigation are mixed but encouraging. The POD-TEAMS Coping with Stress program has documented efficacy in a sub-dataset of adolescents, when compared to treatment-as-usual controls, evidenced by decreased self-reports of depressive symptoms. In a full dataset of adolescents, the results were not conclusive. Although teachers were able to identify students as at-risk based on behavioral constellations of symptomology, teacher ratings of student depressiveness did not provide evidence of the efficacy of the therapeutic treatment. Progress monitoring was documented to show significant change over the course of the intervention, however, results did not reflect consistent and significant decreases each week. The reality of a small sample size is believed to have played a major role in the inconsistency of results. Truncated therapeutic content may also have played a role, to a lesser degree. However, given the practical limitations in natural settings like schools, adapting the curriculum for research purposes may be necessary and even helpful for determining the effectiveness of interventions across multiple settings. A key concept elicited from this study for school psychology and schools in general, is that simply providing attention to students in need of mental health support isn't enough. Schools are pressed to prioritize and provide a high level of

service in a variety of developmental areas in a very short period of time and must be able to maximize its resources, therefore the finding that the depression prevention program has shown the capacity for efficacy in its abbreviated state compared to attention controls is positive. This study represents a step forward in the applied research literature by providing preliminary evidence for a promising program that has the potential to prevent depression in youth who are most at risk for the disorder, expressly when delivered in a school setting that is easily accessed by those in need. When services are more accessible, the likelihood of delivery and involvement increases, which can get adolescents on the road to better mental health and life outcomes.

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Appendix A

Parent Consent Form for Screening Participation

Prevention of Depression in At-Risk Adolescents

Indiana University of Pennsylvania
www.iup.edu

Department of Educational and School Psychology
Stouffer Hall, Room 246
1175 Maple Street
Indiana, PA 15705-1058

P 724-357-2316
F 724-357-6946
www.iup.edu/schoolpsychology

Dear Parent/Guardian,

Your child is invited to complete a 20-item screening survey to see if they are at-risk for depression. This screening is the first part of a research project to evaluate if an intervention program designed to prevent depression in students who are at-risk for becoming more depressed is effective or not effective. The project is being conducted by H. Samantha Mowatt, doctoral student, in partial fulfillment for the award of the Doctor of Education degree in School Psychology from Indiana University of Pennsylvania. Ms. Mowatt is also a school psychologist. She is not employed with the Orange Township Public Schools; however, the principal and the school district is aware of and has granted permission to seek you and your child's voluntary consent for participation.

Your Child's Involvement in this Screening Phase of the Study:

Your child was referred by a school staff member for potential involvement in this screening because he/she may be demonstrating signs of depression. The screening will measure how often your child has experienced symptoms of depression. This tool cannot provide a diagnosis of depression, but does give an indication of whether or not a young person is having problems with sadness.

- If your child's scores on the depression screening form are low, it suggests that there are no evident concerns of depression. Your child's depressive status reflects that your child does not evidence concerns of depression and is *not* eligible to participate in

the second phase of this study. This status will be shared with school staff and no further contact will be made with you or your child. Your child's actual ratings/scores will *not* be shared with anyone and will remain confidential.

- If your child's scores on the depression screening form are high or very high, it suggests a high probability of depression. Your child's status reflects a "possible," "probable" or "major" depressive episode and warrant immediate attention and referral for therapeutic intervention. This status must and will be shared with you and the school support staff to ensure appropriate intervention for your child. You will be informed and your child will be referred to the guidance counselor or school social worker for therapeutic intervention and/or follow-up with community mental health resources. Some of these resources are listed below for your information and convenience. Your child's actual ratings/scores will not be shared with anyone and will remain confidential. Your child will *not* be eligible to participate in the second phase of this study.
- If your child's scores on the depression screening form are moderate, it suggests that they demonstrate "subclinical" symptoms or in other words, are "at-risk" for depression. This is the criteria for being eligible to participate in the second phase of this study. You will be contacted by the lead researcher seeking consent to invite your child into the second part of the study. This status will be shared with you and with the school staff, because it is the determining factor in finding a student eligible for participation in the study. The second part of the research study will include referral for in-school counseling or participation in the intervention group. Your child's actual ratings/scores will not be shared with anyone and will remain confidential.

The screening process will take place immediately after school, so as not to disturb the learning process. It will last roughly 10-15-minutes and will occur immediately after reviewing and receiving your child's voluntary agreement to participate in the screening, if they choose to do so. You will be notified the day before this interaction occurs. If your child does not agree to participate in screening, there will be no further contact and no consequences or repercussions for your child.

I have included the questionnaire to make you aware of the questions that your child will be answering. Your child's

participation in completing the screening survey is voluntary; they may choose to participate or not to participate in the screening. There will be no negative consequences if you or your child do not want to participate in this screening.

Possible Risks

One possible risk during the screening process is that your child may feel singled out from their peers by being asked to participate in the screening. Another possible, but minimal, risk is the concern that your child's ratings will be shared with school staff.

A possible risk during the intervention phase of the study is that your child's confidentiality may be broken if another student from the group shares information from the session outside of the group setting.

<u>Your child will be protected against risks in the following ways:</u>

1. S/He will be spoken with at the end of the school day to avoid being seen by other students who are not being invited to participate.
2. Your child will be informed that their participation in the screening process is voluntary and they may choose **not** to give assent to complete the screening document. There are no consequences if your child does not want to participate in the screening process. You or your child may inform the lead researcher, school principal or guidance counselor that you no longer want your child to participate in the screening or the intervention.
3. Your child's ratings on the screening document will not be shared with anyone and will remain confidential. However, your child's depressive status based on the screening measure scores will be shared to determine if further intensive intervention, participation in the second phase of the study or no further contact is warranted.
4. The protection against risk during the intervention phase is that confidentiality and privacy will be discussed with the students participating in the intervention group. All participants will sign a confidentiality contract and agree upon the consequences that should occur if it is breached. Those consequences include, but may not be limited to: discussion with the primary investigator/group leader, apology and reconciliation to the group or participant who has

been violated and/or removal from the group to individual sessions. These will be discussed with the participants and they will be allowed to collectively offer input into the consequence hierarchy, in an effort to gain participant ownership and commitment to the ideal and to safeguard as much as possible against the risk of inappropriate disclosures. If confidential information is shared outside of the group, it is to be brought to the attention of the group leader, who will then address it with the offender. If concerns persist, the offending adolescent or the adolescent(s) whose confidentiality has been breached may request to participate in or be recommended for individual rather than group intervention.

If you **do** want your child to participate in the screening, please sign the enclosed permission slip allowing your child to complete a rating scale that screens people for depression. The form must be signed and returned to the guidance counselor or classroom teacher in the attached envelope. Please keep the white copy of this form for your records.

If you have any questions or concerns about the project or the enclosed screening form, please do not hesitate to call, write or e-mail Ms. Mowatt, Lead Researcher.

Lead Researcher: **Hortense Samantha Mowatt**

Doctoral Student

Dept. Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

(718) 310-0509

jnyp@iup.edu

Faculty Sponsor: **Dr. Courtney McLaughlin**

Assistant Professor

Dept. of Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

This Project has been Approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724.357.7730).

Parent Consent Form for Screening Participation

Prevention of Depression in At-Risk Adolescents

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent for my child to volunteer to complete a screening for depression. I understand that his/her responses are completely confidential and that I have the right to withdraw my consent for my child to participate at any time. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Parent Name (PLEASE PRINT):

_____

Child's Name (PLEASE PRINT):

_____

Parent Signature:

_____

Date:

_____

Please return to Ms. Mowatt, Lead Researcher

Appendix B

Student Assent Form for Screening

Prevention of Depression in At-Risk Adolescents

Indiana University of Pennsylvania
www.iup.edu

Department of Educational and School Psychology
Stouffer Hall, Room 246
1175 Maple Street
Indiana, PA 15705-1058

P 724-357-2316
F 724-357-6946
www.iup.edu/schoolpsychology

My name is Ms. Mowatt. I am a doctoral student completing a research study for my dissertation. I am also a school psychologist. Although I don't work for the Orange Township Public Schools, your principal and the school district has given me permission to seek your help. I would like to ask for you to participate in my study. The first part of my study is to give a screening survey to students to see if they have a higher chance of becoming depressed. The survey will ask you about your feelings over the past two weeks. This is the part of my study that I am working on right now. You can decide if you want to participate or not participate by answering some screening questions. You can ask me any questions that you want about the screening process or the entire study. My cell phone number and email address are listed at the bottom of this page anytime you want reach me. I am asking for your involvement because of concerns about that you might be experiencing some stress and sadness.

The ratings that you provide on the screening survey will remain confidential and not be shared with anyone. However, your status of depressed based on those ratings may be shared. In other words:

If the ratings that you provide me indicate that there are few or no concerns regarding your stress or depression levels, there will be no further contact and you will not be asked to do anything else. I will tell the school staff member who expressed concern that you are not eligible to participate in the second part of this study.

If your ratings on the screening survey are high or very high, it suggests that you may be experiencing a significant level of depression and that immediate help is needed. I will have to inform

your parent(s)/guardian(s) and the school guidance counselor or social worker to let them provide you with the support you may need to get through this difficult time. I will not tell them the actual ratings or numbers that you put on the screening, but I will inform them that your depressive status is "possible," "probable," or "major."

If your ratings on the screening survey are moderate, or somewhat in the middle, then it suggests that your stress and sadness levels put you at risk for becoming significantly depressed in the future. Your status would be considered "at-risk" and you would be eligible to participate in the second phase of my intervention study. The second part of my study is an intervention to teach you strategies in how to cope with stress and feelings of sadness or to receive counseling support from the guidance counselor or social worker. Only your status will be shared with your parent to obtain consent for you to participate in the second phase of the study. I will not discuss any information that you share with me on the screening rating scale.

Your parent(s)/guardians(s) know about this and agree that you are allowed to participate in the screening part of my study if you would like to.

Your part in the screening process:

The screening process will happen right after school, so I won't disturb your school day. The process will last roughly 10-15-minutes and will occur immediately after reviewing this document with you and receiving your voluntary agreement to participate in the screening, if you choose to do so. You and your parent will be notified the day before this happens so that appropriate arrangements can be made and/or that someone is aware that you will be a little later in getting home the next day. If you do not agree to participate in screening, there will be no further contact and no negative consequences for you.

No one is making you help with this project and you don't have to participate if you don't want to. If you don't want to participate by answering the screening questions, there will be no consequences and nothing bad will happen to you. If you decide later that you don't want to be part of this research, you or your parent/guardian can tell me that by calling, e-mailing, or writing. I will destroy all of the information you gave me when you were

participating in the study. You can also tell Mrs. Malloy, your school principal, that you no longer want to be a part of the study. If you choose not to participate or change your mind after telling me that you wanted to participate, I have included some resources on a separate page that you can use if you ever need someone to talk to about your feelings.

If you **do** want to be in the screening part of my study, please print and sign your name on the highlighted signature page. Please keep the white copy for your records.

Lead Researcher: **Hortense Samantha Mowatt**

Doctoral Student

Dept. Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

(718) 310-0509

jnyp@iup.edu

Faculty Sponsor: **Dr. Courtney McLaughlin**

Assistant Professor

Dept. of Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

This Project has been Approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724.357.7730).

Student Assent Form for Screening

Prevention of Depression in At-Risk Adolescents

I have read and understand the information on the form and I agree to volunteer to answer the screening questions for this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed assent form to keep in my possession.

Name (PLEASE PRINT):

_____

Signature:

_____

Date:_____

Please return this form to:

Ms. Mowatt, Lead Researcher

Where to go for help: Resources for Teenagers

Orange Preparatory Middle School

Guidance Office

Family Connections

395 South Center Street

Orange, NJ 07050

(973) 675-3817

Newark Beth Israel Medical Center CMHC

210 Lehigh Avenue

Newark, NJ 07112

(973) 926-7026

Rutgers University Behavioral Healthcare

183 South Orange Avenue

Newark, NJ 07103

(973) 912-6100 (ACCESS)

East Orange General Hospital Behavioral Health

Child and Adolescent Psychiatric Services (CAPS)

240 Central Avenue

East Orange, NJ 07108

(973) 414-6740

Crisis Intervention/Psychiatric Screening Unit Hotline

(973) 672-9685 or (973) 672-9686

Websites for information

http://www.njmentalhealthcares.org/

New Jersey Mental Health Cares: Mental health information service can help connect you to screening centers, doctors and support groups.

(866) 202-HELP (4357)

http://www.2ndfloor.org/

2nd Floor: A confidential and anonymous helpline for New Jersey's youth to talk about anything from bullying and addition to dating and sexuality. Call anytime or text.

(888) 222-2228

http://www.helpguide.org/articles/depression/teenagers-guide-to-depression.htm

Teenagers Guide to Depression

https://www.teencentral.net/Help/other.php

Includes national and international helplines

Appendix C

Parent Consent Form for Study Participation -

Prevention of Depression in At-Risk Adolescents

Indiana University of Pennsylvania
www.iup.edu

Department of Educational and School Psychology
Stouffer Hall, Room 246
1175 Maple Street
Indiana, PA 15705-1058

P 724-357-2316
F 724-357-6946
www.iup.edu/schoolpsychology

Dear Parent/Guardian,

Your child is invited to participate in a research project to evaluate if a counseling program is effective or not effective in helping students at-risk for depression to not become clinically depressed. The study is being conducted by H. Samantha Mowatt, doctoral student, in partial fulfillment for the award of the Doctor of Education degree in School Psychology from Indiana University of Pennsylvania. Ms. Mowatt is a certified school psychologist. She is not employed with the Orange Township Public Schools. However, the principal and school district have given her permission to seek your child's voluntary participation in this research project. The following information is being provided to you so you can make an informed decision to decide if you would like your child to participate or not participate. Your child is eligible to participate because he/she reports slightly more symptoms of depression than other children, based on a screening you provided consent for a few weeks ago. The referral for screening was initially made by a school staff member.

Purpose of this Study:

The purpose of this study is to determine the effectiveness of the POD TEAMS Coping With Stress prevention of depression intervention program.

Your Child's Involvement in this Study:

If your child participates, he/she will be randomly assigned to the school counselor for a typical school intervention for depression or be asked to participate in a counseling group at school for 8 weeks. If your child is assigned to the group of students for in-school counseling/monitoring, your child will meet briefly with a school counselor once a week for 8 weeks. If your child is assigned to the intervention program, they will meet with Ms. Mowatt once a week, after school, for an hour, during that 8 week period. The intervention program teaches teenagers how to identify and learn to cope with stress and depression before it becomes a major mental health issue for them. The sessions will take place immediately after school and last for one hour, one day per week. You will be notified which day of the week.

To monitor your child's emotional status, each week he/she will complete forms about how they feel. Your child's teacher will also complete forms at the beginning and end of the intervention about your child's social-emotional behavior. Your child's forms and his/her teachers' forms will be confidential and will not be shared with anyone; it will only be seen by Ms. Mowatt, the principal investigator. Your child's name will not be on his/her forms, or on his/her teacher's forms. Additionally, teachers' names will not be indicated on any forms, for the sake of their privacy.

In addition to protecting your child and your child's teacher's privacy not using their names on study documents, it should be noted that other students will not be made aware of your child's involvement in this study. Other students also will not be made aware of the purpose of the study unless they are participants in the study themselves.

Possible Risks

One possible risk to this study is that you or your child may be concerned that other students participating in the group may tell others outside of the group about your child's feelings.

Your child will be protected against risks in the following ways:

1. Be assured that the principal investigator is monitoring your child's feelings throughout the intervention. The principal investigator and will inform you and the guidance counselor or social worker if your child's status changes from being "at-risk" for depression to a "possible," "probable," or "major" depressive episode.
2. Your child will be randomly assigned a confidential identification number, so their names will not appear on any study documents. The student will also be given their number to keep private.
3. Rating scales will be kept in a secure, locked location.
4. Your child's data will never be used in isolation. It will only be used as a group of data.
5. Your child's data will be kept strictly confidential. It will not be shared with any Orange Township Public Schools employee. Your child's ratings of his/her feelings will not be used for disciplinary action in any way.

6. Emotional status ratings are provided by your child on a weekly basis. If your child's emotional status improves or remains that same, you will not be contacted. If your child's status or ratings of depression increase or become clinically significant, you will be notified of their status and resources for immediate mental health intervention will be provided. For your information and convenience, some of those resources are attached at the end of this document.
7. Your child will be provided with an assent form and discussion with the principal investigator explaining the purpose of the study, his/her involvement, possible benefits, and compensation. In addition, reassurance that participation is voluntary and there will be no consequences to him/her if he/she chooses not to participate will be indicated on the form.
8. You may withdraw consent for your child to participate in the study at any time. You may contact Ms. Mowatt, the lead researcher or Mrs. Malloy, the school principal.

Benefits

At the end of the study, you may be provided with the results discussing whether or not the counseling program is effective. This information may help us find an effective way to help students who are at-risk for depression from becoming clinically depressed. Your child will learn how to understand how they feel and how change their thoughts and behavior to feel less sad. He/She may also enjoy the counseling group and interacting with his/her peers and the group leader in a small group environment.

Compensation

There is no compensation for participating in this study.

Your child's participation in this study is voluntary.

You are free to choose if you want to allow or not allow your child to participate in this study. If you decide later that you do not want your child to be a part of this study, you can notify me by calling, e-mailing, or writing to the lead research listed below. You may also contact Mrs. Malloy, the school principal to tell her that you do not want your child to be a part of this study. At that time, all of your child's data sheets will be destroyed and will not be included in the study. In case you choose not to have your child involved with this research, please find a list of community and in-school resources provided for additional emotional support for your child.

If you **do** choose to allow your child to participate in the study, your child's information will be kept strictly confidential and will not be shared with parents, other students or any employee of Orange Township Public Schools. Your child is encouraged to discuss the group and its content with you within the limits of their experience and engagement. The only time confidentiality will be broken is if your child's emotional status deteriorates as mentioned in #1 of how your child is protected against risks. When the study is finished, the results will be presented to parents, students, staff and district officials, but specific information about your child will never be shared by the lead researcher.

If you would like your child to participate in this study, please print and sign your name on the top of the highlighted signature line

and return it to school with your child in the enclosed return envelope. Please keep the white copy of this form for your records.

Thank you for your consideration and assistance with this study. If you have any questions or would like additional information, please contact H. Samantha Mowatt, Lead Researcher.

Lead Researcher: **Hortense Samantha Mowatt**

Doctoral Student

Dept. Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705
(718) 310-0509

jnyp@iup.edu

Faculty Sponsor: **Dr. Courtney McLaughlin**

Assistant Professor

Dept. of Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

This Project has been Approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724.357.7730).

Parent Consent Form for Study Participation

Prevention of Depression in At-Risk Adolescents

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent for my child to volunteer to be a subject in this study. I understand that his/her responses, teachers' responses, and other data are completely confidential and that I have the right to withdraw my consent for my child to participate at any time. I understand that I will be informed if my child's emotional status changes to a higher level of concern. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Parent Name (PLEASE PRINT): _____

Child's Name (PLEASE PRINT): _____

Parent Signature: _____

Date: _____

Phone number or location where you can be reached: _____

Best days and times to reach you: _____

Please place a checkmark on this line if you would like to receive a summary of the results once the study has been completed._____

Please return to Ms. Mowatt, Lead Researcher

Where to go for help: Resources for Teenagers

Orange Preparatory Middle School

Guidance Office

Family Connections

395 South Center Street

Orange, NJ 07050

(973) 675-3817

Newark Beth Israel Medical Center CMHC

210 Lehigh Avenue

Newark, NJ 07112

(973) 926-7026

University Behavioral Healthcare

183 South Orange Avenue

Newark, NJ 07103

(973) 912-6100 (ACCESS)

Websites for information

http://www.njmentalhealthcares.org/

New Jersey Mental Health Cares: Mental health information service can help connect you to screening centers, doctors and support groups.

(866) 202-HELP (4357)

http://www.2ndfloor.org/

2nd Floor: A confidential and anonymous helpline for New Jersey's youth to talk about anything from bullying and addition to dating and sexuality. Call anytime or text.

(888) 222-2228

http://www.helpguide.org/articles/depression/teenagers-guide-to-depression.htm

Teenagers Guide to Depression

https://www.teencentral.net/Help/other.php

Includes national and international helplines

Appendix D

Student Assent Form

Prevention of Depression in At-Risk Adolescents

Indiana University of Pennsylvania
www.iup.edu

Department of Educational and School Psychology
Stouffer Hall, Room 246
1175 Maple Street
Indiana, PA 15705-1058

P 724-357-2316
F 724-357-6946
www.iup.edu/schoolpsychology

My name is Ms. Mowatt. I am a doctoral student who is completing a research study about teenage depression for my dissertation. I am also a school psychologist, but I do not work for the Orange Township Public Schools. However, I have permission from your principal and the school district to ask for your participation. I am sharing information about my study so you can decide whether or not you would like to participate. A few weeks ago, you completed a rating scale about your feelings. The results showed that you have been feeling slightly higher than normal feelings of stress and sadness. The purpose of this part of the study is to see if an intervention program helps teenagers cope with stress and depression works better than the in-school counseling.

There will be two groups in the study. One group of students will meet with a school counselor for a weekly check-in and you will complete a survey about how you feel at the beginning and end of 8 weeks. The other group will participate in the intervention program.

The program teaches students how to check and change their feelings, thoughts and behaviors so they can avoid becoming more depressed. If you participate, one group of students will meet with me once a week for 8 weeks. You will fill out forms about how you feel and we will talk about learning how to monitor and change your thoughts, feelings and behavior. The group will take place for one hour after school each week. One of your teachers will also complete a form about how they see your feelings and behavior in school. You will not get in trouble for anything the teacher tells me. Your forms and the teacher's forms will be confidential and will not be shared with anybody else at school. Your name will not be on your forms or your teacher's forms. However, you will be given your own personal identification number that will go on to all of your documents.

You will be expected to keep all information that is shared in the group confidential and private. You and all of the other students have a right to privacy and the information that is discussed should not be talked about outside of the group. If it is discovered that you have broken this rule of confidentiality, you will be asked to apologize to the group and the person that you offended. If it happens more than once, you may either be removed from the group and continue with the intervention program individually. If you find that someone has broken your privacy or the confidentiality of the group, please let me know. That person will also be subject to the same consequences.

I will not discuss anything we talk about in the group with anyone outside of the group. The only exception to this rule is that when you complete the weekly feelings forms, I will check to make sure that you are not feeling worse. If your status changes and you begin to feel sadder than you did before, I must notify your parent/guardian to get you more help from someone at school or in the community. I will not tell them the ratings that you put on the form, however, I will tell them that your general status is a concern.

You can ask me any questions that you want to about the study at any time. My telephone number and email address are listed at the bottom of this page anytime you want reach me.

Your parent(s)/guardians(s) know about this and agree that you are allowed to help me if you want. You may find that our group and the activities we do in the group fun.

No one is making you participate and you don't have to participate if you don't want to. If you don't want to participate in this study by being in the second phase of it, that is your choice and nothing bad will happen to you. If you decide to participate and then later change your mind, you or your parent/guardian can tell me by calling, e-mailing, or writing and I will destroy all of the information you gave me. You may also talk to your school principal, Mrs. Malloy, if you do not want to participate in the study anymore.

If you **do** want to be in my study, nobody will know your answers, except me. I am asking students who may be feeling sad a little more often than other students to participate. When I finish my study, I might talk about what I learned with other people, or write it down so other people can read it. I will talk about whether or not the program works for groups of students, but never about you personally. I will not use any names when I talk about my study with

other people. If you would like to participate in my study, please print and sign your name on the top of the highlighted signature page. Please keep the white copy for your records.

Lead Researcher: Hortense Samantha Mowatt

Doctoral Student

Dept. Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

(718) 310-0509

jnyp@iup.edu

Faculty Sponsor: Dr. Courtney McLaughlin

Assistant Professor

Dept. of Educational & School Psychology

Indiana University of Pennsylvania

Room 242 Stouffer Hall, Indiana, PA 15705

This Project has been Approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724.357.7730).

Student Assent Form

Prevention of Depression in At-Risk Adolescents

I have read and understand the information on the form and I assent to volunteer to be a subject in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I understand that my parent will be notified if my emotional status changes to a higher level of concern. I have received an unsigned copy of this informed assent form to keep in my possession.

Name (PLEASE PRINT):

_____

Signature:

_____

Date: _____

Please return this form to:

Ms. Mowatt, Lead Researcher

Appendix E

Teacher Consent Form

Prevention of Depression in At-Risk Adolescents

Indiana University of Pennsylvania
www.iup.edu

Department of Educational and School Psychology
Stouffer Hall, Room 246
1175 Maple Street
Indiana, PA 15705-1058

P 724-357-2316
F 724-357-6946
www.iup.edu/schoolpsychology

You are invited to participate in a research project in determining the effectiveness of an intervention designed to reduce the risk of adolescent students from entering into a major depressive episode. This study is being conducted H. Samantha Mowatt, doctoral student, in partial fulfillment for the award of Doctor of Education degree in School Psychology from Indiana University of Pennsylvania. Ms. Mowatt is also a school psychologist, but she is not employed by the Orange Township Public Schools. The district and your school principal have granted permission to seek your **voluntary** permission in this research project. The following information is being provided to you so you can make an informed decision to participate or not participate. You are eligible to participate because you are a teacher of a student who is between the ages of 13 and 16 who has been determined to be at-risk for depression.

Purpose of this Study:

The purpose of this study is to determine the effectiveness of the POD TEAMS Coping With Stress counseling intervention program.

Your Involvement in this Study:

The study will last for 8 weeks. If you participate, you will be asked to complete a behavior and emotional rating scale for your student in the study. You will complete the Behavior Assessment Scale for Children-2nd Edition (BASC-2) at the beginning and at the end of the 8-week counseling intervention. This rating scale will take up to 20 minutes to complete each time. Your ratings will be confidential and

not shared with the parent/guardian or the student. You will also be assigned a confidential identification number that will appear on the documents that you complete.

Possible Risks:

One possible risk to this study is that you may be concerned that the parent will object to or disagree with your ratings of the student.

<u>You will be protected against this risk in the following ways:</u>

1. Neither the parent nor the student will be made aware of your ratings of the student's behavior or emotional development.
2. Your name will not be on the forms you are asked to complete. Rather, a confidential number will be assigned.
3. You will complete the forms and then immediately turn them in to the lead researcher.
4. Your data will be anonymous. It will not be shared with any parent, student or district employee.

Benefits

At the conclusion of the study, you will have the opportunity to attend a presentation and/or receive a copy of the results relating to the effectiveness of the POD TEAMS Coping With Stress program on levels of depression in students at-risk for a major depressive episode.

Compensation

There is no compensation for participating in this study.

Your participation in this study is voluntary.

<u>You are free to choose if you want to participate in this study or not participate.</u> If you choose to participate and then decide later that you do not want to be a part of this research study, you can notify Ms. Mowatt by calling, e-mailing, or writing to her. You may also contact Mrs. Malloy, your school principal.

Withdrawing from the study will not result in any negative consequences for you. If you **do** choose to participate in the study, your information will be kept strictly confidential and will not be shared with parents, students or any employee of the district. When the study is finished, information about the results may be discussed with other people, or written down for other people to read, but specific information that you have provided about specific student(s) will never be shared.

If you would like to help me in my study, please print and sign your name on the top of the highlighted signature line and return it to me. Please keep the white copy of this form for your records.

Thank you for your consideration and assistance with this study. If you have any questions or would like additional information, please contact H. Samantha Mowatt, Lead Researcher.

Lead Researcher: **Hortense Samantha Mowatt**
Doctoral Student
Dept. Educational & School Psychology
Indiana University of Pennsylvania
Room 242 Stouffer Hall, Indiana, PA 15705
(718) 310-0509
jnyp@iup.edu

Faculty Sponsor: **Dr. Courtney McLaughlin**
Assistant Professor
Dept. of Educational & School Psychology
Indiana University of Pennsylvania
Room 242 Stouffer Hall, Indiana, PA 15705

This Project has been Approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone 724.357.7730).

Teacher Consent Form

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a subject in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Name (PLEASE PRINT):

_____

Signature:

_____

Date: _____

Phone number or location where you can be reached:

_____

Best days and times to reach you:

_____

If you would like a copy of the results at the conclusion of the study, please place a checkmark here:

_____

Please return this form to:

Ms. Mowatt, Lead Researcher

Appendix F

Fidelity of Treatment Implementation

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 1: Getting to Know Each Other

Concept/Activity	Observed?	
Introduction/ Getting Acquainted	Yes	No
What is stress?	Yes	No
What is depression?		
• Defining depression	Yes	No
• Causes of depression	Yes	No
• Depression spiral	Yes	No
• Depression in families		
Personal Goals	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 2: Coping With Stress

Concept/Activity	Observed?	
Review	Yes	No
Guidelines for the Group		
• Discussed Rules	Yes	No
Identifying Negative Thoughts		
• Identify negative thoughts	Yes	No
• Identify positive thoughts	Yes	No
• Comparing positive to negative thoughts	Yes	No
Feelings About the Group (questionnaire)	Yes	No
Mood Questionnaire	Yes	No
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 3: Stressful Situations and Thinking

Concept/Activity	Observed?	
Review	Yes	No
Identifying Activating Events	Yes	No
Increasing Positive Thinking	Yes	No
Personal Goals, Revisited	Yes	No
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 4: Examining Negative Thinking

Concept/Activity	Observed?	
Review	Yes	No
Practice Identifying Unrealistic Thoughts		
• Identify negative thought/belief	Yes	No
• Identify positive counterthought	Yes	No
• Practice positive counterthought in response to negative thought	Yes	No
Changing Unrealistic Thinking to Realistic Thinking		
• Examining personal negative thoughts	Yes	No
• Strategies to come up with positive counterthoughts	Yes	No
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 5: Is It Really About Me?

Concept/Activity	Observed?	
Review	Yes	No
Discovering Underlying Negative Beliefs		
• Identify negative beliefs and replace with realistic counterthoughts	Yes	No
• *Review different types of unrealistic beliefs (optional)*	*Yes*	*No*
Is it really about me?		
• Nonpersonal negative thoughts might really be personal beliefs	Yes	No
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 6: Coping With Activating Events

Concept/Activity	Observed?	
Review	Yes	No
More A-B-C Practice *or* Sources of Beliefs	Yes	No
Using Problem-Solving to Cope with Activating Events		
• Strategies for problem-solving	Yes	No
• Dealing with stressful Activating Events	Yes	No
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 7: Techniques for Stopping Unrealistic Thoughts

Concept/Activity	Observed?	
Review	Yes	No
Techniques for Interrupting Unrealistic Thoughts		
• 3 techniques to stop negative thinking	Yes	No
Using A-B-C in Your Life	Yes	No
Prompts to think more realistic, accurate and positive thoughts	Yes	No
• *Balloon Exercise (optional)*	*Yes*	*No*
Practice Assignment	Yes	No
Sharing Activity	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

The Coping With Stress Course

Fidelity of Intervention Implementation

Session 8: Stressful Events, Preventing the Blues, Ending the Weekly Meetings

Concept/Activity	Observed?	
Planning For Emergencies		
• List major life stressors	Yes	No
• Dealing with big stressors	Yes	No
Maintaining Your Gains		
• Identify and dealing with everyday problems	Yes	No
Mood Questionnaire	Yes	No
Feelings About the Class	Yes	No

Engagement	Observed?	
Students offered responses and asked questions during leader discussions	Yes	No
Students participated in paired and/or group activities	Yes	No
Students completed workbook activities	Yes	No

Appendix G

District Approval Letter

ORANGE TOWNSHIP PUBLIC SCHOOLS
Administration Building
451 Lincoln Avenue Orange, New Jersey 07050
Tel: (973) 677-4000 Ext. 6044 Fax: (973) 677-0486
Website: http://www.orange.k12.nj.us

Ronald Lee
Superintendent of Schools

July 28, 2015

Dear Ms. Mowatt c/o Indiana University of Pennsylvania,

It is the intent of Orange Township Public Schools to support the research efforts of Ms. Hortense Samantha Mowatt, Doctoral Student in the Department of Educational and School Psychology at Indiana University of Pennsylvania. With approval from Indiana University of Pennsylvania's Institutional Review Board, Ms. Mowatt will have permission to do the following:

1. Ms. Mowatt may seek referrals from teachers and/or school support staff of students, ages 13-16, who may be at-risk for depression.
2. Ms. Mowatt may seek parent and student consent to screen referred students who may be at-risk for depression.
3. With parental and student consent, Ms. Mowatt may screen the referred students with a brief depression scale.
4. Of the eligible students, Ms. Mowatt may seek parent and student consent to participate in the intervention study. The students who participate in the study will be randomly assigned to groups, complete behavioral rating scales and attend weekly counseling sessions. The sessions will take place after school, on school property for eight weeks and last 60 minutes in duration.
5. Ms. Mowatt may seek teacher participation to provide behavioral scale ratings of students participating in the study.

It is expected that all parent, student and teacher information will be kept confidential.

Sincerely,

Ronald C. Lee
Superintendent of Schools

Appendix H

CITI Completion Report

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)
HUMAN SUBJECTS RESEARCH CURRICULUM COMPLETION REPORT
Printed on 10/16/2014

LEARNER	Hortense Samantha Mowatt (ID: 4451221)
DEPARTMENT	Educational and School Psychology
INSTITUTION	Indiana University of Pennsylvania
EXPIRATION DATE	

SOCIAL, BEHAVIORAL, EDUCATIONAL RESEARCHERS

COURSE/STAGE:	Basic Course/1
PASSED ON:	10/16/2014
REFERENCE ID:	14258940

REQUIRED MODULES	DATE COMPLETED	SCORE
History and Ethical Principles - SBE	10/13/14	5/5 (100%)
Defining Research with Human Subjects - SBE	10/13/14	5/5 (100%)
The Federal Regulations - SBE	10/13/14	5/5 (100%)
Assessing Risk - SBE	10/13/14	5/5 (100%)
Informed Consent - SBE	10/13/14	5/5 (100%)
Privacy and Confidentiality - SBE	10/13/14	5/5 (100%)
Belmont Report and CITI Course Introduction	10/13/14	3/3 (100%)
Conflicts of Interest in Research Involving Human Subjects	10/13/14	5/5 (100%)
ELECTIVE MODULES	**DATE COMPLETED**	**SCORE**
Research with Children - SBE	10/16/14	5/5 (100%)
Research in Public Elementary and Secondary Schools - SBE	10/16/14	5/5 (100%)
Research and HIPAA Privacy Protections	10/16/14	3/5 (60%)

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Program course site is unethical, and may be considered research misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Program Course Coordinator

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