

5-2016

School-Based Interventions for Secondary Students with Anxiety Disorders

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School-Based Interventions for Secondary Students with Anxiety Disorders

by

Tobby Stroud

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Master of Science in

Special Education

April, 2016

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Table of Contents

	Page
List of Tables	4
Chapter	
1. Introduction.....	5
Anxiety Disorders: Diagnostic Criteria	6
Cognitive Behavior Theory.....	7
Research Questions.....	9
Focus of the Paper.....	9
Importance of the Topic.....	9
Definition of Terms.....	10
2. Review of Literature	11
Common Assessment Tools.....	11
Skills for Academic and Social Success	12
Creating Opportunities for Personal Empowerment (COPE) Interventions	17
Other School-Based Mental Health Interventions	26
Chapter 2 Summary	33
3. Conclusions and Recommendations	36
Conclusions.....	36
Recommendations for Future Research.....	38
Implications for Current Practice.....	40

Chapter	3
Summary	42
References	43

List of Tables

Table	Page
1. Chapter 2 Assessments	12
2. Summary of Chapter 2 Findings	34

Chapter 1: Introduction

In today's society, being an adolescent is challenging, but being an adolescent with an anxiety disorder presents additional challenges. Anxiety is the most prevalent mental health issue facing adolescents in the United States today, with prevalence rates ranging from 4% to 25% and an average rate of 8% (Tomb & Hunter, 2004). A variety of anxiety disorders (AD) have been identified, and they are often comorbid with other disorders such as depression and conduct disorders. This high degree of comorbidity makes it difficult to diagnose the specific type of AD. Even more concerning is that a student's AD may go undetected by parents, teachers, and other school personnel (Kashdan & Herbert, 2001).

Anxiety disorders negatively impact a student's success at school, in social settings, and typically cause problems for families at home (Mazurek Melnyk, Kelly, & Lusk, 2014). McLoone, Hudson, and Rapee (2006) identified some of the major effects of AD as lower academic achievement, poor self-esteem, and difficulty with social interactions with others, particularly with peer relationships. McLoone et al. also observed that students with AD are at increased risk of illegal drug use and depression and that they are also more likely to experience anxiety symptoms throughout adulthood.

Cognitive behavior therapies (CBT) have long been regarded as effective interventions for adults with AD. In recent years, researchers have also investigated whether cognitive strategies are appropriate and effective for adolescents with AD. In this starred paper, I review the literature that evaluates the effectiveness of CBT with secondary students who have been diagnosed with an anxiety disorder.

Anxiety Disorders: Diagnostic Criteria

Over the past 30 years, the treatment of adolescents with anxiety disorders has advanced significantly. This advancement started with the 1980 publication of the *Diagnostic and Statistical Manual of Mental Disorders-Third Edition* (DSM-III), which included a new category called Anxiety Disorders of Childhood and Adolescence (American Psychiatric Association [APA], 1980). Strauss (1990) noted that the DSM-III and DSM-III-R listed three types of anxiety disorders in this new category: separation anxiety disorder, overanxious disorder, and avoidant disorder. Children and adolescents could still be diagnosed with the adult categories of anxiety disorders that included generalized anxiety disorder, panic disorder, and social anxiety disorder. The creation of the new DSM category brought new interest in the research of anxiety disorders in children and adolescents, which has resulted in an increased number of research studies conducted on this topic (Strauss, 1990).

Subsequent editions of the DSM have continued to rely upon the same diagnostic criteria. The DSM-5 provides a general definition of anxiety disorders as those with core symptoms of excessive fear and anxiety and related behavioral disturbances. “*Fear* is the emotional response to real or perceived imminent threat, whereas *anxiety* is anticipation of future threat” (APA, 2013, p. 189). Separation anxiety disorder is the excessive fear or anxiety about separation from a caregiving individual, social anxiety disorder involves excessive fear or anxiety about social situations, and generalized anxiety disorder refers to excessive anxiety and worry about a number of events or activities (APA, 2013). Panic disorder involves recurrent and unexpected panic attacks which are abrupt surges of “intense fear or intense discomfort that reaches a peak within minutes” (APA, 2013, p. 208). During the panic attack, the individual experiences symptoms

that include heart palpitations, sweating, trembling or shaking, shortness of breath, feeling of choking, nausea, dizziness, and fears of losing control or dying.

There are numerous types of AD with several that are highly comorbid with each other, and each contains a lengthy documented list of diagnostic criteria for each disorder. Although that list is long, the list of non-pharmacological treatment options is short—with Cognitive Behavioral Therapy (CBT) being the treatment of choice for adolescents with AD.

Cognitive Behavior Therapy

The origin of traditional CBT dates back to Ellis' Rational-Emotive Behavior Therapy model created in 1957 and Beck's Cognitive Therapy model developed in 1967 (Field, Beeson, & Jones, 2015). However, it was not until decades later in 1994 that Kendall conducted the first reported CBT randomized trial with children (Cartwright-Hatton, Roberts, Chitsabasan, Fothergill, & Harrington, 2004). Kendall (1990) was a pioneer in the area of CBT practices and research for children, and he developed one of the most popular CBT programs called *The Coping Cat* and later expanded it into a computerized CBT program. Controlled clinical trials on these and other programs revealed generally positive outcomes using “an individually administered cognitive-behavioral intervention” (Barrett & Turner, 2001, p. 399). With proven research that demonstrated the effectiveness of individual CBT, research studies moved forward to assess the effectiveness of group CBT.

From the early 2000s to the present, studies on the treatment of adolescents with AD focused on bringing AD treatment interventions into schools. Because adolescent anxiety commonly occurs in school, it seemed logical to provide CBT at school so that students have easier access to mental health treatment and can practice their skills in “real-life situations” at school and with peers (Ginsburg, Becker, Drazdowski, & Tein, 2012, p. 2).

Cognitive behavior therapy is an approach that examines relationships between thoughts, feelings, and behaviors (Duckworth & Freedman, 2012; National Association of Cognitive-Behavioral Therapists, 2014). Specifically, CBT theory is based upon the premise that a person's thoughts—not people, places, or situations—are the cause of his or her behaviors, and these thoughts must be changed in order to positively change feelings, actions, and behaviors.

Typically, adolescents with anxiety have irrational thoughts that cause them panic or anxiety. For example, if an adolescent experiences a panic attack during math class at school, she is likely to avoid going to math class again because, while there, she felt she was in extreme danger and then experienced a panic attack. Math class, in her mind, is now associated with danger, panic attacks, and anxiety. Her irrational thoughts cause her to believe she will be in danger and have another panic attack there. For this particular situation, the goal of CBT is to change the irrational thoughts associated with the math class as being the root cause of the panic attack and anxiety and learn a positive way to react instead (National Association of Cognitive-Behavioral Therapists, 2014).

CBT sessions typically occur weekly and last from 8 to 16 weeks to help treat anxiety. The intended end result of CBT is to help students become aware of irrational, inaccurate thinking in order to respond to challenging situations that happen in the future in a more positive way. CBT may not always be a cure, but it gives students the power to cope with situations in a healthy way and to feel better about life (Mayo Clinic, 2013). The coping skills learned through CBT will not only help students deal with their anxiety today, but it will help them as adults tomorrow by knowing how to cope with stressful situations.

Research Questions

Two questions guided this literature review:

1. What types of school-based interventions have been implemented to support secondary students with anxiety disorders?
2. Are school-based interventions effective in treating anxiety disorders in secondary students with anxiety disorders?

Focus of the Paper

For Chapter 2, I reviewed a total of 10 quantitative studies that examined outcomes associated with school-based interventions targeting students' anxiety. Study participants included both middle and high school students. Studies were reviewed if they were published between 2005 and 2016, and only studies conducted in the United States were included.

To search for appropriate literature and studies used in the Chapter 2 review, I used the Academic Search Premier, ERIC, and PsycINFO databases with the majority of articles retrieved from the Academic Search Premier database. The search terms and combination of search terms used included *anxiety*, *anxiety disorders*, *anxiety and school-based interventions*, *adolescent*, *adolescent cognitive behavior therapy*, *school mental health*, and *school-based interventions*. I also searched the tables of contents of two journals spanning the past 2 years: *Journal of Clinical Child and Adolescent Psychology* and the *Cognitive and Behavioral Practice* journal.

Importance of the Topic

Anxiety disorders are among the most common types of mental health disorders affecting adolescents in the United States today. According to Sulkowski, Joyce, and Storch (2012), if anxiety is left untreated, there will likely be significant effects on academic, social, and family functioning. Even more concerning, these problems could extend into adulthood. Many

adolescents with AD have limited or no access to the mental health services they need for a multitude of reasons. For those who do have access to mental health services, there is a stigma around anxiety and mental health issues preventing many adolescents and families from seeking the treatment and therapy they need.

I have personally experienced the debilitating effects of AD, and I know how important interventions such as cognitive based therapy are in overcoming AD. It is important to treat students with AD early to prevent it from lingering into adulthood and leading to further problems. Offering interventions at school is a way to efficiently help students with AD because students spend half of their waking hours in a school setting. Cognitive behavior therapy and other “anxiety” interventions are often practiced in a clinical setting, but this may not be the location where a student’s anxiety issues occur. Students need to be able to access and apply these interventions when anxiety issues happen at school. As a special educator of students with emotional and behavior disorders, I see opportunities for special educators to lead the effort of providing school-based interventions for secondary students with anxiety disorders.

Definition of Terms

This section provides definitions for relevant terms used throughout this paper, unless the terms have already been defined.

Effect size (ES). A numerical way to express how much better or worse the treatment group performed on a task or test compared to the control group (Gay, Mills, & Airasian, 2009).

Chapter 2: Review of Literature

In this literature review, I discuss the outcomes and effectiveness of school-based interventions that target students' anxiety. Both group and individual cognitive-behavioral therapies (CBT) and other school-based mental health (SBMH) interventions are examined. Prior to the review of interventions, I present a table of assessment instruments frequently used in these studies. The chapter is then organized according to three intervention categories: *Skills for Academic and Social Success* (SASS) studies, *Creating Opportunities for Personal Empowerment* (COPE) studies, and other SBMH interventions.

Common Assessment Tools

Multiple studies included in this literature review used the same assessment instruments to assess the pre-post levels of anxiety and depression levels, overall functioning, and healthy lifestyle behaviors. A brief description of these commonly used assessment instruments is included in Table 1. These assessments will be referred to by their acronyms throughout the chapter.

Table 1**Chapter 2 Assessments**

ASSESSMENT TITLE	ASSESSMENT AUTHORS	YEAR	ASSESSMENT PURPOSE	DESCRIPTION OF ASSESSMENT
<i>Anxiety Disorders Interview Schedule for DSM-IV-Parent and Child Versions (ADIS-PC)</i>	Silverman & Albano	1996	Assesses anxiety and behavior disorders; screens for eating disorders and substance abuse	An evaluator conducts separate parent and children interviews. Severity rated on a scale of 0-8, with 4 or greater warranting a diagnosis.
<i>Beck Youth Inventory-Second Edition (BYI-II)</i>	Beck, Beck, & Jolly	2005	Assesses anxiety and depressive symptoms in youth over time	A self-report instrument with higher <i>t</i> scores indicating higher distress levels. The range of scores includes <55 average, 55-59 mildly elevated, 60-69 moderately elevated, and 70+ is extremely elevated.
<i>Children's Global Assessment Scale (CGAS)</i>	Shaffer et al.	1983	Determines overall functioning considering psychological, social, and school behavior factors	An evaluator rating that is scored from 0 to 100. Higher ratings indicate a higher level of functioning.
<i>Healthy Lifestyles Belief Scale (HLBS)</i>	Melnyk & Moldenhauer	2006	Measures the level of healthy behaviors	A self-report instrument with 16 items about living a healthy lifestyle scored on a Likert scale. The scale ranges from 1 strongly disagree to 5 strongly agree.

**Skills for Academic and Social Success
Intervention (SASS)**

In one of the first studies to examine school-based interventions for social anxiety disorder, Masia-Warner et al. (2005) wanted to determine the efficacy of *Skills for Academic and Social Success* (SASS; Masia et al., 1999) for adolescents who were socially anxious. The SASS intervention involves group sessions held at school focused on social skills training, attending

social events with peers, individual student meetings with program leaders, and both parent and teacher meetings to make it a well-rounded program.

School group sessions for students included 12 school meetings that consisted of one psychoeducational session, one realistic thinking session, four social skills training sessions, five sessions of exposure, and one relapse prevention session. Each student met individually with group leaders twice during the study to create individualized treatment goals and work through obstacles that came about during treatment. Social events with peer assistants helped students practice specified social skills in the community such as playing laser tag, miniature golf, or going to the mall. Booster sessions were held after the intervention to monitor progress and discuss obstacles, to help improve the results of the overall intervention.

Peer assistants met twice with the group leader to discuss their roles and responsibilities for social events, skill building practice, and exposures. Parents met with group leaders two times over the course of the study to receive education about social anxiety and how to manage and improve their child's anxiety symptoms. Teachers met with group leaders twice to learn about the SASS intervention, social anxiety, and managing anxiety in the classrooms. They also collaborated throughout the study to help develop exposures, share feedback on student participants, and find out how the intervention was going.

Eighty students and their parents were identified to participate in an in-home diagnostic evaluation via a recruitment process that included teacher nominations, completion of three social anxiety self-rating instruments, and a telephone interview. Additional assessments and interviews resulted in a total of 42 students who met the study criteria. Thirty-seven received a diagnosis of social anxiety disorder, and five received a diagnosis of a specific type of social

phobia. Nearly 50% of the selected participants had another disorder such as generalized anxiety disorder (40%), or dysthymia (14.3%).

Initially, the 42 students were randomly assigned to the SASS intervention ($n = 21$) or the wait-list control condition ($n = 21$). Early on in the study, three SASS and four wait-list students dropped from the study, leaving the final number of study participants at 35. The 26 female and nine male primarily Caucasian participants had a mean age of 14.28 (range = 13-17 years).

Several pre-post instruments were used to evaluate student outcomes: the ADIS-PC, the *Liebowitz Social Anxiety Scale for Children and Adolescents* (LSAS-CA; Masia-Warner, Klein, & Liebowitz, 2003), the *Social Phobic Disorders Severity and Change Form* (SPDSCF; Liebowitz et al., 1992), and the CGAS. Student pre-post self-report inventories were also used to assess their current level of social anxiety: the *Social Phobia and Anxiety Inventory for Children* (SPAI-C; Beidel, Turner, & Morris, 1995), the *Social Anxiety Scale for Adolescents* (SAS-A; LaGreca, 1998), the *Children's Depression Inventory* (CDI; Kovacs & Beck, 1977), and the *Loneliness Scale* (LS; Asher & Wheeler, 1985). The one parent rating scale used in this study was the *Social Anxiety Scale for Adolescents: Parent Version* (SAS-AP; LaGreca, 1998).

Overall, the results of the study were quite positive and favored the transportability of the SASS intervention into a school-based environment. The ADIS-PC and the SPDSCF scores for the intervention group were significantly lower than the wait-list group ($F_{(1, 33)} = 50.6, p < .0001, ES = 2.4$). The number of situations that students feared or tried to avoid also produced significant differences between the groups, as indicated by the LSAS-CA Total Score, Total Avoidance, and Social Avoidance (an average of $F_{(1, 33)} = 4.9, p = .03, ES = .75$). The effects on Performance Anxiety and Total Anxiety were only somewhat significant ($F_{(1, 33)} = 4.0, p = .053, ES = .68$). No treatment effects were found for Social Anxiety or Performance Avoidance on the

LSAS-CA. ANOVA analysis of overall functioning of the intervention group was significantly higher than that of the wait-list group $F_{(1,33)} = 44.5, p < .0001, ES = 2.3$).

The SASS interventions helped significantly reduce the level of social anxiety in new situations as shown by self-reported data from the students on the SAS-A instrument ($F_{(1,33)} = 5.4, p = .03, ES = .79$). The parent form of SAS-AP yielded similar results as the SAS-A. However, no significant differences between the treatment group and wait-list group were found in the two other SAS-A subscales, or in the CDI or LS self-reporting instruments.

The authors noted the clinical significance of the SASS treatment intervention. At post-assessment, 12 out of 18 (67%) students no longer met the DSM-IV criteria for social phobia, whereas 2 out of 17 (11.8%) in the wait-list group no longer met the criteria. At the 9-month follow-up period, those who were in the SASS group maintained their clinical gains from the intervention, plus one additional student no longer met the DSM-IV criteria for social anxiety disorder.

The results of this study demonstrated that it is feasible to transport an anxiety intervention from a clinical setting into a school setting. The statistical and observational results showed significant improvement in overall functioning of those who received the SASS intervention and it was shown to be superior to the wait-list.

Warner, Fisher, Shrout, Rathor, and Klein (2007) wanted to examine again the efficacy of the SASS program, which was described in the previous 2005 study. Although SASS outcomes were evaluated in the 2005 study, outcomes were not compared to outcomes obtained using another intervention program. In this 2007 study, SASS was compared to the *Educational-Supportive Group Function* (ESGF; Masia Warner, Fisher, & Klein, 2004) using the same overall program structure and contact time between both interventions.

Ultimately, 32 students with a primary diagnosis of DSM-IV social anxiety disorder participated in the study and were randomly assigned to either the SASS or the ESGF group. The participants had an average age of 15.1 years, and the majority being female and Caucasian. Almost half were comorbid with another disorder, mostly another form of anxiety.

Multiple pre-post instruments were administered to assess the efficacy of the SASS intervention: the CGAS, the SAS-A, the SAS-A/P, the SPAI-C, the ADIS-P/C, the *Clinical Global Impression Scale–Improvement* (CGI; Klein, Koplewicz, & Kanner, 1992), the *Multidimensional Anxiety Scale for Children* (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997), and the *Beck Depression Inventory-II* (BDI-II; Beck & Steer, 1993).

The study included the SASS intervention (described in the previous study) and the ESGF intervention as the attention control. Like SASS, the ESGF intervention also included 12 group sessions held at school that discussed topics relating to social anxiety and relaxation instruction with targeted support on how to deal with social anxiety and any other type of events in the near future that could potentially cause anxiety for these students. Student participants also received two 1:1 support sessions and four social events held on the weekends equaling the same number of sessions as the SASS intervention. One difference in the ESGF weekend social events compared to SASS is the absence of peer assistants; also, the two individual sessions in ESGF primarily discuss general life issues and some of the difficulties associated with social anxiety. Overall, the ESGF intervention had less targeted content compared to SASS.

Data from multiple assessments consistently showed that the SASS intervention delivered in a school setting was highly effective and superior to the attention control ESGF intervention. For social phobia, the severity ratings at the SASS 6-month follow-up were well below the ESGF 6-month follow-up group ($F_{(1, 33)} = 22.9, p < .001$). SASS was superior to ESGF at the 6-month

follow-up in the category of social phobia diagnosis; 73.3% of SASS students no longer met the diagnostic criteria compared to 6.7% of ESGF students who no longer met the social phobia diagnostic criteria ($X^2 = 13.4, p < .001$). Although SAS-A and SPAI-C self-report scores showed positive results at post treatment, the group effect was not significant. At the 6-month follow-up period, 86.7% of the SASS group and 46.7% of the ESGF group received a normal score on the SPAI-C.

On the BDI-II self-report instrument, depression was significantly lower than pre-treatment for both groups, but differences were not significant between SASS and ESGF. Similar to the SAS-A and SPAI-C student self-reports, the SAS-AP parent report found no significant treatment effects when comparing SASS versus ESGF. Parents reported positive outcomes on social phobia and anxiety in both treatment groups.

Results from this study again demonstrated that a cognitive school-based intervention that targets social skills and exposures practice for 12-weeks can be effectively transported from clinical settings into schools and other community sites. This attention control trial also demonstrated that general, nonspecific/non-targeted treatment interventions are minimally effective in treating AD.

Creating Opportunities for Personal Empowerment (COPE) Interventions

Mazurek Melnyk et al. (2014) conducted a study to determine the feasibility and efficacy of bringing the COPE group intervention into two high schools located in a southwestern school district. Participants in this study included seven males and nine females who ranged in age from 14 to 17 years and were from primarily Hispanic and other minority groups. Forty-four percent of the participants had mild to moderate anxiety, 38% had moderate to severe anxiety,

and most students had mild to moderate depression in addition to anxiety, as measured by the BYI-II.

Several instruments were used in the study to capture a broad range of outcome data: the *Personal Beliefs Scale-Teens* (PBS; Melnyk et al., 2007; Melnyk et al., 2009), the BYI-II, and an 11-question post-program evaluation form that asked questions about the helpfulness of the program.

The intervention included seven, 50-min cognitive-behavioral, skill-building group sessions. The theory behind the COPE intervention is that how a person thinks will direct how he or she feels and behaves. In a typical group session, participants share their thoughts, behaviors, feelings, and practice skills taught in the session with other peers. The sessions were held weekly and students were pulled from a different class each week to reduce the stigma of being pulled out of class. Each group session followed the same framework: review homework from the previous session, present the current session topic, and review the new homework assignment. Part of the homework contained practice in writing positive self-statements, repeating them 10 times daily, and completing self-monitoring and goal setting logs.

Participants experienced a significant decrease in anxiety following intervention, as measured by the BYI-II anxiety subscale post-COPE scores in the normal range ($M = 49.9$, $SD = 9.4$) compared to pre-COPE scores in the mild to moderate anxiety range ($M = 55.5$, $SD = 9.6$). Results from the PBS showed a significant increase in students' belief that they could experience positive mental health behaviors. Post-COPE data ($M = 37.3$, $SD = 6.2$) compared to pre-COPE data ($M = 32.9$, $SD = 3.9$) illustrates this significant increase in positive personal beliefs.

The post-program evaluation captured many positive comments about the COPE program. Summary statements about the positive program benefits identified by the students included “skills to help change their thinking,” “helpful in managing stress and learning how to cope,” “relaxation through breathing techniques and positive imagery,” and “learning how to regulate the emotions” (Mazurek Melnyk et al., 2014, p. 9).

The positive outcomes from the COPE group intervention show it is feasible and effective to deliver this intervention in school settings. The intervention not only decreased anxiety and depression, but also taught the students life-long coping skills. The researchers asserted that when the intervention is delivered in schools, participants are more likely to attend all group sessions and are less likely to drop out of the intervention.

Melnyk et al. (2009) evaluated the effects of the COPE Healthy Lifestyles TEEN (COPE TEEN) program with adolescents who were overweight and had anxiety disorders (AD). The COPE TEEN program is a cognitive behavioral skills building (CBSB) intervention that combined the COPE program with the *Thinking, Emotions, Exercise, and Nutrition* (TEEN) program. This randomized controlled pilot study focused on adolescents’ physical and mental health outcomes and included 19 Hispanic students ages 14-16 from an inner-city high school located in the southwest. Participants were randomly assigned to the COPE TEEN program or the attention control intervention program, based upon the section of health class they attended. One health class was randomly assigned to the intervention ($n = 12$), and the other class assigned to the control group ($n = 7$). Study participants were predominantly female, with 58% in the intervention group and 86% females in the control group.

A mix of standardized assessments and Likert rating scales were used to evaluate outcomes. These included the BYI-II, the HLBS, the *Healthy Lifestyle Choices Scale* (HLCS;

Melnyk & Moldenhauer, 2006), the *Nutrition Knowledge Scale* (Melnyk & Small, 2003a), and a pedometer.

The COPE TEEN intervention program was delivered two-three times per week during the 50-min school health class period across 9 weeks. Each session consisted of an education component, a cognitive behavioral skill building (CBSB) component, and 15-20 min of physical activity. Session topics consisted of 15 lessons on healthy lifestyles through nutrition and physical activity, stress management, self-esteem, goal setting, effective communication. Educational content was reinforced through homework assignments, and student journals were used to track progress toward goals. The CBSB content was delivered via practice and role playing to help reinforce skills learned. Pedometers were issued to participants to log their daily steps, with the goal of reinforcing the physical activity and education components of the COPE TEEN intervention.

The attention control intervention program was identical in length to the COPE TEEN intervention and was delivered across 9 weeks in a second school health classroom. The education component covered general health topics such as first aid, acne, safety, and health profession careers. The physical component was nonexistent in the attention control program, but student participants were still given a pedometer with basic instructions on how to use it.

Data analysis was completed on 17 of the 19 participants who completed baseline and post-intervention assessments. Chi-square, *t* tests, and effect sizes were used to assess outcomes. Results showed that participants in the COPE TEEN intervention were less anxious, less depressed, and more committed to making healthy choices. Results from the BYI-II for the COPE TEEN group show a significant decrease in anxiety from pretest ($M = 54.83$, $SD = 12.45$) to posttest ($M = 50.64$, $SD = 8.72$, $ES = -.56$, $p < .10$). The BYI-II showed a similar level of

reduction in depression scores from pretest ($M = 53.25$, $SD = 13.06$) to posttest ($M = 50.64$, $SD = 9.87$, $ES = -.32$, $p = .11$). Students in the attention control group showed a small decrease in anxiety but an increased level of depression, according to the BYI-II results. Regardless of intervention, students in both groups showed increased commitments to make healthy choices, according to results from the HLCS. The COPE TEEN group had average pre-post scores increased from 54.5 to 58.91 ($ES = .48$, $p < .10$), whereas the attention control group's average scores increased from 57.14 to 61.83 ($ES = .41$, $p = .20$).

The results for students in the COPE TEEN program were superior to the control group. This intervention program not only benefited students who had an anxiety or depression diagnosis, but also benefited the general school population through its delivery into a high school health classroom. By utilizing this program in existing health classes, it is potentially a lower-cost alternative to other CBSB programs. Unlike other CBSB programs delivered in schools, students did not miss valuable class time from other classes.

The COPE TEEN intervention program shows a lot of promise and should be further explored in a full-scale randomized controlled study. The current study yielded positive results, but limitations of the study including a small sample size and absence of assessment of longer-term outcomes prevented generalizability of results.

Melnyk et al. (2013) wanted to expand their pilot study of the COPE TEEN program by investigating its efficacy and generalizability across high school health classes. This study aimed to measure both the short-term and longer-term outcomes on the lifestyle behaviors, social skills, level of depression and anxiety, academic performance, and body mass index of high school students.

This full-scale randomized control trial had 779 participants from 11 different schools across two school districts in both an urban and suburban area in the southwestern region of the United States. Participants ranged in age from 14-16 years old, were 51.6% female, and represented multiple ethnic backgrounds (67.6% Hispanic, 14.1% White, 9.9% Black, 4% Asian, 3.5% Native American, and 1% Other). Nearly 22% of participants scored in the elevated range on the anxiety subscale of the BYI-II and approximately 16% scored in the elevated range on the depression subscale of the same inventory. Each of the 11 schools was randomly assigned to either the COPE TEEN group ($n = 358$), or the control group ($n = 421$). The assignments were made at the school level versus the classroom to prevent cross contamination of results.

Measurement instruments and scales used in this study included the BYI-II, the HLBS, *the Nutrition Knowledge Scale*, *the Activity Knowledge Scale* (Melnik & Small, 2003b), *the Acculturation, Habits, and Interests Multicultural Scale for Adolescents* (AHIMSA; Unger et al., 2002), *the Healthy Lifestyles Perceived Difficulty Scale* (PDS; Melnik, 2003c), *the Social Skills Rating System* (SSRS; Gresham & Elliot, 1990), anthropometric measures (used in the health analysis), and a pedometer.

The structure of the COPE TEEN intervention consisted of 15 weekly sessions during the regularly scheduled class time of a high school health classroom. Each session lasted the entire class period and included a 30-min educational component with a specific topic for the week, plus a 20-min physical activity component. Educational content covered during the weekly sessions included: healthy lifestyles, coping, positive thinking, stress reduction, problem-solving, and eight sessions focused on physical activity and nutrition. The Healthy Teens control group intervention also consisted of 15 weekly sessions that were 50-min in length. The sessions focused on general health topics such as health literacy, health professions, immunizations,

allergies, oral hygiene, safety, and first-aid. The control group did not have a physical activity component; it was focused entirely on adolescent general health topics. Homework was assigned during these sessions to reinforce skills and also included four take-home newsletters to review with parents for credit. All participants (students, teachers, and parents) received various gift card incentives ranging from \$10—\$25 throughout the study, and teachers received a \$100 stipend at the end of the study.

Linear mixed models and ANCOVAs were used to assess the outcomes of this study. Overall results of this study showed that the COPE TEEN intervention positively affected academic performance, psychosocial outcomes, body mass index, and level of physical activity in both the short-term and long-term at 6-months post intervention.

The COPE group scored significantly higher on all three subscales of the SSRS compared to the Healthy Teens control group: Cooperation (COPE: $M = 15.50$, Control $M = 14.59$); Assertion (COPE: $M = 13.30$, Control: $M = 10.41$); Academic Competence (COPE: $M = 97.97$, control $M = 95.69$). COPE participants also earned a higher letter grade in health class compared to the control group. Across groups, BYI-II scores slightly decreased for anxiety and depression. No differences were reported between groups on the BYI-II for anxiety or depression at post-intervention or at 6 months post-intervention, with the exception of participants who had extremely elevated depression scores on the BYI-II.

COPE participants with extremely elevated pre-intervention scores had significantly lower post-intervention scores compared to the Healthy Teens control group ($F_{(1,12)} = 6.98$, $p = .02$). Post-intervention mean scores were 44.43 for the COPE group ($SD = 5.53$) and 66.23 for the Healthy Teens group ($SD = 5.12$). Seventy-eight percent of participants scored the

COPE TEEN intervention as helpful, and 92% of parents thought the program helped their student.

Although other studies investigating this intervention reported significant reductions in anxiety and depression scores when compared to a control group, this study did not yield the same results on these measures. The authors speculated this might have been because the teachers led the intervention program instead of trained researchers. This possibly contributed to lack of treatment fidelity. Another limitation was related to how academic performance was measured, which in this study was the health class letter grade. In the future, changes in standardized test scores should be considered as a measurement of success.

The COPE Healthy Lifestyles TEEN intervention program had already been studied in several urban and suburban school districts, so colleagues Hoying, Melnyk, and Arcoleo (2016) broadened existing research by studying the feasibility, efficacy, and overall acceptability of this intervention in rural America. They selected young Appalachian adolescents for this study due to the prevalence of obesity and mental health issues at rates higher than national averages.

A sample of 102 eighth-graders enrolled in a health class was selected to participate in the study. Of these students, 29 agreed to participate, but only 24 completed the study through post intervention. Participants had a mean age of 13.6 years, were 52% female, 100% White, and 48% of the participant families received public assistance. Instruments used in this study included the BYI-II, the HLBS, and a post-intervention questionnaire.

The COPE TEEN program consisted of 15 sessions held during health class across 15 weeks. These sessions included CBSB to help students learn how to modify their dysfunctional thinking to change their behaviors and how they feel. Students learned the ABC framework (Activator event, Belief that follows, and Consequence of the belief) and practiced using this

framework with real-life scenarios. Educational content was covered across seven sessions and included positive thinking, self-talk, problem-solving, setting goals, dealing with stress, coping, and dealing with emotions in a positive way. The remaining eight sessions covered the areas of nutrition and physical activity. Homework assignments reinforced the weekly lessons and were an essential component of this program.

The study was designed as a pre-post test pre-experimental design with just one group. Data were analyzed using paired sample *t*-tests to measure changes in scores on the BYI-II and HLBS from pre-post intervention. At post-intervention, students' self-concept scores increased, they felt less anxious and had less disruptive behaviors, and they demonstrated an increased level of participation in practicing healthy lifestyle behaviors learned during the intervention. The most notable score improvements were on BYI-II subscales, which had small to medium ES for pre-post mean scores. The HLBS scores also demonstrated positive results when comparing pre-post means. The COPE TEEN program was also well received by students and parents and is feasible to deliver in a middle school health class. On the post intervention questionnaire, 92% of the students thought COPE TEEN was beneficial, and 94% of parents thought it was beneficial.

The COPE TEEN model has an effective design by combining a CBSB component with physical activity and nutrition components. The CBSB component decreases anxiety and depression symptoms, improves self-concept, and as a result may result in healthier lifestyle behaviors.

The results from this study are positive, but further research is needed given the following limitations of the study. First, a control group was not included. Second, the results cannot be generalized across a larger population because of the small sample size. Last, longer-

term outcomes were not assessed. The results of this study warrant a larger scale randomized control trial for this program in the future.

Other School-Based Mental Health Interventions

Schoenfeld and Mathur (2009) studied the effects of the *FRIENDS for Life* anxiety intervention on academic engagement, behavior, and anxiety. Study participants were selected from a southwestern U. S. private school for students diagnosed with EBD. Three students were selected for participation using a teacher nomination and standardized screening process. All three participants were male, in the sixth grade, and took psychiatric medication. Two were Caucasian, and one was of Hispanic origin.

The *FRIENDS* intervention consisted of two 30-min individual cognitive behavior sessions per week using the structured curriculum. Each student participated in 12 sessions led by one of the authors of this study. Session topics included relaxation techniques, self-talk, strategies for managing and coping with anxiety, and the processes of self-evaluation and self-reward. Due to time constraints, the homework and parental involvement piece of the intervention were excluded. Instruments and measurement techniques used included the *Child Symptom Inventories IV* (CSI-IV; Gadow & Sprafkin, 2002; Gadow, Sprafkin, Salisbury, Schneider, & Loney, 2004), the *Intervention Rating Profile for Teachers* (IRP-15; Martens, Witt, Elliott, & Darveaux, 1985), direct observation measurement of academic engagement by independent observers, and a behavioral points system.

This study employed a multiple-baseline design to measure the intervention's effect on academic engagement and behavior. Data analysis consisted of descriptive analysis and visual inspection. Participant levels of generalized anxiety as measured by the CSI-IV showed a

significant reduction in anxiety levels pre-post intervention. Before the intervention began, students scored in the high range or high-moderate range of anxiety scores and at post-intervention students were in the low range or low-moderate range of anxiety scores.

At the end of the 10-week study, all participants increased academic engagement and improved behavioral performance. Participant A's academic engagement increased 19% from baseline ($M = 78\%$), to post-intervention ($M = 93\%$). Participant B demonstrated a 41% increase ($M = 63\%$, $M = 89\%$) and participant C increased by 40% ($M = 64\%$, $M = 90\%$). All three participants' behaviors also improved. The mean number of daily positive behavior points increased by 15% from pre-post intervention: Participant A ($M = 80\%$, $M = 95\%$), Participant B ($M = 71\%$, $M = 88\%$), and Participant C ($M = 74\%$, $M = 89\%$).

Results from this study demonstrated *FRIENDS for Life* was an effective cognitive behavioral intervention that improved anxiety levels, behavior, and academic engagement. These results were significant given the fact the intervention was delivered in a school setting, facilitated by an interventionist who was self-taught on the *FRIENDS* CBT program, and did not utilize all components of the intervention (due to time constraints). Schoenfeld and Mathur (2009) speculated that more rigorous training might result in additional gains. They also noted this was the first study to examine the effects of the *FRIENDS* intervention delivered in a school setting to students who have EBD.

Although study results were positive and showed promising results, the researchers noted the single-subject research design limits generalization. Further studies are needed across a broader group of participant demographics to make the results generalizable to a larger population. The use of a control group would make the findings more robust. In addition, no

participant follow-up was conducted after 3-months post intervention to determine if the positive gains were maintained over a longer time.

Ginsburg et al. (2012) studied the effectiveness of CBT versus usual care (UC) in a pilot randomized control trial delivered to 32 students, ages 7 to 17 with (AD) in inner-city Baltimore schools. Of the 32 students who met study criteria, 44% had generalized anxiety disorder (GAD), 25% had social anxiety disorder, 25% had separation anxiety disorder, 6% had other anxiety or phobias, and 63% had a comorbid disorder—typically another type of AD. The 20 female and 12 male students were mostly African American, of low socioeconomic status, and lived in single-family homes or homes in which the student's parents were not married. Seventeen students were randomly assigned to the CBT group and 12 to the UC group.

A wide range of assessments, questionnaires, and indexes were used to establish baseline anxiety data and overall treatment response. Four tools were used to assess anxiety disorders and symptoms: the ADIS-C/P, the CGI, the CGAS, the *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997), the *Screen for Child Anxiety-Related Emotional Disorders-Parent and Child Versions* (SCARED; Birmaher, Brent, & Chiappetta, 1999; Birmaher, Khetarpal, Brent, & Cully, 1997), the *Children's Automatic Thoughts Scale* (CATS; Schniering & Rapee, 2002), and the *Brief Symptom Inventory* (BSI; Derogatis & Melisaratos, 1983). Other measurement tools used in this study were the *Parenting Stress Index-Short Form* (PSI/SF; Abidin, 1995) and the *Urban Hassles Index* (UHI; Miller & Townsend, 2005; Miller, Webster, & MacIntosh, 2002).

The CBT program consisted of weekly sessions that lasted 30-45 min across a 12-week period and took place in the school guidance counselor office. Eight different topics were included in the group CBT sessions: psychoeducation, exposure, rewards, cognitive restructuring, relaxation, relapse prevention, and problem-solving. The CBT participants

received take-home handouts related to the weekly topic, and two researchers supervised the sessions. The UC program also provided weekly sessions across a 12-week period lasting for 30-45 min during the school day. The UC program contained interventions that the clinician had experience in such areas as supportive therapy or art therapy to help students deal with their anxiety.

Therapists received specific instruction to refrain from using CBT strategies in the UC sessions. However, because they provided therapy to both CBT and UC students, it was difficult not to utilize CBT principles in the UC sessions. For both the CBT and UC programs, parents were invited to participate in at least sessions to receive information about the interventions, have any questions answered, and learn CBT skills (only in the CBT program).

According to the results of this study, both the CBT and UC interventions had relatively the same number of treatment responders as those who no longer had AD post treatment. No significantly different results were found between the CBT intervention and UC intervention. Treatment responder rates for CBT and UC as measured by the CGI-I ranged from 41% to 65% at post treatment and 1-month follow-ups. The percentages of those who no longer had AD at the 1-month follow-up were 43% for CBT and 50% for UC. The ANCOVA results for treatment effects showed no significant differences between CBT and UC on AD severity at post-intervention assessments. This study also found that having a positive working relationship between the student and clinician did not make a difference in treatment response.

One limitation in the study was that the same clinicians provided therapy to both groups, which may have resulted in a crossover of interventions that could potentially skew results. A second limitation of the study was that it was not generalizable across a broader population given the small sample size.

Kang-Yi, Mandell, and Hadley (2013) investigated how SBMH services affected school outcomes such as attendance, suspensions, and academic performance. From school and Medicaid records, researchers identified 468 students from the Philadelphia school district to participate in this study. Students ranged in age from 6 to 17 and included 76.1% African Americans and 73.5% males. They were identified with a variety of mental health disorders: 44.9% with attention deficit hyperactivity disorder (ADHD), 41.5% with Conduct Disorder, and 23.6% with other types of emotional behavioral disorders.

Two intervention programs were assessed in this study: the School-Based Behavioral Health program (SBBH) and the School Therapeutic Staff Support program (School TSS). The SBBH model is designed as a group-counseling model that focuses on the specific needs of the student and meets during the school day, whereas the School TSS model involves having a one-to-one aide assigned to the student who accompanies the student in the classroom throughout the day.

A total of 249 students were enrolled in the SBBH program; 219 were enrolled in the School TSS program. Within the SBBH group, 53% had an ADHD diagnosis, 3.2 % had an IEP at pre-intervention and 60.6% had an IEP post-intervention. School TSS group data showed 52.1% were diagnosed with Conduct Disorder, 2.3% had an IEP pre-intervention, and 43.8% had an IEP post-intervention. Program data were collected over a 3-year period: Year 1 = pre-intervention data, Year 2 = intervention data, and Year 3 = post-intervention data. To evaluate outcomes, researchers analyzed data regarding the percentage of students moving on to the next grade level, school absenteeism rates, school suspensions, visits to the local Crisis Response Center (CRC), and the number of inpatient psychiatric stays.

T-tests, ANOVAs, linear regression models, and chi-square statistics were used to measure differences between the two interventions on school outcomes. To determine the overall effect of SBBH and School TSS on attendance, suspension, and school outcomes, a multilevel analysis approach was used.

Overall, the results of the study demonstrated that the SBBH program had a greater positive effect on measured school outcomes and was significantly different than the School TSS program for grade promotion, attendance, and suspensions. However, neither program had a significant impact on reducing the frequency of CRC visits or inpatient psychiatric care. Post-intervention data showed that 92.4% of students in the SBBH group were promoted to the next grade level, whereas 83.6% of the School TSS group was promoted ($p < .01$). Absenteeism decreased from an average of 2.02 days to 1.83 for the SBBH group, but stayed the same for the School TSS group ($p < .05$). The average number of out-of-school suspensions decreased pre-post from .10 to .0004 for SBBH, and decreased .11 to .01 for the School TSS group ($p < .05$).

The results from this study provide evidence that SBMH services are beneficial to student school outcomes such as grade level promotion, attendance, and suspension rates. Student outcomes from the intervention participants improved, or at a minimum stayed the same. Kang-Yi et al. (2013) recommend caution when interpreting grade-level promotion data. Specifically, a larger percentage of students in the SBBH group were placed on an IEP just after the intervention started compared to the School TSS group. This could potentially have contributed to a higher percentage rate of grade promotion because requirements may have been different for students with an IEP.

The research team of Weems et al. (2015) wanted to determine if providing interventions for test anxiety would help improve the symptoms of other emotional disorders. A total of 325

youth students from five urban schools in the Gulf of Mexico region of the United States were selected to participate in the test anxiety intervention study. This region was selected because of the high potential of anxiety disorders from the aftermath of Hurricane Katrina. Of the 325 students originally selected for the study, approximately half completed the intervention and three follow-ups across a 2-year time span. Ultimately, 157 students participated in the intervention group, and 94 students were in the waitlist control group. Ninety-one percent of the student participants were African-American, 53% female, and 94% qualified for the free school-lunch program.

The intervention consisted of five sessions delivered in small groups of 4–8 students that taught students to use relaxation techniques. In addition, students were exposed to items or situations that commonly produced test anxiety symptoms. Several instruments were used in this study to measure test anxiety, depression, anxiety disorders, posttraumatic stress disorder (PTSD), and perceived control in fearful situations including the *Test Anxiety Scale for Children* (TASC; Sarason, Davidson, Lighthall, & White, 1958), the *Revised Child Anxiety and Depression Scale* (RCADS; Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000), the *Anxiety Control Questionnaire-Child Version* (ACQ-C; Weems, Silverman, Rapee, & Pina, 2003), and the *Post Traumatic Stress Disorder Reaction Index for Children* (PTSD-RI; Frederick, Pynoos, & Nadar, 1992).

The data were analyzed using hierarchical linear modeling. Results from the test anxiety intervention group demonstrated overall significant effects from treatment. Specifically, the intervention group had a larger decrease in test anxiety scores pre-post intervention ($t_{(164)} = 8.25$, $p < .001$) compared to the waitlist group ($t_{(117)} = 4.73$, $p < .001$). The PTSD symptoms of students in the intervention group also decreased significantly from pre to post intervention

($t_{(161)} = 3.03, p < .01$), whereas the waitlist group did not report any significant PTSD reductions. Like the reported reductions in test anxiety and PTSD, intervention students also reported large reductions in RCADS scores pre-post interventions, but no similar changes occurred in the waitlist intervention group. Follow-up analyses conducted over 2 years showed that initial gains made in the reduction of test anxiety were maintained.

The results of this study demonstrated that school-based test anxiety interventions not only significantly decreased the level of test anxiety, but also significantly reduced depression and other anxiety disorders. Because there is a potential link between test anxiety symptoms and other anxiety-related issues, schools that identify students with test anxiety may also help detect and treat other disorders that often go unnoticed.

One specific limitation of the study is that it was not a pure randomized control trial, so there may be some selection bias. A general limitation of this study is that it did not measure the effects on academic outcomes, which is an important component in determining the efficacy of the intervention.

Chapter 2 Summary

I examined 10 studies across a 10-year period that reviewed a variety of school-based interventions for secondary school students with anxiety disorders. Table 2 outlines the key findings from these studies, which are presented in the same order as they are presented in Chapter 2. These findings are discussed in Chapter 3.

Table 2**Summary of Chapter 2 Findings**

AUTHORS	PARTICIPANTS	PROCEDURE	FINDINGS
Masia-Warner, Klein, Dent, Fisher, Alvir, Albano, & Guardino (2005)	42 students in grades 9-11	Intervention, pre and post-treatment assessments by self, trained evaluators, and parents	<ul style="list-style-type: none"> • Significant reductions in social anxiety and avoidance, • Improvement in overall functioning • Demonstrated transportability of CBT into schools
Warner, Fisher, ShROUT, Rathor, & Klein (2007)	36 students ages 14 to 16	Randomized control trial, SASS intervention	<ul style="list-style-type: none"> • Social anxiety interventions in school settings is efficacious • Clinical improvement still demonstrated 6 months later
Mazurek Melnyk, Kelly, & Lusk (2014)	16 adolescents aged 14-17 years	Surveys, COPE intervention/treatment, post-program evaluation by the participants	<ul style="list-style-type: none"> • COPE group intervention delivered in school settings shows promising results • Significant decreases in anxiety noted according to the Beck Youth Inventory • Positive increases noticed in handling negative emotions
Melnyk, Jacobson, Kelly, O'Haver, Small, & Mays (2009)	19 adolescents aged 14-16 years	Randomized controlled pilot study, COPE Healthy Lifestyles TEEN intervention	<ul style="list-style-type: none"> • COPE group showed significant decrease in anxiety & depression scores on the BYI-II • Both groups committed to making healthy lifestyle choices
Melnyk et al. (2013)	779 adolescents aged 14-16 years	Full-scale randomized control trial, COPE Healthy Lifestyles TEEN intervention	<ul style="list-style-type: none"> • COPE group scored significantly higher on all 3 SSRS social subscales • COPE group had significant reduction in BYI-II scores for those who had extremely elevated levels of depression
Hoying, Melnyk, & Arcoleo (2016)	24 adolescents aged 13-14 years	Pilot Study, one-group pre-posttest pre-experimental design, COPE Healthy Lifestyle TEEN intervention	<ul style="list-style-type: none"> • Feasible to deliver in middle school health classes • Decreased anxiety & depression symptoms • Improved self-concept
Schoenfeld & Mathur (2009)	Three sixth grade students attending a self-contained EBD classroom	Direct observation by teachers, and multiple baseline design	<ul style="list-style-type: none"> • Participants in a school-based CBT intervention showed improvements in: Anxiety, Maladaptive behavior, and Academic engagement
Ginsburg, Becker, Drazdowski, & Tein (2012)	32 youth, ages 7 to 17	Pilot randomized control trial and treatment, pre-post interviews for assessment	<ul style="list-style-type: none"> • Similar reductions in anxiety symptoms with CBT delivered by school-based clinicians or UC • No differences in efficacy noted between CBT delivery personnel

Table 2 (continued)

AUTHORS	PARTICIPANTS	PROCEDURE	FINDINGS
Kang-Yi, Mandell, & Hadley (2013)	468 Medicaid eligible students ages 6-17 years	Descriptive and multi-level data analysis	<ul style="list-style-type: none"> • Positive effects realized on school outcomes with SBMH services • Less expensive, and less restrictive school-based behavioral health (SBBH) programs more efficacious than school therapeutic support services (TSS)
Weems, Scott, Graham, Banks, Russell, Taylor et al. (2015)	325 at-risk youth ages 8-17 attending an urban school	Intervention, wait-list control comparison, pre-assessment, and post-treatment assessment, follow-up evaluations for 3 years	<ul style="list-style-type: none"> • Test anxiety associated with other forms of anxiety disorders • Interventions helped reduce test anxiety • Interventions can be cross- applied to help other anxiety issues • Test anxiety program can be successfully integrated into schools

Chapter 3: Conclusions and Recommendations

Students with anxiety disorders (AD) have lower academic achievement, poor self-esteem, and difficulty with social interactions with others, particularly with peer relationships (McLoone et al., 2006). They are also at increased risk of illegal drug use and depression. The purpose of this research paper was to examine types of school-based interventions implemented to support secondary students with AD and the effectiveness of these interventions. Chapter 1 focused on the background of AD with an overview of cognitive behavior therapy, and Chapter 2 provided a review of the literature on the outcomes and effectiveness of school-based interventions that target students' anxiety. In this chapter, I present conclusions, recommendations for future research, and implications for current practice.

Conclusions

I reviewed 10 studies that examined school-based interventions for secondary students with AD. In this section, I discuss themes from Chapter 2 as they relate to the two focus questions of this paper: types of school-based interventions to support secondary students with AD, and effectiveness of these school-based interventions in treating secondary students with AD. Three themes emerged from the studies in this literature review: (a) interventions with a CBT component that are successful in reducing AD long term, (b) general interventions that are not targeted are minimally effective in treating AD, and (c) interventions that can be successfully transported from a clinical setting into a school setting.

Longer-term success. All 10 studies demonstrated significant reductions in the level and severity of AD. Five studies measured success longer term and all five produced successful results (Ginsburg et al., 2012; Kang-Yi et al.; Masia-Warner et al., 2005; Melnyk et al., 2013; Warner et al., 2007; Weems et al., 2015).

The SASS intervention (Masia-Warner et al., 2005; Warner et al., 2007) resulted in a large decrease in the levels of social phobia with 67% to 73% of participants no longer meeting the DSM-IV criteria for social phobia longer term at the 6- to 9-month follow-up periods.

Research by Weems et al. (2015) showed gains made in reductions of test anxiety, PTSD, and RCADS scores were maintained at the 2-year posttreatment follow-up period.

General interventions. In the 2007 SASS intervention study (Warner et al., 2007), 6.7% of the participants in the control group who received the general *Educational-Supportive Group Function* (ESGF) intervention no longer had a diagnosis of social phobia at the 6-month follow-up posttreatment period; whereas, 73% of the SASS group no longer had a diagnosis of social phobia for the same period. Additionally, the social phobia severity ratings for the ESGF group at the 6-month follow-up period were significantly higher than those of the SASS intervention group.

The attention control intervention that Melnyk et al. (2009) delivered in a general education health class covered basic health topics such as first aid, acne, safety, and health profession careers. The students who participated in this general intervention had a small decrease in their anxiety, but their level of depression increased. Results from these studies show that general, non-specific interventions are not effective in treating anxiety disorders.

Transportable interventions. The results of all 10 studies reviewed in this paper demonstrate that it is feasible to transport these interventions from a clinical setting to a school setting. There are still challenges that will need to be overcome when implementing them in schools. In most cases, the number one challenge will be the availability of resources, as funding is scarce across school districts. The COPE TEEN intervention is a highly promising one to implement in schools because it can be built into the existing health class curriculum and be

delivered during the regularly scheduled health class period. By delivering COPE TEEN during health class, all students will benefit from the coping skills and healthy lifestyle components, not just those students with AD. The one obstacle when delivering the COPE TEEN intervention is that students might have to take two semesters of health classes versus the current requirement of one semester in order to accomplish the current state standards plus the intervention.

Recommendations for Future Research

In today's school environment, the standards and expectations of students are rapidly evolving. The expected level of academic rigor and success for all students continues to increase. The studies in this literature review primarily included interventions for anxiety, depression, and behavior. Additional research is needed to explore interventions that will help improve school outcomes such as attendance and academic performance for students with AD.

Kang-Yi et al. (2013) studied the SBBH intervention that aimed to improve school attendance, reduce the number of suspensions, and increase academic performance. This intervention should be considered for further research. If improvement can be made in the areas of attendance and suspensions, then some improvement in academic performance is naturally expected just by being in the classroom more often. In an effort to further prove the efficacy of the SBBH intervention, additional research should consider different school populations such as suburban or rural areas. Looking at different ethnic groups and including more females in the study intervention groups would be beneficial as well. If the SBBH intervention continues to be efficacious, then the academic performance component of the intervention should be expanded given that increased academic performance is an area of focus for all students.

The COPE Healthy TEEN intervention is quite promising given that it not only helped students with AD, but also was beneficial to the general student population. Pilot studies across

multiple groups of students showed that this intervention was superior to control groups, and it was feasible to deliver the program in a school setting. However, when the intervention was studied in a full-scale randomized control trial with 779 student participants, the results were not that different from the control group intervention. Researchers attributed this lack of differentiation due to teachers leading the intervention who had less experience delivering the intervention than trained researchers who delivered it in the past. Therefore, further research should be conducted to determine the best way to bring COPE TEEN into schools and how to effectively train educators so that students get the most out of the program.

Schoenfeld and Mathur's (2009) study on the *FRIENDS for Life* anxiety intervention demonstrated a reduction in anxiety levels and problem behaviors plus increased academic engagement for students with EBD. These positive results should be further explored in a larger scale study with more students who have AD, at the secondary school level. Additionally, the teacher training plan for this intervention should be reviewed and enhanced since this study yielded positive results with a teacher who was self-taught on the intervention and did not use all of the components due to time constraints. This program shows promise in helping students with AD be more successful in school from behavior and academic standpoints.

One of the most interesting findings from my literature review was the study by Weems et al. (2015) in which a test anxiety intervention focused on behavioral strategies to reduce test anxiety. The intervention not only reduced the level of test anxiety, but also significantly reduced depression and other anxiety disorders. Further research is warranted to see if the potential link between test anxiety symptoms and other anxiety-related issues is real and can be replicated. If it is replicated, this test anxiety intervention will also help educators detect and

treat other internalizing disorders that often go unnoticed. Finally, future test anxiety studies should be expanded to measure the effects on academic outcomes.

Overall, I see the three most important areas of future research for school-based interventions for secondary students with AD as being the most effective ways to deliver the intervention in school, the most effective ways to train educators on the intervention, and the measured academic outcomes of such interventions. All 10 studies demonstrated the feasibility of bringing the interventions into school, and now these intervention programs need to be fine-tuned and utilized in schools across the country with all students having access to them.

Implications for Current Practice

As a special educator, my job is to help students become successful life-long learners. I currently teach students with EBD who are in a Level III program, and I am responsible for teaching math, language arts, social studies, and science. The positive implications to me as a special educator are having tools and interventions available to use in my classroom that will help my students be successful both inside and outside of school.

All of my students attend a general education health class in the 10th grade, and I know they would enjoy and actively partake in the COPE TEEN program as part of the health class curriculum. In an effort to help bring this intervention to the health classroom, it could first be tested by the EBD teachers, and then launched as part of the standard health class curriculum where health teachers would lead the intervention. I envision the team of EBD teachers I work with sharing best practices around COPE TEEN with the health teachers through our Professional Learning Communities (PLCs). Another way to bring this intervention into the health classroom is for the health and special education EBD teachers to be trained on the

program at the same time. This would help build strength and support for the COPE TEEN and other intervention initiatives in the high school where I work.

All of the studies reviewed had some form of CBT built into them, and it is a benefit to special education teachers like me to have their students receive CBT at school. When students receive CBT from outside providers—such as a local counseling center—the special educator and case manager are not in the loop with regard to strategies that are effective for the student. As an example, when students experience anxiety issues in school, they freeze or forget coping strategies that they practiced in the clinical setting. If these strategies are learned and practiced in school, the teacher or case manager can help the student use strategies learned to help ease any anxiety issues they experience during the school day.

The more challenging implications of these AD interventions are the time and energy needed to learn and implement them. This must be viewed as a long-term investment in students. I believe that initially it will require more time inside and outside of the classroom than what I am doing today, but as I learn and use the intervention strategies, it will become easier and less time consuming, and the benefit will be seeing improved results from my students.

The implications to the field of special education are limited school funding resources to implement the interventions, and the lack of time to effectively train educators to successfully lead these interventions in the classrooms. A couple of ideas to encourage educators to learn how to implement and teach the intervention at school is to provide continuing education credits or provide a small cash stipend or incentive to those who complete the training, as was used in one of the COPE TEEN studies (Melnyk et al., 2013). A challenging aspect of implementation in schools is that school districts would expect to see improvements in academic performance as a return on their investment into these intervention programs. If improvements in academic

performance were not realized, some of the blame may be placed on the educators and that might be a risk that some are not willing to take, thereby impeding the effort of implementation into schools.

One way to offer support across the field of special education is for educators who learned and implemented these anxiety interventions to not only share best practices of implementation with their peers in school, but also across the entire school district, and with other districts in the area. Best practice sharing is an effective way to bring new ideas to broader audiences. Educators could share the things that did and did not work well when implementing the interventions. These experiences, when shared first hand from one educator to another, are the best sources of information and one of the best ways to support other educators.

Summary

Many adolescents experience anxiety, and symptoms are manifested at school. Adolescents with AD must be able to use strategies to deal with the anxiety issues, and they are more likely to apply these strategies when they are learned in the school setting. When interventions are delivered at school during the school day, students are more likely to attend all sessions and not drop out of the intervention program, when compared to participating in the intervention in a clinical setting. If they are successful in managing their anxiety and behavior and have good school attendance, students are better able to focus on academic performance. If students can see success in one area, they are more likely to see success in multiple areas of school.

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