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# School-Based Mental Health Services and Programs: A Review of the Literature

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**School-Based Mental Health Services and Programs:  
A Review of the Literature**

by

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## Chapter 1: Introduction

According to multiple reports (e.g., Marsh, 2016; Powers, Webber, & Bower, 2011), 20% or more of children and adolescents in the United States experience symptoms of diagnosable mental health disorders. Unfortunately, most children do not receive services that address their mental health needs (Paternite, 2005; Powers et al., 2011). When available, mental health services are delivered through special education programs in schools (Lendrum, Humphrey, & Wigglesworth, 2013). Yet, fewer than 2% of school-age children and youth receive special education services under the federal disability category of Emotional Disturbance (Kauffman & Landrum, 2013). The discrepancy between incidence rates and service suggest that many children and youth are in need of mental health support.

Data (James & Glaze, 2006) also revealed that children and youth with mental health disorders are more likely to be incarcerated than their age matched peers without mental health challenges. The U.S. Department of Justice reported that over half of all prison and jail inmates have a mental health disorder, and that 14% to 24% of them had a history of mental health disorders and many of them had not received treatment until they were admitted to jail or prison (James & Glaze, 2006).

The prevalence data suggest that American society must provide greater access to mental health services for children and youth to reduce their negative life outcomes. Some professionals contend schools are the ideal settings to provide the greatest access to the services and supports children and youth need to be functioning, productive, and participating members of society (Becker & Domitrovich, 2011; Burnett-Zeigler & Lyons, 2012; Hutchinson, Carton, Broussard,

Brown, & Chrestman, 2012; Paternite, 2005). School-based mental health services are collaborative programs that include assessment, prevention, intervention, referral, and counseling (Paternite, 2005).

### **Statement of the Problem**

This paper reviews literature on the impact of school-based mental health services and supports on students' academic and behavioral outcomes. The challenges associated with implementing these programs are also examined.

### **Research Questions**

Two questions guided this literature review. First, what educational, social, and emotional outcomes are reported for students who receive school-based mental health services and supports? Second, what challenges do professionals experience when implementing school-based mental health programs?

### **Importance of Topic**

As a special educator and case manager of students with emotional and behavioral disorders, I have been deeply invested in helping children overcome challenging behaviors associated with their mental health diagnoses. Colleagues often seek my assistance to address behavioral concerns, and I am often referred to as the "behavior specialist." However, I am not a mental health professional, and the special education services I provide are not always sufficient to meet the complex needs of our students.

Through my investigation I hope to gain a better understanding of the programs that can be implemented to ameliorate the social, emotional, and behavioral difficulties of our students. I

an embarking on this journey to determine which evidence-based practices lead to increased student performance.

### **Historical Background**

The study of children's mental health, or child psychiatry, was initiated and evolved at Johns Hopkins University between 1890 and 1945. Initially, efforts were driven by a desire to view social problems as a medical goal, but between the 1920s and 1940s, Psychiatrist Adolf Meyer became a leader in changing the purpose and approaches in treating children's mental health. Meyer had a progressive mindset, and he was especially interested in determining how the environment and varying human responses to environmental stressors influenced behavior. He sought to intervene at the community level rather than solely at the individual level. A student of his, Leo Kanner, wrote the book *Child Psychiatry in 1935*, giving this specialized expertise its official title (Han, 2012). The inhumane institutionalization of many individuals with disabilities and poor conditions of hospitals housing those with mental deficiencies in the United States during this era brought about a desired societal shift among child welfare reformers to work together in order to take care of all people (Levine, 2015). However, prior to the development of the National Institute of Mental Health (NIMH) in 1949, mental health professionals were lacking and those that were trained lacked experience with children. Even though the NIMH provided necessary training and funding for mental health professionals to be equipped to meet the mental health challenges in the United States, many of them opted to enter private practice rather than public practice (Levine, 2015).

The birth of children's mental health as it is known today came about some time later with the report of the Joint Commission on Mental Health and illness and the acceptance of the Community Mental Health Act in 1963 in response to the deinstitutionalization movement in the United States. The significant needs for mental health services for children became known in 1969 via a Joint Commission on Children's Mental Health, driving the focus of training mental health professionals towards the needs of children. In 1978 a President's Commission specifically addressed the significant needs for mental health intervention among children. This encouraged funding for children's mental health, but it continued to be inadequate due to a lack of direction and designation (Levine, 2015).

Much like the field of Child Psychiatry, theoretical models of children's mental health dramatically evolved over time. Sigmund Freud was an Austrian neurologist who was known for publishing many theories to explain neurotic behavior of humans. He was most known for his belief in human instinct, unconscious thoughts, infantile sexuality and dream analysis. Freud believed that human behavior is influenced by instinct. He determined that all human behavior belongs in two categories of instincts: the Eros and the Thanatos. The Eros includes instincts that serve to please the body and the Thanatos is known as the instinct to survive. Freud was also very passionate about infantile sexuality and believed that the strongest instinct was that of pleasuring the body; however, the Thanatos Theory indicated that he did not believe that all human behavior was the result of repressed sexual desires. Because much of his work and personal experiences lead him to believe that neurotic behavior was caused by an inability to bring unconscious thoughts or repressed memories to the conscious mind and deal with them

directly, he focused his treatment on helping his patients discover why they were experiencing neurosis and psychosis by allowing them to talk freely while he stayed silent (from <http://www.iep.utm.edu/freud/>).

Talk-therapy, or psychoanalysis, is still used. Psychoanalysis is used primarily in clinical settings as a treatment of mental health challenges today. Freud's theories, though dating back to the later 19<sup>th</sup> century and earlier 20<sup>th</sup> century, laid the foundation for many other theories and practices that continue to represent modern-day mental health interventions. Sigmund Freud had a significant influence on the development of mental health services and those who would continue to refine the mental health field (from <http://www.iep.utm.edu/freud/>).

Erik Erikson was one of the many individuals impacted by the foundational work of Freud. They met in Vienna, where Freud invited Erickson to study psychoanalysis. Erickson emigrated to and practiced in the United States of America. Three major publications in the 1960s and in 1980 communicated his psychosocial theory which encompassed several stages all individuals experience. Each of the eight stages he described has possible positive outcomes and conflicts to which individuals must respond and their response to these conflicts determines their success in the following stages. Their success has an impact on how their view themselves and society (Woolfolk, 2007). Urie Bronfenbrenner took Erikson's psychosocial theory further by illustrating how many social contexts affect development in his bioecological model of development. He recognized that human behavior is impacted by one's biology and environment. His model was highly influenced by reciprocal relationships between oneself and others within various social systems (Woolfolk, 2007).

Similar to Bronfenbrenner, Albert Bandura applied like ideas to develop the Social Learning Theory. He acknowledged both operant conditioning (the theory that behavior is more or less likely to occur based on reinforcement and punishment) and the idea that humans are affected by others. More specifically he explains that individuals are influenced by their analyses of their own experiences and by what they observe others doing and the effects of their actions. He believed that one's performance is not merely a reflection of ability or what has or has not been learned, but rather that performance is influenced by observations and incentives and may only occur ideally in certain situations or when prompted (Woolfolk, 2007). More recently, this theory has evolved into the social cognitive theory as Bandura has incorporated the influences of cognitive factors such as beliefs, self-perceptions, and expectations (Woolfolk, 2007). This theory suggests that one learns and makes decisions based on the consequences of their own actions and by observing the consequences of others' behavior (Woolfolk, 2007).

Biological theories are gaining ground in the mental health field. As the medical field advances with neuroimaging and genetic testing, many leaders in the mental health field are hopeful that we will someday be able to determine treatments based on biological markers as we do for other chronic diseases. Thus far, scientists have been able to identify genes linked to schizophrenia; brain differences that make it more likely one will develop post-traumatic stress disorder (PTSD) and overactive regions of the brain in people with symptoms of depression. It is not likely that a purely biological explanation will account for all mental illnesses does not account for environmental impacts; however, it is likely that discoveries such as these could

provide another piece to the puzzle and increase success with treatment of mental health illnesses (Weir, 2012).

**History of federal law.** Today, Special Education services are federally mandated. Due to overall low-quality facilities during the era in which individuals who differed cognitively, physically, or behaviorally were institutionalized, the federal government became more involved in the education of individuals with disabilities. They enacted the Education for All Handicapped Children Act (EAHCA) in 1975 is also known as Public Law 94-142 (PL-94-142). PL 94-142 ensured that all children with disabilities would have a free and appropriate public education (FAPE), ensured protection of the rights of students with disabilities and the rights of their parents, provided assistance to schools to provide necessary education to all students, and ensured successful intervention. It was with the enactment of this law that students with “serious emotional disturbance” (SED) qualified for such protection and educational intervention (Woolfolk, 2007).

In 1990, PL 94-142 was reauthorized and renamed the Individuals with Disabilities Education Act (IDEA). This reauthorization included services for individuals with disabilities between the ages of 18 and 21 years old, it added assistive technology services, and rehabilitation counseling and social work services. Students with autism and traumatic brain injury were included to receive services. Future amendments in 1991 and 1997 included emphasis on early intervention and preschool services, and supports to improve parent-school relationships. In 2004, major revisions took place when IDEA was once again revised. These revisions required that teachers be highly qualified, that paperwork be reduced, revisions to the

state assessment goals, required children with disabilities to participate in state and local assessments, required that compliance monitoring focus more heavily on student performance, and required that highly mobile children and children who are homeless receive FAPE and required more assistance to early intervention programs. A series of changes to procedural safeguards, particularly concerning suspension and expulsion of children with disabilities was also included in this revision (Woolfolk, 2007).

These mandates require that all students receive free and appropriate public education (FAPE). Theories of mental health issues suggest that there are likely biological, cognitive, and social components underlying the difficulties experienced by individuals with mental health issues. With increasing awareness of mental health needs, expansion in the scope of services offered to children with these needs has also been necessary. Districts provide a variety of mental health services through school counselors, school social workers, school nurses, special education teachers and behavior specialists, as well as school psychologists. Due to the recognition that schools are overwhelmed with increasing responsibilities and are not likely to have staff-student ratios to sufficiently and solely meet the needs of at-risk and identified youth with mental health needs, many schools partner with community agencies to meet these demands. Student practitioners, trained practitioners through University programs, mental health centers and medical health centers help fulfill the needs of students with mental health needs in the school setting (Paternite, 2005).

The spectrum of mental health services is vast, indeed. I reviewed studies including services provided by basically trained to expert practitioners in a supervisory position, providing

direct services within the school or in school-based mental health or health centers or clinics.

Providing mental health services on school campuses reduces stigma and increases accessibility to students making them the ideal setting for mental health intervention. The success of school-based mental health services and increased federal support has fostered recent growth of school-based mental health initiatives across the United States and globe (Paternite, 2005).

## **Chapter 2: Review of the Literature**

In Chapter 1, a rationale, a statement regarding the focus of my paper, and historical backgrounds of both community-based mental health services and the history surrounding school-based mental health (SBMH) services were provided. In Chapter 2, I review 15 studies dated between 2003 and 2017 addressing the results of school-based mental health programs involving either an in-school parental component or services delivered by clinicians in school settings and the implications SBMH presents for the educational system and its personnel. Studies reviewed are summarized in chronological order and include both quantitative data pertaining to changes in behavioral and academic qualities in children and adolescents deemed “at risk” or diagnosed with mental health disorders, as well as qualitative input related to factors contributing to the success of school-based interventions.

### **Focus and Scope of the Review**

This paper reviews the extant literature on the impact of school-based mental health services and supports on students’ academic and behavioral outcomes. The challenges associated with implementing these programs are also examined.

I used a number of strategies to locate research relevant to this topic. I searched the Academic Search Premier, ERIC, and PsycINFO databases computationally. An array of keywords were used in the searches. Representative terms include mental health in schools, school-based mental health services, school-based mental health supports, mental health intervention in schools, comprehensive mental health services and schools, comprehensive mental health services and students, mental health and public schools, intervention and emotional

disorders, as well as intervention and behavior disorders. To identify research I also reviewed of the tables of contents (2010-2014) of three journals: the *Journal of Clinical Child and Adolescent Psychology*, the *Journal of School Health*, and *Psychology in the Schools*.

The search yielded 15 quantitative and qualitative research studies published between 2003 and 2017. The majority of my findings reported the educational and social, emotional, or behavioral effects of school-based mental health interventions, and some described critical implementation components and challenges. I limited my research review to studies conducted in U.S. schools to provide more consistency regarding health care practices.

### **Review of the Literature**

This review is organized chronologically from earliest to most recent. Each summary is organized thematically. First information regarding the purpose, if provided and details about the population are explained. Second, methods and procedures for collecting data is described, followed by results of the studies and an explanation of any difficulties expressed by the authors and experienced by the stakeholders is provided.

### **Results of Studies Pertaining to the Success of School-Based Mental Health Programs**

Catalano, Mazza, and Harachi (2003) examined the effects of *the Raising Healthy Children* (RHC) program on children's academic and behavioral performance. Participants included 968 elementary students from 10 area schools in the Pacific Northwest that were paired based on socioeconomic status and attendance patterns. Students in general education first- or

second-grade classrooms were randomly divided into two groups: students receiving the RHC intervention and a control group.

Teachers of students in the treatment group attended workshops designed to reduce academic risks and aggressive behaviors and to enhance student motivation, cooperation, and problem-solving skills. After each workshop, RHC staff provided classroom coaching. Teachers also attended in monthly meetings to reinforce teaching strategies learned in the workshops and coaching sessions. Parents participated in five parenting workshops and in-home problem-solving training.

Teachers, parents, and students completed pre-post self-report scales. Teachers and parents measured commitment to school, academic performance, social competency, and antisocial behavior. Teacher ratings of antisocial behavior were comprised of 10 items from the *Teacher Observation of Classroom Adaptation-Revised* (Werthamer-Larsson, Kellam, & Wheller, 1991) and the *Teacher Behavior Checklist-Teacher Report* (Achenbach, 1991). Similarly, students in the treatment group answered yes or no to two prompts regarding friendships and social skills. The self-report antisocial scale required students to answer yes or no to eight questions addressing lying, breaking things on purpose, taking items from others, and teasing or making fun of others. The aforementioned measures were repeated in the spring of the first and second years of implementation.

Teachers reported students who received the RHC intervention had significantly higher ratings in commitment to school. According to teacher report measures, mean ratings for males increased from 3.20 to 3.28 and mean scores for females improved from 3.38 to 3.51. Average

academic performance improved among males receiving intervention (increasing from 3.25 to 3.30) compared to peers in the control group, whose ratings decreased throughout the study. Behaviorally, students in the RHC group improved significantly in social competence (teacher ratings increased from an average of 3.55 to 3.74 for males and from an average of 3.97 to 4.11 for females), whereas control students' ratings decreased. With regard to antisocial behavior, program students had significantly lower ratings and a decreasing growth rate, whereas control students had a higher level of antisocial behavior and an increasing growth rate. Teacher ratings of antisocial behavior among females decreased from 1.22 to 1.13.

Parent data revealed that the RHC program significantly improved school commitment and academic performance. Average ratings from parents regarding school commitment of males increased from 3.48 to 3.55 and remained stable for females. Males receiving intervention had a mean score of 3.63 in the spring of the final year of the study with regard to academic performance, whereas males in the control group received a mean score of 3.46. Females receiving intervention had an average rating of 3.58 in the spring of the final year of the study, whereas females in the control group had a mean score of 3.51. However, no effects were reported in the areas of social competence and antisocial behavior. The researchers noted that 53% of the parents either attended parent workshops or received a visit from the RHC staff. Therefore, approximately half of the parents did not participate. Student self-report data indicated no significant effects on social competency and antisocial behavior.

The authors concluded this universal prevention program was effective in reducing risk factors in school. They also indicated it supported the findings of other universal prevention

programs focusing on proactive comprehensive programs for students in primary grades. Even without parent involvement, the teachers were able to bring about significant changes in all four domains. The use of self-report data was cited as a possible limitation in this study that should be addressed in future studies.

Stein et al. (2003) evaluated the effectiveness of a school-based mental health intervention targeted at reducing children's symptoms of posttraumatic stress disorder (PTSD) and depression as a result of exposure of violence. They conducted a randomized-controlled trial during the 2001-2002 school years with 126 sixth-grade students from two large Los Angeles middle schools who were randomly assigned to a treatment group or comparison group. Sixty-one of these students received *Cognitive Behavioral Intervention for Trauma in Schools (CBIT)* during the trial and were compared to the other 65 students assigned to the waitlist delayed treatment group.

Students were assessed prior to intervention and 3 months subsequent to intervention using the *Child PTSD Symptom Scale (CPSS; Foa, 2001)* and *Child Depression Inventory (CDI; Kovacs, 1992)*. Parents reported psychosocial dysfunction on the *Pediatric Symptom Checklist (PSC; Jellinek & Murphy, 1998)*. Teachers reported classroom problems such as acting out, shyness or anxiousness, and learning problems using the *Teacher-Child Rating Scale (Hightower, 1986)*.

The manual-based *CBIT* was designed for use in an inner city school mental health clinic. It was implemented by two full-time psychiatric social workers and one part-time psychiatric

social worker who conducted *CBIT* sessions in small groups of five to eight students once per week.

Baseline assessment revealed that students in the treatment groups and students in the treatment wait-list delayed group had similar child, parent, and teacher ratings. However, after 3 months of intervention, students in the treatment group had significantly lower self-reported symptoms as compared to those in the delayed group (8.9 and 15.5, respectively). This equates to an estimation of 87% of students reporting lower ratings of symptoms of PTSD than would be expected had they not received intervention. After 6 months, when the delayed group had also received intervention, no significant differences were found in self-reported scores of PTSD and depression symptoms. Parents of students in the intervention group reported significantly less psychosocial dysfunction at 3 months than parents of students in the delayed intervention group (16.5 and 12.5, respectively). This equates to 78% of parents of children who underwent intervention reporting significantly less psychosocial dysfunction than they would have had their children have not received the *CBIT*. At 6 months, after the treatment delayed group received intervention, parent reports of psychosocial dysfunction for both groups were similar. Teachers did not report significantly different scores between the treatment group and the group on the waitlist delayed treatment plan.

In general, the *CBIT* intervention significantly improved self-reported symptoms of PTSD and depression as well as parent-reported signs of psychosocial dysfunction as compared to students with similar exposure to traumatic events and with similar baseline symptoms and

ratings, but who were not receiving intervention. *CBIT* has potential to significantly improve mental health difficulties experienced by youth in the public school arena.

In 2003, Weiss, Harris, Catron, and Han conducted an experiment with their invention of the RECAP (Reaching Educators, Teachers, and Parents) program—a modified combination of techniques that have been validated as beneficial to individuals with concurrent internalizing and externalizing behavioral challenges designed to encompass three broad categories of intervention: coping skills training, problem-solving skills training, and parent training.

Three elementary or elementary-middle schools lacking in-school mental health services and educating children “at-risk,” which was defined as greater than 70% of the student population receiving free and reduced lunch rates, were selected to participate in the experiment. School-based intervention was chosen due to schools being a prime location to provide students and their family greater access to mental health supports. Self-reported, peer-reported, and parent-reported mental health screening measures addressing the internalizing domains of anxiety, depression, and somatization, as well as the externalizing domains of aggression, hyperactivity and delinquency were used to select participants. The externalizing and internalizing scores were combined for an overall “psychopathology” score and any student scoring one standard deviation above the mean on any of the three measures by at least two informants qualified to participate and were randomly assigned to control or treatment groups.

Three clinicians (one social worker and two psychiatric nurses, all with clinical experience) participated in 2 days of formal training and were required to read the manuals and review the materials prior to implementing the RECAP program. Parent-, teacher-, peer- and

self-reports were collected prior to or at the beginning of the school year for baseline. Parent-, teacher-, and self-reports were obtained twice throughout the year and peer-reports once in the middle of the year. A posttest was provided to all informants as a final assessment of progress related to concurrent internalizing and externalizing behavioral difficulties.

Improvements in parent, peer, and self-report scores on internalizing and externalizing behaviors and acceptance from peers were evident when comparing pre-post outcomes. Parent reports of internalizing and externalizing behavior challenges improved from an average score of 12.8 to 9.0 and from an average score of 19.6 to 15.0, respectively. Self-report scores of internalizing and externalizing behavior challenges improved from an average score of 25.3 to 21.2, and from 20.1 to 18.3, respectively. Most significantly, the rate of change for the treatment group was significantly greater than it was for the control group. Interestingly, teacher reports revealed no significant improvement in regard to acting out and learning.

In conclusion, the RECAP intervention had a significantly positive outcome for students who exhibited comorbid internalizing and externalizing behavior challenges.

Massey, Armstrong, Boroughs, Henson, and McCash (2005) conducted a qualitative analysis of the challenges to implementation, operation, and sustainability of mental health services in a large urban school district. The purpose of the study was to examine the differences among experiences of school personnel and community mental health service providers who received funding from the Safe Schools/Healthy Students Initiative (SS/HSI).

A total of 22 representatives from 12 SS/HSI programs participated in focus groups as part of the study. Participants included professionals from community agencies who provided

prevention programs and direct service interventions to children, youth, and families. The participants had at least seen one another and most had participated together in monthly meetings regarding district grant efforts. Participants were divided into four small focus groups based upon their experiences: (a) school-system prevention programs, (b) community-based prevention programs, (c) school-system intervention programs, and (d) community-based intervention programs.

Ninety-minute focus groups were conducted over a 6-week period near the end of the grant implementation phase. Each participant was provided a discussion guide with questions that focused on variables contributing to the grant's success, changes they made or would make during the program, and strategies they used or would use to ensure program continuation. Additional probes were conducted to advance conversation among participants. The researchers conducted content analyses of verbatim transcriptions of audiotapes and review of field notes.

Results revealed no differences between groups with regard to accountability and program flexibility, which was an unexpected finding. All service providers routinely supplied data for program monitoring, and often provided more documentation than required. They also had no difficulties in adapting their programs to the school setting.

Differences among focus group members were due to (a) the prevention or intervention focus of the program, and (b) whether the program was offered by internal provider (school) or under contract with an external provider (community). Two major areas of differences were identified: supports and challenges to school integration and sustainability efforts.

**Supports and challenges to school integration.** Community members were concerned that locating the program in the school did not provide the program with status and legitimacy. In addition, they indicated they had difficulties accessing resources and materials needed for program implementation and knowing whom to contact. Service providers outside the school setting struggled with creating meaningful relationships with staff and understanding their place in the school. Possible explanations of these obstacles included misunderstandings of the referral process and program content, as well as a lacking awareness of the external programs. Both internal and external programs felt the urge to advertise their program to gain support.

Staff also discovered that the success of their program was dependent on the level of support of the school administrator and other staff. When support was evident, the program was more effective. Lack of communication among programs was a common theme for both external and internal providers.

The issue of obtaining informed consent was an issue of serious concern for direct service providers, who deal with the delivery of mental health services in a clinical setting. Providers reported educators did not understand the importance of informed consent as part of the treatment process.

**Sustainability efforts.** Striking differences were observed with regard to program sustainability efforts. External staff focused their efforts to maintain financial support for program continuation by grant writing, presentations made to funding agencies in the community, and lobbying the school board. Internal service providers worked within the district

by disseminating information, promoting the program to the district administration, and training staff to continue when grant funds ceased.

In general, communication and interpersonal factors posed a significant impact on the success of school-based mental health services in this study. It was crucial for administration and staff to support program implementers. Educating parents, students, school personnel, and community members made a difference in the levels of support program staff received as well as in the overall achievement of programs. External clinicians found it more difficult to establish the role of their services in the school environment and reported a need for opportunities to promote their efforts. Fiscal components and access to materials were also a challenge to implementing school-based mental health interventions.

Terzian and Fraser (2004) conducted a study reviewing six school-based programs requiring on-site parental involvement for the purpose of discovering strategies to improve behavior and drug use in public school settings. The six programs reviewed were: the Baltimore Classroom Centered/Family-School Program (CC-FSP) Prevention Trial; the Linking the Interests of Families and Teachers (LIFT) program conducted in Oregon; the Promoting Alternative Thinking Strategies (PATHS) program in North Carolina, Tennessee, Washington and Pennsylvania; the Raising Healthy Children (RHC) program implemented in Washington, the Seattle Social Development Project; and the Families and Schools Together (FAST) program implemented in multiple national and international sites. These sites were chosen because they utilized an experimental or quasi-experimental design with a control group component. They

included a universal component, encompassed a family intervention, and provided clear descriptions of intervention components.

Most of the programs targeted youth in poverty-stricken areas with more than half of the students receiving free-and-reduced lunch. Common program goals included reducing antisocial behavior and mental health problems among children and adolescents, improving prosocial behavior and cognitive problem-solving skills, building overall social competence, and improving peer relations. Other objectives typically addressed included improving academic performance, encouraging prosocial peer groups, developing attitudes against drugs and violence, strengthening the partnership between homes and schools, and providing additional increasing classroom curricula and management strategies as well as teachers' understanding of problem-solving strategies.

Across studies students receiving intervention exhibited less antisocial behavior and performed more social skills as compared to those in the control groups. Children in intervention groups were also less likely to engage with antisocial peer groups and more likely to have prosocial relationships with peers as compared to students in the control groups. Compared to students not receiving intervention, students in the treatment groups were less likely to engage in health risk behaviors such as sexual activity and drug use and less likely to exhibit violent behavior. Lastly, students exposed to treatment conditions were more likely to show improved academic performance.

Based on their review of the results of these six studies, Terzian and Fraser (2004) concluded that crucial strategies for use of school-based interventions include strengthening

skills of children, parents, and teachers. Particularly, they suggested that teachers receive training related to managing classroom disruptions, understanding peer dynamics, and promoting positive learning environments. In addition, increasing opportunities for teachers and parents to communicate and promoting positive relationships between parents and teachers is important to the success of any intervention program. Last, Terzian and Fraser suggested that promotion of connections between children and parents is a critical component to any successful program aimed to improve student behaviors in public schools. It is reasonable to conclude that all programs were successful in accomplishing objectives related to behavior, mental health, relationships, and academic performance and that certain elements are imperative to the success of school-based intervention.

In a 10-year study, the Conduct Problems Prevention Research Group (CPPRG, 2007) tested the efficacy of the Fast Track Program in preventing behavioral and psychiatric problems of students in four high-poverty public elementary schools in Durham, NC; Seattle, WA; Nashville, TN; and rural central PA. Schools were matched demographically and paired so that two schools received the intervention and one school was the comparison site. Using three screening measures, 891 students were selected as participants and were divided into two groups based on moderate to high levels of disruptive behaviors. A total of 387 students participated in the control group.

In grades 1-5, families and children in the intervention group were provided with parent training and home visits to address academic tutoring and social skills training needs. In first grade, paraprofessionals provided 30 minutes of reading tutoring during the enrichment program

and two more reading sessions each week, as well as a weekly friendship group for targeted students. Twenty-two weekly group meetings were conducted in first grade, 14 biweekly sessions were conducted in grade 2, and 9 monthly meetings were held each year in grades 3 through 6. After first grade, criterion-referenced assessments were used to adjust how often and how intensely the aforementioned components were delivered to meet the needs of individuals and their families. Additionally, monthly sessions in grades 5 and 6 addressed transitioning to middle school, drug-free behavior, and sexual development. Workshops addressing identity and vocational goal setting were held for students in grades 7 and 8. Individualized intervention plans were implemented for all participating youth from grades 7 to 10 based on assessment outcomes following grades 3, 6, and 9. In addition to small-group and individualized interventions, classrooms in grades 1 to 5 implemented an adaptation of the *Alternative Thinking Strategies* curriculum in order to reduce aggression and improve social and emotional knowledge. Two to three lessons per week were delivered to classrooms of students in the treatment group.

Following the first, third, and ninth grades, criterion counts and psychiatric diagnoses for conduct disorder (CD), oppositional defiant disorder (ODD), attention deficit/hyperactivity disorder (ADHD), and any externalizing disorder were used to determine effects of the program. Self-reported antisocial behavior was also used to determine the effectiveness of the program.

**Grade 3 results.** Mean criterion counts for ODD among the highest-risk youth receiving intervention (1.29) as compared to that of the control group (2.09) indicated that intervention significantly reduced the criterion counts as severity of risk increased. This was also true for ADHD criterion counts. Mean ADHD criterion counts for youth in the intervention group were

6.64, whereas the mean count for the control group was 8.14. Similarly, as the severity of risk increased the incidence of psychiatric diagnoses decreased. The rate of any externalizing diagnosis was 38% among the highest-risk intervention group members in contrast to 53% of the control group. The rate of CD diagnosis was 11% among the highest-risk intervention group members compared to 20% of those in the control group. Furthermore, the likelihood of ODD diagnoses among the highest-risk children and youth was reduced by more than half with implementation of the various intervention components.

**Grade 6 results.** As supported by results after grade 3, mean criterion counts for ADHD among the highest-risk students receiving intervention and assessed after grade 6 were significantly fewer than those in the control group (3.62 compared to 5.85, respectively). Criterion counts for CD and ODD and incidence of all psychiatric disorders yielded marginally significant results.

**Grade 9 results.** Intervention appeared to significantly lower self-reported antisocial behavior among youth in the treatment group as compared to youth in the control group. In fact the mean score for self-reported antisocial behavior for the intervention group was 2.04, whereas the mean score of the control group was 2.74. Mean CD and ADHD counts were significantly lower for the highest risk intervention group (0.63 and 2.96, respectively) than the control group (1.41 and 5.79, respectively). Similarly, diagnoses of any externalizing disorders decreased with severity of risk. Twenty-six percent of the highest-risk youth in the treatment group, compared to 46% of youth in the control group, were diagnosed with an externalizing disorder. Similarly,

for the highest-risk students, the probability of diagnosis of CD was reduced by nearly 75%. and the probability of diagnosis of ADHD was reduced by half.

Overall, the Fast Track intervention proved to have a significantly positive impact on preventing childhood and adolescent psychiatric disorders as well as antisocial behavior for those students initially marked as highest risk. Such positive effects were detected throughout the 10 years of the study. In contrast, the intervention had limited impact on improving behavioral variables of students who were initially marked as moderate risk. Although the lengthiness of this intervention may have accounted for its success, the CPPRG noted that the length and costliness of the Fast Track intervention may outweigh the benefits. They suggested the intervention be limited to only those considered to be at highest risk for developing behavioral and psychiatric disorders.

Jacobs et al. (2007) examined factors related to treatment responders and non-responders in a school-based intensive mental health program (IMHP). Fifty-one children (40 boys, 11 girls) ages 5-13 years participated in the study. All of these children met the federal criteria for emotional disturbance (ED) and were considered to have “critical need[s]” (p. 224). In addition, the participants had been provided prior interventions that were ineffective.

Students were enrolled in the IMHP from 1 to 48 months. They attended regular classes for half a day and spent the remaining 3 hours in the IMHP classroom. During this time, students participated in a behavior management program and received collaborative evidence-based psychosocial and biomedical interventions.

The *Child and Adolescent Functional Assessment Scale* (CAFAS; Hodges, 1989) and chart reviews were used to analyze response to treatment. For the purpose of this study, total scores of over 140 indicated a need for intensive intervention; scores between 100 and 130 suggested a need for more than outpatient care with multiple support services, scores between 50 and 90 indicated a need for additional services beyond outpatient care, and scores between 20 and 40 suggested a need for only outpatient care. In addition to CAFAS scores, chart reviews and daily records provided extensive information.

At baseline the two groups did not differ significantly with regard to age, gender, ethnicity, placement, average length of time in IMHP, and history of suspected or confirmed emotional or physical abuse and neglect. The mean score on the CAFAS at intake for responders was 121.4, and the mean score for non-responders was 132.5. Following intervention, 16 students were categorized as non-responders and 35 considered responders; the mean score for responders was 45.71 and 126.88 for non-responders. Significant differences between the two groups were found in their history of suspected or confirmed sexual abuse and types of diagnoses. More than 62% of non-responders had a history of sexual abuse compared to 28.6% of responders. Internalizing disorders were more common among those who did not respond to treatment as compared to responders (93.8% compared to 65.7%). Also, 87.5% of those who did not respond to treatment were characterized by comorbid externalizing and internalizing disorders, whereas 51.43% of responders experienced this co-occurrence of disorder.

Despite the fact that all the children in this study met criteria for ED and had not responded to previous intervention, overall, the children responded well to the school-based

IMHP treatment. Surprisingly, this intervention proved most beneficial to students with externalizing disorders and those who had experienced physical or emotional abuse and neglect. However, those who did not benefit were most likely to have comorbid internalizing and externalizing disorders and a history of sexual abuse. Research must continue to address what is needed, where it is needed, and with whom and for which disorders or symptoms and variables it is needed and successful.

Shirk, Kaplinski, and Gudmundsen (2009) evaluated the effects of cognitive behavioral therapy (CBT) for 50 youth (34 girls and 16 boys) between the ages of 14 and 18 years who were diagnosed with depression. The CBT was offered in health clinics and counseling centers in four high schools in the Rocky Mountain West. A total of 36 students met study criteria and completed 12 sessions of manual-based CBT delivered by doctoral-level psychologists. Cognitive, behavioral, and interpersonal modules educated students to restructure their thinking, use coping strategies, utilize social skills, and improve problem-solving abilities.

Trained clinicians administered several pre- and post- outcome measures: the Mood, Anxiety, and Disruptive Behavior Disorder modules of the computer assisted version of the Diagnostic Interview Schedule for Children—Version IV (C-DISC-IV; Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000), the *Beck Depression Inventory* (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), and 25 items from The *Life Events Questionnaire* (LEQ; Masten, Neemann, & Andenas, 1994) were administered to measure “total life stress” and “trauma history” (Shirk et al., 2009, p. 110). The results of these measures were later analyzed to identify significant predictors of treatment response (Shirk et al., 2009).

Percentages of response were derived based on whether or not participants met diagnostic criteria for depressive disorder at post-treatment. Response was defined as participants no longer meeting criteria. This percentage was compared to response rates of seven similar studies in order to determine its value. The average response rate among the seven studies was 56.5%, whereas the response rate for this study was 64%. In addition, the BDI results indicated that 72% of the participants in this study fell within the normative range at post-treatment. Of the 14 possible predictive associations measured, four were reported as statistically significant: high levels of stress, severity of depressive symptoms at pretreatment, exposure to traumatic events, and number of CBT sessions completed (Shirk et al., 2009).

Overall, the results of this study were more positive than previous studies. This study expanded the sample of participants to include students in school-based environments, whereas many previous studies to which it was compared were conducted in clinical or home-based settings. These data support that the role of school-based mental health as a beneficial bridge between education and mental health. This study also supports the idea that school-based mental health services such as CBT can positively impact emotional and behavioral symptoms experienced by adolescents with mental health disorders.

Jureska, Hamilton, and Peterson (2011) reported findings from a study conducted to evaluate the effectiveness of the Coping Power Program (CPP; Lochman, Wells, & Murray, 2007) with children who engaged in disruptive and hyperactive behaviors. A total of 119 students, aged 10 to 12 years, from four public schools in two rural counties in Oregon were

randomly assigned to either a control or intervention group. The intervention group consisted of 63 participants, and the control group consisted of 56 participants.

Two pre-post assessments were administered. Teachers completed the *Behavior Assessment Scale for Children, Second Edition, Teacher Rating Scale* (BASC-2 TR; Reynolds & Kamphaus, 1992) for all students. Students completed the *BASC-2 Student Rating Scales* (BASC-2 SR; Reynolds & Kamphaus, 1992). Four trained group leaders conducted 30-40-minute weekly CPP meetings with students in the treatment group during their recess or lunch times over a period of 6-7 months. Group leaders also attended bi-monthly meetings to ensure fidelity.

Significant differences between pre- and post-treatment results of the *BASC-2 TR* were evident in the Hyperactivity subscale, such that students receiving treatment decreased their mean score on the Hyperactivity subscale from 62.20 to 58.25 ( $p = .006$ ). Even though statistically significant results for the parent version of this assessment were not evident, it is reasonable to conclude from these data that school-based interventions such as the CPP can improve the outlook for children whose behaviors are associated with ADHD and prevent clinically significant mental health problems from surfacing in their futures (Lochman, Boxmeyer, Powell, & Qu, 2012).

Lochman et al. (2012) investigated the long-term effects of the school-based intervention, *Coping Power*, on academic outcomes in students with aggressive behaviors. A total of 531 students and parental figures participated in the study from 57 urban and suburban public schools in five school systems in Alabama.

Participants enrolled in the third grade and received intervention during their fourth- and fifth-grade school years. Students were randomly assigned to either the Coping Power intervention group or a control group.

Intensely trained and basically trained counselors were randomly assigned to treatment groups and conducted 34 small-group sessions for 50-60 minutes each. Control group participants were not exposed to the intervention and therefore were not assigned an intensely trained nor a basically trained counselor. Topics addressed in the group sessions accessed by those students in the treatment group included study skills, organization, emotional awareness, anger management, perspective taking, problem-solving, peer relationships, and resistance to peer pressure. In addition, individual meetings between students and their counselor leader occurred once monthly. Small-group 90-minute parent meetings also occurred biweekly. Subjects included skills to support students' academic success and positive behavior, stress management skills, behavior management, and positive family communication. Parents were also provided information regarding the skills their students were learning in their sessions so that they could reinforce students' use of their abilities outside of school.

An analysis of academic records for third through seventh grade indicated that students who received intervention from intensely trained counselors did experience significant and long-standing improvements in language arts. Mean score differences between intervention and control group students ranged from 2 to 10 points. Final assessment results revealed a mean score of 76.2 for students receiving intervention from intensely trained counselors, compared to a mean score of 66.2 for control group students. This positive effect on academic performance of

targeted at-risk students receiving intervention helped to slow the overall decline in grades over time.

Jureska et al. (2011) concluded school-based mental health interventions have potential to improve the academic performance of students at-risk for aggressive behavior. Even though *Coping Power* did not directly address academic performance, it produced significant long-term effects when presented by intensely trained counselors in the school setting. Thus, the authors concluded that when a student's social/emotional/behavioral needs are adequately addressed, their academic performance will concurrently improve and may continue to do so throughout their school years and even after intervention ceased.

Kang-Yi, Mandell, and Hadley (2013) examined the impact SBMHs had on children's attendance, suspension, grade promotion and utilization of serious mental health services. Four hundred sixty-eight students between 6 and 17 years-old and whom were receiving Medicaid at the time of the study between 2006 and 2007. All participants were also initially enrolled in one of two city-wide school based mental health programs. Kang-Yi et al. wanted to examine the outcomes of routine school-based mental health, as the majority of studies to date have examined the effects of temporary or novel programming.

Specifically Kang-Yi et al. (2013) conducted their experiment for the purpose of comparing school outcomes of youth receiving SBMH services and those not receiving such intervention. Kang-Yi et al. used analysis of variance (ANOVA) and linear regression to determine significant changes over time with regard to improving attendance, decreasing suspensions, encouraging grade promotion and reducing Crisis Response Center visits and

psychiatric hospitalizations. Comparisons were made between the group attending the SBMH program and the group enrolled in the Therapeutic Staff Support (TSS) program as well as to school-level data. The TSS program provided students more intense or restrictive 1-to-1 support.

Overall, children's attendance in the experimental group (those enrolled in the SBMH or TSS) improved from an average of 2.19 days of absence in 2005-2007 school years to 2.09 days in the 2007-2008 school year) while the average attendance school-wide worsened over time (1.62 days in the 2006-2007 school year to 1.73 in the 2007-2008 school year). The average number of monthly in-school suspensions increased, but the number of monthly out-of-school suspensions decreased significantly over the 2 years of the study (from .05 in the 2005-2006 school year and .100 in the 2006-2007 school year to .003 in the 2007-2008 school year). An approximate 13% increase in grade promotion occurred subsequent to program enrollment. Conversely, there was no statistically significant reduction in use of Crisis Response Centers or instances of psychiatric hospitalizations.

A multilevel analysis controlling for variables naturally present in the school setting confirmed statistically significant improvements in school outcomes for children enrolled in one of the two school-based mental health programs compared to the school level data between the enrollment year (2006-2007) and the post-enrollment year (2007-2008). This analysis also revealed that children enrolled in the SBMH were 63% more likely to be promoted to the next grade than children enrolled in the TSS and interestingly children enrolled in the SBMH were more likely to have an individualized education program (IEP) following enrollment. In addition, school-level absences and suspensions were significantly impacted at the individual

level. For every 1 day of additional suspension at the school level, the likelihood of suspension at the individual level increased up to 8.5 times. Per additional day of average absence at the school-level, the average absence at the individual level increased 47%. Last, this multilevel analysis indicated that grade promotion was more likely for individuals enrolled in the SBMH rather than the TSS and for those who were enrolled younger and who did not have a psychiatric diagnosis.

In sum, this study provided evidence that school-based mental health supports can lead to positive school outcomes for students with mental health needs. In addition, the data suggested that enrollment in a less restrictive setting like a SBMH program may be more beneficial to students than more restrictive settings such as the TSS and those who received earlier intervention were more significantly impacted. However, the data also cautions one to consider that severity of mental health disorders (such as those of the individuals more likely served in the TSS setting) may impact the quality of effects any program has at an individual level. Kang-Yi et al. (2013) also noted the importance of considering contextual factors when evaluating the effectiveness of any program, routine or otherwise, and urged readers to consider that previous studies have proved that attitude and belief systems related to student achievement may have a greater impact on school outcomes regardless of the program being implemented.

Powers et al. (2011) examined the importance of community collaboration to support school based mental health services. They studied the effects of researchers partnering with community members and other stakeholders (i.e., administration, school personnel, a local mental health clinician, families and students) on behavioral and achievement outcomes of

students in need of mental health services. Powers et al. noted that offering student mental health services in schools allowed greater access to such services by breaking down obstacles families often experience when seeking mental health services in clinical settings; most notably possession of insurance, or cost of services.

A pilot study was conducted in an elementary school in the southeastern United States. Stakeholders worked together to agree upon a referral process, provide training to school staff to better equip them to identify symptoms of common mental health disorders and related symptoms experienced by children, and brought in a mental health clinician to provide SBMH services to students identified as having symptoms of mental health issues. A local university provided assessment of the outcomes of this project. University personnel conducted individual interviews with administration and community leaders provided perceived successes and challenges of this SBMH program study. Input from teachers and caregivers were collected during focus group discussions.

The specific elements of the intervention or program were mutually prescribed by community leaders, the clinician, teachers, administration, and families. Collaboration was ongoing throughout the duration of the project. The school district and clinician met monthly to work through problems and agreed on how to amend services to improve student outcomes. The University continuously and honestly communicated details regarding funding, which was initially provided through a grant process initiated by a community leader affiliated with the University. According to Powers et al. (2011), these elements of collaboration were imperative to the success of the project.

The chosen district was purposely selected due to the demographics of students and families served. The district that partnered with the university to conduct this study had a high poverty rate and significant underachievement. Nearly 100% of students in the target school received free or reduced lunch rates. Also, 58.5% of students scored below grade level on the 2010-11 state standardized assessment of reading performance and 38.5% of students scored below grade level on such assessment of mathematical achievement. The population of male students and female students was nearly equal. The control and experiment schools served a similar population of students, were similar in size, and had similar achievement scores on state standardized tests and demographics.

Data were available for 61 students in the sample for this study. The sample represented all grades (K-5); however, grade information for three students was not recorded. Attendance and end-of-grade standardized assessment scores of students in the sample at the target school were contrasted to those of students in the comparison school. The number of proficient students on the state standardized mathematical assessment at the end of the school year in the target school was 68%. Similar performance of students in the comparison school (64.6%) on the same standardized measure of achievement was reported. There was a statistically significant difference between the number of proficient students receiving SBMH services and the number of proficient students in the comparison school in terms of performance on the state standardized reading assessment. In fact, 64% of the students receiving SBMH services in the target school were proficient in reading on the end of the year standardized tests, whereas 49.7% of students in the comparison school performed with proficiency on this same measure of achievement. Again,

due to lack of data collection prior to piloting this project, growth over time for individual students in the target school were not able to be analyzed. A total of 94 incidents of discipline referrals was reported; however, similar data was not collected from the comparison school nor was it collected prior to the pilot of the SBMH program in the target school; therefore, comparative and growth analyses were not able to be performed.

Overall, the data collected and analyzed through this study proved that collaboration between community leaders and districts to provide purposefully and personally designed SBMH services had a significantly positive effect on student achievement with regard to proficient performance on the end-of-year state standardized reading assessment. SBMH services did not have a statistically significant impact on attendance nor did it impact on proficiency on end-of-the-year state standardized mathematical assessments. Frequent and transparent communication between all parties was noted as an integral component of implementing SBMH interventions and allowed for this project to be sustained and expanded to six area schools. Many students were able to access services and treatments outside of the school setting as a result of SBMH.

In 2015, Montanez, Berger-Jenkins, Rodriguez, McCord, and Meyer published the results of a 2-year study on the effects of a School-Based Mental Health Prevention Program (SBMH-PP) titled Turn 2 Us (T2U). This program was implemented in an area of Manhattan, New York City with a dominant population of Latino youth. The program was designed in collaboration with community and school stakeholders using a Positive Behavioral Interventions and Supports (PBIS) model and extracurricular tracks to enhance social, behavioral, and academic performance of elementary-aged youth at risk for developing mental health disorders. The

program also included ample opportunities for parent and teacher education within the school setting. Montanez et al. were particularly interested in evaluating an intervention addressing mental health needs of underrepresented racial and ethnic backgrounds, and cited sources stating specifically Latino youth with mental health disorders are underrepresented and underserved. They also aimed to highlight important program components, especially collaboration between systems when designing the program because such collaboration can have a positive effect on emotional and behavioral problems our youth experience.

For this study, 182 students from two elementary schools were referred for intervention; however, 172 participated (62%, 30% and 8% of fifth-, fourth-, and third-graders, respectively). In addition, 32 teachers participated in the study. The students were referred based on teacher perceptions of their internalizing (i.e., extreme shyness or excessive fear or withdrawal from peers) and externalizing (i.e., attention-seeking or disruptive behaviors such as taking things from people, being disrespectful and talking out of turn, or interrupting) behaviors.

Multiple components were offered in this program. Students who were perceived as demonstrating internalizing behaviors were invited to participate in a 12-week creative art or dance program. They met one time per week after school in groups of no more than eight students. This program was provided by professionals with the CARING at Columbia program who promote self-efficacy, empowerment, coping and conflict-resolution skills through structured drama and dance experiences. A sports program, however, was offered to students with perceived externalizing behavior problems. Specific sports experiences were offered based on reported desire for them within the community. Each student's compliance in the classroom

settings determined their ability to participate in performances or tournaments. The sports program also invited youth not referred for intervention, and their participation was solely based on athletic or dance ability.

Students in both tracks also participated in a 12-week mentorship program offered to others in their like-track. They met weekly during recess with college graduates who were supervised by the program manager, a licensed bilingual and bicultural clinical social worker. They taught students how to use body and brain exercises in response to or to prevent stress (specifically stress associated with test-taking) and how to develop and live healthy lifestyles. They also used an adapted version of the Promoting Alternative Thinking Strategies curriculum to improve social and emotional skills.

Teachers were offered an average of six workshops to attend through the year to improve their ability to identify youth at-risk of developing mental health issues. These workshops also aimed to destigmatize mental health issues and provide strategies for classroom management that effectively addresses problem behaviors and maintains a positive environment for learning. Ninety-percent of teachers also attended an 18-hour training session over the course of 2 years. The session prompted awareness of mental health issues, empathy, and positive communication between teachers, parents and students. Sessions were provided by faculty from Columbia University to small groups of eight or less educators. Private consultations were also offered on an as-needed basis to support use of strategies teachers learned during the sessions and to address students' performance needs.

Caregivers were also offered ample educational opportunities to destigmatize mental health issues, develop effective strategies for disciplining their children and encouraging healthy lifestyle choices. A total of six workshops were offered at each site by the program manager. Caregivers were also offered the opportunity to attend an orientation and workshop held only for those with students in the T2U study, and 80% attended. Contrastingly, only 30% of caregivers attended team meetings with their child, teachers, and T2U staff to address needs and goals. A quarter of the caregivers took advantage of private consultations to address behavioral needs and obtain referrals for treatment-services. Last, in an effort to provide universally accessible resources, all handouts were provided at a fifth-grade reading level in both English and Spanish.

Teachers completed the *Student Assessment Survey* (SAS), which is a self-administered 16-item adaptation of the *Conners' Teacher Report Form* (Conners, Sitererios, Parker, & Epstein, 1998). The items on this form used a scale similar to the Likert rating scale. Statistical analyses suggested that significant improvements were made with regard to social and behavioral performances among students in the SBMH-PP and students with a higher-risk or greater level of need made more significant gains than those considered low-risk. In addition, absences decreased significantly as compared to attendance records of control students randomly selected for comparison. Scores on state assessments improved significantly; with more notable improvement in ELA scores than in mathematics scores. Scores were not able to be obtained for students in third grade during intervention prior to enrollment in the intervention program because they are only first administered in third grade.

In sum, Montanez et al. (2015) determined that when collaborative efforts among stakeholders and professionals reach caregivers, teachers and students, incorporate instruction related to strategies, understanding diversity, and healthy lifestyles, include organized participation in extracurricular activities based on a student's symptoms, and are culturally sensitive, they can have significantly positive effects on academic and behavioral performances of students. Moreover, they provided additional data that confirmed even students at high-risk of developing mental health issues can benefit from thoughtful and purposeful mental health services in the school setting. Their intervention was successful in improving academic and behavioral performances of elementary youth in a low socio-economic and high minority population in an urban setting.

Larson, Chapmen, Spetz, and Brindis (2017) reported the findings of their review of numerous empirical studies published between 2003 and 2013 examining the negative impact of childhood trauma, implications of mental health care for children, school-based mental health centers (SBMHCs), and the effects of SBMHCs on the academic achievement of youth in the United States. Their efforts were motivated by their understanding that “80% of youth in the United States have experienced trauma in the form of victimization” (p. 65) and 70% of youth (a disproportionate majority of whom are of low socioeconomic status) with mental health disorders do not receive mental health intervention), and that failure to receive such services can lead to serious disorders and potentially death by suicide.

They also noted that schools tend to be ideal locations to provide such services because of their access to children and that some studies have proven that school-based mental health

services have a positive impact on school performance of youth. In fact, students were 21 times more likely to initiate services in a SBMHC than they were to initiate such services in a clinical setting.

Larson et al. (2017) reviewed 10 studies specifically examining the impact of mental health disparities on academic achievement. Eight of these studies revealed a significant impact of mental health issues on academic achievement. These experiments used standardized test scores to measure impact, whereas the two studies that revealed no statistically significant impact of mental health issues on student achievement utilized self-reports of grades.

Larson et al. (2017) examined two experiments that specially studied the impact of SBMHCs on academic achievement of youth. Both studies examined data for group of students over the time of their studies. Both experiments also used a master's level mental health practitioner to provide services in the school setting. One of the studies examined the rate of high school dropout to determine if SBMHCs positive impacts academic achievement, whereas the other study examined attendance and GPA to determine the effects of SBMHCs on academic achievement of students. In one study SCBMHCs mental health services significantly impacted GPA, but did not significantly impact attendance. The reverse was true for those students who utilized the SBMHC for medical health services, rather than mental health services. In the other study high school dropout was less likely for those students utilizing SBMHC services at a mild or moderate frequency than students who did not receive SBMHC services, while those who utilized these mental health services at school at a high frequency were more likely to drop out than students who did not receive such services at all. This was likely due to the correlations

between students with serious mental health needs using the services more frequently; therefore concluding that students with greater mental health challenges are more likely overall to drop out of school.

In sum, Larson et al. (2017) concluded that mental health disparities among youth are a significant issue for schools as they predict underachievement in school. Schools are a focus for mental health services due to the fact that many implications of clinical mental health services are not relevant in a school setting and because of accessibility to students. SBMHCs have a generally positive impact on GPA and have reduced dropout rates for students who receive SBMHC services at mild or moderate frequencies. Students with more severe mental health needs are most likely to receive SBMHC services at high frequencies and students who received services at high frequencies are more likely to dropout than students who do not receive mental health services through the SBMHC.

### Chapter 3: Conclusions and Recommendations

The purpose of this paper was to examine the effects of school-based mental health services on academics, social, emotional, and behavioral outcomes of children and adolescents in the United States. This paper also examined the challenges of implementing SBMH services in schools.

#### Conclusions

I reviewed 15 studies in all. Of these studies, eight addressed academic performance. SBMH effects on academics were measured using grades or GPA, scores on standardized academic assessments, attendance, drop-out rates, and grade promotion. Ten of the studies reviewed social, emotional, or behavioral outcomes, and five studies addressed critical components of success or obstacles of SBMH programming.

**Social, emotional, and behavioral outcomes.** One study spoke to the impact of SBMH services on substance abuse. Specifically, Lochman et al. (2007) as cited in Jureska et al. (2011) found that students receiving SBMH services displayed consistently lower rates of substance use at post-intervention. Lochman et al. (2007) also noted that SBMH has positive effects on students' social competence and their ability to self-regulate. Catalano et al. (2003), CPPRG (2007), Lochman et al. (2012) and Montanez et al. (2015) further supported social skill improvements as a result of SBMH services. In fact, Catalano et al. provided evidence of declined social competence among the group of students not receiving SBMH intervention. In addition, statistically significant improvements in self-regulation and behavior skills were noted in Lochman et al. (2007).

Lower ratings and criterion counts, or symptomatology, of mental health diagnoses were reported by Stein et al. (2003), the CPPRG (2007), Jacobs et al. (2007), and Shirk et al. (2009). In addition, Catalano et al. (2003) reported decreased antisocial behavior and increased prosocial behavior in youth receiving SBMH services. Weiss et al. (2003) noted statistically significant improvements in internalizing and externalizing behaviors of youth who received SBMH intervention. General statistically significant improvements in behavior of students who received SBMH support were further supported by Atkins et al. (2006), Kang-Yi et al. (2013), and Montanez et al. (2015).

The results of a longitudinal study conducted by the CPPRG (2007) indicated sustained improvements in social, emotional and behavioral outcomes of SBMH throughout 10-year period. Jureska et al. (2011) found that SBMH services can also decrease demonstrations of hyperactivity in students with ADHD or like symptoms and therefore prevented more serious mental health issues or illnesses in the future. Interestingly, Jacobs et al. (2007) proved that intense mental health services in schools can lead to emotional and behavioral improvements for students who have not responded to less intense interventions.

**Academic outcomes.** Academic outcomes were not found to be as consistent as social, emotional, and behavioral outcomes of students receiving SBMH services; however, trends were still evident. Improvements in academic performances were noted in eight of the nine studies I reviewed. Statistically higher academic performances and school commitment of students receiving SBMH services were reported by Catalano et al. (2003). Students receiving SBMH services also performed significantly better on standardized English Language Arts (ELA) or

reading assessments in two studies (Montanez et al., 2015; Powers et al., 2011), and did not perform better on standardized ELA assessments in one study (Lochman et al., 2012). Montanez et al. (2015) determined that students who were not considered to be at greatest risk of developing mental health problems, but whom were receiving SBMH intervention, also significantly improved their performance on standardized mathematics assessments. Lochman et al. (2012) also reported significantly higher mathematics scores on standardized assessments among those receiving SBMH interventions. However, Powers et al. (2011) did not find significant differences in standardized math assessment scores between students receiving SMBH services and those in the control group.

Other improvements such as a 13% increase in grade promotion after enrollment in SBMH services (Kang-Yi et al., 2013) and significantly higher GPAs among students attending SBMH services (Larson et al., 2017) were also reported. However, Weiss et al. (2003) and Stein et al. (2003) both reported no effect of SBMH treatment on grades. Some students, those not attending SBMH services at the highest frequencies, were reportedly less likely to dropout (Larson et al., 2017), whereas attendance overall did not seem to be positively affected by SBMH services in studies conducted by Weiss et al. (2003), Stein et al. (2003), and Kang-Yi et al. (2013). Interestingly, improved attendance of those receiving SBMH services was reported in one study (Montanez et al., 2015).

**Challenges of school-based mental health programming.** Several elements of SBMH programming were reported as critical to the successes of treatment. Ongoing collaboration between internal and external stakeholders, including parents, was stressed as a critical

component and potential barrier to successful school-based mental health programming (Massey, Armstrong, Boroughs, Henson, & McCash, 2005; Montanez et al., 2015; Powers et al., 2011; Terzian & Frazer, 2004). Montanez et al. also noted the importance of including students in ongoing communication regarding programming.

Stakeholder attitudes and awareness can also pose challenges to successful SBMH programming. Specifically, enthusiasm of school personnel is a key element of successful school-based mental health intervention (Massey et al., 2005; Powers et al., 2011). Massey et al. (2005) also noted the importance of administrative support and buy-in. However, one can only be supportive of that which they are educated about, so to foster buy-in among stakeholders, it is imperative SBMH programming include training components for school personnel and parents (Powers et al., 2011; Terzian & Frazer, 2004).

A few other components were reported to either positively or negatively impact the success of SMBH programs. Flexible programming that is informed by the culture of the students and families it is supporting is critical to its effectiveness (Larson et al., 2017; Massey et al. 2005; Montanez et al., 2015). When mental health services are based in the school setting, barriers such as insurance and accessibility to students needing such support are not a deterrent to needed services (Larson et al., 2017). Accurate and consistent record keeping, especially informed consent, also contribute to the effectiveness of SBMH programming (Massey et al., 2005).

**Summary of conclusions.** In sum, academic and SEB performances did seem to be positively impacted by SBMH services. Though not conclusively supported, SBMH intervention

has led to improved performance on state standardized assessments, grades, and grade promotion or commitment to school in many studies. SBMH services have also proved to significantly impact social competence, emotional regulation and behavioral performances of children and adolescents in the United States. Lack of academic and SEB growth was noted amongst those students with the most complex mental health needs or those attending SBMH services at the highest frequencies. Students with complex needs such as comorbid externalizing and internalizing disorders or those who have been victims of trauma are not as likely to respond to treatment.

Overall, mental health needs significantly impact school success, have significantly impacted society and threaten the quality of life and future outcomes of children and adolescents in our schools. Districts and their interdisciplinary teams experience hurdles such as communication, program consistency, and funding such as sustaining funds to support long-term treatment and insurance challenges. These elements are important for districts and teams to consider when planning their continuum of SBMH services. With careful and comprehensive programming, school-based mental health services can have significantly positive effects on academic, social, emotional, and behavioral performances of children and adolescents and potentially change the trajectory of their futures.

### **Recommendations for Future Research**

Mental health and behavior are naturally ambiguous and therefore, most measurement tools used in the studies I reviewed are at least somewhat subjective, which makes results difficult to interpret definitively. Overall, many of the studies reviewed for the purpose of this

paper used rating scales which are standardized and therefore likely reliable. However, several different measures were used; therefore resulting conclusions of academic, social, emotional, and behavioral weaknesses and strengths are relative. On a related note, some studies utilized self-reported data which should also be interpreted with caution due to rater bias. Future researchers should select assessment tools that are objective or at least standardized. Most of the studies I reviewed were implemented in urban settings, and so additional research should be conducted in rural districts as well. Many studies reviewed in this paper had relatively small sample sizes. Future experiments addressing larger populations in urban locations and meta-analyses examining the effects of SBMH services with similar designs would provide greater confidence in results and conclusions.

Further research addressing funding sources and sustainability efforts is imperative to the future success and long-term effects of SBMH programming in schools. On a related note, updated studies addressing the long-term effects and generalization of skills developed through participation in mental health interventions provided in schools to other natural settings are necessary. Challenges encountered during implementation of SBMH were only directly reported in five studies I reviewed; therefore, readers may want to delve deeper into integral elements of successful SBMH supports. Overall, providing continued evidence that SBMH services are necessary and effective in improving the lives of students in and outside of school will only grow support and implementation of this necessary practice, positively impacting the future of students with mental health needs.

### **Implications for Current Practice**

With mental health issues resulting in potentially devastating futures of our youth, educating and treating students with social, emotional, and behavior issues is imperative. Mental health is a vast and equivocal presence, so educators should know that intervening can be overwhelming. Colleagues and the media often state that teaching is a stressful occupation and mental health issues of many of our students is one of the reasons for this stress. With time of the essence during the school day, and with teachers already carrying out an overwhelming number of responsibilities, adding frequent communication with community stakeholders, clinicians, funding sources, school staff, and parents is likely to be perceived as cumbersome to say the least. In addition, upon reflecting on recent conversations with colleagues about the possibility of SBMH services, it is apparent that fears of increased behavioral challenges following potentially sensitive sessions with therapists or clinicians during the school day are contributing to skepticism and reluctance to initiating SBMH services.

It is important districts do not view SBMH as a stand-alone solution to the implications of student mental health problems in schools. Rather, SBMH should be viewed as one component to meeting the mental health needs of our students. Teams should carefully and comprehensively plan services with a collaborative mentality. We need to talk with one another and learn from previous planning a implementation errors. We need to reflect on our efforts often in order to perfect our interventions while keeping in mind they are in fact imperfect due to the varying complexities of mental health.

Studies reviewed in this paper spoke passionately about the necessity of stakeholder buy-in. In the field of special education, professionals often serve as advocates and spokespersons for new, research-based best practices. Educating our colleagues, continuing to partner with social workers, clinicians and parents or caregivers, is perhaps our most fundamental duty in the effort to establish SBMH in our districts. Simply communicating, however, is not likely to promise change. Fluid, ongoing, honest, and flexible teamwork among all stakeholders is essential. Many of us already do this as a basic expectation of our professions, but perhaps we can do it with more focused intent, more often, and with all those with vested interest in our students.

Finances and lacking or inadequate health benefits also prevents positive systemic change from taking and maintaining flight. Parents and caregivers run into financial challenges and insurance difficulties, deterring and even preventing them from seeking the services their children need. Schools and outside agencies run out of funding through grants and much of the time interventions cease with funding. Connecting parents or caregivers with local or county services may contribute to overcoming such financial hassles. Stakeholders should also become familiar with the grant-writing processes in their district. Communicating with those in administrative roles (e.g., principals, superintendents of school districts, coordinators of special education services, directors of special education services, etc.) and the local school board members may also provide insight to possible financial resources. In order to sustain school-based mental health services, however, change will likely need to occur at the level of our U.S. government.; therefore, teams should be familiar with the legislative processes and participate in

them on the behalf of students with mental health needs who are being unsatisfactorily served in our school systems and would likely make significant progress with school-based mental health services. The future of our society and quality of life of our students depends on our action as educators. Based on research, school-based mental health is likely to contribute to their progress academically, socially, emotionally, and behaviorally.

## References

- Achenbach, T. M. (1991). *Manual for the teacher's report form and 1991 profile*. Burlington, VT: University of Vermont Department of Psychiatry.
- Atkins, M. S., Frazier, S. L., Birman, D., Adil, J. A., Jackson, M., & Graczyk, P. A., et al. (2006). School-based mental health services for children living in high poverty urban communities. *Administration and Policy in Mental Health and Mental Health Services Research, 33*, 146-159.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). *Beck depression inventory (BDI)*. [Assessment Instrument] Philadelphia, PA: National Institute of Mental Health (NIMH).
- Becker, K. D., & Domitrovich, C. E. (2011). The conceptualization, integration, and support of evidence-based interventions in the schools. *School Psychology Review, 40*, 582-589.
- Burnett-Zeigler, I., & Lyons, J. S. (2012). Youth characteristics associated with intensity of service use in a school-based mental health intervention. *Journal of Child and Family Studies, 21*, 963-972.
- Catalano, R. F., Mazza, J. J., & Harachi, T. W. (2003). Raising healthy children through enhancing social development in elementary school: Results after 1.5 years. *Journal of School Psychology, 41*, 143-164.
- Conduct Problems Prevention Research Group. (2007). Fast track randomized controlled trial to prevent externalizing psychiatric disorders: Findings from grades 3 to 9. *Journal of the American Academy of Child and Adolescent Psychiatry, 46*, 1250-1262.

- Conners, C. K., Sitarenios, G., Parker, J. D. A., & Epstein, J. N. (1998). *Conners' rating scales, revised*. [Assessment Instrument] North Tonawanda, NY: Multi-Health Systems, Inc.
- Foa, E. A. (2001). *Child PTSD symptom scale (CPSS)*. [Assessment Instrument] Philadelphia, PA: Center for the Treatment and Study of Anxiety.
- Han, A. Y. (2012). *Children's mental health in the United States: The development of child psychiatry at John's Hopkins, 1890-1945*. (Unpublished doctoral dissertation). Berkley, CA: University of California—Berkley.
- Hightower, A. D. (1986). *Teacher-child rating scale*. [Assessment Instrument] Rochester, NY: University of Rochester.
- Hodges, K. (1989). *Child and adolescent functional assessment scale (CAFAS)*. [Assessment Instrument] North Tanawanda, NY: Multi-Health Systems, Inc.
- Hutchinson, P., Carton, T. W., Broussard, M., Brown, L., & Chrestman, S. (2012). Improving adolescent health through school-based health centers in post-Katrina New Orleans. *Children and Youth Services Review, 34*, 360-368.
- Jureska, D. E., Hamilton, E., & Peterson, M. A. (2011). Effectiveness of the coping power program in middle-school children with disruptive behaviours and hyperactivity difficulties. *Support for Learning, 26*, 168-172.
- Jacobs, A. K., Roberts, M. C., Vernberg, E. M., Nyre, J. E., Randall, C. J., & Puddy, R. W. (2007). Factors related to outcome in a school-based intensive mental health program: An examination of nonresponders. *Journal of Child and Family Studies, 17*, 219-231.

- James, D. J., & Glaze, L. E. (2006). *Mental health problems of prison and jail inmates*. Retrieved from <http://www.bjs.gov/content/pub/pdf/mhppji.pdf>.
- Jellinek, M., & Murphy, M. (1998). *Pediatric symptom checklist*. [Assessment Instrument] Boston, MA: Massachusetts General Hospital.
- Kang-Yi, C. D., Mandell, D. S., & Hadley, T. (2013). School-based mental health program evaluation: Children's school outcomes and acute mental health service. *Journal of School Health, 83*, 463-472.
- Kauffman, J. M., & Landrum, T. (2013). *Characteristics of emotional and behavioral disorders of children and youth* (10<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson.
- Kovacs, M. (1992). *Children's depression inventory (CDI)*. [Assessment Instrument] North Tanawanda, NY: Multi-Health Systems, Inc.
- Larson, S., Chapman, S., Spetz, J., & Brindis, C. D. (2017). Chronic childhood trauma, mental health, academic achievement, and school-based health center mental health services. *Journal of School Health, 87*, 675-686.
- Lendrum, A., Humphrey, N., & Wigelsworth, M. (2013). Social and emotional aspects of learning (SEAL) for secondary schools: Implementation difficulties and their implications for school-based mental health promotion. *Child and Adolescent Psychology, 18*, 158-164.
- Levine, M. (2015). Children come first? A brief history of children's mental health services. *American Journal of Orthopsychiatry, 85*, S22-S28.

- Lochman, J. E., Wells, K. C., & Murray, M. (2007). *The coping power program: Intervention at the middle school transition* (1<sup>st</sup> ed.). Washington, DC: American Psychological Association.
- Lochman, J. E., Boxmeyer, C. L., Powell, N. P., & Qu, L. (2012). Coping power dissemination study: Intervention and special education effects on academic outcomes. *Behavioral Disorders, 37*, 192-205.
- Marsh, R. (2016). Identifying students with mental health issues: A guide for classroom teachers. *Intervention in School and Clinic, 51*, 318-322.
- Massey, T. O., Armstrong, K., Boroughs, M., Henson, K., & McCash, L. (2005). Mental health services in schools: A qualitative analysis of challenges to implementation, operation, and sustainability. *Psychology in the Schools, 4*, 363-371.
- Masten, A. S., Neemann, J., & Andenas, S. (1994). *Life events questionnaire (LEQ)*. [Assessment Instrument] Society for Research on Adolescents.
- Montanez, E., Berger-Jenkins, E., Rodriguez, J., McCord, M., & Meyer, D. (2015). Turn 2 us: Outcomes of an urban elementary school-based mental health promotion and prevention program serving ethnic minority youths. *Children & Schools, 37*, 100-107.
- Paternite, C. E. (2005). School-based mental health programs and services: Overview and introduction to the special issue. *Journal of Abnormal Child Psychology, 33*, 657-663.
- Powers, J. D., Webber, K. C. K., & Bower, H. A. (2011). Promoting school mental health with a systems of care approach: Perspectives from community partners. *Social Work in Mental Health, 9*, 147-162.

- Reynolds, C. R., & Kamphaus, R. W. (1992). *Behavior assessment scale for children* (2<sup>nd</sup> ed.) (BASC-II). [Assessment Instrument] Minneapolis, MN: Pearson Education, Inc.
- Shaffer, D., Fisher, P., Lucas, C., Dulcan, M. K., & Schwab-Stone, M. (2000). *Diagnostic interview schedule for children version IV (DISC-IV)*. [Assessment Instrument] Philadelphia, PA: National Institute of Mental Health (NIMH).
- Shirk, S. R., Kaplinski, H., & Gudmundsen, G. (2009). School-based cognitive behavior therapy for adolescent depression: A benchmarking study. *Journal of Emotional and Behavioral Disorders, 17*, 106-117.
- Stein, B., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., & Elliott, M. N., et al. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *Journal of the American Medical Association, 290*, 603–611.
- Terzian, M. A., & Fraser, M. W. (2004). Preventing aggressive behavior and drug use in elementary school: Six family-oriented programs. *Aggression and Violent Behavior, 10*, 407-443.
- Weir, K. (2012). The roots of mental illness: How much mental illness can the biology of the brain explain? *Science Watch, 43*, 30. Retrieved from [www.apa.org](http://www.apa.org).
- Weiss B., Harris V., Catron T., & Han, S. (2003). Efficacy of the RECAP intervention program with concurrent internalizing and externalizing problems. *Journal of Counseling and Clinical Psychology, 71*, 364-374.

- Werthamer-Larsson, L., Kellam, S. G., & Wheller, L. (1991). *Teacher observation of child adaptation-revised* (TOCA-R) [Assessment Instrument]. Baltimore, MD: The Fast Track Project.
- Woolfolk, A. (2007). *Educational psychology* (10<sup>th</sup> ed.) (pp. 66-230). Boston, MA: Allyn & Bacon.