ABSTRACT

USING SCHOOL-RELEVANT MEASURES TO FURTHER SUPPORT THE IMPLEMENTATION OF SCHOOL-BASED MENTAL HEALTH PROGRAMS IN PUBLIC SCHOOLS IN SOUTHWEST OHIO

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The purpose of this study was to examine the impact that school-based mental health programs had on student functioning using building-level indicators. This study compared school buildings located in southwest Ohio which had operating school-based mental health programs to similar buildings throughout the state of Ohio without school-based mental health programs. The four variables used for comparison were: 1) the percentage of state indicators of performance met during the 2003-2004 school year, 2) school attendance rates of students, 3) suspension rates, and 4) expulsion rates. A questionnaire was developed to collect this building information and to supplement data obtained from the Ohio Department of Education. Results of the data analyses using a MANOVA and four ANOVAs did not demonstrate a significant relationship between school-based mental health programs and the four studied variables. This paper also presents limitations of the study and directions for future research.
Using School-Relevant Measures to Further Support the Implementation of School-Based Mental Health Programs in Public Schools in Southwest Ohio

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Chapter I
Introduction

With the federal government’s adoption of the No Child Left Behind Act of 2001 (2002), U.S. school districts are becoming increasingly focused on student outcomes as measured by national standardized assessment. According to this law, school-wide programs must strengthen the school’s core academic curriculum by meeting state academic standards and must be rooted in scientifically based research (No Child Left Behind, 2002). School-based mental health programs are currently affected by this national trend in that these programs are being asked by the federal government and, in turn, by the school district to demonstrate their effectiveness in terms of improved academic standards. School-based mental health programs can be as simple as their name implies to much more complex structures of student services. Broadly defined, school-based mental health programs are programs designed and implemented by mental health professionals based within a school. These professionals work collaboratively with the school to provide mental health services that range from school-wide prevention services to on-going individual counseling. The goal of school-based mental health programs is to meet the varied mental health needs of the students.

Previous research has shown that school-based mental health programs, when implemented properly, are associated with improvements in psychological functioning (e.g. Nabors & Reynolds, 2000; The Conduct Problems Prevention Research Group, 1999a). Although it is not the primary goal of these programs, school-based mental health programs and services can indirectly lead to improvements in academic achievement and school functioning for students. The logic behind this statement is based on the following argument. Unmet mental health needs can negatively affect the academic performance of students (Pfeiffer & Reddy, 1998). Outcomes associated with prior research on the value of school-based mental health programs have shown such programs to effectively meet the mental health needs of students (Weist, Paskewitz, Warner, & Flaherty, 1996). Therefore, school-based mental health programs, by successfully meeting student mental health needs, positively affect student academic performance (New Freedom Commission on Mental Health, 2003). Research indicates that when students in need of mental health services receive treatment via a school-based mental health program attendance, letter grades, and national test scores increase (Armbruster & Lichman, 1999). It is thus argued, based on theoretical perspectives and comments made by
various researchers, that when the mental health needs of a portion of students within a school are met, an increase in academic performance may be reflected by the entire school building as well (e.g. Sugai, 2003; Catron & Weiss, 1994; Garrison, Roy, & Azar, 1999). Additionally, when left untreated, social and behavioral problems interfere with the school success for the identified child, the entire classroom, and the teacher (Owens & Murphy, 2004).

While No Child Left Behind (2002) mandates school accountability for all U.S. public school districts, it is left to each state to decide how to measure performance. According to the state of Ohio it is important to note that test scores are just one way of measuring student performance. Other indicators that do not include federally mandated test data (e.g. attendance rates) exist that also demonstrate student performance (Ohio Department of Education, 2004). Together the test scores and other indices combine to form the indicators of performance which all school districts strive to achieve (Ohio Department of Education, 2004). According to the state of Ohio, elementary school buildings have 11 indicators of performance and high school buildings have 12 indicators of student performance. However, the available research investigating the improvements in students that receive school-based mental health services using school relevant indicators such as these state determined indicators of student performance is very limited.

This study was derived from the absence of research regarding federally mandated school-relevant indicators of school district performance (No Child Left Behind, 2002), combined with available research regarding the effectiveness of school-based mental health programs as assessed through clinical measures. The purpose of this study was to compliment contemporary knowledge by further investigating school-based mental health programs and student performance in terms of state indicators and other school relevant measures. This study attempted to document differences between school buildings with school-based mental health programs and school buildings without school-based mental health programs in terms of the percentage of state indicators of performance met, as well as attendance, suspension, and expulsion rates. More specifically, the hypotheses were that the school buildings located in four Southwest Ohio counties with school-based mental health programs would be associated with 1) a higher percentage of state indicators of performance met as measured by standardized proficiency tests, 2) higher attendance rates, 3) lower suspension rates, and 4) lower expulsion rates when compared to similar school buildings without school-based mental programs. A goal
of this research was to demonstrate that documenting the effects of school-based mental health programs using school-relevant measures would comply with the requirements of *No Child Left Behind* (2002) and thus further support the use of school-based mental health programs in U.S. public schools.
Chapter II

Review of the Literature

U.S. schools are currently being confronted with criticism, regarding school accountability, as well as with increased media attention on school violence (Larson, Smith, & Furlong, 2002). Currently, health insurance budget cutbacks dictated by managed care organizations are putting increase pressure on public schools to meet students’ health needs (Hains, Jandrisevits, Theiler, & Anders, 2001). In addition to meeting the mental health needs of the students, schools are held accountable for improving student performance. School-based mental health programs are arguably a proposed solution to both of these issues, meeting the mental health needs of students and increasing student performance. However, research on the effects of school-based mental health programs using school performance measures is limited at best. This research proposal was an attempt to provide data indicating an association between the presence of school-based mental health programs and increased building-wide student performance.

This literature review will summarize that presently children and adolescents in the U.S. are more likely to have higher levels of mental health problems and illnesses (U.S. Department of Health and Human Services, 1999). Along with a high prevalence rate, this population is also characterized as one whose mental health needs are not being met. One-third of those children and adolescents diagnosed and in need of treatment for a mental illness are not receiving any mental health services (U.S. Department of Health and Human Services, 1999). This unmet need for services is often indicative of both current and future problems in terms of school performance and achievement as well as difficulty functioning later in life (Kataoka, Zhang, & Wells, 2002).

In the next section, some of the barriers to receiving mental health services in the community are addressed. These barriers help to explain the high attrition rates associated with community mental health clinics and also contribute to the large percentage of children and adolescents receiving no or inappropriate mental health care. These barriers to receiving mental health services in the community represent one of the major concerns of families, schools, and mental health practitioners that have lead to school-based mental health programs becoming a proposed solution to counter the increasing prevalence of untreated mental health problems in U.S. children and adolescents (Flaherty, Weist, & Warner, 1996).
To better explain why schools are the proposed solution to some of the mental health challenges facing U.S. children and adolescents, school-based mental health programs will be reviewed. In this study, a general definition of these programs and services is presented. In addition to defining school-based mental health programs, the current estimated number of these programs operating in the U.S. will also be presented.

The next section consists of a review of school-based mental health programs and services in terms of advantages and effectiveness using various measures. This review of the literature on the effectiveness of these programs is summarized to demonstrate that these programs are in fact able to meet the mental health needs of some students. The studies reviewed include those evaluating school-based mental health service effectiveness through the use of treatment and comparison groups with effectiveness being studied using various clinic-oriented measures. Because of mixed effectiveness results, studies that have demonstrated both effectiveness and ineffectiveness will be reviewed. This section concludes with an overview of the current research investigating the direct effect that school-based mental health programs and services can have on the academic performance of students.

Following the review of the outcomes in student functioning associated with school-based mental health programs, the rationale behind this proposed research is discussed. While reviewing the available research on school-based mental health programs, it was found that a majority of the studies failed to include measures that address the school context and more importantly student performance. Such failure to include school relevant measures is an issue that has been discussed in several reviews (e.g. Rones & Hoagwood, 2000; Weist et al., 2000; Nabors & Reynolds, 2000). In addition to the call by researchers (e.g. Rones & Hoagwood, 2000) to investigate the effectiveness of school-based mental health programs in terms of school relevant measures, recent events have further strengthened the need to explore this area. The necessity to include school relevant measures has been brought about by contemporary legal mandates such as No Child Left Behind (2002), which requires school accountability through the use of school measures of student performance. The No Child Left Behind (2002) also stipulates that school districts are to use school-wide programs that must be scientifically based and proven-effective (U.S. Department of Education, 2003). As a result, school-based mental health programs need to be associated with improvements in the academic achievement and performance of all students and assist school districts in meeting the adequate yearly progress.
required by *No Child Left Behind* (2002) if they are to be implemented in U.S. public schools. According to *No Child Left Behind* (2002), school districts are responsible for ensuring yearly student progress towards improving the areas of performance defined as state indicators. As a result, student performance and thus school-oriented measures (state indicators of performance, attendance rates, suspension rates, and expulsion rates) chosen for use in this study are explained.

The review concludes with a discussion of the underlying assumptions that guided the formation of the present research, followed by the specific research questions and hypotheses suggested by the literature review that were examined in this thesis.

**Mental Health Research**

*Prevalence of Mental Health Problems*

As obtaining mental health services for children has become increasingly difficult, the negative impact that poor mental health and mental illness has on the functioning and school-life of children and adolescents has become more apparent. The New Freedom Commission on Mental Health (2003), a commission devoted to researching and suggesting improvements in the mental health care of the U.S., concluded that no other illnesses damage so many children as seriously as mental illness. According to Pluymert (2002), there currently exists a growing body of compelling evidence which echoes the importance of addressing the mental health needs of children and adolescents raised by this commission. Poor mental health and mental disorders can affect any child or adolescent regardless of their age, sex, race/ethnicity, or social class. The most current estimates place the prevalence of mental health problems and illness around 20% of children and adolescents in the U.S. (U.S. Department of Health and Human Services, 1998). As data regarding the prevalence of mental health problems was reported in 1998, in that same year Pfeiffer and Reddy (1998) concluded that with the difficulties associated with mental health treatment, the prevalence of mental illness appears to be increasing at a distressing rate. As the percentage of children and adolescents with mental health problems increases, the effects associated with mental illness and especially unmet mental health needs has received more attention.

*The Effects of Unmet Mental Health Needs*

According to the U.S. Department of Health & Human Services (1999), of the suggested 20% of children and adolescents in the U.S. with a mental disorder, it is estimated that less than
one-third of these children and adolescents in need of mental health services received any type of treatment. Baruch (2001) commented that even more startling is the fact that outpatient as well as community-based mental health centers often failed to reach groups of young people in greatest need, such as refugee children, children from ethnic minority backgrounds, and others from economically or socially disadvantaged backgrounds. The U.S. Office of Technology Assessment (1986) concluded that half of the children who did receive treatment received care that was inappropriate for their situation. The implications for these children and adolescents with untreated or mistreated mental health problems is that their lack of treatment can cause major developmental consequences, often leading to problems throughout their lives.

Mental health problems and illness can profoundly disrupt a person's thinking, feeling, moods, ability to relate to others, and capacity for coping with the demands of life (National Alliance for the Mentally Ill, 2004). As a result of these negative implications, mental health problems must be addressed if students are to function appropriately and be able to learn effectively in schools (Adelman & Taylor, 1998a). According to the U.S. Office of Technology Assessment (1991), children with mental health problems often have difficulties in intellectual and educational performance.

Adelman and Taylor (1991) expanded on the effects of mental health on educational performance by postulating that mental health problems propagate absenteeism and negatively affect academic and school performance. This conclusion, regarding the negative effects of mental health on academic and school performance, was further supported by Combrink-Graham (1989). In a commentary about the present status on mental health in U.S. schools, Pfeiffer and Reddy (1998) stated that unmet mental health needs are associated with increased dropout rates, lower grades and graduation rates, and increased retention and absenteeism.

Children and adolescents with untreated mental health disorders have also been shown to have poor long-term functioning and are at risk for developing future problems such as substance abuse, legal problems, and employment difficulties (National Alliance for the Mentally Ill, 2004). Kataoka et al. (2002) further stated that untreated childhood depression places children at greater risk later in life for suicidal behaviors, poor academic functioning, and substance abuse.

Barriers to Receiving Mental Health Services in Community Clinics

Research continues to document the need for mental health services for children and adolescents. However, despite such documented necessity, children and adolescents encounter
barriers when seeking help. Barriers to treatment include demographic factors, stigma, parent/child attitudes, transportation, and financial aspects (Cuffe, Waller, Addy, Mckewon, Jackson, Moloo, et al., 2001). According to the New Freedom Commission on Mental Health (2003), the stigma surrounding mental illness prompts many individuals to hide their symptoms and even avoid treatment. Evidence of the effect of these barriers to treatment was further reported by Kataoka et al. (2002). According to this research, approximately 80% of youth ages six-17 in need of mental health services did not receive services within the preceding 12 months. Rates of untreated youth increased to 90% for families without insurance. Kazdin (1996) stated that these barriers help to explain why community mental health clinics have reported no-show rates of 50% or greater. Barriers to treatment found in community mental health clinics have sparked the proposal of school-based mental health programs. This proposal has come not only from researchers (e.g. Baruch, 2001) but Presidential commissions as well (New Freedom Commission on Mental Health, 2003).

School-Based Mental Health Programs and Services

As a result of the outcomes associated with untreated mental health problems, Adelman and Taylor (1998b) have come to the conclusion that school reform efforts focused on mental health issues would not only improve, but also enhance the academic and emotional functioning of all children. According to the U.S. Office of Juvenile Justice and Delinquency Prevention (1995), schools are not the environment in which children are first exposed to the majority of factors that contribute to mental health problems (biological factors, emotional and behavioral problems, poverty, physical abuse, racism, poor academic performance, and inadequate or inconsistent support and discipline) in the U.S. However, some of the most effective interventions that have been proven to reduce the impact of mental health problems, however, have been implemented within schools. It has been argued that schools are in a key position to identify mental health problems and possibly offer services because every day more than 52 million students attend over 114,000 schools in the U.S. Almost one-fifth of the U.S. population passes through a school on any given weekday (Jamieson, Curry, & Martinez, 2001).

Defining School-Based Mental Health Programs and Services

While school-based mental health programs are not a new phenomenon, they have recently gained popularity (Flaherty et al., 1996). Current estimates placed the number of U.S. school-based mental health programs just over one thousand (Baruch, 2001). It is difficult to
give a thorough and concise description of school-based mental health programs however, because their nature and scope vary from site to site depending upon the needs of the location and the available services (Adelman, Taylor, Weist, Adelsheim, Freeman, Kapp, et al., 1999). Despite this difficulty, a definition will be presented that encompasses many well-known programs, such as The Baltimore Model (for a program description see Flaherty & Weist, 1999) or the Child First Program (for a program description see Mclain-Arellano & Arman, 2002).

As previously mentioned, school-based mental health programs are typically designed and operated by mental health professionals. These mental health professionals work conjointly with school personnel to best meet the mental health needs of the students. School-based mental health treatment includes the provision of on-site primary preventive, diagnostic, and treatment services in the school (Bailey, 2000). School-based mental health programs focus on the prevention of mental health problems in the entire student body (e.g. evaluating school climate), focus on intervening with students at-risk for mental health problems (e.g. social skills groups), and provide intensive mental health services for students with already existing problems (e.g. one-on-one counseling sessions), all within the school setting (Weist & Albus, 2004). These programs and the mental health services they are capable of implementing in the school supplement traditional school mental health services offered by school counselors, school psychologists, and school social workers. They do so by linking schools to the services associated with community mental health centers, health departments, and other social services (Flaherty et al., 1996). School-based mental health programs integrate the services of the school, community agencies, hospitals, and universities to best meet the mental health needs of children and adolescents (Pluymert, 2002). This integration includes assessment, multi-modal treatments, consultation, and strategies that are available to all students and special and regular education classes (Baruch, 2001).

While acknowledging the possible variability of programs, it is important to point out that most school-based mental health programs aim to address a wide array of mental health and psychosocial problems. These problems include: school adjustment and attendance problems, dropout rates, physical and sexual abuse, substance abuse, relationship difficulties, and emotional difficulties (Adelman et al., 1999). In addition to treating existing problems, school-based mental health programs also focus on prevention (Pluymert, 2002). These prevention activities are often directed towards both the general population and at-risk students (e.g. Second
Despite the wide range of mental health issues that school-based mental health programs address (e.g. depression, conduct problems, social skills deficits, etc.), researchers have investigated many school-based mental health programs and services in terms of their advantages and effectiveness in treating these mental health problems.

Research on School-Based Mental Health Programs

Given the increasing number of school-based mental health programs in the U.S. and the increased attention they are receiving, researchers investigating them have tended to focus on two main areas: advantages of school-based mental health programs and the effectiveness of school-based mental health programs and services in terms of improvements in psychological functioning. Significantly less attention has been focused on improvements in student academic performance.

Advantages of School-Based Mental Health Programs

When stating the advantages of school-based mental health programs, researchers have often relied on a comparison of these school-based services to those services offered in the community. This comparison has led researchers to conclude several advantages being associated with school-based mental health programs, such as improved access to children, dissolution of financial and transportation barriers, and reduction of the stigma associated with receiving mental health services.

As previously stated, community and outpatient mental health agencies are associated with high rates of no-shows and attrition of clients (Baruch, 2001). Conversely, after reviewing the literature available on school-based mental health programs, researchers have stated that these services provided a single point of access to services in a familiar nonthreatening atmosphere (Weist et al., 1996). In a study by Armbruster and Lichtman (1999) when comparing a sample of clients receiving mental health services in the school (n = 256) to those clients receiving services in the community (n = 220) it was concluded that the school-based mental health programs provided clinicians with greater access to the children most in need. The researchers found that after reviewing clients’ records, there was a minimal attrition rate and minimal cancellation or no-show rate. Such low rates of cancellation and no show were attributed to the ease of access to children as compared to the records of those receiving services in the community.
In another study, Catron, Harris, and Weiss (1998) attempted to explore the effects of school-based mental health programs by referring students to school-based programs and community-based services. After examining the data from their study, the researchers noted that 96% of the students referred to the school-based mental health program (n = 106) started treatment whereas only 13% of the students referred to community-based services (n = 80) began treatment. This single point of access minimized the extent to which parents were responsible for getting the child to their appointment. As a result of the mental health services being provided directly in the school, schedules and transportation issues were lesser barriers to mental health treatment for children and no-shows were minimal (Baruch, 2001).

By providing services directly within schools and having greater access to the children in need of service, school-based mental health programs are also able to break through certain financial barriers. In a study by Nastasi, Varjas, Bernstein, and Pluymert (1998), 56% of school-based programs included in the study (n = 87) relied on multiple sources of funding. Most of the funding for these school-based mental health programs came from external grants, were funded by the school themselves, and were provided by Medicaid. Furthermore, Schlitt, Lear, Ceballos, Chuckovich, Hacker, Hazzard, et al. (as cited in Armbruster, Andrews, Couenhoven, & Blau, 1999) concluded that many school-based mental health programs did not bill their clients for services nor sought third-party billing. Diverging from the school-based mental health programs not seeking third-party billing, community mental health clinics are forced to abide by the guidelines of Managed Care Organizations. These organizations dictate access, comprehensiveness, and duration of mental health delivery (Hains et al., 2001).

In addition to overcoming cost and transportation barriers, school-based mental health programs also address some of the barriers surrounding the stigma of receiving mental health services. According to Baruch (2001), mental health treatment provided in the schools is normalized. In the school, the use of such help can be felt to be part of the ordinary school curriculum (Baruch, 2001). After having reviewed office records of a school-based clinic offering mental health services, Jepson, Juszczak, and Fisher (1998) stated that they believed that as a result of offering services in the school, the stigma attached to being referred to a mental health clinic in the community that often deters young people from seeking help would be minimized. This conclusion was further supported by Jennings, Pearson, and Harris (2000) in a review of the effectiveness of school-based mental health programs in the Dallas, Texas Public
Schools. The researchers stated that the services offered in these schools were relatively devoid of stigma.

Overcoming these barriers to treatment is a very important aspect of school-based mental health programs. However, the advantages of school-based mental health programs are not limited to this area. By offering services directly in the school, professionals are able to work in collaboration with teachers, recommend and evaluate the effects of modifications in the classroom environment, and possibly modify the expectations and attitudes of school personnel through consultation and by providing data about students’ academic and social needs (Pluymert, 2002). After having reviewed available literature on school-based mental health programs, Evans, Langberg, and Williams (2003) concluded that school-based mental health services offer the opportunity to successfully generalize treatment gains to the settings in which the presenting problems exist. Further review of school-based mental health programs indicated that the school-based clinician had the potential to achieve greater accuracy in recognizing and identifying student problems as they are able to directly observe the children, their behavior, and also learn directly from teachers’ reports (Baruch, 2001). Last, school-based mental health programs increased the opportunity to introduce strategies for the prevention of mental health problems among young people so that these concerns can be addressed before they become serious or pathological (Baruch, 2001).

Research on the Effectiveness of School-Based Mental Health Programs and Services

In addition to overcoming certain barriers to treatment, programs providing school-based mental health services have been shown to be effective in terms of improvements in the psychological functioning of those students that received services. A small body of recent research showed that school-based programs were just as effective as clinic based services (Armbruster & Lichtman, 1999). While there are over 1,000 school-based mental health programs currently operating in the U.S. whose effectiveness is still questioned and evaluated (Walker, 2001), researchers have found numerous instances of school-based mental health programs with well documented results.

During the research for this study, it was found that a majority of the studies on the effectiveness of school-based mental health programs have relied on clinical measures, completed pre and post treatment. These studies have not only researched the general effectiveness of school-based mental health programs, but they have also investigated individual
services offered by school-based mental health programs. It is important to investigate both aspects of school-based mental health, the programs themselves and the services they provide, because it is the individual services that add up to describe a significant function of these programs. The provided services help to distinguish mental health programs from other school-wide programs aimed at affecting student behaviors. Researchers cannot explore the value of school-based mental health programs without investigating the effectiveness of the individual services offered because without effective services the program itself will not be effective.

Effective programs and services. School-based mental health programs are designed to provide treatment to children and adolescents suffering from a range of mental health problems. In researching school-based mental health programs, the majority of the programs addressed the same issues as community mental health clinics. In reviewing the literature investigating the effectiveness of school-based mental health programs, Rones and Hoagwood (2000) found that these programs treated emotional and behavioral concerns, depression, conduct problems, stress management and stress related issues, and substance abuse. In addition to treating the same issues, school-based mental health programs were much like community mental health clinics in that they also relied on clinical measures to assess improvements. According to Hoagwood and Erwin (1997), the use of these clinical measures allowed for indication of functioning improvement, symptom reduction, and the ability to demonstrate empirical support for the school-based mental health program’s efficacy.

Research indicates that school-based mental health services have been shown to be as effective as community mental health clinics. In a study of 36 inner-city school-based mental health programs, the Children’s Global Assessment Scale (C-GAS; Shaffer, Gould, Brasco, Ambrosini, Bird et al., 1983), and the Global Assessment of Functioning (GAF; American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders 3rd ed., revised, 1987), were used to compare the effectiveness of these programs to community clinics when working with children diagnosed with externalizing, internalizing, or other disorders. These measures were administered both pre- and post-treatment to the two groups of students. Armbruster and Lichtman (1999) concluded that the children seen in the school-based mental health program (n = 256) improved comparably, in terms of functioning with the children seen in the clinic setting (n = 220).
In a study using similar measures but relying on comparisons between students receiving services (n = 181) and a control group where students did not receive any service (n = 113); the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1989), Youth Self-Report Forms (YSR; Achenbach, 1991), and the Global Assessment of Functioning Scale (GAF; American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders, 4th ed., 1994) given pre- and post-treatment also resulted in clinician reports of improved behavioral and emotional functioning (Nabors & Reynolds, 2000). Studies that further investigated the ability of school-based mental health programs to improve the functioning of children and adolescents have provided similar results. In a study by Hawkins, Catalano, Kosterman, Abbot, and Hill (as cited in Rones & Hoagwood, 2000), it was also demonstrated that school-based mental health services lead to enhancement in functioning for children with emotional and behavioral problems.

School-based mental health services research has also focused on the possible effects of these services when working with students having conduct problems. In a study by Lochman, Coie, Underwood, and Terry (1993), the Teacher Behavior Checklist (Coie & Dodge, 1988), peer nomination ratings, and the Perceived Competence Scale for Children (Harter, 1982) were used to examine any improvements in functioning that resulted from treatment. Lochman et al. (1993) found that when compared to a control group (n = 26), the treatment group (n = 26) showed significant progress in functioning on the measures in terms of aggression, peer rejection, and positive social acceptance.

A similar study by Gottfredson, Gottfredson, and Hybl (1993), produced comparable results. The researchers also used a group of students receiving school-based mental health services (n = 4513) and another group of students to serve as a control group (n = 1206). Using the Classroom Environment Assessment designed specifically for this study, teacher ratings and surveys, and the Effective School Battery (ESB; Gottfredson, 1984) to measure the effectiveness of the school-based mental health services, it was shown that the students’ disruptive behaviors, functioning, and school environment improved.

The Conduct Problems Prevention Research Group (1999a) also studied the effect that school-based mental health programs have on students with conduct problems. In this study, improvements in functioning associated with school-based mental health services were investigated using the Teacher Observation of Classroom Adaptation-Revised (TOCA-R;
Werthamer-Larsson et al., 1991) and the Social Health Profile (SHP; Conduct Problems Prevention Research Group, 1999b). The measures were given to students receiving school-based mental health services (n = 6715) pre- and post-treatment. The Conduct Problems Prevention Research Group concluded that the school-based mental health services resulted in higher levels of functioning for the students that received services. This change in functioning translated to decreased aggression, increased peer relations, and improved/positive classroom atmosphere as determined by the scores obtained on the two measures.

Dolan, Kellam, Brown, Werthamer-Larson, Rebok, Mayer, et al. (1993) also studied the effects that school-based mental health services can have on the functioning of aggressive children by comparing the improvements in functioning of students receiving school-based mental health services (n = 289) with a control group of students not receiving any mental health services (n = 212). It was concluded, as indicated on pre- and post-treatment measures on the Teacher Observation of Classroom Adaptation-Revised (TOCA-R; Werthamer-Larrson et al., 1991) and the Peer Assessment Inventory (Pekarik, Prinz, Leibert, Weintraub, & Neale, 1976) that the students who received services displayed decreased aggressive behaviors. In yet another study, Reid, Eddy, Fetrow, and Stoolmiller (1999) explored the effectiveness of school-based mental health services in dealing with conduct problems. Similar to the previously discussed studies, the researchers relied on the use of a group of students receiving intervention (n = 382) and a comparison group of students not receiving any mental health services in the school (n = 289). Both groups of students were assessed pre- and post-treatment using the following measures: family assessments, teacher interviews, the Interpersonal Process Code (IPC; Rusby, Estes, & Dishion, 1991), and the Peer-Preferred Social Behavior subscale from the teacher-rated Walker-McConnell Scale of Social Competence and School Adjustment (Walker & McConnell, 1988). Based on the outcomes associated with these measures, it was concluded that the services received by aggressive students resulted in improved functioning and decreased physical transactions.

In an earlier study, Lochman and Curry (1986) administered the Breyer’s Behavior Observation Schedule for Pupils and Teachers (BOSPT; Breyer & Calchera, 1971), Missouri Children’s Behavior Checklist (MCBC; Sines, Pauker, Sines, & Owen, 1969), and the Perceived Competence Scale for Children (PCSC; Harter, 1982) pre- and post-treatment to two groups of students receiving school-based mental health services (n = 20). The researchers stated that this
was done to measure the effects of school-based treatment. Lochman and Curry (1986) concluded that students that received school-based services demonstrated decreased aggression, increased on-task behaviors, increased social competence, and increased self-esteem based on differences between pre- and post-treatment scores on the measures. Hudley and Graham (1993) also explored the possible effects of school-based mental health services in terms of conduct problem symptom reduction. Using the Teacher Checklist (Coie, 1990) with aggressive (n = 72) and non-aggressive students (n = 36) randomly assigned to either one of two treatment groups or a control, Hudley and Graham stated that there were significant decreases in the aggressive behavior of students receiving either of the treatments compared to the students assigned to the control group based on the data collected using the selected measure.

Further examination of school-based mental health programs has produced comparable results when exploring aspects of symptom reductions instead of focusing on student functioning. Using items taken from several clinical assessment tools [i.e. State-trait Anger Expression Inventory (STAXI; Spielberger, 1988), Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), and the Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986)], Weist et al. (1996), found that students receiving treatment in school-based mental health programs (n = 39) showed significant decline in depression and improvement in self-concept when compared to the functioning of the control group of students (n = 34).

Further studies involving the use of school-based mental health programs to treat children and adolescents with depression have also produced similar results as other mental health areas. Clarke, Hawkins, Murphy, Sheeber, Lewisohn, and Seeley (1995) used clinical measures to assess depressive symptoms and functioning. The measures used in the study included the Hamilton Depression Rating Scale (Hamilton, 1960), Center for Epidemiologic Studies-Depression Scale (CES-D, Radloff, 1977), and the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Epidemiologic Version (K-SADS-E, Orvaschel & Puig Antich, 1986). These measures were used with a group of students receiving school-based mental health services (n = 76) and a group of students not receiving mental health services (n = 74). In this study school-based programs were shown to be effective both in terms of depressive symptom reduction and improvements in functioning when comparing the results of the measures between the two groups of students. Symptom reduction was not only evident at the conclusion of treatment, but one year later when similar results were again demonstrated.
Gillham, Reivich, Jaycox, and Seligman (1995) conducted a similar study using a treatment group of students receiving school-based mental health services (n = 69) and a long-term comparison group of students not receiving any type of mental health services (n = 49) to explore the effectiveness in terms of depressive symptom reduction. During this study the Children’s Depression Inventory (CDI; Kovacs, 1985), the Reynolds Child Depression Scale (RCDS; Reynolds, 1989), and the Reynolds Adolescent Depression Scale (RADS; Reynolds, 1986) were used as pre- and post-treatment measures. At the conclusion of treatment as well as two years later, these measures demonstrated a reduction in depressive symptoms for the students receiving school-based mental health services.

*Mixed results regarding the effectiveness of programs and services.* As mentioned previously, despite the fact that some school-based mental health programs have been attributed with being effective, their overall effectiveness is still being evaluated. This ongoing evaluation is due in part to numerous studies that have produced mixed results when determining the effectiveness of school-based mental health services. In a longitudinal study of children receiving school-based mental health services Nabors and Prodente (2002) utilized the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 1989) and Youth Self-Report Form (YSR; Achenbach, 1991) to measure the effectiveness of school-based mental health services in terms of improvement in functioning for students receiving treatment (n = 79 at 12-month follow-up) as compared to the improvements in functioning for the control group of students (n = 54 at 12-month follow-up). Based on the information obtained using these measures, Nabors and Prodente concluded that the results obtained in this study were mixed. The results of the Child and Adolescent Functioning Assessment Scale produced nonsignificant improvements in functioning for the treatment group whereas the Youth Self-Report Form demonstrated significant improvements in student functioning.

A study by Klingman and Hochdorf (1993) also resulted in mixed results. Klingman and Hochdorf used three measures in an attempt to document the effects of school-based services in working with depressive symptoms. These three measures were the Israeli Index of Potential Suicide (IIPS; Zung, 1974), the UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), and the Index of Empathy for Children and Adolescents (Bryant, 1982). These measures were given pre- and post-treatment to a group of students receiving school-based mental health services (n = 116) and a group of students that did not receive any mental health services (n = 121). Klingman
and Hochdorf concluded that both the UCLA Loneliness Scale and the Index of Empathy for Children and Adolescents produced no significant differences between the treatment and control groups. However, Klingman and Hochdorf did find a greater reduction in depressive symptoms on the Israeli Index of Potential Suicide for the treatment group than the control group.

School-based mental health services focusing on conduct problems have also produced mixed results. Pepler, King, Craig, Byrd, and Bream (1995) found both significant and non-significant improvements using the Child Behavior Checklist teacher and parent versions (CBCL; Achenbach, 1991) and the Revised Class Play Method of Peer Assessment (Masten, Morison, & Pellegrini, 1985) when comparing students receiving treatment (n = 40) to control students not receiving treatment (n = 34). These measures were completed prior to the start of treatment and again at the conclusion. Only the teacher report measure indicated post-treatment improvements in the students that received the school-based services. A study by Vitaro and Tremblay (1994) also produced comparable results. The researchers randomly assigned aggressive youth to either a treatment condition (n = 46) or a control group (n = 58), and administered the Social Behavior Questionnaire (SBQ; Loeber, Tremblay, Gagnon, & Charlebois, 1989), the Pupil Inventory (Pekarik et al., 1976), and Self-reported Delinquency Questionnaire (SRDQ; LeBlanc & Frechette, 1989). The researchers used these measures various times after the conclusion of treatment to assess for student improvement in functioning. Similar to the Pepler et al. (1995) study, Vitaro and Tremblay also obtained significant results for the treatment group with regard to functioning but only as reported by teachers.

In a study by King and Kirschenbaum (1990) the opposite results where found. The researchers used pre- and post-treatment ratings on the Children’s Depression Rating Scale-Revised (CDRS-R; Poznanski, Grossman, Buchsbaum, Banegas, Freeman, & Gibbons, 1984), the Teacher Child Rating Scale (T-CRS; Hightower, Work, Cowen, Lotcyzewski, Spindell, Guave, & Rohrbeck, 1986), and the Child Behavior Checklist (Achenbach & Edelbrock, 1983), to explore the effects of school-based mental health services with two treatment groups (n = 36, n = 66) and a control group (n = 25). It was indicated by both the Children’s Depression Rating Scale-Revised and the Child Behavior Checklist that the school-based services were effective in terms of decreased problematic behaviors, decreased depressed mood, and increased positive behaviors and functioning. This conclusion was based on the results obtained when comparing the scores on the measures of the two treatment groups and the control group. Despite the
significant results obtained on these two measures, King and Kirschenbaum stated that the Teacher Child Rating Scale did not show any improvements in functioning or behaviors for either of the treatment groups.

Programs and services without demonstrated effectiveness. Contrary to the many studies demonstrating some effective results, there are several available studies that have concluded that some school-based mental health services are not effective. Clarke, Hawkins, Murphy, and Sheeber (1993) conducted one such study. The researchers attempted to investigate the effectiveness of school-based mental health programs and services in working with depressed students. In this study, the researchers placed students at-risk for depression into one of two groups, either a treatment group (n = 76) or a control group (n = 74). The two groups were then given the Teacher Observation of Classroom Adaptation-Revised (TOCA-R; Werthamer-Larsson et al., 1991) as pre- and post-treatment measures. Based on the information obtained using this measure, it was concluded that there were no overall significant improvements in functioning for the students receiving treatment. Another study by Rosal (1993) also produced non-significant results in terms of symptom reduction and improved functioning for students with behavior problems. The researcher randomly assigned the students to one of three groups: cognitive-behavioral treatment (n = 12), art therapy (n = 12), or a control group (n = 12). Following this random assignment the researcher administered the Children’s Nowicki-Strickland Internal-External Locus of Control (CNS-IE; Nowicki & Strickland, 1973), Teacher Rating Scale (TRS; Conners, 1969), and the Personal Construct Drawing Interview developed for this study. Based on a comparison of pre- and post-treatment results using these measures, the researcher concluded that the improvements in behaviors that were indicated on several measures were in fact non-significant.

Further studies have resulted in similar non-significant improvements using a variety of clinical measures. Tremblay, Pagani-Kurtz, Masse, Vitaro, and Pihl (1995) investigated the effectiveness of school-based mental health services in their treatment of the level of functioning of students with conduct problems. These researchers found that when using pre- and post-treatment data from the Social Behavior Questionnaire (SBQ; Loeber, Tremblay, Gagnon, & Charlebois, 1989), examining school adjustment, and self-reported juvenile delinquency there were no significant results between students receiving services (n = 43) and the two control groups (n = 82, n = 41). In another study Braswell, August, Bloomquist, Realmutto, Skare, and
Crosby (1997) used the Behavioral Assessment System for Children (BASC; Reynolds & Kamphaus, 1992) and the Problem-Solving Rating Scale (PSRS; Bloomquist, August, Cohen, Doyle, & Everhart, 1997) to measure the effects on students receiving school-based mental health services (n = 309). The students included in the study were randomly assigned to one of two treatment conditions and another identified group of students constituting a nondisruptive comparison group (n = 143). Both of these measures produced non-significant effects in reducing conduct problem symptoms and improving the functioning of students receiving either treatment.

Longitudinal studies have also produced non-significant results when evaluating the effectiveness of school-based mental health services. Catron et al. (1998) investigated the effects of school-based services two-years after students (n = 106) received either treatment or tutoring (comparison group). When comparing the differences of the treatment group with comparison group on pre- and post-treatment measures on peer nominations, the Child Behavior Checklist (CBCL; Achenbach, 1991), the State-trait Anxiety Inventory for Children (STAIC; Spielberger, 1973), and the Vanderbilt Depression Inventory (VDI; Weiss & Garber, 1993) no significant findings or group differences emerged.

Studies investigating mental health and academic performance. In addition to the studies discussed above that have only focused on school-based mental health programs improving psychological functioning using clinical measures, few studies also do exist that have documented the effects of school-wide programs that included attention to mental health and school-specific behaviors. Knoff and Batsche (1995) demonstrated program effectiveness in terms of the number of special education referrals, number of behavior referrals, number of retained students, and student achievement. Knoff and Batsche found that when comparing pre-service levels with post-service levels between the treatment schools and its students (n = 600-700 students) and comparison schools and its students (n = 425 students), there were significant differences. The school that received the school-wide intervention had fewer at-risk students referred for and placed in special education, had lower suspension and retention rates, and had increased achievement as measured by the number of students at or above grade level on the Comprehensive Test of Basic Skills. In another study focusing on school-relevant measures, Flaherty and Weist (1999) examined the data made available by the Baltimore Schools Expanded School Mental Health Programs, a program which has addressed the mental health needs of
school students for the past several years. The researchers concluded that based on the data presented by the school district-wide program, most of the students that received mental health services (n = 2,032) exhibited improvements in grades, attendance, school behaviors, and general functioning. Based on the data analyzed during these studies, there appears to be a relationship between school-based mental health programs and academic achievement. This relationship was supported by the New Freedom Commission on Mental Health’s (2003) discussion on schools helping to address mental health problems. In this discussion, it was stated that schools with strong mental health programs can address the health and behavioral concerns of students, reduce unnecessary pain and suffering, and also help ensure academic achievement of students.

Rationale for Proposed Research and Selected Measures

Although the effectiveness of school-based mental health programs has become an important topic, studies investigating this topic have not kept up with the expansion of school-based programs. The limited number of studies that have been conducted using clinical measures have indicated that the treatment received in school-based mental health programs is capable of meeting the mental health needs of students. While these results are an important aspect of the benefits of school-based mental health programs, researchers have not focused on the other important aspect: that these are school-based mental health programs and not just mental health programs operating within a school. School relevant measures are necessary to assess the effects of school-based mental health programs.

Given the two main areas most often used to demonstrate the effectiveness of school-based mental health programs (advantages of receiving services in the schools and psychological functioning of students receiving services), there is a need to further explore the association between school-based mental health programs and school performance. While clinical measures do an excellent job of describing improvements in functioning and symptom reduction, when used in school settings, the information is often not useful because it does not show improvement in terms that schools use and understand (Ringeisen, Henderson, & Hoagwood, 2003). In addition to focusing on more school-relevant measures, schools must meet national accountability standards by focusing on programs that show school-relevant student progress (U.S. Department of Education, 2003) instead of improvements in psychological functioning.
School Relevant Measures

Intervention success should be assessed not with symptom checklists, but with measures involving daily school-life functioning (Pluymert, 2002). These scales should include areas such as homework completion, participation in classroom discussions, problem-solving disputes with peers, etc. (Pluymert, 2002). Bailey (2000) argued that because of school-based context of treatment and the intimate relationship between school-based mental health programs and the schools, studies need to document a positive correlation between intervention and student academic performance. In yet another article, Weist et al. (2000) concluded that when evaluating the outcomes of school-based mental health programs, the evaluations should be related to functional indicators associated with positive life adjustment for youth. Their examples of functional indicators investigating positive life adjustment included both grades and attendance rates of students. Nabors and Reynolds (2000) further supported this belief by stating that it is important to ensure that grades and absences be examined in future studies.

As mentioned above, current research indicates an association between school-based mental health services and student performance, but these studies are not as numerous as those investigating psychological functioning. Studies that have investigated academic outcomes associated with school-based mental health programs have found improvements in several areas. According to studies included in this literature review, research has indicated that children receiving school-based mental health services showed improvements in academic performance, attendance, and school behavior (Armbruster & Lichtman, 1999; Weist et al., 1996; Jennings et al., 2000). Despite the call by researchers (Rones & Hoagwood, 2000; Weist et al., 2000; Ringeisen et al., 2003) to further study school-based programs using school relevant measures, few have done so. The need for school relevant measures has recently become more pronounced with schools being forced into accountability by the federal government.

School Accountability

With President Bush’s signing of the No Child Left Behind Act of 2001 (2002) into law, U.S. public schools were placed in a very difficult situation, in deciding whether to no longer accept previously used federal funds or accept federal dollars and require that every student in the district take standardized tests. The majority of U.S. public schools cannot operate strictly on state and local funds, therefore schools are left with little choice but to accept the federal funds and assess all students (McLoughlin, 2003).
District-wide testing for all students was part of President Bush’s plan to hold U.S. public schools accountable for their students’ performance. *No Child Left Behind* (2002) monitors accountability by tracking districts' yearly progress to ensure that every child learns and every school has the opportunity to improve. According to this act, school accountability is determined by examining the number or percentage of students being proficient in certain academic-related areas as determined by each state individually. If a school fails to achieve adequate yearly progress for two consecutive years, the school is labeled “in need of improvement” and, if lack of progress continues, may be forced to take corrective actions. These actions range from re-examining the curriculum to replacing the staff (McLoughlin, 2003).

With school accountability being so strongly emphasized by the federal government, school districts in need of improving student proficiency scores must seek programs which are proven to be effective in terms of improving student and school performance (U.S. Department of Education, 2003). According to this act, for too many years, too many schools have experimented with lessons and materials that have proven to be ineffective and have done so at the expense of their students. Under *No Child Left Behind* (2002), federal support is targeted to those educational programs that have been demonstrated to be effective through rigorous scientific research. *No Child Left Behind* (2002) mandates that, for the first time in history, funding be tied to academic achievement. According to the U.S. government, schools should use taxpayer funds on programs that work (U.S. Department of Education, 2003). Ultimately, programs that work are those which target and improve the academic achievement of students in terms of state indicators of performance and test scores.

*State Indicators, Attendance, Suspension, and Expulsion Rates*

As a result of the government’s new focus on using proven programs and interventions, schools are recommended to use interventions that will help them make adequate yearly progress. Making adequate yearly progress then translates into meeting more state indicators. In the state of Ohio, state indicators include being proficient and/or achieving at a predetermined rate in the following areas: citizenship, math, reading, writing, science, attendance rates, and graduation rates. The state of Ohio measures annual progress by monitoring 22 of these indicators for each school district, with 11 being measured at the elementary level buildings and 12 being measured at high school level buildings (Ohio Department of Education, 2004). Currently, middle schools are not being mandated to administer proficiency tests and as a result,
the state is not measuring annual progress in these buildings, the state does however still collect
data on attendance, suspension, and expulsion rates.

By investigating the effectiveness of school-based mental health services in terms of the
percentage of state indicators met, attendance rates, suspension rates, and expulsion rates schools
are able to see improvements in students that are meaningful to them on a school-wide
perspective. Previous research has demonstrated the relationship between unmet mental health
needs and school performance. As mentioned previously, this unmet need for mental health
services is associated with lower grades, lower graduation rates, and increased absenteeism
(Pfeiffer & Reddy, 1998). Given the findings regarding the effects of mental health on school
performance, it is conceivable that student mental health will impact the number of state
indicators obtained by each school building, as well as the attendance, suspension, and expulsion
rates associated with each building.

Assumptions Underlying the Present Study

Based on the relationship demonstrated by previous research between school-based
mental health programs and academic achievement, it is argued that this relationship will
continue to exist when investigating the entire school building. That is to say that the services
provided by school-based mental health programs (as was defined in this study) would not only
have an impact on the academic achievement of the students receiving services, but an impact on
the performance of the students in the school building. This assumption was grounded by two
different perspectives: 1) a theoretical perspective using concepts taken from Systems Theory
and 2) the conclusions reached by researchers and the federal government regarding widespread
effects of school-based mental health programs.

Underlying this study was a concept taken from Systems Theory which states that a small
change in one aspect of a system will result in change throughout the rest of the system.
According to researchers, schools are often viewed as systems, thus a small change in one aspect
of the school system could have dramatic and unforeseen effects throughout the entire system
(Mid-Continent Research for Education and Learning, 2000). Based on the possibilities evident
when viewing schools as systems, it was logically assumed that by implementing school-based
mental health programs and offering services to students there would be effects throughout the
entire school building.
This underlying assumption of school-based mental health programs having widespread effects on students other than those receiving services has been supported by various researchers as well as by *No Child Left Behind* (2002). In addition to unmet mental health needs affecting specific children, these needs also affect their peers. Children who develop disruptive behavior patterns can have a negative influence on the social and academic environment of their peers (Rones & Hoagwood, 2000). Children with mental health problems frequently take away from other students’ academic engaged time by disrupting the class or the teacher. If the teacher is able to focus on teaching instead of managing behaviors, the entire class benefits. According to Sugai (2003), these positive classroom environments allow an educator to use their instructional time effectively which, in turn, supports the academic achievement of all students.

The notion that effects of school-based mental health programs are school-wide has been mentioned by other researchers as well. In a previous study, Catron and Weiss (1994) commented that although the typical aim of a school-based mental health program is an individual child, certain aspects of the program may have a broader and more generalized effect throughout the school. Garrison, Roy, and Azar (1999) furthered this claim after reviewing relevant research and concluding that although school-based mental health services enhance individual student adjustment, they also enhance the overall school environment. The notion of school-based mental health programs having widespread effects is even supported in the wording of *No Child Left Behind* (2002). In Section 1114 of *No Child Left Behind* (2002), when discussing the requirements of school-wide programs, which includes meeting the educational needs of all children in the school, counseling programs are clearly stated as an example of a program that meets the requirements.

**Research Hypotheses**

As indicated throughout the literature review, the available research regarding school-based mental health programs has focused on two main areas: advantages of receiving services in the schools and improvements in psychological functioning of students. It is evident that, despite the association between mental health and student performance, research has neglected to provide such documentation. Given all of the information presented in this research proposal, it is argued that school-based mental health programs affect the performance of the entire school building. It has been shown that mental health problems can have negative effects on the academic performance of students. The way in which school-based mental health programs have
effectively treated mental health issues was then discussed. When the mental health issues of students are met, not only does their academic achievement improve but, according to theory and comments made by various researchers, the academic achievement of their peers does as well. Individual improvement may lead to an increased performance of the school building.

Based on this belief, it was hypothesized that when compared to public school buildings without school-based mental health programs, school buildings (and the entire student population contained within these buildings) that currently do have operating school-based mental health programs would experience higher levels of functioning in terms of school-relevant measures. More specifically, it was hypothesized that the school buildings located in four Southwest Ohio counties with school-based mental health programs will have I) a higher percentage of state indicators of performance met in those schools administering proficiency tests, II) higher attendance rates, III) lower suspension rates, and IV) lower expulsion rates, when compared to similar school buildings without school-based mental health programs.
Participants

The participants in this study included public elementary, middle, and high school buildings throughout the state of Ohio (N = 128). The 128 school buildings used in this study included 76 elementary school buildings, 26 middle/junior high school buildings, and 26 high school buildings. The school buildings with school-based mental health programs (n = 64) that were used in this study came from a comprehensive list of public school buildings, in four southwest Ohio counties, identified by various sources as having operating mental health programs. These four counties were specifically chosen for use in this study because of their previous participation in a study that investigated the mental health needs of students attending public schools within each county (Neeley & Carrozza, 2002). In addition to the public school buildings with school-based mental health programs, comparison school buildings were selected throughout the state of Ohio. The comparison school buildings (n = 64) are further defined below.

Programs that met the following description were included in this study and will be referred to as school-based mental health programs. School-based mental health programs were those programs whose mental health-focused services operated strictly within the public school building during school hours and were available to all students in the school. The program and included services were implemented by trained and qualified professionals with at least a bachelor’s degree in a mental health-related field and were affiliated with a university, a community mental health agency, and/or sponsored by a county mental health board. In addition to an affiliation, the program had employees working in the school that were available to students and staff on multiple days for at least the previous three years. Other requirements necessary to be defined as a school-based mental health program included working collaboratively with school personnel. Further requirements for inclusion of buildings with school-based mental health programs in the study included having staff that provided direct ongoing mental health counseling to students, direct group counseling services, mental health services had to target internalizing as well as externalizing symptoms. In addition to direct services, the school-based mental health programs had to be identified by both the county mental
health agency representative and the person contacted at each building as meeting these criterion in order to be included in the study.

In addition to public school buildings with school-based mental health programs, other public school buildings without programs meeting the above description were chosen as the comparison group for this study. Public school buildings possessing a school-based mental health program were matched with the most similar comparison public school building. The comparison school building consisted of a same level building from the most similar school district throughout the state of Ohio. School district similarity was calculated by the Ohio Department of Education, which used the school district’s size, poverty level of the district (based on percentage of students of Ohio Works First), socioeconomic status of the families associated with the district, a rural/urban continuum (calculated by comparing population density and percentage of agricultural property), race/ethnicity, a non-agricultural and non-residential dimension (based on the per-pupil amount of commercial, industrial, mining, tangible, and public property), and tax capacity (Ohio Department of Education, 2004).

In these comparison school buildings, the mental health needs of the students were addressed by the school psychologist or guidance counselor instead of by professionals from an outside agency or university. Instead of being chosen at random, the school districts were chosen based on similarity. This was done in order to try to control for effects related to school size and demographics, poverty level and income levels of the families in the district, school setting, and financial resources.

**Materials**

*School-based mental health program letter.* The materials in this study included a letter used to introduce the study and to locate school buildings in the four southwest Ohio counties currently receiving school-based mental health services. The letter was sent to the appropriate person(s) or departments at county mental health boards, to directors of mental health programs, and to mental health providers (see Appendix A).

*School-based mental health program questionnaire.* In addition to the letter, this study also included the use of a questionnaire designed by the researcher specifically for the current study. The purpose of the questionnaire was to introduce the study, provide the participants with a definition of school-based mental health programs and services, and confirm that the school building either did or did not receive these services. The questionnaire also served as a method
of obtaining data regarding the details of the school-based mental health program, obtaining a
general description of the services and characteristics of the school-based mental health program,
and gathering data regarding building-wide programs which targeted student achievement. All
of this information allowed the researcher to determine which school buildings with school-
based mental health programs were included in the study. Based on the important role the
questionnaire served, it was created and refined by conducting a pilot study.

The need to create this questionnaire resulted from the fact that previous research and the
methods used to collect the data did not lend themselves to this study. Pre-established levels of
validity and reliability, therefore, do not exist. To help facilitate its development, questions
originally included on the questionnaire were created directly from the criterion that school-
based mental health programs were required to meet for their inclusion in this study (see
Appendix B). Following this, the questionnaire was initially sent to a small number of school
buildings in southwest Ohio (N = 5). The purpose of this pilot study was to get feedback from
potential participants in the form of suggestions, questions, or possible revisions. In addition,
Miami University faculty members reviewed the questionnaire for the purpose of obtaining
feedback and suggestions. This provided the researcher with an “expert” sense of the validity of
the measure.

*Ohio Department of Education website.* In addition to the letter and questionnaire,
information reported by the Ohio Department of Education on their website
(http://www.ode.state.oh.us) was used in this study. The website was used to supplement data
collected using the questionnaires; to collect school building report cards of student performance
and attendance rates; suspension rates; expulsion rates; and to determine similar school districts.

*Variables*

*Dependent variables.* This current study investigated the effects of school-based mental
health programs on student performance. As previously mentioned, four dependent variables
were used to compare school buildings with school-based mental health programs to school
building without school-based mental health programs. The four variables included: the
percentage of state indicators of performance met during the 2003-2004 school year, the school
attendance rate of students, suspension rates, and expulsion rates. Data for all four dependent
variables were obtained from the Ohio Department of Education Website.
In Ohio, the *state indicators of performance* represent student performance on state proficiency tests, attendance rates, and graduation rates. Using the data collected by the Ohio Department of Education as reported by their website, the number of state indicators of performance met during the 2003-2004 school year by each school building participating in the study was divided by the number of state indicators possible for each building. This was done to determine the percentage of state indicators of performance met at each building since the total number of state indicators assessed at each building varied depending on the grade levels contained in the building. The percentage of state indicators of performance met for each building range from 0% to 100%. *Attendance rates* were defined as the percentage of the student population that was present on a given day. *Suspension rates* were defined as the number of out-of-school suspensions during the 2003-2004 school year per 100 students. *Expulsion rates* were defined as the number of expulsions that occurred during the 2003-2004 school year per 100 students.

*Independent variable.* The independent variable in this study included the type of the school building. In this study, two types of school buildings were selected and compared using the four dependent variables. The first type of school building consisted of those that currently had operating school-based mental health programs as previously defined in the above sections. The second type of school building used in this study consisted of those building that did not have school-based mental health programs.

*Procedure*

*Locating school-based mental health programs.* The first stage of this study entailed collecting a comprehensive list of public school buildings in four southwest Ohio counties with school-based mental health programs. To accomplish this, a letter (Appendix A) was created and distributed to the appropriate persons and/or departments of universities/colleges and county mental health boards in the four southwest Ohio counties selected for use in this study. The letter asked for information regarding any school districts or buildings with which they partner in an attempt to meet the mental health of students. In addition to this letter, an Internet search was conducted so as to find additional school-based mental health programs within the four counties. Using these two methods, 95 school buildings within the four counties were identified as having school-based mental health programs.
Pilot study. Because the School-Based Mental Health Program Questionnaire was created specifically for this study, a small pilot study was first conducted. The questionnaire was sent to five school buildings in the southwest Ohio area. These five school buildings were chosen based on their location in southwest Ohio. In addition to proximity, these five building were also chosen because some of their staff were knowledgeable of school-based mental health programs either in their buildings or in the surrounding school districts. The purpose was to obtain feedback in terms of the questionnaire’s usefulness, inclusion of unclear items or wording, and general concerns. This pilot study also allowed the researcher to gauge the validity of the measure. While the pilot study questionnaire contained a description of the study as well as a section to collect data, an additional section was present that was not included on the final version. This additional section consisted of questions and prompts to provide the researcher with feedback, suggestions, and/or concerns about the questionnaire (see Appendix B). In addition to soliciting feedback from those persons participating in the pilot study, the research met with each participant to review the questions and supporting materials.

Based upon the steps taken to create the questionnaire used in this study and the feedback from the participants in the pilot study, this measure appeared to possess adequate validity. During the development of the questionnaire, feedback was solicited from university professors knowledgeable in creating questionnaires. Questions included were directly generated from the definition of school-based mental health programs used in this study. Responses provided by the participants in the pilot study also further support the validity of this measure. Of the five participants sent the draft version of the questionnaire, 100% of them agreed with the statement: “the questions seemed related to the purpose of the study.” All five of the participants also supported the following statements: “the questionnaire was straightforward,” “the purpose of the questionnaire was clearly stated,” and “the questions were easy to understand.” Following the completion of the questionnaire by the participants, the researcher asked each participant in a separate one-on-one setting to explain their understanding of the directions, the questions, and/or statements. All of the participants were able to adequately explain, to the researcher’s satisfaction, each section as well as provide responses that were reasonable for each question. Last, the feedback and suggestions provided by the participants in the pilot study were directly incorporated into the final version of the questionnaire (see Appendix C).
Selecting participants. Once the comprehensive list of public school buildings in the four selected southwest Ohio counties with school-based mental health programs was compiled, the school buildings (n = 95) were later contacted by mail to participate in the study. Concurrently, a matched sample process was used to create the comparison group. Two similar comparison school buildings were matched to the selected school building with school-based mental health programs based upon the characteristics of the school district. The two matched school buildings from similar districts throughout the state of Ohio were chosen in case the most similar school building had a school-based mental health program or did not complete the questionnaire. However, only the most similar match was initially contacted as described in the following section.

Collecting data/distributing questionnaires. Once all of the school districts were selected and matched, the School-Based Mental Health Questionnaire (Appendix C) was mailed to the school psychologist at each school building. Each distributed questionnaire contained a code that was used to identify the school district, building, and county. This code was only available to the researcher. Once the questionnaires were mailed, follow-up postcards were sent after 6 weeks for non-responsive school buildings (n = 52). At the conclusion of data collection, 95 questionnaires were originally distributed to school buildings identified as having a school-based mental health program and 66 were returned (return rate of 69%). Out of the 66 school-buildings with school-based mental health programs that returned questionnaires, two buildings were dropped from the study due to the questionnaires from neither of the comparison school buildings being returned or the questionnaire indicating that the building did not have a school-based mental health program. A total of 170 questionnaires were sent to comparison school buildings and 88 were returned (return rate of 52%). Information from 24 questionnaires was not included in this study for one of three reasons: 1) the matched school building with a school-based mental health program did not return a completed questionnaire, 2) it was not the most similar building, or 3) the building currently had a school-based mental health program.
Chapter IV

Results

School Building Characteristics

Analyses of the data contained on the returned questionnaires indicated that the initial match of school buildings with school-based mental health programs to those buildings without school-based mental health programs was a good one. As shown in Table 1, there were no significant differences between the two groups for other school building characteristics (school enrollment, school district income, number of building-level academic programs).

Research Hypotheses

A multivariate analyses of variance (MANOVA) was conducted to compare the building-level indicators of performance (percentage of state indicators of performance met, school attendance rate of students, suspension rates, and expulsion rates) with the independent variable (type of school building). No significant differences were found. The means and standard deviations for each of the dependent variables can be found in Table 1.

The results of the ANOVAs are described in terms of the stated hypotheses.

Hypothesis I: School buildings with school-based mental health programs will have met a higher percentage of state indicators of performance when compared to similar school buildings without school-based mental health programs. A one-way ANOVA of the data using building type (with school-based mental health program vs. without school-based mental health program) as the independent variable and the percentage of state indicators of performance met as the dependent variable, resulted in a non-significant F-value, F(1,124) = 1.327, p > .01. This suggested that the mean score of percentage met for the two types of school buildings differed only by chance and may be assumed to be equal (see Table 2).

Hypothesis II: School buildings with school-based mental health programs will have higher attendance rates when compared to similar school buildings without school-based mental health programs.

A one-way ANOVA of the data, using building type as the independent variable and attendance rate as the dependent variable, resulted in a non-significant F-Value, F(1,124) = .619, p > .01. This suggested that the mean attendance rate for the two types of buildings differed only by chance and may be assumed to be equal (see Table 2).
**Hypothesis III:** School buildings with school-based mental health programs will have lower suspension rates when compared to similar school buildings without school-based mental health programs.

A one-way ANOVA of the data, using building type as the independent variable and suspension rate as the dependent variable, resulted in a non-significant F-Value, $F(1,126) = .704$, $p > .01$. This suggested that the mean suspension rate for the two types of buildings differed only by chance and may be assumed to be equal (see Table 2).

**Hypothesis IV:** School buildings with school-based mental health programs will have lower expulsion rates when compared to similar school buildings without school-based mental health programs.

A one-way ANOVA of the data, using building type as the independent variable and expulsion rate as the dependent variable, resulted in a non-significant F-Value, $F(1,125) = 3.777$, $p > .01$. This also suggested that the mean expulsion rate for the two types of school buildings differed only by chance and may be assumed to be equal (see Table 2).
Chapter V
Discussion

Conclusion

The purpose of this study was to compliment contemporary knowledge of the impact that mental health services have on student functioning by further investigating school-based mental health programs and student performance in terms of state indicators and other school relevant measures. Whereas previous research has demonstrated an improvement in student functioning at the individual level following mental health services (Flaherty & Weist, 1999; New Freedom Commission on Mental Health, 2003; Conduct Problems Prevention Research Group, 1999a), this study focused on investigating improvement in student functioning at the building level in schools that offered mental health services to all students. To accomplish this, public school buildings with school-based mental health programs and public school buildings without school-based mental health programs were compared in terms of the percentage of state indicators of performance met, attendance rates, suspension rates, and expulsion rates. This was done by locating school buildings in four southwest Ohio counties that currently had a school-based mental health program and comparing these buildings to similar school buildings without school-based mental health programs throughout Ohio.

According to the data presented in the previous chapter, school buildings with school-based mental health programs as well as those without school-based mental health programs were associated with comparable levels of the dependent variables. Both types of school buildings had approximately the same percentage of state indicators of performance met, attendance rates, suspension rates, and expulsion rates. School-based mental health programs, in this context therefore, failed to be associated with an improvement in student functioning at the building-wide level. It is important to note, however, that this does not imply that school-based mental health programs are ineffective in terms of improving student functioning. Previous research has in fact shown improvement in student functioning following the receipt of mental health services in the school (e.g. Armbruster & Lichman, 1999; Clarke et al., 1995; Flaherty & Weist, 1999; Knoff & Batsche, 1995). It is quite possible that this demonstrated effectiveness has not generalized or is not significant enough to be evident at the building-wide level. This notion is supported by examining the characteristics of the school buildings with school-based mental health programs (Table 1). When examining the data, these mental health programs
served on average only a minor percentage of the student population ($M = 6.82$, $SD = 7.92$; range = 1.30 - 31.00), employed few mental health providers at each building ($M = 1.304$, $SD = 0.76$; range = 1.00 - 6.00), had been in operation for only a few years ($M = 4.72$, $SD = 2.18$; range = 3.00 - 11.00), and rarely conducted whole-class interventions or groups each year ($M = 0.02$, $SD = 0.14$; range = 0.00 - 1.00). Research published after the start of this study echoes similar conclusions. Bruns, Walrath, Glass-Siegel, and Weist (2004) concluded that, after reviewing the findings associated with their study, that one full-time mental health worker in a school of 400 children with significant risk factors is unlikely to overcome many of the challenges school face. In addition to considering the small percentage of students served by these mental health programs, it is important to consider other possible explanations of why significant results were not obtained as well.

Based on the comments made by previous researchers regarding the wide-spread effects of school-based mental health programs on the classroom as well as on individual students (Sugai, 2003; Owens & Murphy, 2004; Catron & Weiss, 1994), this researcher assumed that proposed class-wide improvements would be evident at the building-level. This may have been too large of a theoretical leap given the lack of previous research using similar designs and measures. It is quite possible that when measured at the class-wide level, educators would see improvements in the academic functioning of the student that received treatment as well as in the rest of the class. These improvements could still however not be exhibited throughout the school building. Another possible explanation of academic improvements not being exhibited at the building-level, as measured in this study, is in part because of the measure chosen to encapsulate academic functioning. State indicators of performance are designed to measure the overall level of student academic functioning based on the percentage of students that obtained a proficient score on a standardized test. It is possible that this measure is not sensitive enough to indicate building-wide improvements in student functioning as it was intended for use in this study.

**Limitations**

It is also important to keep in mind that the lack of significant findings associated with this study should be considered when examining its inherent limitations. The limitations associated with this study can be classified as one of two types: design and procedural.

**Design limitations.** Design limitations include those that occurred when deciding how to conduct this study. The most important limitation associated with the design of this study was...
the type of research design used. This study was created using a causal-comparative design for quantitative research. This type of research is limited in the types of conclusions that can be made because of a lack of control of extraneous variables. This design does not indicate cause but only association. Pre-existing groups were compared with little control for other variables that could affect the relationships between the independent and dependent variables. This study attempted to control for issues related to income, school size, and the number of academic programs implemented at the building-level. The researcher believed that these were some of the variables that could influence the results obtained in this study. As shown in Table 1, the two categories of buildings were similar in terms of school district income, school size, and the number of academic programs. However, little was done to investigate and control for other confounding variables such as pre-existing differences between those public school buildings with school-based mental health programs and those without. This study assumed that prior to implementing mental health programs, student functioning and other variables related to academic achievement between buildings with school-based mental health programs and those without school-based mental health programs were comparable.

Another limitation associated with the design of this research is the lack of pre-treatment measures. This study did not attempt to measure student functioning at the buildings prior to implementing school-based mental health programs. This study assumed that student functioning prior to the implementation of the school-based mental health program at certain buildings was comparable to the most similar building that did not implement a school-based mental health program.

A third design limitation associated with this study included an absence of information collected assessing the mental health services provided in the comparison school buildings. During the designing phase of this study, much attention was paid to exploring and collecting data on the mental health services that were provided in school-based mental health programs. However, no attention was paid to the mental health services at comparison buildings. Steps were taken to assess the number and scope of building-wide academic programs that were in place at each building but not of mental health services. This is important to note as a limitation as the mental health services provided in comparison buildings could have been comparable to those provided by school-based mental health programs. It is possible that school psychologists, school guidance counselors, school social workers, etc. could provide similar mental health
services without being identified as working for a school-based mental health program. Therefore, it would have been beneficial to determine if the services provided by school-based mental health programs were unique to the buildings with school-based mental health programs.

A fourth design limitation dealt with the sample selected for this study. The buildings with school-based mental health programs were selected from only four counties in southwest Ohio. This small sampling of school buildings limits the generalizability of the results and may not accurately represent the vast diversity of school-based mental health programs operating throughout Ohio. The small sample size used in this study may not have been large enough to measure differences between the two types of buildings on the measured variables given the small effect size observed when examining the data.

Procedural limitations. While there were several limitations associated with the research design, there also existed limitations inherent with the procedures used for data collection. First, a questionnaire had to be specifically designed to collect the data used in the study. Pre-established levels of validity and reliability did not exist and thus, even though time was spent refining the measure during a pilot study, uncertainty remained regarding validity and reliability. Second, because a questionnaire was used in an anonymous manner, the participants were not able to ask clarifying questions, nor was the researcher able to have participants elaborate on their responses. These two limitations were evident when examining the data. As previously described, mental health agencies were contacted during the initial phase of the data collection to obtain a preliminary list of buildings with school-based mental health programs. During this phase, the researcher was provided with a list of school buildings and a description of the services provided by these school-based mental health programs. However, several participants from buildings identified as having school-based mental health programs provided information that contradicted information included by the agency responsible for providing services in that building, this resulted in the building not being included in the study. This occurrence raises serious questions as to the accuracy of the program descriptions and characteristics that were obtained by the researcher using the questionnaire.

Future Research

With No Child Left Behind mandating that public school districts use proven-effective programs in their buildings, it is more important than ever to further explore school-based mental health programs in terms of school relevant measures. Although this study failed to provide
further support for school-based mental health programs using the percentage of state indicators of performance met, attendance rates, suspension rates, and expulsion rates (methods of accountability in Ohio public schools), its results and limitations provide direction for future research involving the evaluation of school-based mental health programs on student functioning. These future directions include the use of a longitudinal study that continually measures the impact of school-based mental health programs by examining current functioning of the student body (prior to implementing the program) as well as yearly progress using school relevant measures. Previous longitudinal studies (e.g. Nabors & Prodente, 2002; Flaherty & Weist, 1999) have shown that this type of study can capture improvements in student functioning of individual students over an extended period of time following mental health services provided in schools. Several different longitudinal studies could be conducted that complement the continuously expanding knowledge base regarding the effectiveness of school-based mental health programs. One suggestion includes conducting longitudinal studies that investigate levels of student functioning prior to the implementation of school-based mental health services and that continue to monitor student functioning for the next several years during which the services are implemented in the building. Another suggestion would include a longitudinal study that includes both buildings with school-based mental health programs and control buildings. Student functioning at each type of building would be monitored prior to implementation as well as during the next several years.

Other suggestions for future research that would address limitations encountered in this study include studies that use a larger sample of school buildings representative of a more diverse geographical location. Along with including an increased number of public school buildings with school-based mental health programs, it would be advantageous for future studies to gather a more in-depth description and thus have a greater understanding of the nature and scope of the school-based mental health programs currently operating in U.S. public schools and the services that they provide. In addition to a greater sample size and a better understanding of the mental health services provided by these programs, it would be valuable to employ more strenuous criteria for classification as school-based mental health programs. Examples of specific criteria include: having at least two mental health program employees, being in existence as an operating program for at least 7 years, providing details on services offered, and having the school-based mental health program serve a significant percentage of the student population.
These recommendations would allow for greater generalization of any significant findings associated with school-based mental health programs as well as a better understanding of the services being provided by the programs studied. The researchers would thus also be able to include only those school-based mental health programs that meet specific criteria which may result in a more accurate investigation of the impact that school-based mental health programs can have on student achievement using building-level measures.

Given the recent call to investigate mental health services present in the schools by examining school relevant measures (Ringeisen et al., 2003), research that addresses any of the limitations associated with this study would be beneficial to understanding the impact that school-based mental health programs can have on student functioning at both the individual and building-wide level. With the signing of No Child Left Behind (2002), school districts are now required to use proven-effective programs in their buildings. It would be beneficial to both school psychologists and other school personnel for future research to continue to explore an association between school-based mental health programs and student functioning using the accountability measures mandated by state departments of education. Future research that documents the effects of school-based mental health programs using school-relevant measures, may show that these programs would comply with the requirements of No Child Left Behind (2002), thus generating further support for the use of school-based mental health programs in U.S. public schools.
Table 1.  
Means of School Building Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Buildings with School-Based Mental Health Programs (n = 64)</th>
<th>Buildings without School-Based Mental Health Programs (n = 64)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>School District Income</td>
<td>33137.13 (5930.60)</td>
<td>32234.34 (6013.11)</td>
<td>0.73*</td>
</tr>
<tr>
<td>Number of Enrolled Students</td>
<td>646.23 (437.57)</td>
<td>544.16 (371.26)</td>
<td>1.97*</td>
</tr>
<tr>
<td>Number of Building-Level Academic Programs</td>
<td>3.41 (1.11)</td>
<td>3.09 (1.00)</td>
<td>2.70*</td>
</tr>
<tr>
<td>Number of Students served By Mental Health Program</td>
<td>34.18 (26.82)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of Student Population Served</td>
<td>7.38 (7.92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of School-Based Mental Health Program Employees</td>
<td>1.30 (0.76)</td>
<td></td>
<td></td>
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<tr>
<td>Number of Years School-Based Program at Building</td>
<td>4.72 (2.18)</td>
<td></td>
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<tr>
<td>Number of Whole Class Mental Health Interventions/Groups</td>
<td>0.02 (0.14)</td>
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Note: Means are presented with standard deviations in parentheses.  
* p > 0.05
Table 2.
Mean Scores of School Building Performance.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Buildings with School-Based Mental Health Programs (n = 64)</th>
<th>Buildings without School-Based Mental Health Programs (n = 64)</th>
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</thead>
<tbody>
<tr>
<td>Percentage of Indicators of Performance Met</td>
<td>77.94 (28.96)</td>
<td>71.87 (30.20)</td>
</tr>
<tr>
<td>Attendance Rate for Building</td>
<td>94.67 (5.68)</td>
<td>95.24 (1.30)</td>
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<tr>
<td>Suspension Rate for Building</td>
<td>8.86 (10.83)</td>
<td>7.35 (9.37)</td>
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<tr>
<td>Expulsion Rate for Building</td>
<td>0.18 (0.49)</td>
<td>0.08 (0.19)</td>
</tr>
</tbody>
</table>

Note: Means are presented with standard deviations in parentheses.
References


Catron, T., Harris, V., & Weiss, B. (1998). Posttreatment results after 2 years of services in The Vanderbilt School-Based Counseling project. In M. Epstein & K. Kutash (Eds.), *Outcomes for children and youth with emotional and behavioral disorders and their families: Programs and evaluation best practices* (pp. 633-656). Austin, TX: Pro-Ed, Inc.


Palo Alto: Consulting Psychologists Press.


Weiss, B., & Garber, J. (1993). The Vanderbilt Depression Inventory. Unpublished manuscript, Vanderbilt University, Nashville, TN.


Appendix A
Locating School-Based Mental Health Programs Materials

Hello,

My name is Jason A. Kibby and I am a 3rd year graduate student in the School Psychology Program at Miami University. I am currently attempting to examine the association between school-based mental health programs and building-wide student performance as part of my thesis project. I am requesting your assistance in compiling a comprehensive list of school-based mental health programs in public school buildings throughout Butler, Clinton, Clermont, and Warren Counties in the state of Ohio.

School-based mental health programs, generally speaking, are typically designed and operated by mental health professionals. These mental health professionals work conjointly with school personnel to best meet the mental health needs of the students. School-based mental health treatment includes the provision of on-site primary preventive, diagnostic, and treatment services in the school. School-based mental health programs focus on the prevention of mental health problems in the entire student body (i.e. evaluating school climate), focus on intervening with students at-risk for mental health problems (i.e. social skills groups), and provide intensive mental health services for students with already existing problems (i.e. one-on-one counseling sessions), all within the school setting. These programs supplement traditional school mental health services offered by school counselors, school psychologists, and school social workers by linking schools to the services associated with community mental health centers, health departments, and other social services. School-based mental health programs integrate the services of the school, community agencies, hospitals, and universities to best meet the mental health needs of children and adolescents. This integration includes assessment, multi-modal treatments, consultation, and strategies that are available to all students and special and regular education classes.

If you are willing to provide assistance, please forward a list of school-based mental health programs operating in public schools in Butler, Clinton, Clermont, and Warren Counties of which you are aware of or which your program is affiliated. This information (the name of school-based mental health program and participating school building), can either be sent
through e-mail to kibbyja@muohio.edu or by completing the attached page and mailing it, using
the envelope provided.

If you do not feel capable of providing the information sought, please forward this request to the appropriate person knowledgeable in this area or the services provided to local school buildings.

Please allow me to thank you in advance for your cooperation. In the event that you need any additional information regarding this research project, you may contact Dr. Katherine Wickstrom by phone at (513) 529-6624 or by e-mail at wickstfk@muohio.edu. Other inquiries regarding this study and its results may also be directed towards myself via e-mail correspondence - kibbyja@muohio.edu. If you have any questions about your rights as a participant of this study, please contact the chairperson of Miami University’s Office for the Advancement of Research and Scholarship at (513) 529-3734. Thank you for your time!

Sincerely,

Jason A. Kibby
School-Based Mental Health Programs in Ohio

Please provide the name of the school-based mental health program, if known, and the school district or districts that receive mental health services from this program. When you are finished please return this sheet to me using the envelope provided. Thank You!

<table>
<thead>
<tr>
<th>Name of School-Based Mental Health Program</th>
<th>Name of School Building(s) Receiving Services</th>
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Appendix B
School-Based Mental Health Program Questionnaire – Pilot Version

Hello,

My name is Jason Kibby and I am a 3rd year graduate student at Miami University in the School Psychology Program. Presently, I am working on my thesis requirement by attempting to examine the association between school-based mental health programs and school district performance. I am requesting your voluntary, anonymous, participation in the current pilot study.

Specifically, you will be asked to complete and return a brief questionnaire packet and provide the researcher with feedback about any problems with the packet. Please note that this packet consists of a definition of school-based mental health programs, a questionnaire about such programs in your school district, a feedback page regarding your experience of completing the materials used for this study, as well as a prepaid self-addressed envelope for your convenience. Participation should take approximately 5-10 minutes. If you agree to participate, please complete the enclosed questionnaire packet including any written feedback about the questionnaire itself and return it in the enclosed prepaid self-addressed envelope. Please feel free to write any comments or questions or mark any unclear sections directly on the materials themselves. There are no risks involved by participating in this study.

By completing the enclosed packet you will have voluntarily agreed to participate as a participant in this study, which will be carried out by myself, under the supervision of Dr. Katherine Wickstrom, Assistant Professor in Educational Psychology, at Miami University, Oxford, Ohio, 45056. Records of this study will be kept confidential, and you will not be identified in any written or verbal reports.

Please note that you were given a copy of this form whether or not you have agreed to participate in this study. The alternative to this study is to not participate. In this letter, I have instructed you that your participation is voluntary and anonymous and that you may withdraw from the study at any time. Please understand that if you refuse to participate or if you consent
and then later withdraw from the study this will not affect your relationship with the professors at Miami University, fellow co-workers, or administration at your present school.

Please allow me to thank you in advance for your cooperation. In the event that you need any additional information regarding this research project, you may contact Dr. Katherine Wickstrom by phone at (513) 529-6624 or by e-mail at wickstfk@muohio.edu. Other inquires regarding this study and its results may also be directed towards myself via e-mail correspondence - kibbyja@muohio.edu. If you have any questions about your rights as a participant of this study, please contact the chairperson of Miami University’s Office for the Advancement of Research and Scholarship at (513) 529-3734. Thank you for your time!

* If you do not feel that you possess the information required to complete this questionnaire please forward this packet to the person in your building knowledgeable of the mental health services provided in your schools.

Sincerely,

Jason A. Kibby
School-Based Mental Health Program Definition

The definition provided below is not the only acceptable definition of a school-based mental health program; it is designed to provide the reader with a general understanding.

- School-based mental health programs, generally speaking, are typically designed and operated by mental health professionals.
- These mental health professionals work conjointly with school personnel to best meet the mental health needs of the students.
- School-based mental health treatment includes the provision of on-site primary preventive, diagnostic, and treatment services in the school.
- School-based mental health programs focus on the prevention of mental health problems in the entire student body (i.e. evaluating school climate), focus on intervening with students at-risk for mental health problems (i.e. social skills groups), and provide intensive mental health services for students with already existing problems (i.e. one-on-one counseling sessions), all within the school setting.
- These programs and the mental health services they are capable of implementing in the school supplement traditional school mental health services offered by school counselors, school psychologists, and school social workers by linking schools to the services associated with community mental health centers, health departments, and other social services.
- School-based mental health programs integrate the services of the school, community agencies, hospitals, and universities to best meet the mental health needs of children and adolescents. This integration includes assessment, multi-modal treatments, consultation, and strategies that are available to all students and special and regular education classes.
School-Based Mental Health Program Questionnaire

This questionnaire is being designed specifically for this study. The purpose of the questionnaire is to either confirm the existence or absence of a school-based mental health program in school districts throughout the state of Ohio. As mentioned in the introduction letter, this thesis is attempting to explore the association between school-based mental health programs and school district performance. School accountability measures (number of state indicators met and attendance, suspension, and expulsion rates) will be compared between school districts with school-based mental health programs and those districts without these programs. When completing this questionnaire, please do not include your name or other identifying information. When you are finished completing the questionnaire please fill out the questionnaire feedback section, then place the questionnaire in the self-addressed prepaid envelope.

Thank you for your participation in this study and the completion of this questionnaire!

Directions:
Please answer each question to the best of your knowledge by placing an X in front of your answer.

1. My school currently has a program which meets the definition of a school-based mental health program as defined on the previous page. ___ yes ___ no

if you answered no to this question, please skip to question #3
if you answered yes, please continue with question #2 on the following page

(Continue to the next page)
2. The program currently operating in my school building has the following characteristics:

Mark all that apply with an X

___ has been in operation in the school district for at least 3 years
___ has services available to more than one school in the district
___ program operates in the school more than 3 days per week
___ includes personnel that possess at least a master’s degree in a mental health-related field working in each school more than 3 days per week
___ has more than one person responsible for providing mental health services in each school working with the program
___ has more than one person qualified to provide mental health services to students
___ is affiliated with a university, community mental health clinic, or county mental health board
___ includes services that are available to all students, regular and special education
___ includes services that are utilized by all students, regular and special education
___ includes services related to school-wide prevention of student problems, i.e. Positive Behavior Support
___ includes services and/or interventions that can be implemented in the student’s classroom
___ includes responding to the crises of individual students, i.e. suicide threats
___ includes on-going individual counseling with students
___ includes group counseling with students, i.e. anger management groups
___ includes services that target internalizing as well as externalizing mental health problems, i.e. depression (internalizing), antisocial behaviors (externalizing)
___ program works collaboratively with school employees i.e. guidance counselors, teachers, principals
___ program design includes functioning as a consultant to teachers
___ programs design includes functioning as a consultant to parents
___ includes input from student’s parents/guardians when deciding services
___ includes school input when conducting a mental health assessment, i.e. surveying teachers

(Continue to the next page)
___ measures effects on student functioning/accountability, i.e. pre- and post-service measures
___ services are provided in the school during school hours
___ includes activities in the school that actively promote the program, i.e. in-services for teachers regarding available services
___ acts as a referral source to community services, i.e. community mental health clinics, hospitals, support groups

3. Please complete the following questions to the best of your knowledge

**Program Information**

_______ number of years program has been at your building
_______ number of children that have received individual services since start of program
_______ average number of children served per year
_______ number of regular education students served since start of program
_______ number of special education students served since start of program
_______ number of whole class interventions conducted per year
_______ number of school-based mental health program employs in your building
_______ average number of students per regular education classroom per year
_______ average number of students in special education classrooms per year (if offered at your building)

(Continue to the next page)
5. Please answer each question about school building services to the best of your knowledge by placing an X in front of your answer.

**School Building Services**

Does your school building offer or use any of the following building-wide services?

___ Title 1 services
___ Positive Behavior Support Program
___ Promoting Alternative Thinking Strategies (PATHS)
___ Second Step Violence Prevention Program
___ Dynamic Indicators of Basic Early Literacy Skills (DIBELS)
___ Accelerated Reader Program (A.R.)
___ Support Groups
___ Tutoring before or after school
___ Proficiency tutoring for students that have not passed one or more of the tests
___ Conflict Management

5. Please list any additional building-wide academically or behaviorally targeted programs that were not listed in the previous question

_________________________________ _______________________________

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(Continue to the next page)
Comments or additional information about your school, school-based mental health program, or other services provided in your building: (Use the backside of this questionnaire if you need more space)

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(Continue to the next page)
Materials Feedback

As a participant in the development of this questionnaire, you are being asked to answer several questions. The purpose of these questions is to provide information that will assist in the further development and refinement of the questionnaire.

Please take a couple extra minutes to provide the researcher with feedback.

Rate the statements using the following scale: 1 - agree 2 - neutral 3 - disagree

The questionnaire was straightforward 1 2 3
The questionnaire was easy to complete 1 2 3
The questionnaire took less than 10 minutes to complete 1 2 3
The purpose of the study was clearly stated 1 2 3
The purpose of the questionnaire was clearly stated 1 2 3
The questions were easy to understand 1 2 3
The questions seemed related to the purpose of the study 1 2 3

List any additional comments, questions, or concerns regarding the use of this questionnaire:

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Appendix C
School-Based Mental Health Program Questionnaire

Hello,

My name is Jason Kibby and I am a 3rd year graduate student at Miami University in the School Psychology Program. Presently, I am working on my thesis requirement by attempting to examine the association between school-based mental health programs and school district performance. I am requesting your voluntary, anonymous, participation in the current study.

Specifically, you will be asked to complete and return a brief questionnaire packet. Please note that this packet consists of a definition of school-based mental health programs, a questionnaire about such programs in your school district, as well as a prepaid self-addressed envelope for your convenience. Participation should take approximately 5-10 minutes. If you agree to participate, please complete the enclosed questionnaire packet and return it in using the enclosed prepaid self-addressed envelope. There are no risks involved by participating in this study.

By completing the enclosed packet you will have voluntarily agreed to participate as a participant in this study, which will be carried out by myself, under the supervision of Dr. Katherine Wickstrom, Assistant Professor in Educational Psychology, at Miami University, Oxford, Ohio, 45056. Records of this study will be kept confidential, and you will not be identified in any written or verbal reports.

Please note that you were given a copy of this form whether or not you have agreed to participate in this study. The alternative to this study is to not participate. In this letter, I have instructed you that your participation is voluntary and anonymous and that you may withdraw from the study at any time. Please understand that if you refuse to participate or if you consent
and later withdraw from the study this will not affect your relationship with the professors at Miami University, fellow co-workers, or administration at your present school.

Please allow me to thank you in advance for your cooperation. In the event that you need any additional information regarding this research project, you may contact Dr. Katherine Wickstrom by phone at (513) 529-6624 or by e-mail at wickstfk@muohio.edu. Other inquires regarding this study and its results may also be directed towards myself via e-mail correspondence - kibbyja@muohio.edu. If you have any questions about your rights as a participant of this study, please contact the chairperson of Miami University’s Office for the Advancement of Research and Scholarship at (513) 529-3734. Thank you for your time!

* If you do not feel that you possess the information required to complete this questionnaire please forward this packet to the person in your building knowledgeable of the mental health services provided in your schools.

Sincerely,

Jason A. Kibby
School-Based Mental Health Program Definition

The definition provided below is not the only acceptable definition of a school-based mental health program; it is designed to provide the reader with a general understanding.

- School-based mental health programs, generally speaking, are typically designed and operated by mental health professionals.
- These mental health professionals work conjointly with school personnel to best meet the mental health needs of the students.
- School-based mental health treatment includes the provision of on-site primary preventive, diagnostic, and treatment services in the school.
- School-based mental health programs focus on the prevention of mental health problems in the entire student body (i.e. evaluating school climate), focus on intervening with students at-risk for mental health problems (i.e. social skills groups), and provide intensive mental health services for students with already existing problems (i.e. one-on-one counseling sessions), all within the school setting.
- These programs and the mental health services they are capable of implementing in the school supplement traditional school mental health services offered by school counselors, school psychologists, and school social workers by linking schools to the services associated with community mental health centers, health departments, and other social services.
- School-based mental health programs integrate the services of the school, community agencies, hospitals, and universities to best meet the mental health needs of children and adolescents. This integration includes assessment, multi-modal treatments, consultation, and strategies that are available to all students and special and regular education classes.
School-Based Mental Health Program Questionnaire

The purpose of this questionnaire is to confirm the existence or absence of a school-based mental health program in school districts throughout the state of Ohio. As mentioned in the introduction letter, this thesis is attempting to explore the association between school-based mental health programs and school district performance. School accountability measures (number of state indicators met and attendance, suspension, and expulsion rates) will be compared between school districts with school-based mental health programs and those districts without these programs. When you are finished completing the questionnaire please place the yellow pages of the questionnaire in the self-addressed prepaid envelope.

Thank you for your participation in this study and the completion of this questionnaire!

Directions:
Please answer each question to the best of your knowledge by placing an X in front of your answer.

1. My school currently has a program which meets the definition of ___ yes ___ no a school-based mental health program as defined on the previous page.

if you answered “no” to this question, please skip to question #4
if you answered “yes”, please continue with questions #2 through #5 on the following pages

(Continue to the next page)
2. The program currently operating in my school building has the following characteristics:

Mark all that apply with an X

___ has been in operation in the school district for at least 3 years
___ program operates in the school more than 3 days per week
___ has more than one person responsible for providing mental health services in each school working with the program
___ is affiliated with a university, community mental health clinic, or county mental health board
___ includes services that are available to all students, regular and special education
___ includes services that are utilized by all students, regular and special education
___ includes services related to school-wide prevention of student problems
___ includes on-going individual counseling with students
___ includes group counseling with students, i.e. anger management groups
___ includes services that target internalizing as well as externalizing mental health problems, i.e. depression (internalizing), antisocial behaviors (externalizing)
___ program works collaboratively with school employees i.e. guidance counselors, teachers, principals
___ includes input from student’s parents/guardians when deciding services
___ measures effects on student functioning/accountability, i.e. pre- and post-service measures
___ services are provided in the school during school hours
___ acts as a referral source to community services, i.e. community mental health clinics, hospitals, support groups
4. To the best of your knowledge please fill in the number to each of the following questions about your school-based mental health program.

_______ number of years program has been at your building
_______ approximate number of regular education students served during the previous year
_______ approximate number of special education students served during the previous year
_______ number of whole class interventions conducted during the previous year
_______ number of school-based mental health program employees in your building

4. To the best of your knowledge please answer each question about **School Building Services** by placing an X in front of your answer.

Does your school building offer or use any of the following building-wide services?

___ Title 1 services
___ Positive Behavior Support Program
___ Promoting Alternative Thinking Strategies (PATHS)
___ Second Step Violence Prevention Program
___ Accelerated Reader Program (A.R.)
___ Support Groups
___ Tutoring before or after school
___ Proficiency tutoring for students that have not passed one or more of the tests
___ Conflict Management
___ Reading Literacy Program
___ Other (Please list):

(Continue to the next page)
5. Please provide any additional comments or information about your school, school-based mental health program, and/or other services provided in your building:

(Use the backside of this questionnaire if you need more space)

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Thank you for completing this questionnaire, please return only the yellow pages of the questionnaire using the provided envelope.