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ABSTRACT

THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND
SCHOOL-BASED MENTAL HEALTH SERVICES FOR
MIDDLE SCHOOL STUDENTS

by

Lisa O. Williams

Abstract of a Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2012
ABSTRACT

THE RELATIONSHIP BETWEEN ACADEMIC ACHIEVEMENT AND
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by Lisa Ogle Williams

May 2012

Mental health issues among American adolescents and children can negatively impact their potential for school success. As many as 10% of students among the general education population suffer from psychiatric disorders, yet only between 1% and 5% of those students are being served. The effects of mental health difficulties are problematic for students because they negatively impact academic performance, behavior, attendance, and school violence (Whelley, Cash, & Bryson, 2003). There are often barriers to academic performance relative to psychiatric illness and problems that include inadequate health insurance coverage, lack of transportation, shortages of child mental health professionals, and stigmas associated to mental health challenges (Young & Murray, 2004). Evidence suggests racial and ethnic minority groups are less likely to use mental health services due to lack of access, and they also receive poorer quality care (U. S. Department of Health and Human Services, 2001).

The purpose of this study was to determine if there is a relationship between school-based mental health services (one-on-one therapy, therapeutic groups, and family support services) and academic achievement among middle school students as measured by performance in mathematics and reading on a state criterion-referenced test. The
study was conducted in a large, suburban school district in the southeastern region of the United States. It was designed to examine the relationship between school-based mental health services and academic achievement for middle school students by race and gender. The researcher conducted a quantitative research study of archival data from 184 middle school students receiving school-based mental health services between 2008 and 2011.

The data analysis revealed that there were improvements in reading, but not in mathematics, following participation in one or more school-based mental health services. Based on the data analysis, it was further revealed that there was no significant interaction of achievement scores and gender or race following participation in school-based mental health services. The analysis of means indicated that student achievement in reading for males, females, White students, and Black students improved following participation in school-based mental health services. However, student achievement in mathematics decreased for males, females, White students, and Black students following services.
The University of Southern Mississippi

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CHAPTER I

INTRODUCTION

The primary goal for American education is to provide students with a free appropriate education so that all children may grow and develop academically, emotionally, and socially to succeed in a global society. Often, students experience mental health issues that interfere with their ability to meet educational expectations for appropriate development and success. In the United States, it is estimated as many as 70% of children and adolescents who need mental health intervention do not receive services (Whelley et al., 2003). Fragmented families, economic hardship, and overburdened mental health systems all contribute to the lack of assessment, diagnosis, and treatment being made available to school children of all ages. Skalaski and Smith (2006) reported that when students struggle with mental health matters, they often have attendance problems, difficulty completing assignments, and increased conflicts with adults and peers. Additionally, Walker, Severson, and Seely (2010) stressed the need for additional research that addresses early screening of students for the purpose of identifying those who may need mental health services. The United States Department of Education, in the March 2010 Blueprint for Reform, Reauthorization of the Elementary and Secondary Education Act, established a national priority of providing a world-class education for every child (U.S. Department of Education, 2010).

The Mental Health: A Report of the Surgeon General—Executive Summary (1999) reported that almost 21% of American children suffered from mental or addictive disorders as follows: anxiety (13%), mood disorders (6.2%), disruptive disorders (10.3%), substance use disorders (2.0%), and any disorder (20.9%). Among those with
diagnosable disorders, four million were reported with significant impairment. They suggested that policy-makers, educators, and juvenile justice personnel have recognized the significant link between mental health and classroom success. Although more research is needed, communities were encouraged in the report to establish and maintain evidence-based prevention and intervention services (Mental Health: A Report of the Surgeon General, 1999). Approximately one third of children and adolescents who need help receive treatment, and less than half of those have adequate treatment. School involvement in assessing and treating students with psychological problems has increased for several reasons: an increase in the number of youth with notable psychosocial problems, a shorter amount of time allowed for both inpatient and outpatient treatment, and an overburdened mental health care system (Scholzman, 2003).

Mental health issues among American adolescents and children not only cause pain and distress, but they also negatively impact a child’s potential for success in school. It is noted that up to 10% of students among the general education population suffer from psychiatric disorders, yet only 1% to 5% of those students are being served. Those youngsters experiencing mental health issues may demonstrate aggression, or their behaviors may be more subtle and lead to feelings of anxiety or depression (Repie, 2005). Students who face emotional and behavioral problems have difficulty learning and often make learning difficult for others around them. The effects of mental health difficulties are problematic for students in that they negatively impact academic performance, behavior, attendance, and school violence (Whelley, 2003).

For schools to continue to meet accountability expectations for student success, the issue of mental health among children and youth and the impact such mental health
issues have on academic success need to be explored. Schools are ideal for screening young people because they establish age-appropriate expectations for children. Additionally, they provide a longitudinal view of children’s behavior in a controlled setting. Finally, school-based screening may be beneficial to identify mental health needs before disciplinary action is required (Gall, Pagano, & Desmond, 2000). If schools identify and target problem behaviors with programs of intervention, it is likely academic outcomes will improve as well (Fleming, Haggerty & Catalano, 2005).

In regard to educating children in the United States, schools must examine current practices and determine targeted areas for reform to improve achievement. As Vagle (2009) asserted in her work published in The Principal as Assessment Leader, improving student achievement is a moral responsibility. She further states that factors such as poverty, race, or ethnicity are not what stand in the way of achievement. The greatest obstacles to student achievement and closing achievement gaps are school practices and policies and the beliefs that undergird them. In order to face the moral obligation of providing a world-class education for all students, schools must examine practices and consider the belief systems that govern such practices. Changes must be made where appropriate to promote positive mental health among children and improve and expand school mental health programs (President’s New Freedom Commission on Mental Health, 2003). A major shift is necessary based on the reality that test scores are not likely to increase adequately in schools where significant numbers of students face major barriers to learning (Adelman & Taylor, 2006).

Hinman (2009) examined the silent epidemic in the United States---the high school dropout rate, citing that one million high school students in the United States drop
out of school annually. Almost one third of all public high school students and half of
African Americans, Hispanics, and Native Americans fail to graduate. The long-term
effects of this epidemic impact future employment, health, and socio-economic status.
Theses data not only magnify the challenge of meeting the national goals established in
the *Blueprint for Reform, Reauthorization of the Elementary and Secondary Education
Act* (U. S. Department of Education, 2010), but also frame the immediate need for
schools to become innovative in identifying and addressing barriers to student learning in
order to keep them in school through twelfth grade.

With heightened expectations for providing a world-class education for American
students and ensuring that every child graduates from high school prepared for careers
and college, educators are faced with meeting increasing demands to meet the needs of
American students (U. S. Department of Education, 2010). This brings into question
where the responsibility lies in the guarantee to deliver a world-class education. The
priorities for American education presented in *A Blueprint for Reform* (U. S. Department
of Education, 2010) establish rigorous accountability systems that include all students. In
addition to requiring accountability systems focused on college and career-ready
standards, there exists a requirement for rigorous interventions among low-performing
schools as well. To meet this requirement, schools must meet the needs of diverse
students, including students with disabilities and students who are at risk. Public
agencies, community organizations and families all share the responsibility of addressing
achievement gaps and improving outcomes for all students. Students at greatest risk for
failing to meet academic standards often live in communities lacking the capacity to
address their needs, resulting in their inability to focus on learning (U. S. Department of
Education, 2010). There are often barriers to academic performance relative to psychiatric illness and psychological problems that include inadequate health insurance coverage, lack of transportation, shortages of child mental health professionals, and stigmas associated to mental health challenges (Young & Murray, 2004).

Evidence suggests racial and ethnic minority groups are less likely to use mental health services due to lack of access, and they also receive poorer quality care (U. S. Department of Health and Human Services, 2001). The result is minority communities that have a greater proportion of individuals whose mental health needs are unmet. The following barriers deter minorities from seeking quality care: cost, stigma, and fragmented structure of services. Additionally, poverty has a disproportionate effect on racial and ethnic minorities. Individuals who live in poverty and those with the lowest levels of income and education are more likely to have a mental disorder (Manson, 2003).

Data support an increased need for assessment and treatment of school-aged children with psychiatric illness and psychological problems. Students experiencing these issues may have increased difficulties with academic achievement. Therefore, schools must recognize the importance partnering with families and communities to deliver services to support the wide range of student needs. Based on the recommendations from the U. S. Department of Education (2010), the responsibility to reform schools is a shared duty that cannot be met by teachers and principals alone. Now is the time for deployment of every available resource to support students at greatest risk for academic failure. Often, those students most at risk reside in communities that lack sufficient capacity to address their full range of needs, including their psychological and
emotional needs. This impacts students’ ability to focus on learning and their teachers’ ability to focus on teaching (U. S. Department of Education, 2010).

Scholzman (2003) suggested that schools must find innovative approaches to create environments that support students and keep them safe and healthy in their schools and in their communities. The establishment of programs that employ collaborative mental health services is one step to linking needs of students who are experiencing psychological and emotional needs that are unidentified or unmet to adequate mental health services. Schools must find ways to increase student access to mental health care to more adequately deliver a world-class education to all students.

The purpose of this study was to determine if there is a relationship between school-based mental health services (one-on-one therapy, therapeutic groups, and family support services) and academic achievement among middle school students as measured by student performance on the mathematics and reading portions of the Georgia Criterion Referenced Test. The study was designed to determine if there is a relation between school-based mental health services and academic achievement for middle school students by race and gender.

Statement of Problem

Because of the significant number of adolescents facing mental health issues and the percentage of children whose needs are unmet, there is a need for research to determine if there is a relationship between mental health services and academic achievement. The No Child Left Behind Act (2002) established accountability measures that require schools and school districts to meet standards of learning for all students so that each student makes adequate yearly progress (AYP) in all tested areas. The measure
is determined in part by student participation and achievement on statewide assessments. The law requires each state to set academic standards and implement testing programs aligned with standards to measure student achievement based on the standards. In the state of Georgia, AYP legislation requires schools to meet standards in the areas of test participation and academic performance for both Reading/English Language Arts and Mathematics, and a second indicator determined by each district. Georgia holds each district accountable for student achievement, including AYP as one component of Georgia’s Single Statewide Accountability System. In order to meet AYP, each school and district must meet three criteria. All students in each school, grades one through eight, as well as all student subgroups (race/ethnicity, economically disadvantaged, limited English proficient, and students with disabilities) with at least forty members must post 95% participation in state assessments in Reading/English Language Arts and Mathematics. All students in each school as well as all student groups with at least forty members must meet or exceed the annual measurable objectives (AMO). The AMO is in regard to the percentage of students scoring proficient or exceeding proficient in Reading/English Language Arts and Mathematics. The targeted percentage established to determine AMO changes annually (Georgia Department of Education, 2010a).

This study examined the relationship between school-based mental health services and sixth and seventh grade students’ academic achievement in the areas of mathematics and reading by race and gender. Specifically, this study explored the relationship between services for identified mental health needs and student performance on the state-mandated curriculum assessment test for middle school students. For the purposes of this study, academic achievement is defined as student performance in the areas of reading
and mathematics on the Georgia Criterion Reference Test (CRCT), scale score. School-based mental health services is defined as one or any combination of one-on-one therapy, group therapy, and family support services provided by certified personnel employed by the Success for All Students project to students enrolled in grades six, seven, and eight (Success for All Students, 2009). Differences by race were examined for only White and Black students.

Research Questions

Students experiencing psychiatric illness or psychological problems may have increased difficulties with academic achievement. Therefore, mental health services must be adequately provided to students in need in order for students to meet academic expectations. This study examined the following questions:

1. Is there a relationship between school-based mental health services, race, and gender and reading achievement among middle school students?
2. Is there a relationship between school-based mental health services, race, and gender and mathematics achievement among middle school students?

Statement of Hypotheses

For the purposes of statistical analysis the research questions in this study were written and presented in directional hypotheses.

H_1: Changes in the academic performance of students on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.
H₂: Changes in the academic performance of students on the reading portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

H₃: Improvements in the academic performance of students by gender on the mathematics portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₄: Improvements in the academic performance of students by race on the mathematics portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

H₅: Improvements in the academic performance of students by gender on the reading portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₆: Improvements in the academic performance of students by race on the reading portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

Terms and Definitions

For the purposes of this study, the following terms should be understood regarding their relationship with mental health needs among adolescents, academic achievement, and public school practices.
Family support services are the types of mental health services wherein a therapist works with an entire family, including the target student, to help them care for and live with a child or adolescent experiencing an emotional, behavioral, or mental disorder (Success for All Students, 2009).

Georgia Criterion-Reference Test (CRCT) is the assessment tool used in the state of Georgia to measure student acquisition of the knowledge and skills expected in the Georgia Performance Standards (GPS). All students enrolled in grades one through eight take the CRCT in Reading, English/Language Arts, and Mathematics. (Georgia Department of Education, 2010b).

One-on-one therapy is a school-based mental health service wherein the client is treated one-on-one with a therapist who uses varied treatment approaches (“Success for All Students”, 2009).

Race refers to black, white, or other race classifications of students (Georgia Department of Education, 2010b).

School-based mental health services are strategies implemented, within the school setting, in collaboration with mental health providers, to address prevention and intervention services to decrease risk factors and increase resiliency among children and youth in order to improve academic achievement (“Success for All Students”, 2009).

Therapeutic groups refer to a type of mental health service wherein the client participates in a small group with other students under the guidance of a therapist to help him or her and each other (Success for All Students, 2009).
Delimitations to the Proposed Research

The research study involves a limited population from which data were obtained. Data were collected from students enrolled in sixth, seventh, or eighth grades who received school-based mental health services.

Also, conclusions drawn from the study may be limited by the scope of the research base and sources examined as the basis of the proposed study. Other research and data, unknown to the researcher at the onset of the investigation, may exist that would have significant influence on the research findings.

Justification of the Study

In the United States, the complexity of social and educational problems has increased in relation to mental health issues among adolescents. Data reported by The Federal Interagency Forum on Child and Family Statistics (America's children in brief: Key national indicators of well-being, 2010) between 2005 and 2008 indicated the percent of adolescents eleven to fourteen years old whose parents reported serious or minor difficulty with emotions, concentration, behavior, or getting along with others varied by gender, race, and poverty level. There was a disparity between those whose parents indicated a concern and the percentage of children who received services for either serious or minor difficulty with emotions, concentration, behavior, or getting along with others. Furthermore, the data show the percentage of youth ages twelve to fifteen who had at least one major depressive episode in the past year varied, particularly in comparisons of children by race and gender (America's children in brief, 2010). It is also noted that there are significant disparities for minorities in mental health services in that racial and ethnic minorities, when compared to Whites, have decreased access to care, are
not as likely to receive care as needed, and have received care that is of poor quality (Young & Murray, 2004).

These problems establish the need for better systems to address students’ social and mental health needs. Various psychosocial problems affect student learning, behavior, and school performance (U. S. Department of Health and Human Services, 2001). By reason of this, school policy makers have historically assisted teachers by providing a wide range of counseling, psychological, and social services in schools. During the past twenty years, there has been an increase in linking schools with community services to improve the wellbeing of students and families. The expansion of school-linked services has resulted in increased advocacy for mental health in schools. The result is that most schools have programs in place to address a range of mental health and psychosocial concerns such as attendance concerns, dropouts, substance abuse, relationship issues, and violence (Center for Mental Health in Schools, 2010).

Due to the alarming figures regarding youngsters with emotional or psychological disorders, schools must accept the critical responsibility for the development of academics as well as social and emotional functioning. Although schools are not responsible for meeting every need of every child, schools are responsible for confronting obstacles such as mental health issues that may be impeding learning. Implementation of programs that strengthen mental health services may reduce prevalence of and provide early intervention for problems students are experiencing. School-based mental health services can be effective for addressing the complicated and overlapping barriers to learning.
Although there are many benefits to school-based mental health services, much of the focus in educational research and reform is focused on instructional practices, management, and governance issues. In a climate of caring support for children and adolescents, schools recognize the importance of reaching and teaching the whole child within their whole environment. Schools, therefore, must acknowledge and support positive mental health and take steps to demonstrate such support (Skalski & Smith, 2006). Specifically, this study seeks to examine the variable of school-based mental health services and the impact of those services on academic achievement in mathematics and reading among middle school students.

Based on a study of available research, it is critical to look at the relation between school-based mental health services and student performance on state-mandated assessments. Given the current realities of increased accountability for student achievement, it seems vital to examine whether or not school-based mental health services have a positive relationship with student achievement as measured by state criterion-referenced tests. Individual schools and districts must measure student achievement and analyze programs to determine their impact on overall accountability measures.
CHAPTER II

REVIEW OF RELATED LITERATURE

The primary goal of this section of the research study is to present literature that establishes a link between accountability expectations and mental health needs among children and adolescents in the United States. Additionally, the section attempts to reveal pertinent literature that has been reviewed regarding mental health services to children and youth in the United States. Lastly, this section of the research study provides an overview of effective programs and models for implementation, their advantages and disadvantages, and their connection to meeting mental health and academic needs of children and adolescents.

Educational Policy Regarding School Reform

There are numerous federal policies and regulations supporting the need to address mental health issues among youth by increasing services to improve outcomes such as academic success and social and emotional functioning. The bulk of policies and initiatives related to mental health services for young people stem from the work of the United States Department of Education and the Department of Health and Human Services. The Individuals with Disabilities Act (IDEA), originally passed in 1975 as Public Law 94-142, the Education for All Handicapped Children Act, provided specific legal and procedural protections for students with handicaps. The IDEA (1990) legislation has had the most significant impact on education in that it establishes parameters for identification and evaluation of students and specifies educational rights for those who qualify for services. An individual’s disability must fall within one of the categories of eligibility identified in the law. Serious emotional disturbance is among the
categories listed. Also, the individual must require special education and related services due to the disability (La Morte, 2008, p. 333).

There are several acts of legislation that have established a national priority for students to reach higher levels of achievement. IDEA (1975), Goals 2000: The Educate America Act (1994), and NCLB (2002) each include provisions for making resources available to states to support schools in meeting national expectations. In three education policies, the federal government has addressed the debate over school reform – National Indicator Initiatives (National Governor’s Association, 2011), Goals 2000: The Educate America Act (1994), and the No Child Left Behind Act (NCLB, 2002). In 1989, President George W. Bush and the National Governors’ Association developed America 2000, which established six performance goals for public schools. In addition to goals addressing readiness, graduation rates, and grade-level competencies, the policy also included a goal that every American school would be free of drugs and violence by the year 2000. In 1994, Goals 2000: The Educate America Act became law and was amended in 1996. The aim of the law was to improve the quality of education for all students. The act authorized federal support for state plans for school improvement and edited the six goals of America 2000 with the addition of staff development for teachers and increased parental involvement for the purpose of promoting the “social, emotional, and academic growth of children” (Oliva, 2009, p.155). The following is a partial list of the goals set forth in Goals 2000: The Educate America Act (2004):

1. Every child will start school ready to learn.
2. The high school graduation rate will increase to at least ninety percent.
3. U.S. students will be first in the world in science and mathematics.
4. Every school in the U.S. will be free of drugs, violence, and the unauthorized presence of firearms.

NCLB (2002) is the most recent involvement of the federal government in K-12 education reform. The act, signed into law by President George W. Bush in 2002, reauthorized the Elementary and Secondary Education Act of 1965. It specifically addressed in Title V the emotional well being of children. These federal mandates highlight the need for schools to create reform in order to meet the assurances outlined in each.

In 2002, President George W. Bush announced the creation of the “President’s New Freedom Commission on Mental Health” (2003). The purpose of the Commission was to examine problems and gaps that had led to a fragmented mental health delivery system and to make specific recommendations that could be implemented by Federal and State governments, local agencies, and health care providers. President Bush identified the following obstacles that negatively impact excellent care for citizens with mental illnesses: stigma surrounding mental illness, unfair treatment limitations, unmerited financial expectations for mental health benefits assigned by private health insurance, and a fragmented service delivery model ("President’s New Freedom Commission on Mental Health," 2003).

The goal of the Commission was to recommend improvements to mental health care systems in order to improve quality of life for adults and children with emotional disturbances ("President’s New Freedom Commission on Mental Health," 2003). The Commission reviewed the quality of services, identified unmet needs and barriers to services, identified innovative treatments and services that could be replicated, and
created policies to support improved services. Goal Four in the report promotes mental health among children with a recommendation of improvement and expansion of school mental health programs. The Commission noted that the mission of schools is to educate students, but also that children who have emotional behavior disorders are at greatest risk of school failure ("President’s New Freedom Commission on Mental Health," 2003). Additionally, the Commission echoed the Surgeon General’s assertion that schools are the perfect location for providing mental health services from prevention to treatment because it is where children spend the majority of their day (Kutash & Duchnowski, 2007).

Specific to middle grades education, Turning Points 2000 (Jackson & Davis, 2000) asserts that middle schools are to serve the “whole child” (p.23), challenging them to think critically and to care about their physical and mental health. In the mid-1980’s, the Carnegie Corporation of New York established the Carnegie Council to elevate the challenges of adolescent years on the nation’s agenda. The Task Force on Education of Young Adolescents was established to examine novel approaches to promoting the education and healthy development of adolescents. The resulting report, *Turning Points: Preparing American Youth for the 21st Century* (Carnegie Council on Adolescent Development, 1989), provided a framework for middle grades education and other recommendations to address the unique needs of adolescents. Following the publication, a Carnegie Corporation team, the Middle Grade School State Policy Initiative (MGSSPI), pursued a decade-long effort to assess implementation of Turning Points recommendations. The result was *Turning Points 2000: Educating Adolescents in the 21st Century* (2000), which is a detailed examination of middle grades education that is a
useful tool to guide practitioners in implementation of the middle school model. The overarching goal undergirding the Turning Points model was to ensure the success of every student (Jackson & Davis, 2000).

Mental Health Issues and Adolescents

The most common mental health disorders among adolescents include the following: bi-polar disorder, obsessive-compulsive disorder, impulse disorders, depression, oppositional defiance disorder, and Attention Deficit Hyperactive Disorder (ADHD) (Cash, 2004). If the aforementioned mental health issues are not addressed, students may experience difficulties with learning, relationships, and physical health. In addition to these acute mental health disorders, children and adolescents experience other mental health challenges that also interfere with their overall success in schools. These challenges may include stress and anxiety, depression, loneliness or rejection, suicidal thoughts, and alcohol or substance abuse (School Psychologists: Providing Mental Health Services to Improve the Lives and Learning of Children and Youth, NASP, 2010). The most common reason students are referred for counseling and the major cause of school difficulties for students is anxiety. Anxiety can create difficulty in concentration and make learning difficult. The most commonly diagnosed behavioral disturbance among the school-aged population in the U. S. is ADHD. Finally, a major concern for educators is the prevalence of students with Conduct Disorder and Oppositional Defiant Disorder, with one to ten percent and two to sixteen percent of the general population identified respectively (Sousa, 2009).
Role of Schools in Mental Health Services

There are several factors contributing to the importance of the role of schools in linking mental health services to students’ needs. As indicated in a 1999 Surgeon General report, “Seventy percent of children and adolescents in need of treatment do not receive mental health services” (“Mental Health: A Report of the Surgeon General”, 1999). The incidence and prevalence of mental disorders is similar for children in rural and urban settings according to the President’s New Freedom Commission on Mental Health (2003). In the United States, the percentage of individuals living below the poverty line has increased from 12.4% in 2000 to 14.3% in 2009 (Bishaw & McCartney, 2010). Based on data from the World Health Organization (Mental health: Strengthening our response, 2010), families and children who live in poverty report more increased incidence of emotional, behavioral, and substance use disorders than individuals who are not subjected to poverty.

The American Academy of Pediatrics (2004) addressed the need for collaboration and coordination of services such as school-based mental health services. Because of the high level of mental health needs of children and limited availability of pediatric appointments, pediatricians may not uncover significant mental health challenges. Additionally, barriers such as inadequate health insurance, lack of transportation, financial constraints, and stigmas related to mental health problems interfere with adequate screening and services for children (American Academy of Pediatrics, 2004).

In the 2003 position paper, This We Believe, the National Middle School Association (NMSA) set forth a philosophy of adolescents and conditions of effective
middle level schools. The document is a revision of the original paper, published in 1982. In the paper, the association established fourteen characteristics of a successful middle school, eight addressing culture and six relating to programmatic qualities. Among the characteristics of effective middle schools, the NMSA believes that schools must establish “School-wide efforts that foster health, wellness, and safety” (National Middle School Association, 2003, p. 7). When middle schools are responsive to the developmental needs of students, they provide many ongoing opportunities for adolescents targeting the development of healthy minds for personal growth. They also establish programs to target areas of students’ lives that inhibit learning in order to develop healthy coping skills (National Middle School Association, 2003).

Additionally, quality middle school programs cultivate both physical and psychological safety, which results in an increased likelihood of academic success. Essential to achieving this tenant of the NMSA philosophy is the role of the school counselor. School counselors are vital in their support for adolescents by providing programs and services such as: peer mediation; peer tutoring; parent meetings; classroom activities; group sessions; one-on-one guidance sessions; coordination of support services provided by school psychologists, school social workers, and speech therapists; and coordination of community-based services (National Middle School Association, 2003).

Federal legislation in Title I of NCLB (2002) established that all children have fair and equal opportunities to obtain a high-quality education and attain proficiency on state academic standards, improving the academic achievement of the economically disadvantaged. Title IV of the Act established expectations for providing safe, drug-free schools to meet the needs of all students, including at-risk youth. While the primary
focus of NCLB (2002) is academic success for all children, the law specifically accounts for the development of opportunities to advance school mental health in Title IV. NCLB has unmistakable accountability expectations for academic outcomes and clearly established levels of proficiency. Along with those contingencies for schools to document adequate yearly progress, there is also specific funding earmarked for academic purposes (NCLB, 2002).

The President’s New Freedom Commission (2003) provides specific recommendations for increasing access to mental health services in schools, stating, “growing evidence shows that school mental health programs improve educational outcomes by decreasing absences, decreasing discipline referrals, and improving test scores…” (Daly et al., 2006, p. 448). Ultimately, schools must develop the capacity to establish a vision and create programs to reinforce students’ good mental health and to react to acute mental disorders (Cash, 2004).

In schools where large numbers of students encounter mental health barriers to learning, strategies other than just improving instruction are required in order to improve achievement test scores and close achievement gaps. When students come to school unable to learn or when they are not motivationally ready to learn, test scores are not likely to increase unless schools enable students to navigate beyond the barriers that are interfering (Adelman & Taylor, 2006). Educators face the challenge of reporting academic progress for students in environments where student aggression and violence are escalating. To ensure effective and safe schools, educators must develop a working knowledge of developmental psychology and behavior theory relative to the development of social/emotional and academic skills (Kutash & Duchnowski, 2007). Policymakers
hold high expectations for schools to reach higher academic achievement for all students, specifically measured by achievement test scores. In reality, a significant number of students are faced with a host of external interfering factors that are not typically changed by instructional improvements alone. Therefore, logical, well-defined systematic plans should be developed and directed at addressing interfering factors. (Adelman & Taylor, 2006).

The World Health Organization (WHO) constitution defines health as a “state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity” (Mental Health, 2010, p. 1). The Forum on Child and Family Statistics presents indicators that describe key health conditions such as emotional or behavioral difficulties and adolescent depression (America's children in brief, 2010). Data presented by the Substance Abuse and Mental Health Services Administration (National center for health statistics, 2009) indicate the percentage of children ages eleven to fourteen reported by a parent to have serious or minor difficulties with emotions and behavior difficulties differed for males and females as well as for racial subgroups of children. In 2008, the percentage of males (6.5%) reported by a parent as having serious emotional and behavior difficulties was greater than females (3.4%). The difference between males and females reported as having minor emotional and behavior difficulties was greater with 20.7% of males and 12.4% of females reported respectively.

Differences among racial subgroups are also noted with 5.8% of White, 7.1% of Black, and 3% of Hispanic children reported as having serious difficulties and 14.7% of White, 18.3% of Black, and 11.7% of Hispanic children reported as having minor emotional and behavior difficulties. Data reported by the Substance Abuse and Mental
Health Services Administration (National center for health statistics, 2009) illustrated that in 2008, 6.6% of children between the ages of twelve through fifteen had at least one Major Depressive Episode (MDE) in the past year (America's children in brief, 2010).

Often schools are viewed as separate from the communities where they reside, resulting in a disconnection between students, parents, staff, and community residents and resources. Schools that are an integral part of their communities tend to be more successful. To increase school and community integration, schools must take steps to create and maintain collaboration with various public and private agencies and organizations. One way to increase mental health support for students and families is through school-community collaborations (Adelman & Taylor, 2006). Unlike school-linked services, school-community collaborations place staff at schools and integrate services in coordination with school staff. School-community collaborations provide easier access for students and families, particularly for those who have been historically underserved. Additionally, better outcomes are associated with these types of programs by empowering children and families and often result in increased involvement in schools. Such collaborations potentially enhance social-support networks among students and families and create an increased sense of community (Adelman & Taylor 2006).

Schools may also establish collaborative partnerships with family resource centers, public health departments, and other community-based services to support families and children (Young & Murray, 2004). The needs of children are such that no single agency is capable of having the expertise or resources to meet them in isolation. Rather, interagency collaboration between schools and mental health systems is the
proposed mechanism by which the challenges should be met (Kutash & Duchnowski, 2007).

School-Based Mental Health In Schools

In 2001, the Policy Leadership Cadre for Mental Health in Schools (Policy Leadership Cadre for Mental Health in Schools, 2001) stressed that increasing mental health in schools is about creating a comprehensive, systemic approach to strengthen students and families, schools, and communities. The purpose of such improvements is to maximize learning and wellbeing. The Center for Mental Health in Schools at UCLA (2001) noted that leaders promoting mental health in schools have emphasized the importance of several considerations. Programs must be based on well-conceived models, and they must include a framework that is linked with the mission of schools. Additionally, support programs need to be restructured in a manner where school and community resources are woven together to create integrated approaches to enhance healthy development and address problems (Policy Leadership Cadre for Mental Health in Schools, 2001).

The practice of providing school-based mental health services was initiated by child psychiatrist, Gerald Caplan, in his work with a clinical staff of social workers and psychologists in Israel in 1949. Their charge was caring for mental health needs of immigrant children residing in residential institutions. Caplan (Caplan, Caplan, & Erchul, 1995), recognized the traditional model, which included referral, diagnosis, and psychotherapy for individual children was not feasible due to the needs of the 16,000 children with whom they were working. An alternative, indirect model emerged. Staff consulted with referred children and their caregivers using a consultation approach.
Caplan’s work continued during his tenure (1952-1977) at the Harvard School of Public Health and Harvard Medical School. By the mid-1960’s Caplanian consultation was considered a major means of providing mental health services. The practice of consultation has evolved through the years to include mental health consultants as in-house staff members in schools and hospitals and non-mental-health staff have relied on them for support (Caplan et al., 1995).

School-based health services (SBHS) have expanded significantly since the mid-1980’s. The national movement to provide comprehensive mental health services in schools gained momentum during the 1980’s and 1990’s as programs were expanded to augment traditional services provided by school counselors, psychologists, and social workers (Weist & Christodulu, 2000). Services, instead, linked schools with community mental health centers, health departments, and other social services. SBHS provide primary health care and services to students. Expanded school mental health (ESMH) programs are integral to many SBHS due to the fact that often the primary reason for referral to the SBHS is for mental health services. Although progress has been made, most schools still do not have comprehensive ESMH programs and children’s mental health needs continue to go unmet (Weist & Christodulu, 2000).

Initially, school-based services were identified as a need for students in poor urban areas wherein their mental health challenges were not being met. By the year 2000, more than 1,200 school-based health clinics were established in the United States; and according to some studies, up to half of the visits to those clinics were for mental health matters (Schlozman, 2003). Adelman and Taylor (2006) assert that in order for students to learn and schools to perform adequately, mental health and psychosocial
problems must be addressed. Teachers in schools across the nation routinely seek assistance in facilitating their students’ positive emotional and social development.

However, programs and services are typically a supplement to other priorities identified by schools. Programs have included a wide range of support services to address concerns such as attendance problems, abuse, substance abuse, and delinquency and violence. The development of school-based programs was for the purpose of providing early intervention, treatment, crisis intervention, and prevention. Research supports the potential of school-based interventions, but as SBMH programs expand, there are increased concerns regarding their effectiveness (Adelman & Taylor 2006).

One way for schools to create school-based mental health services is via a three-tiered approach (American Academy of Pediatrics, 2004). The first tier is designed to provide mental health programs and services to target all students in an effort to decrease risk factors and increase resilience. Such programs include varied curricular and extra-curricular activities to increase students’ feelings of success associated with school. Tier two is targeted mental health services to assist students who have one or more mental health needs but who manage at a functional level in many academic and social activities. Interventions may include group or individual therapy and behavioral elements of Individualized Educational Plans (IEP’s). The third tier addresses needs of students identified as having severe mental health diagnoses and symptoms. Tier three interventions involve a multi-disciplinary team of professionals working collaboratively to support the young person’s mental health needs (Young & Murray, 2004).

Weisz, Sandler, Durlak, and Anton (2005) proposed a similar integrated model to link prevention and treatment for an array of problems and disorders. The model
includes three tiers of prevention as well as three categories of treatment. It also includes a strategy for Health Promotion/Positive Development Strategies, which is aimed at developing strengths in individuals, families, communities, and social systems to prevent future difficulties. While the model is not presented in the form of tiered strategies, those that address serious disorders are complemented by previous strategies of prevention in an effort to ameliorate the risk before it becomes debilitating to the child (Weisz et al., 2005).

The three tiers of prevention include: Universal Prevention Strategies, Selective Prevention, and Indicated Prevention. Universal Prevention strategies address risk factors among the entire population of youth, similar to Tier I interventions. Selective Prevention strategies target specific risk factors among identified groups who share the same risk factor. Indicated Prevention is a strategy designed to intervene with individuals who display significant symptoms of a particular disorder (Weisz et al., 2005).

Schools employ multiple approaches to provide mental health support to students and families. The traditional model involves an outside specialist consulting with school staff about students experiencing problems (Schlozman, 2003). Specialists include psychiatrists, psychologists, and social workers working in a trusting relationship with school personnel to suggest treatment, facilitate referrals, or to interpret clinical techniques. The traditional model has been criticized for several reasons: time limitations for specialists and students, lack of understanding of the school culture on the part of the specialist, availability of mental health clinicians, and reluctance of the clinician to share information with teachers. Nontraditional models vary, but generally they involve making services available in schools. The model that is most established is the School-
based health clinic (SBHC) which provides both general medical care and psychiatric attention (Schlozman, 2003).

Young and Murray (2004) identify three typical models of services: school-supported mental health models; community connections models; and comprehensive, integrated models. School-supported mental health models include service providers such as social workers, guidance counselors, and school psychologists employed by the school system. Separate mental health units exist within the school system, and school nurses are the primary entry point for students with mental health concerns. In community connections models, mental health agencies or individuals deliver direct services either full- or part-time under contract services. Mental health professionals are available or are invited into after school programs, and there is a formal link to off-site mental health providers. Comprehensive, integrated models are those that address prevention, school environment, screening, referrals, special education, family, and community issues. These models deliver direct services to students and families within the school environment (Young & Murray, 2004).

Advantages of School-Based Mental Health Services

Schools are essential partners in transforming the mental health system in the United States. Advancing mental health in schools hinges upon the development of a comprehensive, multi-faceted approach to strengthen students, families, schools, and communities. It depends on the realignment of policy and practice with a cohesive framework based on well-conceived models. There are various agendas for mental health in schools that include:
1. Using schools to increase access to children and their families to conduct research and provide services.

2. Increasing availability of mental health interventions through expanded school resources, co-locating community resources and schools, and combining school and community resources, and

3. Changing how students are perceived in schools through multi-disciplinary teamwork, coordination of interventions, integration of interventions, modification of student support staff roles, and development of systematic approaches to address barriers to student learning.

In short, psychosocial and mental health concerns must be addressed in order for students to learn and perform adequately (Adelman & Taylor, 2006).

NCLB (2002) and funding cuts for education have increased school accountability to examine program effectiveness, including the relationship between school-based mental health services and academic progress. There are several advantages to school-based mental health services: services are provided in the setting where many of the difficulties for adolescents occur, access to services is increased, fewer stigmas are associated with an in-school provider, and there is an increase in the clinician’s understanding of school culture (Jennings, Pearson & Harris, 2000). Other advantages of school-based mental health services are that parents and students may avoid the stigma of going to unfamiliar settings for treatment, transportation issues are eliminated, and time away from class is minimized. Also, because of the convenience, parents may be more likely to sustain longer commitment and follow-through with therapy (Young & Murray, 2004).
In addition to the advantages there are potential disadvantages to be considered. Teachers may become frustrated with students’ absences from class due to frequency of visits with the clinician. Conversely, teachers may rely too heavily on the services of the clinician and send students too frequently. Either may result in strained relationships among personnel (Schlozman, 2003).

Although there are many advantages noted to providing mental health interventions within the school environment, there needs to be a solid link between the interventions and the academic outcomes. In a study (Fleming et al., 2005) conducted among participants from the Raising Healthy Children (RHC) Project associated with ten public schools in a suburban Pacific Northwest school district, the findings indicated that behavioral characteristics commonly targeted by preventative interventions were predictive of academic performance. The data included annual student, parent, and teacher surveys as well as academic achievement measures of mathematics and reading scores. The results support the position that interventions promoting social and emotional skills among students increase their ability to stay focused and improve school bonding, resulting in increases in academic performance. Lastly, there was also evidence that there was a predictive relationship between early disruptive and anti-social behavior and academic achievement (Fleming et al., 2005).

Mental health in schools must reflect a shared agenda to integrate school improvement policies to more wisely invest resources. School-based mental health is part of essential support systems to enhance student learning so schools can achieve their mission. The focus of school-based mental health is on

1. Promoting social-emotional development,
2. Preventing mental health and psychosocial problems,
3. Enhancing resiliency,
4. Intervening early after the onset of mental health related problems,
5. Addressing factors in schools that affect student and staff well-being such as bullying, alienation, and student disengagement,
6. Establishing policies and practices for school-based mental health that confront equity considerations,
7. Building capacity among staff to address and promote healthy development of students, and
8. Drawing on empirical evidence to aid in development of effective interventions.

To effectively integrate school-based mental health and school reform, policymakers must view the challenges of increasing student achievement through the lens of addressing barriers to learning and promoting healthy development of all children and adolescents (Adelman & Taylor, 2006).

School-Based Mental Health Services: Effective Programs

There are excellent examples of effective collaborative mental health service models in the United States. The Baltimore City Schools utilize program models that include satellite programs within schools. The most prevalent model in Baltimore is the placement of a single clinician, hired by a local lead agency (Flaherty & Weist, 1999). In 1971, Dallas, Texas public schools expanded the concept of a community clinic to be housed on a high school campus. The collaborative efforts of the three partner agencies, Community Mental Health Centers, the hospital district, and the school district, resulted
in the establishment of ten Youth and Family Centers (YFC), strategically located to serve students in elementary, middle, and high schools. Most centers are housed in freestanding modular units built by the district. They offer primary and mental health services to students (Jennings, Pearson, & Harris, 2000).

In 1969, Dallas Independent School District was among the first to establish school-based health services. The University of Texas Southwestern Medical Center, with funding from the Children and Youth Program of President Johnson’s War on Poverty Fund, worked collaboratively with the Dallas County Hospital District to create the first community clinic established to provide primary care health services to children and youth. The clinic was initially housed at Children’s Medical Center before moving to two elementary schools. The program expanded to a high school in 1971 where it was housed in a freestanding modular building on the school campus. Among the guiding principles of the centers is the belief that all children have the right to basic health and mental health services and that every child must have a caring family member and caring teacher involved in his or her life.

By 1993, the services included several school-based sites and the Community Mental Health Center (CMHC) in partnership with principals who took the first step to link mental health issues to problems with attendance, test scores, and discipline. The goal was to determine if the CMHC could offer support to address the problems with attendance, test scores, and discipline. The resulting action was that CMHC placed a child psychiatrist in schools four hours per week to assess students’ needs and provide services. The psychiatrist also worked with school psychologists, social workers, counselors, and nurse practitioners to form a multidisciplinary treatment team for
students. The program evolved and expanded rapidly, extending to fourteen schools within six months of the establishment of the CMHC (Jennings et al., 2000).

Increased recognition of the importance of providing school-based mental health services led to the creation of a blue-ribbon panel of community and business leaders who took an interest in programs to support students, families, and schools, including a proposal for partnership among the CMHC, the hospital district, and the school district (Jennings et al., 2000). The result was the creation of ten Youth Family Centers (YFC) strategically located in the community. Each YFC serves twenty schools. The Dallas Independent School District collects data at the beginning and end of the school year relative to education outcomes, attendance, grades, behavior, and test scores. In the 2003 report cited by Jennings, the data indicated a 31% decrease in academic failure among students receiving mental health services. When surveyed, 90% of students and family members who completed questionnaires indicated satisfaction with services received. Similarly, school personnel reported 95% satisfaction (Jennings et al., 2000).

Flaherty and Weist (1999), highlight Baltimore City Schools, which have been widely recognized as a leader in the development of school mental health programs since the mid-1980. Through creative leadership among state and local health departments, mental health departments, and education systems, individuals responded to unmet needs of students in the district through the establishment of expanded school health programs that provided assessment, therapy, prevention activities, and augmented services by mental health professionals.

In 1985, the Baltimore City Health Department established seven centers in high schools designated to provide basic health care with limited mental health services.
Mirroring national statistics, 22% of visits to the centers were for psychosocial reasons such as stress in families, anxiety, and exposure to violence (Flaherty & Weist, 1999). Funding generated from Medicaid, which exceeded the needs to sustain the centers, was used to employ mental health personnel. Through collaboration and partnerships among Johns Hopkins University, The University of Maryland, and multiple city and state agencies, additional school-based mental health centers were established. Within a ten-year period, one-third of the 176 Baltimore schools added these services, and by 1999 almost half of the schools provided school-based mental health services (Flaherty & Weist, 1999).

In November 2005, the Cobb County School District (CCSD), located in Marietta, Georgia, created the Success for All Students (SFAS) project through an award from the U. S. Department of Education’s Integration of Schools and Mental Health Systems Initiative. The project, which was in place from November 2005 through May 2007, provided an opportunity to create an infrastructure for an integrated, community-wide plan for a region of the district. The goal of this plan was to promote safe, drug-free environments and to support pro-social skills and healthy childhood development (Success for All Students, 2009).

A Steering Committee and School-based Learning Resources Team were established to identify barriers and adopt strategies for implementation of new programs to meet students’ needs (Success for All Students, 2009). The teams were instrumental in the adoption of evidence-based practices and the modifications of policies and procedures within the district. Among the programs implemented that addressed violence and childhood development, one significant program was designed to increase student access
to quality mental health care by forming partnerships between schools and mental health agencies. Therein the social, behavioral, and emotional barriers to learning could be addressed. The programs and services provided during the grant period served as data for an additional grant from the federal Safe Schools/Healthy Students Program (Cobb County School District, 2009).

Since 1999, the Federal Safe Schools/Health Students Initiative has provided funds to more than 365 urban, suburban, rural, and tribal areas. CCSD was awarded an $8.5 million grant in July 2008, one of the largest grants in the ten-year history of the Safe Schools/Healthy Students Initiative (Cobb County School District, 2009). The grant, which is the result of collaboration among the U.S. Departments of Education, Health and Human Services, and Justice, was created as a result of rising concerns about youth violence, substance abuse, and school safety. The grant funds provide free intervention services to students in twenty elementary schools, nine middle schools, and six high schools in two regions of the school district over a four-year period. SFAS has the potential to impact over 37,000 students, which is approximately thirty-five percent of the district’s enrollments. The project’s main objective and goal is to provide and sustain a holistic, safe and healthy educational environment for all youth driven by, provided by, and ensured by the community at large. Key elements of SFAS include: safe school environments and violence prevention; student behavioral, social and emotional supports; early childhood social and emotional learning programs; alcohol, tobacco and other drug prevention activities, and school-based mental health services (Cobb County School District, 2009).
In order to qualify for services provided by the grant, students must be referred through a school counselor or school social worker. School-based referral teams that include SFAS clinical staff, counselors, social workers, teachers, and administrators refer students for services. The local referral team evaluates the referred student’s overall needs relative to academic and behavioral performance and develops an intervention and support plan. Among services provided by the grant, school-base mental health services are provided as appropriate, including one-on-one therapy, group therapy, and family support services. The SFAS staff includes mental health therapists, a substance counselor, family support specialists, licensed clinical social workers, a trainer and interventionist, school-based probation officers, and a clinical manager (Cobb County School District, 2009).

The project has received community, school district, and even statewide support as seen in a newspaper article, which chronicled the SFAS kick-off. School district superintendent Fred Sanderson acknowledged the effective use of community resources to provide mental health counseling and therapy to keep students in class and out of jail. State school superintendent, Kathy Cox, recognized the link between mental health and success among children and adolescents (Mollett, 2009). Approximately 450 students in grades K-12 received services during the 2009-2010 school year by school-based mental health therapists and other support personnel to address mental health challenges. In its first year of implementation, the district saw a decrease of thirty-nine percent of students placed on juvenile probation, a twenty-four percent decrease in truancy, and a thirty-one percent decrease in school fights. Among the more than 450 students receiving school-
based mental health services, there was a forty-six percent decrease in discipline events in general ("School Climate/Success for All Students", 2010).

As presented in this chapter of literature and data review, pertinent research on the subject of mental health issues among children and adolescents and the relation with academic achievement is broad. The demands for school, district, and state accountability for student achievement are complicated by many factors, including mental health challenges faced by children and adolescents in the U. S. The goal of this research study is to contribute to the broad base of research that already exists. Another goal is for the research presented, combined with future research, to be used to assist educators and policymakers in making decisions to benefit the children and families they serve. The following chapter will describe the study participants and the general methodology and procedures used in this study.
CHAPTER III

METHODOLOGY

This chapter will identify the research questions and hypotheses examined in the research study. The chapter will also provide a description of the general methodology and procedures followed in the study as well as a description of the research design. Included in the description of the methodology presented in this section is an explanation of the participants in the study, assumptions and limitations, and how the results were analyzed.

Research Design

This study was conducted in a large, suburban school district, serving more than 116,000 students. The researcher conducted a quantitative research study of archival data from 184 middle school children and youth receiving school-based mental health services between 2008 and 2011.

Dependent variables

Individual student scale scores from the Georgia Criterion Reference Test (CRCT) in the areas of mathematics and reading were used to measure academic performance. Scale scores in mathematics and reading from prior to receiving services and after receiving services were used to measure progress.

Independent variables

Data were disaggregated by gender and race to measure the relation between these factors, school-based mental health services and academic achievement. Differences by race were examined for only White and Black students. In addition, data regarding type
of service were disaggregated to measure the relation between services provided and academic achievement.

Participants

Participants are from two regions of a large, suburban school district, serving more than 116,000 students. Study participants were middle school students who were provided school-based mental health services (one-on-one therapy, group therapy, and family support services) via a federal grant, Success for All Students. Participants in the study were enrolled in middle schools with varying ethnic, racial and socio-economic demographics in a large southern state. The two regions were identified for inclusion in a federal grant to provide school-based mental health services for several reasons. Both have experienced significant population growth in what were previously rural areas, and the two areas do not have available public transportation and other community-based services. In comparison to families in other areas of the district, families in the two areas lack individual resources and access to private services (Cobb County School District, 2009).

Approximately 19,000 students are enrolled in each of the two regions within the district, with approximately 26% identified as economically disadvantaged and four percent identified as English Language Learners (Cobb County School District, 2009). During the 2009-2010 school year, a total of 8,767 students were enrolled in the nine middle schools represented in the study. Among the schools in the study, the percentage of students who met eligibility requirements for free or reduced meals ranged from 10% to 66%. Three schools receive Title I funding and support.
In all but one school, the percentage of students receiving special education services was equal to or greater than 11%, and the percentage of students served in limited English language programs ranged from .5% to 3.4%. The racial and ethnic composition of the schools varied significantly. Five schools served predominantly White students and two schools serve predominantly Black students. The total population of students served in all nine schools ranges from 13% to 81% White, 11% to 23% percent Black, and 3% to 18% Hispanic (Georgia Department of Education, 2010).

Data from students in sixth, seventh, and eighth grades during the 2008-2009, 2009-2010, and 2010-2011 school years who received school-based mental health services were studied. The total number of participants in the sample was 184.

**Procedures**

**Data Collection**

The researcher obtained archival data from the Success for All Students grant project, with permission from the superintendent, the office of accountability for the district, and the grant coordinator, based on the consent and release forms signed by parents prior to services.

The researcher collected de-identified data on individual students using numbers rather than student names from the database collected and maintained by the Success for All Students grant project to identify participants. Individual schools were not identified in the data collection. Because student names were not revealed to the researcher, individual student identification was not part of the investigation. Study participants were anonymous to the researcher. Specifically, none of the data collected by the researcher revealed the personal identity or the school identity of any of the participants.
**Instrumentation**

Study participants were identified by gender and race as well as by the grade level in which they were enrolled during the 2009-2010 school year.

Student scale scores on the mathematics and reading portions of the Georgia Criterion Reference Test (CRCT) were used as indicators of academic performance. The Georgia CRCT is administered annually to measure students’ acquisition of skills and knowledge described in the Georgia Performance Standards. Student performance on the CRCT is used to evaluate individual student’s strengths and weaknesses relative to the state-mandated curriculum. Students in grades first through eighth are required to take the CRCT. The tests in third, fifth, and eighth grades serve as the determinant for promotion to the next grade. Scale scores are reported in three ranges: Does Not Meet Standards (DNM) = 1-799, Meets Standards (M) = 800-849, and Exceeds Standards (850 and above) (Georgia Department of Education, 2010). Student scale scores were identified as academic achievement scores of students following participation in school-based mental health services to represent the reading and mathematics scale score on the CRCT prior to the initiation of school-based mental health services and the reading and mathematics scale scores on the CRCT after school-based mental health services were initiated.

The type of school-based mental health services examined in the study included one-on-one therapy, group therapy, and family support services. Data were identified by the type of services and included individuals who received only one-on-one therapy, only
group therapy, only family support services, or both one-on-one therapy and family support services.

Data Analysis

Statistical Analysis software, PASW Statistics, was used to conduct relevant statistical tests on the data collected. A multivariate analysis of variance (MANOVA) was conducted to test for the interaction between academic achievement scores of students following participation in school–based mental health services and the type of school-based mental health services received by students. As a follow up analysis to the MANOVA, a univariate analysis was run to examine academic achievement scores of students following participation in school–based mental health services. Two additional analyses were conducted using multiple analyses of covariance (MANCOVA) to examine the independent variables of time and gender, controlling for race, and to examine the independent variables of time and race, controlling for gender.

Summary

This study was designed to determine if there is a relation between school-based mental health services and academic achievement among middle school students in the areas of reading and mathematics in a suburban southern United States school district. The study utilized scale scores from state curriculum tests in mathematics and reading. Scores were analyzed using statistical measures to answer the research questions and to test the following hypotheses:

1. How do school-based mental health services, race, and gender impact reading achievement among middle school students?
2. How do school-based mental health services, race, and gender impact mathematics achievement among middle school students?

H₁: Changes in the academic performance of students on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

H₂: Changes in the academic performance of students on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

H₃: Improvements in the academic performance of students by *gender* on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₄: Improvements in the academic performance of students by *race* on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

H₅: Improvements in the academic performance of students by *gender* on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₆: Improvements in the academic performance of students by *race* on the *reading* portion of the Georgia CRCT following participation in school-based mental
health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

A total of 184 participants enrolled in receiving school-based mental health services (one-on-one therapy, therapeutic groups, or family therapy) were included in the study.

This study is intended to contribute to the body of literature regarding mental-health related barriers to student learning and the obligation schools have to deploy available resources to ensure a world-class education for all students. It is well documented that mental health needs and fragmented families are barriers to student success in schools and that federal legislation dictates a focus on not only academic achievement but also on extended mental health services to children and families in need. The questions in this study attempt to provide support for school-based mental health services that effectively address the problem of mental health matters that prevent teachers from teaching and students from learning.
CHAPTER IV

RESULTS

Introduction

This chapter presents the analysis of archival data collected from the Success for All Students grant project, with permission from the superintendent, the office of accountability for the district, and the grant coordinator, based on the consent and release forms signed by parents prior to services. The data included participants’ race and gender, type of school-based mental health service(s) provided, and individual student scale scores on the mathematics and reading portions of the state criterion-referenced test from before school-based mental health services and following school-based mental health services. The data drawn from the study were in relation to students’ performance on the Georgia CRCT from before school-based mental health services, and following services. The purpose of the study was to determine if there is a relationship between school-based mental health services (one-on-one therapy, therapeutic groups, and family support services) and academic achievement among middle school students by race and gender as measured by student performance on the mathematics and reading portions of the Georgia Criterion Referenced Test.

The researcher collected data on individual students using numbers rather than student names from the database collected and maintained by the Success for All Students grant project to identify participants. Individual schools were not identified in the data collection. Because student names were not revealed to the researcher, individual student identification was not part of the investigation. Strict confidentiality was maintained by keeping the individual identity as well as the school of enrollment
concealed to the researcher by using numbers and coding. None of the data collected by the researcher revealed the personal identity or the school identity of any of the participants.

Sample Characteristics

The study sample was drawn from students enrolled in sixth, seventh, eighth, or ninth grade during the 2010-2011 school year (N=184) in a large suburban school district in the Southeastern United States. The majority of study participants was male (67%) and was enrolled in seventh grade (38%) during the 2010-2011 school year. Table 1 illustrates the gender description of study participants. Table 2 illustrates the grade level description of study participants.

Table 1

_Gender of Study Participants_

<table>
<thead>
<tr>
<th>Participants by Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>125</td>
<td>67</td>
</tr>
<tr>
<td>Female</td>
<td>59</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 2

_Grade Levels of Study Participants during the 2010-2011 School Year_

<table>
<thead>
<tr>
<th>Participants by Grade Level</th>
<th>Grade Enrolled in During the 2010-2011 School Year</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>25</td>
<td>13</td>
</tr>
</tbody>
</table>
The racial representation among participants was Caucasian (49%), Black (35%), followed by others identified as Asian, Hispanic, or Multi-Racial (16%). Table 3 illustrates the racial representation among participants in the study.

Table 3

*Racial Representations of Study Participants*

<table>
<thead>
<tr>
<th>Participants by Race</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>64</td>
<td>34</td>
</tr>
<tr>
<td>White</td>
<td>91</td>
<td>49</td>
</tr>
<tr>
<td>Other (Asian, Hispanic, Multi-racial)</td>
<td>29</td>
<td>15</td>
</tr>
</tbody>
</table>

Study participants received at least one of the identified types of school-based mental health services during their middle school years in the form of only one-on-one therapy, only therapeutic groups, only family support services, or both one-on-one therapy and family support services. The majority of participants (53%) received one-on-one therapy and participated in therapeutic groups (21%). The remaining participants received family support services (8%) and both one-on-one therapy and family support services (17%). Table 4 illustrates the type of services provided to study participants.
Table 4

Type(s) of School-Based Mental Health Services Received by Study Participants

<table>
<thead>
<tr>
<th>Type(s) of School-Based Mental Health Services</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-on-one Therapy</td>
<td>94</td>
<td>53</td>
</tr>
<tr>
<td>Therapeutic Groups</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>Family Support Services</td>
<td>14</td>
<td>8</td>
</tr>
<tr>
<td>One-on-one Therapy &amp; Family Support Services</td>
<td>12</td>
<td>17</td>
</tr>
</tbody>
</table>

Data Analysis

For the purposes of statistical analysis the research questions in this study were written and presented in directional hypotheses. These hypotheses were tested using multivariate analysis of variance (MANOVA) to test for the relationship between participation in school-based mental health services and academic achievement scores of students following service and the interaction between academic achievement scores and the type of school-based mental health services among participants. As a follow up analysis to the MANOVA, a Univariate analysis was run to examine academic achievement scores of students following participation in school-based mental health services. Two additional analyses were conducted on the data using multiple analyses of covariance (MANCOVA) to examine the independent variables of time and gender, controlling for race and to examine the independent variables of time and race, controlling for gender.
To test hypotheses 1 and 2, a MANOVA was run to test for the interaction between academic achievement scores of students following participation in school-based mental health services and the type of school-based mental health services.

$H_1$: Changes in the academic performance of students on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

$H_2$: Changes in the academic performance of students on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

The factorial MANOVA revealed that the multivariate interaction of academic achievement scores of students following participation in school-based mental health services and type of school-based mental health services was not supported, $\Lambda = .971$, $F(6, 240) = .599$, $p < .05$, $r = .05$. The between subjects MANOVA revealed that the multivariate main effect of type of school-based mental health services received by study participants was not supported, $\Lambda = .964$, $F(6, 240) = .451$, $p < .05$, $r = .043$.

The within subjects MANOVA revealed that the multivariate main effect of academic achievement scores of students following participation in school–based mental health services was supported, $\Lambda = 13.208$, $F(2, 120) = .000$, $p < .001$, $r = .000$.

Follow-up, univariate analyses of variance were run to examine academic achievement scores of students prior to and following participation in school–based mental health services in reading and mathematics. A one-way ANOVA indicated significant differences in academic achievement scores for students following participation in school-based mental health services in reading ($F(1, 121) = 12.88$, $p <$
.001, \( r = .31 \)). As seen in Table 5, reading scores increased after receiving services regardless of type of service received.

A one-way ANOVA indicated significant differences in academic achievement scores for students following participation in school-based mental health services in mathematics (\( F(1, 121) = 8.33, p < .001, r = .254 \)). As seen in Table 6, mathematics scores decreased after receiving services regardless of type of service received.

The mean scores in reading for students receiving any type of school-based mental health service increased following participation in school-based mental health services. Table 5 illustrates the mean scores of participants in reading prior to receiving school-based mental health services and following participation in school-based mental health services.

Table 5

Mean Scores for Reading Following Services

<table>
<thead>
<tr>
<th>Mean Scores for Reading Following Services</th>
<th>Prior to Services</th>
<th>Following Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Type of Services Received</td>
<td>819.077</td>
<td>826.103</td>
</tr>
<tr>
<td>One-on-one Therapy</td>
<td>821.524</td>
<td>829.841</td>
</tr>
<tr>
<td>Therapeutic Groups</td>
<td>810.100</td>
<td>816.800</td>
</tr>
<tr>
<td>Family Support Services</td>
<td>819.240</td>
<td>827.880</td>
</tr>
<tr>
<td>One-on-one Therapy &amp; Family Support Services</td>
<td>825.444</td>
<td>829.889</td>
</tr>
</tbody>
</table>
The mean scores in mathematics for students receiving any type of school-based mental health service decreased following participation in school-based mental health services. Table 6 illustrates the mean score of participants in mathematics prior to receiving school-based mental health services and following participation in school-based mental health services.

Table 6

Mean Scores for Mathematics Following Services

<table>
<thead>
<tr>
<th></th>
<th>Prior to Services</th>
<th>Following Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any Type of Services Received</td>
<td>818.321</td>
<td>810.732</td>
</tr>
<tr>
<td>One-on-one Therapy</td>
<td>816.698</td>
<td>814.667</td>
</tr>
<tr>
<td>Therapeutic Groups</td>
<td>816.000</td>
<td>802.100</td>
</tr>
<tr>
<td>Family Support Services</td>
<td>815.920</td>
<td>809.200</td>
</tr>
<tr>
<td>One-on-one Therapy &amp; Family Support Services</td>
<td>824.667</td>
<td>816.963</td>
</tr>
</tbody>
</table>

Additional analyses were run on the data using factorial multiple analyses of covariance (MANCOVA). To test hypotheses 3 and 5, a MANCOVA was run controlling for race with the academic achievement scores of students prior to and following participation in school–based mental health services and gender of student participants as the independent variables.
H₃: Improvements in the academic performance of students by gender on the mathematics portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₅: Improvements in the academic performance of students by gender on the reading portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

The within subjects multivariate test revealed that the interaction of academic achievement scores of students prior to and following participation in school–based mental health services and gender was supported, $\Lambda = .561$, $F(2, 104) = .000$, $p < .001$, $r = .073$.

The within subjects multivariate test revealed that the main effect of academic achievement scores of students prior to and following participation in school–based mental health services was supported, $\Lambda = 4.013$, $F(2, 104) = .021$, $p < .001$, $r = .193$. Univariate sphericity assumed tests on each of the variables found no significant effect on mathematics scores ($F(1, 106) = 4.455$, $p < .05$, $r = .201$), and no significant effect on reading scores ($F(1, 106) = 2.559$, $p < .05$, $r = .154$). See table 8 for mean reading and math scores.

The estimated marginal means in reading by gender of all participants reveal that participants scored higher following participation in school-based mental health services ($M = 927.590$, $SD = 2.248$) than prior to services ($M = 822.133$, $SD = 2.142$). In
mathematics, participants scored lower following school-based mental health services (M = 809.691, SD = 2.595) than prior to services (M = 815.668, SD = 3.063).

The estimated marginal means by gender in reading of female participants reveals that female participants in school-based mental health services scored higher following services (M = 827.665, SD = 3.861) than prior to services (M = 823.242, SD = 3.689). The same is true for male participants in that following participation in school-based mental health services males scored higher (M = 827.516, SD = 2.332) than they did prior to services (M = 821.025, SD = 2.222).

The estimated marginal means by gender in mathematics of female participants reveals that female participants in school-based mental health services scored lower following services (M = 806.924, SD = 4.469) than prior to participation in services (M = 810.912, SD = 5.274). The same is true for male participants in that following participation in school-based mental health services males scored lower (M = 812.485, SD = 2.691) than they did prior to participation in services (M = 820.425, SD = 3.176).

Tables 7 and 9 illustrate estimated marginal means in reading and mathematics by gender of participants.

Table 7

Estimated Marginal Means in Reading and Mathematics by Gender

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Standard Deviation</th>
<th>Math</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>824.270</td>
<td>2.072</td>
<td>816.442</td>
<td>2.666</td>
</tr>
<tr>
<td>Females</td>
<td>825.453</td>
<td>3.440</td>
<td>808.918</td>
<td>4.427</td>
</tr>
</tbody>
</table>
Table 8

*Estimated Marginal Means of Pre- and Post Scores in Reading and Mathematics by Gender*

<table>
<thead>
<tr>
<th>Pre-and Post Scores in Reading and Math by Gender</th>
<th>Math Pre</th>
<th>SD</th>
<th>Math Post</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>820.425</td>
<td>3.176</td>
<td>812.485</td>
<td>2.691</td>
</tr>
<tr>
<td>Female</td>
<td>810.912</td>
<td>5.274</td>
<td>806.924</td>
<td>4.469</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading Pre</th>
<th>SD</th>
<th>Reading Post</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>821.025</td>
<td>2.222</td>
<td>827.516</td>
</tr>
<tr>
<td>Female</td>
<td>823.242</td>
<td>3.689</td>
<td>827.665</td>
</tr>
</tbody>
</table>

Table 9

*Estimated Marginal Means of Reading and Mathematics CRCT Scores Among All Participants Prior to and Following Services*

<table>
<thead>
<tr>
<th>Estimated Marginal Means in Reading and Mathematics Among All Participants</th>
<th>Reading Pre</th>
<th>Standard Deviation</th>
<th>Reading Post</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>822.133</td>
<td>2.142</td>
<td>927.590</td>
<td>2.248</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Math Pre</th>
<th>SD</th>
<th>Math Post</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>815.668</td>
<td>3.063</td>
<td>809.691</td>
<td>2.595</td>
</tr>
</tbody>
</table>
To test hypotheses 4 and 6, a MANCOVA was run controlling for gender with the academic achievement scores of students prior to and following participation in school–based mental health services and race of student participants as the independent variables.

H$_4$: Improvements in the academic performance of students by race on the mathematics portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

H$_6$: Improvements in the academic performance of students by race on the reading portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

The within subjects multivariate test revealed the interaction of academic achievement scores of students prior to and following participation in school–based mental health services and race was not supported, $[\Lambda] = .898$, $F(2, 104) = .411$, $p < .01$, $r = .093$.

The within subjects multivariate test revealed that the main effect of academic achievement scores of students prior to and following participation in school–based mental health services was supported, $[\Lambda] = 12.59$, $F(2, 104) = .000$, $p < .01$, $r = .329$.

Univariate sphericity assumed tests on each of the variables found a significant effect on both reading scores ($F(1, 106) = 12.756$, $p < .05$, $r = .328$) and mathematics scores ($F(1, 106) = 9.176$, $p < .05$, $r = .282$).

The estimated marginal means by race among participants in reading reveals White students ($M = 827.476$, $SD = 2.270$) performed better than Black students ($M = $
In mathematics, White students (M = 820.076, SD = 2.921) also out-performed Black students (M = 805.536, SD = 3.673). The estimated marginal means in reading by race of all participants revealed that participants scored higher following school-based mental health services (M = 826.980, SD = 2.039) than prior to services (M = 820.545, SD = 1.943). In mathematics, participants scored lower following participation in school-based mental health services (M = 809.426, SD = 2.354) than prior to participation in services (M = 816.186, SD = 2.778).

The estimated marginal means in reading by race reveals that White students participating in school-based mental health services scored higher following services (M = 829.569, SD = 2.555) than prior to services (M = 825.383, SD = 2.434). The same is true for Black students receiving school-based mental health services in that following participation in services, Black students scored higher (M = 824.392, SD = 3.212) than they did prior to services (M = 815.708, SD = 3.060).

The estimated marginal means by race in mathematics reveals that White students participating in school-based mental health services scored lower following services (M = 816.385, SD = 2.949) than prior to participation in services (M = 823.767, SD = 3.481). The same is true for Black students participating in school-based mental health services in that following participation in school-based mental health services Black students scored lower (M = 802.467, SD = 3.707) than they did prior to services (M = 808.605, SD = 4.376). Tables 10, 11 and 12 illustrate estimated marginal means in reading and mathematics by race of participants.
Table 10

*Estimated Marginal Means in Reading and Mathematics by Race*

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Standard Deviation</th>
<th>Math</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whites</td>
<td>827.4</td>
<td>2.270</td>
<td>820.76</td>
<td>2.921</td>
</tr>
<tr>
<td>Blacks</td>
<td>820.050</td>
<td>2.854</td>
<td>805.536</td>
<td>3.673</td>
</tr>
</tbody>
</table>

Table 11

*Estimated Marginal Means of Pre- and Post Scores in Reading and Mathematics by Race*

<table>
<thead>
<tr>
<th></th>
<th>Math Pre</th>
<th>SD</th>
<th>Math Post</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>823.767</td>
<td>3.981</td>
<td>816.385</td>
<td>2.949</td>
</tr>
<tr>
<td>Black</td>
<td>808.605</td>
<td>4.376</td>
<td>802.467</td>
<td>3.707</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Reading Pre</th>
<th>SD</th>
<th>Reading Post</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>825.383</td>
<td>2.434</td>
<td>829.569</td>
<td>2.555</td>
</tr>
<tr>
<td>Black</td>
<td>815.708</td>
<td>3.060</td>
<td>824.392</td>
<td>3.212</td>
</tr>
</tbody>
</table>
Table 12

*Estimated Marginal Means of Reading and Mathematics CRCT Scores Among All Participants Prior to and Following Services*

<table>
<thead>
<tr>
<th></th>
<th>Reading Pre</th>
<th>Standard Deviation</th>
<th>Reading Post</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math Pre</td>
<td>816.186</td>
<td>2.778</td>
<td>809.426</td>
<td>2.354</td>
</tr>
<tr>
<td>Math Post</td>
<td>820.545</td>
<td>1.943</td>
<td>826.980</td>
<td>2.039</td>
</tr>
</tbody>
</table>

Summary

This chapter presents the analysis of data in relation to student performance on the Georgia CRCT from before school-based mental health services and following services. The data included participants’ race and gender, type of school-based mental health service(s) provided, and individual student scale scores on the mathematics and reading portions of the state criterion-referenced test from before school-based mental health services and following school-based mental health services.

Based on the analysis of data it was revealed that there were improvements in the academic performance of middle school students on the reading portion of the Georgia CRCT, but not on the mathematics portion following participation in one or more school-based mental health services. The mean scores in reading of participants increased for students participating in each type of school-based mental health services. However, the mean scores in mathematics decreased for students participating in each type.
It was further indicated there is no significant interaction of academic
achievement scores of students in mathematics or reading and gender or race following
participation in school-based mental health services. The analysis of means indicate that
student achievement in reading for males, females, White students, and Black students
improved following participation in school-based mental health services. However,
student achievement in mathematics decreased for males, females, White students, and
Black students following services.
CHAPTER V

DISCUSSION

Summary

Chapter V presents a summary of the findings of the research project, an explanation of the conclusions, and recommendations for future study. The summary will include a restatement of purpose of the research study, the research questions explored, the six hypotheses that were examined, and the results discovered in the study. The results and findings will then be discussed, and the chapter will conclude with a presentation of implications for policy and practice and recommendation for further research on the topic.

Purpose

The purpose of this study was to determine if there is a relationship between school-based mental health services (one-on-one therapy, therapeutic groups, and family support services) and academic achievement among middle school students as measured by student performance on the mathematics and reading portions of the Georgia Criterion Referenced Test. The study was designed to determine if there is a relation between school-based mental health services and academic achievement for middle school students by race and gender.

Research Questions

1. How do school-based mental health services, race, and gender impact reading achievement among middle school students?

2. How do school-based mental health services, race, and gender impact mathematics achievement among middle school students?
Hypotheses

H₁: Changes in the academic performance of students on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

H₂: Changes in the academic performance of students on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary by type of service.

H₃: Improvements in the academic performance of students by *gender* on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₄: Improvements in the academic performance of students by *race* on the *mathematics* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.

H₅: Improvements in the academic performance of students *by gender* on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for race.

H₆: Improvements in the academic performance of students *by race* on the *reading* portion of the Georgia CRCT following participation in school-based mental health services among sixth, seventh, and eighth grade students will vary when controlling for gender.
Conclusions and Discussions

The description of study participants coincides with existing research that supports the need to offer school-based mental health services for middle school-aged children, male students in particular. Survey data published in a report by the Substance Abuse and Mental Health Services Administration (2009) indicated that students between eleven and fourteen years of age reported by a parent to have difficulties with emotions and behaviors differed for males and females. The percentage of males reported as having serious difficulties was greater (6.5%) than females (3.4%), and males reported as having minor difficulties was greater (20.7%) than females (12.4%). The observation of participants in this study supports this research, in that, of the 184 participants who had been referred for school-based mental health services, 125 of them were males and 59 were females.

The results of this study relative to reading supported the research that indicates when students are provided interventions to address mental health matters, reading achievement improves. However, the results contrasted with such research in that the results indicated there was not improvement in mathematics achievement. Instead, math achievement decreased.

The study revealed there was a positive relationship between student participation in one or more of the identified school-based mental health services (one-on-one therapy, group therapy, family support services) and student achievement in the area of reading for all students, regardless of race or gender. The results of a study associated with ten public schools in a suburban Pacific Northwest school district reported evidence that there was a predictive relationship between early disruptive
behavior and academic achievement. The study also supported the position that interventions to promote social and emotional health among students increases their likelihood of improved academic performance (Fleming et al., 2005). Adelman and Taylor (2006) point out that unless schools enable students to navigate beyond interfering barriers to learning, test scores are not likely to increase. The data relative to reading achievement from this study supported earlier findings that indicate that mental health interventions may have a positive impact student achievement.

This study supports the research presented earlier. As referenced in the review of literature, other research has indicated that targeted interventions to address mental health needs among children and adolescents will likely improve academic outcomes (Fleming et al., 2005). As Vagle (2009) asserts in her work published in The Principal as Assessment Leader, factors such as race or ethnicity have a lesser impact on student achievement than do school practices and policies. Further, as discussed by Adelman and Taylor (2006), achievement results for schools where significant numbers of students face major barriers to learning is not likely to occur without major shifts in the availability of school-based mental health services.

The participants in this study represented students in grades six, seven, or eight who have demonstrated emotions or behaviors that warranted inclusion in school-based mental health services. Study participants were able to access services within their local schools from qualified providers who worked closely with school personnel in the students’ setting to reduce barriers to learning. Study participants benefited from a significant component of the Success for All Students program which was designed to increase student access to quality mental health care by forming partnerships between
schools and mental health agencies. Therein the social, behavioral, and emotional barriers to learning could be addressed (Cobb County School District, 2009). By design, the school-based mental health services were provided to help families and schools overcome factors such as cost, stigma, and fragmented structure of services that prevent families from providing mental health interventions for children and adolescents (Manson, 2003). The study participants represented approximately 40% of the total number of students reported as receiving services during the 2009-2010 school year (“School Climate/Success for All Students”, 2010). As noted in the research, a substantial number of children between the ages of eleven and fourteen face emotional and behavioral difficulties (America's children in brief, 2010). This study supports the research that significant numbers of students in need of mental health assistance are between the ages of eleven and fourteen. The data revealed that they are able to overcome such barriers that interfere with their academic achievement, specifically in the area of reading.

Discussion of Reading and Mathematics Curriculum

Because this study revealed improvements among students receiving school-based mental health services in reading but not in mathematics, it is important to address other potential influences on student achievement rather than student participation in school-based mental health services. A comparison of the two curriculum areas indicated that student achievement results were potentially influenced by differences in curriculum demands. There are fundamental differences between the two content areas relative to curriculum and instruction in the state of Georgia.

The English Language Arts curriculum encompasses several content strands that
include reading; writing; conventions; and listening, speaking, and viewing, which are introduced as core concepts and further developed through each grade level. Additionally, standards-based curriculum offers an additional strand, reading across the curriculum, suggesting that teachers in all content areas are responsible for teaching reading skills. There have been no considerable changes in the English Language Arts curriculum over the past six years (Georgia Department of Education, 2010).

Conversely, Georgia began implementing a new mathematics curriculum in 2005, Common Core Georgia Performance Standards. The curriculum was implemented in sixth grade in 2005, seventh grade in 2006, and eighth grade in 2007. The curriculum is organized into five content strands: number and operations, measurement, geometry, algebra, and data analysis and probability. The curriculum stresses rigorous concept development and requires students to reason, evaluate mathematical arguments, and use the language of mathematics to communicate precisely, and to make connections among mathematical topics with other disciplines (Georgia Department of Education, 2010).

The mathematics curriculum not only changed during the year study participants were enrolled in middle school, but it also became more demanding. Therefore, changes in curriculum demands could have limited the benefits of school-based mental health services on student achievement results in the area of mathematics. The fact that the reading curriculum was stable during the timeframe of the study, the school-based mental health services could have had a more positive impact on student achievement in reading. Additionally, while the reading curriculum spirals, the mathematics curriculum introduces new concepts or requires higher levels of expected learning outcomes in each of the three middle school grades. Lastly, teachers across curriculum areas generally
support reading strategies whereas that practice is not as prevalent in the area of mathematics.

Limitations

The research study examined the relationship between school-based mental health services (one-on-one therapy, therapeutic groups, and family support services) and academic achievement among middle school students. It is noted that variables other than school-based mental health services that occurred in middle school classrooms exist. Those variables could have created conditions that could have produced differences in achievement scores, creating a potential threat to the internal validity of the study.

Another limitation of the study was that the data were obtained from a sample of 184 students, which is a limited sample from which to draw universal conclusions or generalizations. However, the data and the conclusions drawn are significant in that the sample included students of varying races, both genders, and were representative of varying socio-economic levels.

Additionally, the research sample utilized in this study was limited to a single school district in the Southeastern United States. The researcher, therefore, notes the limitations. Due to these inherent limitations, the conclusions drawn were not intended to be universal or definitive. Rather, the conclusions were viewed as a source of relevant data to contribute to the existing body of knowledge associated with this study. The researcher noted no other limitations.

Implications for Policy and Practice

In light of the findings and conclusions of this study, there are several recommendations for educational policy-makers. The results of the study revealed that
there was a positive relation between school-based mental health services and reading. It is therefore recommended that school districts continue to explore establishment of programs that employ collaborative mental health services linking the needs of students who are experiencing psychological and emotional issues that are unidentified or unmet. Goal four in the President’s New Freedom Commission on Mental Health (2003) promotes mental health among children with a recommendation of improvement and expansion of school mental health programs, pointing out that children who have emotional or behavior disorders are at greatest risk of school failure. As indicated in a 1999 Surgeon General report, “Seventy percent of children and adolescents in need of treatment do not receive mental health services” (Mental Health: A Report of the Surgeon General, 1999).

As stated in chapter two of the study, schools are ideal for screening young people because they establish age-appropriate expectations for children (Gall et al., 2000). Additionally, they provide a longitudinal view of children’s behavior in a controlled setting. Finally, school-based screening may be beneficial to identify mental health needs before disciplinary action is required (Gall et al., 2000). If schools identify and target problem behaviors with programs of intervention, it is likely academic outcomes will improve as well (Fleming et al., 2005).

This research clearly points to the need of schools to respond to federal expectations of ensuring a world-class education for all students. Establishing school-based mental health services is one way to ensure students’ mental health needs are addressed in order to increase their capacity for meeting academic standards. Currently, schools generally follow the model of traditional services provided by school counselors,
psychologists, and social workers. The manner in which schools address mental health needs of students must change as demands for academic accountability increase. Establishing school-based mental health services is supported in the research as well as in the results of this study.

Suggestions for Future Research

Based on the findings of this study and the subsequent discussion, the following suggestions are presented for further study. Given the fact that student achievement in mathematics decreased, future studies would be beneficial to re-examine the impact of school-based mental health services. Studies conducted after the mathematics curriculum is stable and has been implemented cohesively among participants might provide more reliable data regarding the impact of school-based mental health services on mathematics achievement.

Future studies might also include larger samples, with consideration of students in grades other than grades six, seven, and eight. To support the research suggesting that early intervention strategies have a positive effect on academic outcomes, students in elementary school could be studied. To support the research suggesting that students living in poverty have increased mental health challenges as well as barriers to services, socio-economic status of study participants could be included. Further, studies that include an analysis of academic outcomes over several years rather than only before and after services might yield more conclusive results.

Another suggestion for consideration for future studies is to conduct relevant analysis of the impact of participation in school-based mental health services with consideration for the amount of time students are involved in mental health interventions.
Within such a study, it might also be beneficial to expand the analysis to include other types of mental health and social-skill development services.

Parent, teacher, and student perceptions of the impact of services relative to academic achievement can be explored as an additional component to measure effectiveness of school-based mental health services. Perception measures along with additional measures of academic achievement, such as academic grades, might provide relevant data regarding the impact of school-based mental health services.
APPENDIX A

INSTITUTIONAL REVIEW BOARD COMMITTEE ACTION

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

The risks to subjects are minimized.
The risks to subjects are reasonable in relation to the anticipated benefits.
The selection of subjects is equitable.
Informed consent is adequate and appropriately documented.
Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
Appropriate additional safeguards have been included to protect vulnerable subjects.
Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the “Adverse Effect Report Form”.
If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 12020902
PROJECT TITLE: The Relationship Between Academic Achievement and School-Based Mental Health Services for Middle School Students
PROJECT TYPE: Dissertation
RESEARCHER/S: Lisa O. Williams
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership & School Counseling
FUNDING AGENCY: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF PROJECT APPROVAL: 02/14/2012 to 02/12/2013

Lawrence A. Hosman, Ph.D.
Institutional Review Board Chair
APPENDIX B

CLIENT CONSENT FORM: SUCCESS FOR ALL STUDENTS

SUCCESS FOR ALL STUDENTS

Funded by the Safe Schools/Healthy Students (SS/HS) Grant

CLIENT CONSENT FORM

The Success for All Students project, funded by the SS/HS grant, is currently utilizing school and community-based services to identify all current mental health programming in an effort to increase student access to best-practiced mental health care. Success for All Students works closely with 35 schools located in areas 5 and 6 of the Cobb County School District (CCSD) to improve outcomes for students accessing and receiving mental health services. The goal of this project is to promote cross collaboration of communities and schools to work together to diminish barriers for students in need of mental healthcare services thus increasing academic achievement. The Success for All Students project has been created to foster the collaboration between school based counseling professionals and community-based mental health providers in an effort to enhance mental health services.

The Success for All Students project is a confidential process designed to assist with addressing issues (i.e. emotional, social, and/or behavioral) that impact the successful academic achievement of students enrolled within areas 5 and 6 of Cobb County School District (CCSD). This initiative will serve to provide a greater understanding of issues that impact students, parents, and/or caregivers as it relates to mental healthcare. Through counseling sessions, information will be provided that can assist students with developing personal and interpersonal coping strategies. It will involve a relationship between your child and a trained therapist to help him/her accomplish their individual goals.

CONFIDENTIALITY

Counseling sessions will involve sharing sensitive and private information. There will be times during counseling sessions in which certified school personnel (i.e. teacher and/or school principal) and trained licensed therapists (i.e. school social worker, school psychologist, professional counselor, and/or guidance counselor) will be present. All staff involved in this initiative are professionally trained and possess experience in maintaining confidentiality of information shared. No record of counseling will be contained in any academic and/or educational locations. You may request in writing the counseling staff release specific information about your child, to designated parties, pertaining to counseling sessions.

GEORGIA STATE UNIVERSITY

It should be noted that Success for All Students is supported by a Safe Schools Healthy Students federal grant (http://www.sshs.samhsa.gov/). As a result, data must be gleaned in order to evaluate the project’s overall effectiveness. As a result, non-identifying data regarding your student will be presented to the Success for All Students local evaluation team from Georgia State University. This data may include academic, attendance and behavioral measures. Your student’s anonymity and confidentiality will be maintained by providing de-identified data to the local evaluation team. All data used by Georgia State for evaluation purposes will be used in aggregate form.

EXCEPTIONS TO CONFIDENTIALITY

- The counseling staff works as a team. Your child’s therapist may consult with other counseling staff to provide the best possible care.
- If there is evidence your child is in imminent danger of harm to his/her self and/or others, a therapist is legally required to report this information to the authorities who are responsible for ensuring safety.
- Georgia State law mandates staff who become aware of and/or suspect, physical, sexual abuse, or neglect of any person under 18 years of age must report this information to county child protection services (Department for Children and Family Services).
• A court order, issued by a judge, may require the counseling staff to release information contained in records and/or require a therapist to testify in a court hearing.

STUDENT’S RESPONSIBILITIES

In order to participate, students must report regularly to all therapeutic sessions. Parent participation is important and is necessary to ensure the successful intervention of this initiative.

AFTER-HOURS CRISIS

SFAS Therapists, Family Support Specialists, Probation Officers, etc. will make every possible effort to be available to their clients and schools during normal school hours during the school year. Please be aware that SFAS staff may not be available to students, families, and schools outside of normal school hours and during school breaks. For this reason, in the event of a crisis or mental health emergency SFAS staff highly recommend that the parent/guardian contact a local emergency service, such as Ridgeview Institute, Peachford Hospital, your local emergency room, or 911.

If you suspect that such a crisis may occur, it is your responsibility to share this information with your SFAS staff so that a safety/crisis plan may be developed with you beforehand. It will be important that you share updates on any crises with the SFAS staff working with your student during your next communication; however, it is the guardian’s responsibility to arrange for immediate crisis intervention with the emergency service of their choice in the event of suicidal ideation, gestures, or attempts, homicidal ideation, gestures, or attempts, as well as any other potential threat to personal safety. Please note that SFAS is not, and should never serve as, an emergency service. Please refer to the list of emergency services and numbers below. You may also call 911.

Ridgeview Institute  770-434-4567
Wellstar Kennestone Hospital  770-793-5000
Peachford Hospital  770-454-2302
Behavioral Health Link  1-800-715-4225

I have read the above information, including the paragraph dealing with the “Exceptions To Confidentiality.” I understand all information shared with clinicians involved with the Success for All Students project will remain confidential and no information will be released without my written consent. During the course of counseling sessions, it may be necessary for the therapy team to communicate with staff at my child’s school to obtain additional information. SFAS will not obtain prior written consent before getting this limited type of information from involved school staff. This consent form provides SFAS the authority to access this additional information. To provide comprehensive services to my child, written authorization will not be requested prior to consultation with involved staff. Verbal consent for limited release of information may be necessary in special circumstances. In all other circumstances, consent to release of information will be given through written authorization. I understand the therapy team will discuss all information regarding the provision of services.

Should I have any questions regarding this consent form or about the services that will be offered, I can discuss them with the therapy team. I have read and understand the above. I consent to my child’s participation in the counseling sessions offered to him/her at their school. I understand that I may stop counseling sessions at any time

__________________________________________  __________________
Full Name of Student                      School Name
__________________________________________
Parent/Guardian Print Full Name            Parent/Guardian Signature
__________________________________________
Witness Print Full Name                    Witness Signature
APPENDIX C

RELEASE OF INFORMATION FORM: SUCCESS FOR ALL STUDENTS

SFAS Release of Information v3-22-09

FOR: __________________________                          DATE OF BIRTH: _____
FIRST, MIDDLE, LAST (PLEASE PRINT)

SCHOOL NAME: __________________________
GRADE: __________________________

Success for All Students (SFAS) is a grant funded program provided by Cobb County School District in collaboration with community partners, including your child’s local school, Cobb Community Services Board (CSB), and Cobb County Juvenile Court. By initialing here _____________ you consent for SFAS to share information with our partners, except as noted below:

Exceptions: __________________________________________________________________________________________

For additional release of information please complete:

I HEREBY REQUEST AND AUTHORIZE SUCCESS FOR ALL STUDENTS:

CHECK ALL THAT APPLY:

☐ TO RELEASE TO:  ☐ TO REQUEST FROM:

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<tr>
<th>Phone</th>
<th>Fax</th>
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THE FOLLOWING INFORMATION:
Check appropriate areas to be released: Please be specific.

☐ School Attendance  ☐ Discipline Records
☐ Grades             ☐ Current Living Situation
☐ Reason for Seeking Services ☐ Treatment Plan
☐ Services Your Child Currently Receives ☐ Treatment Recommendation
☐ Initial Assessment   ☐ Discharge Summary
☐ Verbal Communication/Consultations ☐ Other: __________________________

I understand that this information may be protected by Title 42 (Code of Federal Rules of Privacy of Individually Identifiable Health Information, Parts 160 and 164) and Title 45 (Federal Rules of Confidentiality of Alcohol and Drug Abuse Patient Records, Chapter 1, Part 2), plus applicable state laws. I further understand the information disclosed to the recipient may not be protected under these guidelines if they are not a health care provider covered by state or federal rules.

I understand that failure to sign a release will not disqualify my student from receiving services, but that referrals may be provided to me for appropriate and/or additional resources. I understand that this authorization is voluntary, and I may revoke this consent at any time by providing written notice. I understand that this release will be invalid 1 year after signature and that new releases will need to be completed when schools/providers change.

I, __________________________________________, attest that I am legally able to and do freely sign this consent form. I understand that I have a right to receive a copy of this authorization. I understand that I have a right to refuse to sign this authorization.

SIGNATURE OF PARENT/GUARDIAN DATE SIGNATURE OF WITNESS DATE
APPENDIX D

SCHOOL DISTRICT APPROVAL TO CONDUCT RESEARCH

Ms. Lisa O. Williams
6097 Fairlong Bluff
Acworth, GA 30101

Dear Ms. Williams:

Your application to conduct research in Cobb County School District has been administratively approved. You may now contact the individual schools/departments about their participation in the study. Listed below are the schools identified in your application, along with the name and phone number of the principal. A copy of the Principal Agreement To Participate Form is included. After gaining approval from school principals, submit the original form to the Office of Accountability. Once the form has been received in the Office of Accountability and Research, a final letter of approval will be sent to you.

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<tr>
<th>School</th>
<th>Principal</th>
<th>Phone</th>
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<tbody>
<tr>
<td>Awtrey Middle School</td>
<td>Jeffrey Crawford</td>
<td>770.975.6615</td>
</tr>
<tr>
<td>Barber Middle School</td>
<td>Lisa Williams</td>
<td>770.975.6764</td>
</tr>
<tr>
<td>Cooper Middle School</td>
<td>Peggy Martin</td>
<td>770.819.2438</td>
</tr>
<tr>
<td>Durham Middle School</td>
<td>Georganne Young</td>
<td>770.975.6641</td>
</tr>
<tr>
<td>Lost Mountain Middle School</td>
<td>Terry Poor</td>
<td>678.594.8224</td>
</tr>
<tr>
<td>Lovinggood Middle School</td>
<td>Elizabeth Wilson</td>
<td>678.331.3015</td>
</tr>
<tr>
<td>McClure Middle School</td>
<td>Susan Wing</td>
<td>678.331.8131</td>
</tr>
<tr>
<td>Pine Mountain Middle School</td>
<td>Lisa Jackson</td>
<td>678.594.8252</td>
</tr>
<tr>
<td>Tapp Middle School</td>
<td>Jerry Dority</td>
<td>770.222.3758</td>
</tr>
</tbody>
</table>

Should modifications or changes in research procedures become necessary during the research project, submit changes in writing to the Office of Accountability and Research. If you have any questions regarding the final approval process, contact our office at [redacted].

Sincerely,

[redacted]
Chief Accountability and Research Officer
REFERENCES


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