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# Mental health practices of school psychologists

Dana Leann Miller  
*University of Iowa*

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MENTAL HEALTH PRACTICES OF SCHOOL PSYCHOLOGISTS

by

Dana Leann Miller

An Abstract

Of a thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Psychological and Quantitative Foundations in the Graduate College of The University of Iowa

December 2010

Thesis Supervisor: Associate Professor Kathryn Gerken

## ABSTRACT

The current literature suggests an increasing need for mental health services for school-age children (U.S. Department of Health and Human Services, 1999; Friedman, Katz-Levey, Manderschied, and Sondhiemer 1996; Costello, Mustillo, Erkanli, Keeler, and Angold, 2003; Kataoka, Zhang, and Wells 2002 and Kessler, Berglund, Demier, Jin, Merkgangas, and Walters, 2005). Research indicates that the schools may be the ideal place for children to receive such services. Studies have found that school psychologists do spend some of their time providing counseling, however the time spent on these services is significantly limited (Curtis et al, 1999; Bramlett et al 2002; Yates 2003; and Villarin,2005; and Curtis et al, 2008). While other studies have examined the provision of individual and group counseling by school psychologists, they have not provided operational definitions of what constitutes mental health services. Moreover, a review of mental health services provided by school psychologists has not been conducted since the reauthorization of IDEA in 2004, which may have impacted the amount of time school psychologists have to provide various services in schools. The purpose of this study was to examine if school psychologists currently provide mental health services. In addition this study examined if school psychologists perceived providing mental health services as their role, and their level of satisfaction with their current role and function. A sample of 118 of 1,000 school psychologists from the National Association of School Psychologists (NASP) listserv completed the survey. The results indicated that, the majority (83.3%) of school psychologists reported being satisfied with their current role and function. The majority (75.2%) of school psychologists also perceived the provision of mental health services as part of their role. While the majority of school psychologists indicated that they provided mental health service, the amount of time dedicated to the provision of services was less than 10% of time per week. The most frequent barriers to providing mental health services were limited time, and the need for additional training. The most frequent barriers for provision of services, by participants not currently providing

services were employer policies and procedures and limited time. Determinates of provision of mental health services included training, and employment in areas using Non-categorical classification. Overall, the participants indicated that they did not see any significant changes in the provision of mental health services they provide, since the reauthorization of IDEA in 2004.

Abstract Approval:

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Graduate College  
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CERTIFICATE OF APPROVAL

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PH.D. THESIS

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This is to certify that the Ph. D. thesis of

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Philosophy degree in Psychological and Quantitative  
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To my family, without you this would have never been possible.



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## CHAPTER I

### INTRODUCTION

In 1999, the United States Surgeon General recognized that our nation's children could be in crisis given the increasing rates of mental illness among children and adolescents (U.S. Department of Health and Human Services, 1999). Children ages nine to seventeen with severe functional limitations due to mental health disorders are estimated to comprise five to nine percent of the population (Friedman, Katz-Levey, Manderschied, & Sondhiemer, 1996). Approximately 20% of children in the United States are estimated to have mental disorders with at least mild functional impairments (U.S. DHHS, 2000). One in five children and adolescents currently have or will experience signs and symptoms of a mental health disorder during any given year. By age 16, one in three children and adolescents will have one or more diagnosable mental health disorders (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003).

Most prevalent disorders include: 13% anxiety disorders, 6.2% mood disorder, 10.3% disruptive disorders, and 2.0 % substance disorders (U.S. DHHS, 1999). Unfortunately these numbers may only reflect a portion of the children and adolescents who have mental health disorders given that only 21% of children, ages four to seventeen, who need mental health evaluations, receive them (Kataoka, Zhang, & Wells, 2002). In general, children with any mental disorder are at an increased risk of having mental illness and impaired functioning as adults thus decreasing their quality of life and increasing the cost to society (Cosello et al., 2003). Kessler, Berglund, Demier, Jin, Merkangas, & Walters (2005) have indicated that approximately one-half of all mental health disorders that are experienced throughout the lifetime begin by the age of 14.

Given the high prevalence of mental health disorders in children and adolescents one would hope that treatment for this vulnerable population would be readily available, but, this is not the case. It is estimated that 7.5 million children in the United States do not receive the mental health services they need (Flisher et al, 1997; Kataoka et al.,

2002). Only six to seven percent of children in the United States receive mental health services (Kataoka, Zhang, & Wells 2002). This is alarming given the negative outcomes for children with untreated mental health disorders.

Children who suffer with mental illness and do not receive early identification, and intervention are at greater risk for poor academic functioning, substance abuse, unemployment, poverty and suicidal behavior (Fergusson & Woodward, 2002). Children with Obsessive Compulsive Disorder (OCD) may experience impaired functioning in many domains including, but not limited to, academic, social, and vocational (Adams, Waas, March, & Smith, 1994). Lewin et al (2005) additionally indicated that OCD is a chronic disorder and if left untreated will persist into adulthood. Children with conduct disorder (CD) are likely to commit crimes such as vandalism, running away, truancy, and theft (McCabe, Hough, Wood, & Yeh, 2001). Children with this disorder have an increased chance of having anti-social personality disorders as adults, in addition to a higher probability of having comorbid disorders, which increases the probability of negative outcomes. Most alarming, an estimated 90% of children who commit suicide have a mental health disorder (U.S. DHHS, 1999). From the year 2003-2004 suicide rates increased 8 % from previous years, and the most significant increase was among females ages 10-19 years, and males age 15-19 (Lubell, Kegler, Crosby, & Karch, 2007). Early intervention is crucial.

Kataoka et al (2002) reported that of children that have mental health needs, 76.1% of Caucasian children and adolescents, 76.5% of African American children and adolescents, and 88.4% of Hispanic children and adolescents have unmet mental health care needs. Additionally, 97.5% of uninsured children and adolescents, 78.9% of privately insured children and adolescents, and 72.8% of public insured children and adolescents who need mental health services do not receive them (Kataoka et al., 2002). Minority groups, specifically, Hispanics, and the uninsured and privately insured have higher rates of unmet mental health care need.

Farmer, Burns, Phillips, Angold, & Costello (2003) found that when children and adolescents received mental health services, it was most likely to be in the educational setting. Some may argue that the function of our nation's schools is to educate children, and not to provide mental health services. However, the relationship between mental illness and academic outcomes is overwhelmingly negative. Forty percent of all children suffer educationally and are at risk of failing to succeed due to mental illness, poverty, family circumstances, and inadequate health care (Adelman & Taylor, 2001). If the issue of providing mental health services in schools is not addressed, many of the nation's children will be set up to fail academically. Given the current climate of accountability, schools need to recognize and provide interventions for the mental health needs for children in the schools. The provision of mental health services is vital to improving the likelihood of academic success.

In an effort to address this need the Health Resources and Services Administration (HRSA) Maternal and Child Health Bureau (MCHB) started a federal initiative in 1995 for mental health services in schools. In 2000 the initiative was renewed by HRSA and Substance Abuse and Mental Health Services Administration (SAMHSA). The renewed initiative funded two nationally-focused training and technical assistance centers for mental health in schools. The first is the Center for Mental Health in Schools; this center is based at UCLA and provides resources for school based mental health professionals (Adelman & Taylor, 2008). The second center is the Center for School Mental Health Analysis and Action (CSMHA) located at the University of Maryland, Baltimore. The centers advocate for the provision of mental health resources in the school and provide resources to aid in the development of school mental health centers in addition to resources for practitioners (Adelman & Taylor, 2008).

Guidelines regarding the implementation of services are provided by the 2001 Policy Leadership Cadre for mental health in schools. Furthermore the provision of mental health services in schools was recommended by the New Freedom Commission of

mental health (2003). Quality school-based mental health services could provide children and adolescents with access to the treatment they need (Armbruster, Gerstein, & Fallon, 1997).

However, mental health services are lacking for a number of reasons. First, the effectiveness of school-based mental health services has not been well documented and not fully embraced by local communities (Flaherty, 1996; Hoagwood & Erwin, 1997). The following factors can negatively influence mental health services in the schools: the culture of the school, service providers, training of individuals delivering services, how the services are being delivered, the frequency and integrity of services, and the perceptions of school personnel regarding services (Hoagwood & Erwin, 1997; Repie, 2005). In addition changes in special education legislation, accountability, use of response to intervention and Non-categorical classification may affect the provision of mental health services (Villarin, 2005).

Assessment, referral services and short-term interventions such as behavior management consultation and crisis intervention are more likely to be provided in the schools as opposed to counseling, case management, and family support services (Foster, Rollefson, Doksum, Noonan, & Robinson, 2005). Additionally, students with externalizing disorders (i.e., ADHD and conduct disorder) display more disruptive behaviors that may result in school-based interventions. Children with internalizing disorders (i.e., depression and anxiety) may be overlooked, as symptoms may not be visibly problematic in schools, but could impact academic success.

Foster et al (2005) found that the majority of individuals providing school-based mental health services were school counselors, school nurses, school psychologists, and school social workers respectively and expressed concern that some of the individuals currently providing mental health services in the schools might lack the training needed to provide services to children with psychopathology. Koller and Bertel (2006) indicated that school psychologists, social workers and nurses all should have a basic level of



training in mental health. The training components, however, were contingent upon the university from which they graduated. Even if various professionals were licensed, that did not guarantee knowledge or competency in the provision of mental health services. Additionally, some rural schools do not have full time nurses, or school counselors leaving no one to provide mental health services to children and adolescents. In addition, when school counselors were present, they often filled a guidance role as opposed to a mental health counselor role (Lockhart & Keys, 1998).

The 2002 Invitational Conferences on the Future of School Psychology addressed the unmet mental health needs of children in the United States. At this conference, it was stated that school psychologists need to be “awakened” to the changing role, and stressed the importance of providing mental health services to students (Ehrhardt-Padgett, Hatzichristou, Kitson, & Myers, 2003). School psychologists can be instrumental in the development of exemplary school mental health services (Herman, Merrell, Reinke & Tucker, 2004; Nastasi, 1998; Nastasi, 2000; Nastasi, 2004; Nastasi, Pluymert, Varjas, & Berstein, 2002; Nastasi, Varjas, Berstein, & Pluymert, 1998; Ross, Powell, Elias, 2002). However, even with the recent push to provide evidenced based mental health services in the schools, surveys of school psychologist indicated that they devote more than 50% of their time conducting psychoeducational assessments for special education eligibility although they would like to spend equal amounts of time providing consultation and direct interventions (Hosp & Reschly, 2002).

The National Association for School Psychologists (NASP) Blueprint for Training and Practice III (NASP, 2006) indicated that practicing school psychologists should have the specialized training to provide mental health services to children and adolescents in the schools. However, school psychologists are not being used as frequently as other individuals who may have less specialized training. NASP defines a School Psychologist as an individual who works to find solutions for students implementing various strategies to improve schools and districts (NASP, 2007). School

psychologists should provide services in the areas of consultation, evaluation, intervention, prevention, and research and planning. This includes mental health evaluations and counseling for students when interpersonal and family problems interfere with their academic functioning (NASP, 2007). School psychologists should be specially trained to make connections between mental health, learning and behavior in the schools (NASP, 2008) and they should play an instrumental role in providing mental health services to children and adolescents in schools.

The importance of school psychologists providing mental health services in the school is additionally stressed in the NASP 2008 Best Practices in School Psychology (Thomas & Grimes, 2008) which stated that “ School psychologists should be the leading mental health experts in the schools who are knowledgeable about development in social, affective, and adaptive domains and are able to identify and apply sound principles of behavior change within these domains in order to help design and implement prevention and intervention programs to promote wellness and resiliency” (NASP, 2008 pg, 1261).

Is it possible that recent shifts in academic accountability and the implementation of Response to intervention (RTI), and Non-categorical classifications has negatively affected school psychologists’ role in providing mental health services? Villarin (2005) found that school psychologists spent the least amount of their time providing intervention and counseling services compared to the amount of time spent completing assessments. Use of the discrepancy model to determine a learning disability and special education eligibility (i.e., discrepancy between cognitive abilities and academic achievement) may be a contributing factor influencing the amount of time school psychologists spend conducting assessment (in areas using the discrepancy model).

The reauthorization of IDEA in 2004 identified Response to intervention (RTI) as an alternative means to identify a disability. Within this model, the majority of school psychologists’ time may be consumed by using other forms of assessment such as

curriculum-based assessment and evaluation and measurement of academic concerns, rather than mental health services.

To gain a better understanding of how this may affect school psychologists one needs to understand the basic components of the RTI model. Response to intervention (RTI) is a model that should address both academic and behavioral issues in our nation's schools. However, it does not address mental health concerns other than overt behavior (National Association of State Directors of Special Education, 2007). The RTI model has received a lot of attention since the 2004 amendments to IDEA (IDEA, 2004). The National Association of State Directors of Special Education (2007), indicated that RTI as currently implemented stems from the work of Deno regarding data-based program modification model (Deno, 1985) and Bergan's behavioral consultation model (Bergan, 1977) and follows a problem-solving framework. RTI focuses on early identification and intervention for children with learning disabilities (Vaughn, 2006). RTI promotes the use of academic intervention in the general education setting with on-going evaluation of how the student is responding to the intervention. In general, RTI provides a method of monitoring student academic progress and designing and implementing intervention at various levels dependent upon individual students' needs to increase academic achievement. RTI follows three guiding components, these include: High quality instruction/intervention, learning rate and level of performance and importance of educational decisions (National Association of State Directors of Special Education, 2007). Although RTI has many different models and can have a number of different Tiers of intervention, the most commonly used model follows the three-tier model developed by Sharon Vaughn (2003). The tiered model has yielded positive outcomes for learning disability identification (Marston, 2005). Tier 1 includes core instructional intervention, which is provided to all students and is designed to be preventative and proactive. Tier 2 includes a target group of students (at-risk students) who needed interventions on a short-term basis, and Tier 3 provides intensive, individual interventions for students who did

not respond to Tiers 1 and 2. Interventions are assessment based, high intensity; and occur over a longer duration (National Association of State Directors of Special Education, 2007; Vaughn 2003).

Implementation of the various models of RTI may solely focus on identification, intervention and eligibility for services regarding academic concerns and not include programs regarding the prevention of, assessment, and interventions for mental health services. Often, children with internalizing disorders, who do not display disruptive behaviors in the classroom, are not identified and provided services within this framework. Additionally, students who need mental health services in the general education setting whose symptoms are not manifested overtly may be overlooked. Interventions within RTI appear to focus more on academic concerns given the current emphasis on accountability and alignment with No Child Left Behind Legislation (Kavale & Spaulding, 2008).

How RTI is currently being implemented in schools appears to have changed the role of school psychologists in the school settings with regards to assessment of special education eligibility (Reschly, 2004). School psychologists should be able to provide evidence based mental health services in schools, however this is not a role school psychologists are currently fulfilling (Villarin, 2005). It is possible that school psychologists are perceived as special education “gate keepers” and not mental health experts or have limited time to deliver services because of the focus on academic and behavioral interventions (Curtis, Hanley, Walker, & Baker, 1999; Bramlett, Murphy, Johnson, & Wallingsford, 2002; Foster et al., 2005).

Within the RTI framework school psychologists could be instrumental in providing universal screenings and consultation on school-wide mental health education and disorder prevention. If school psychologists do not view themselves as qualified to provide individual or group counseling to children and adolescents, they could actively participate in promoting mental health and treating mental illness in Tiers 1 and 2.

Nastasi and Varjas (2008) suggested that by using a RTI model school psychologists could provide intensive mental health services to students in Tier 3 or intensive level of intervention. In Tiers 2 and 3 school psychologists could aid in developing specially designed interventions as well as group and individual counseling for student with mental illnesses that affect their global functioning (Nastasi & Varjas, 2008).

The shift toward Non-categorical classification for students to receive special education services may have also affected school psychologists' role in providing mental health services in the schools. The motivation for Non-categorical classification was to move away from viewing presenting concerns as a problem within the child and to provide similar interventions to children with the same classification. The hope was that Non-categorical classification would promote the use of specialized individual academic interventions (Reschly, Tilly, & Grimes, 1998). Is this occurring as desired in practice? By not identifying students as having emotional and behavioral disabilities, there may be a failure to recognize the specific areas in which students need assistance. The focus appears to be on academics instead of addressing the underlying concerns, which may have contributed to poor academic performance. School psychologists and other school personnel may not be called upon to provide services for children with emotional concerns.

Due to the emphasis on academic functioning, school psychologists may be providing even fewer mental health services than Foster and colleagues reported in 2005. There has not been any other nationwide study on the mental health services that are being provided in our nations school since the Foster et al study that was conducted in 2002-2003 before the implementation of RTI.

The current study will investigate the role school psychologists have in providing mental health services in schools. A list of definitions used in the study as well as the specific research questions follow.

### Definitions

Response to Intervention: A tiered model of prevention and intervention strategies provided in the general education setting to increase academic and behavioral performance and provide information to aid in the determination of special education eligibility.

Non-categorical classification: Providing a general label (such as eligible individual) to all children who are eligible to receive special education services, regardless of impairment (learning disability, behavior disorder, intellectual disabilities, etc...).

Mental health services: Designing and implementing interventions (e.g., classroom interventions and direct student counseling) for children and adolescents to assist them in overcoming mental health problems and increase success in school, home and community.

Mental health problems: A child or adolescent displaying the signs or symptoms of a mental illness or disorder. These symptoms do not meet the intensity or duration necessary in the diagnosis of a mental health disorder. However, signs and symptoms may warrant interventions regarding health promotions, prevention and treatment (U.S. DHHS, 1999).

Mental illness: A DSM-IV diagnosable mental disorder, which is noted by changes in thinking, mood, or behavior that causes distress and/ or impaired functioning.

Evidence Based practices: based on the 1995 APA taskforce definition: Interventions or treatments based on the integration of the best available research with clinical expertise in the context of student characteristics, culture, and preferences (APA Task Forces, 2006).

Consultation: Working cooperatively with school staff to address the mental health and educational needs of students.

The specific research questions for this study are:

- 1) Are school psychologists currently satisfied with their role and function? (As measured by section III, question 1 of the survey)

- 2) Do school psychologists perceive themselves as mental health experts?  
(As measured by section III, question 2 of the survey)
- 3) Do school psychologists perceive providing mental health services as part of their role? (As measured by section III, question 3 of the survey)
- 4) Do school psychologists report providing mental health services to students?
- 5) What is the overall relationship between demographics (age, gender, degree, and training) with the provision of mental health services? (As measured by section I, questions 1, 2, 4, and section III question 8 of the survey).

## CHAPTER II

### REVIEW OF THE LITERATURE

The chapter will begin with a review of literature from the last decade regarding the mental health service needs of children and adolescents. The next section will cover the negative outcomes for children and adolescents who do not receive treatment for their mental health disorders including the relationship between mental health disorders and academic achievement and mental health and suicide. Then, literature addressing the effectiveness of school-based mental health services will be reviewed. Next is an overview of the literature on who is providing mental health services in the schools. Finally, the current available literature regarding the role and function of school psychologists is presented.

#### Mental Health Needs

There are a number of studies available that provide insight into the prevalence of mental health disorders in children and adolescents, in addition to the use of services by this at-risk group. This section will review all available studies from 2000 to the present regarding the mental health needs of children and adolescents.

Kataoka, Zang, and Wells (2002) conducted a secondary data analysis of three nationally representative household surveys from 1996-1998. These surveys included the National Health Interview Survey (n = 11,017), the National Survey of American Families (n = 28,867), and the Community Tracking Survey (n = 8,852). The purpose of this study was to determine the use of mental health services by children and adolescents ages 3-17 years. This survey categorized children as having an unmet need if they exceeded a cutoff point on a mental health screening and did not receive any mental health services within a year. Kataoka et al., found that the prevalence of a mental health disorder ranged from 6% to 7.5%. A higher percentage of children who had public insurance (9-13%) used mental health services than did those children who were uninsured (4%-5%) or privately insured (5%-7%). Male children used mental health services at higher rates than female



children. Only 21% of children who needed mental health evaluations received them (based on the cutoff scores individuals obtained on the mental health screening and reported use of mental health services). The discrepancy between individuals who needed services and those who actually received services was more evident among Latinos and the uninsured.

This study was one of the first to provide national estimates of the use of mental health services by children and adolescents. It presented a clear picture of the current state of children's use of mental health services and provided useful data regarding the need to increase children's access to and use of mental health services. However, it did not provide information about what constituted mental health services, how children were referred to mental health services, where the services were being provided, and who was providing the services and under what conditions.

Farmer, Burns, Phillips, Angold, and Costello (2003) examined children and adolescents points of entry into mental health services in addition to how they progressed through the mental health service sectors (i.e., specialty mental health services, education, general medicine, juvenile justice, and child welfare). Data for this study were obtained through the Great Smokey Mountain Study, a longitudinal epidemiological study of children in the southeastern United States that examined mental health problems of children and adolescents from 1993 to 2003. Potential participants were screened for externalizing symptoms using the Child Behavior Checklist (CBCL). Children who scored above a predetermined cutoff score and 10% who scored below a cutoff score were selected for the study. The sample consisted of 1,073 children ages nine, 11, or 13 when they entered the study. Demographically, 51.4% of the participants were male, 48.6% female. In regards to race 89.3% were Caucasian, 7.0% African American, and 3.7% American Indian. All participants and their parents were interviewed at the beginning of the study, and re-interviewed yearly every three years regarding use of services for mental health problems.

Results indicated that 33.6% of children received services for emotional, behavioral, or substance use problems in one or more of the five service sectors. Additionally in any given year 18%-19% of the population used mental health services. Data indicated that approximately 11% of the children used education services, 7% used specialty mental health services, 4% used general medical services, and 1-2% used child welfare or juvenile justice services. In regards to initial exposure to mental health services more than 60% of the children who received mental health services at some point in their lives, first received services from the education sector.

The sample-recruiting criteria for this study focused on a behavior checklist. Based on this, use of mental health services for those with internalizing disorders could not be assessed. Additionally, this study did not examine what constituted mental health service in the education sector, nor did it discuss the integrity of services. This study, however, presented clear data that children and adolescents' initial exposure to mental health services was often in the education sector.

Burns, Phillips, Wagner, Barth, Kolko, Campbell, and Landsverk (2004) conducted a study examining use of mental health services among children in child welfare who had been reportedly subjected to maltreatment. Participants in this study were selected from the National Survey of Adolescent Well-Being, which provided a nationally representative sample of children and adolescents who were investigated by child welfare regarding reports of maltreatment. This study included 3,803 children and adolescents ages 2 to 14 years. The need for mental health services was established by documentation of mental health disorders from previous mental health professionals. When a diagnosis was not available, need was established using the CBCL. For children ages 2-5, a parent form was used, ages 6-10 a parent and teacher form was used, and for individuals ages 11 and older the parent, teacher, and self-report assessments were used. Mental health service use was measured with the Child and Adolescent Services Assessment to establish what services (i.e., outpatient service, in-home mental health,

clinic-based specialty mental health services, private practice professionals, therapeutic nursery/day treatment, hospitalization in a psychiatric hospital, inpatient drug or alcohol facilities, group homes, or residential treatment facilities) were used 12 months prior to participation in the study. Burns et al found that 47.9% of their sample scored in the clinical range on the CBCL and were therefore identified as in need of mental health services. Results additionally indicated that, of the children who scored in the clinical range on the CBCL, only 11.7% of them received services. Examined demographically, only 6.6% of children ages 2-5 years, 15.5% of children 6-10 years, 25.9% children and adolescents ages 11-14 years who needed mental health services received them. No significant differences were found regarding gender or race/ethnicity. In addition 4.1% of children and adolescents who were not in the clinical range received mental health services. When children and adolescents who needed services received them, they were most likely served in an inpatient or outpatient facility (23.6%), outpatient facility only (22.4%), or clinic or private practice (19.5%). The remaining received treatment in-home counseling (7.7%), psychiatric inpatient facilities (5.1%), or day treatment (1.4%). Overall, 84% of the sample did not receive mental health services.

The participants in the study were in foster homes, and duration of time in the home was not considered when evaluating the validity of the parent/foster parent reports. The study is important because it offered evidence of the need for mental health services within an increasingly at-risk population.

Anderson and Gittler (2005) conducted a study assessing the extent of unmet needs for rural children and adolescents with mental health and/or substance use disorders. This was a retrospective study examining adolescents ages 12-18 years in Iowa (n = 177) who were discharged from outpatient mental health or substance abuse treatment centers. This study found that only 36% of adolescents who needed treatment for co-occurring disorders (mental health disorder and substance use disorder) received it. Additionally, 64% of adolescents with co-occurring disorders did not receive empirically

supported treatment. Interestingly, the study found that children who received services for co-occurring disorders demonstrated improvement for the mental health disorders, but not the substance use disorders. Moreover, adolescents with histories of sexual abuse were more likely to receive mental health treatment only. The authors noted that treatment has historically been adult focused, limiting specialized services for adolescents. Additionally, Anderson and Gittler stated that rural areas may have had insufficient professional staff to treat adolescents in need.

The Anderson and Gittler (2005) study provided insight into the path of services for adolescents with mental health and substance use disorders in rural Iowa. Information regarding where treatment occurred prior to enrollment in an outpatient clinics was not included. Given the selection criteria, generalization regarding need for services was limited, as a number of individuals might have needed mental health or substance abuse services, but were never referred. Additionally, the authors did not indicate if any of the services provided to the adolescents prior to the outpatient clinics occurred in the schools, or if treatment was made available to the adolescents through school referrals.

Although the number of children with mental illnesses is relatively high in the general population, availability and use of services is limited. Farmer et al (2003) identified the education sector as the most common initial exposure to mental health services. However, none of the studies examined the provision of mental health services in the schools in relation to meeting the unmet mental health needs of children and adolescents.

#### Outcomes for Untreated Mental Health Disorders

This section provides a critical review of available research from 2000 to the present regarding the negative outcomes for children and adolescents with untreated mental illnesses. Outcome literature related to suicide, academic performance, and school dropout is reviewed.

## Suicide and Mental Illness

In 2000, Strauss, Brimaher, Bridge, Axelson, Chiappetta, Brent and Ryan conducted a study examining the association between suicidal ideation, suicide attempts, and anxiety disorders in children and adolescents (n=1979) ages five to 19. The participants were selected from a group of children and adolescents who received assessments at an outpatient clinic for mood and anxiety disorders between 1986-1995. Participants were assessed using the Schedule for Affective Disorders and Schizophrenia for School Aged Children- Present Episode (K-SADS-P) and were stratified by age and responses to questions regarding suicidal behavior on the K-SADS-P. The three groups of participants were non-suicidal (n=817), suicidal ideation (n=768), and suicide attempters (n=934). Diagnoses of psychiatric disorders were based on the K-SADS-P and diagnostic criteria from the Diagnostic and Statistical Manual of Mental Disorders- Fourth Edition (DSM-IV). Logistical regression analyses were conducted controlling for demographic characteristics and comorbid disorders. Strauss et al., found that in children age 15 years or below who were suicide attempters had a lower prevalence of separation anxiety than individuals who had suicide ideation and individuals in the non-suicidal groups. Participants who were 15 years or older and had generalized anxiety disorder demonstrated suicide ideation more often than non-suicidal groups. Strauss and colleagues (2000) concluded that anxiety disorders may not be as associated with suicidal behavior as often as mood disorders and substance use disorders. Moreover, generalized anxiety disorder may increase the risk of suicidal ideation while separation anxiety may be a protective factor against suicidal behavior.

The sample in this study was referred from an outpatient clinic; however treatment of anxiety disorders was not examined. Participants may have been receiving interventions that may have affected the occurrence of suicidal ideation or attempts confounding the results. Generalization of the results is limited given the clinic-based

sample. This study is important in highlighting a possible connection between suicidal ideation and generalized anxiety disorder.

Sanchez and Le (2001) conducted a literature review of 15 studies published from 1978 to 2001 in order to determine the association between suicide and mood disorders. Five studies investigating psychiatric diagnoses from psychological autopsies with children and adolescents, four studies investigating the prevalence of depression and suicide attempts and six follow-up studies of depressed children and adolescents and suicide occurrences were reviewed. Children and adolescents who had depression comorbid with other mental health disorders (externalizing disorders, or substance use disorders) were at higher risk for suicide completion. Among children who attempted or completed suicide, mood disorders was the most common diagnosis. Moreover, Sanchez and Le (2001) found that early identification and treatment of mood disorders decreased the probability of suicide completion.

The inclusionary criteria for the studies in this review were not detailed. However, the review provided evidence of a link between mood disorders and suicide attempts and completion. In addition the review highlighted the increased risk of suicide in children and adolescents with comorbid disorders.

A longitudinal study evaluating the prevalence and predictors of suicidal thoughts and attempts among adolescents was conducted by Sourander, Helstela, Haavisto, and Bergroth (2001). Five hundred and eighty children who participated in the Epidemiological Multicenter Child Psychiatric Study in Finland were included in this study. In 1981, as part of the original study, participant's parents and teachers completed the Rutter Scales and participants completed the Child Depression Inventory (CDI). Assessments were re-administered in an eight year follow-up. Participants were placed in two groups, suicidal or non-suicidal based on whether the self-report, parental report and teacher report measures indicated suicidal thoughts or behaviors within the previous six months. In addition to the Rutter and CDI, at follow-up parents and participants

completed the CBCL. Regression analyses were employed to evaluate suicidal thoughts / attempts and associated factors. Of all the participants who displayed suicidal characteristics 52% scored in the clinically significant range on the CBCL. Girls were two times more likely to develop suicide ideation and/or attempts than boys. Only 20% of children and adolescents who reported suicidal ideation were referred to mental health services. Children who had emotional and behavior problems (antisocial symptoms and depressive symptoms) reported by parents and teachers at age eight were more likely to have suicidal thoughts or attempts at age 16 than children without emotional or behavioral problems. Moreover, participants reported having three times more suicidal thoughts/behaviors than reported by their parents.

The participants in this study were Finnish children and the findings may be limited due to cultural differences related to perceptions of mental illness and treatment. In addition, reliance on self-report measures may not fully capture the severity of symptoms. This study does, however demonstrate a link between mental illness and suicidal ideation and attempts.

Kelly, Cornelius, and Clark (2004) conducted a study that examined the relationship between psychiatric disorders and suicide attempts of 503 adolescents (12-19 years) with substance use disorders. The participants were selected from a group of adolescents who were in research studies at the Pittsburgh Adolescent Alcohol Research Center between 1991-2000. All participants who were recruited were involved in mental health treatment (i.e., inpatient units, residential treatment programs, group homes, detention centers, outpatient treatment, and community mental health centers). The diagnosis of substance use disorders was based on the Structured Clinical Interview for DSM-III-R disorders. Psychiatric disorders were assessed using the K-SADS. Information about suicide attempts were gathered through participant and parent report. Of males who attempted suicide 97.3% met the diagnostic criteria for major depression compared to 32.9% of non-attempters. Thirteen point eight percent of boys who

attempted suicide met diagnostic criteria for Bipolar disorder, compared to 2% of non-attempters. Approximately 55% of suicide attempters versus 30.1% of non-attempters met diagnostic criteria for ADHD. Among girls 91.1% of suicide attempters (54.5% non-attempters) met criteria for major depression, 13.8% of attempters (2.1% non-attempters) met criteria for bipolar disorder, 50 % of attempters (21.2% non-attempters) met criteria for a substance use disorder, and 69.6% of attempters (49.2% non-attempters) met criteria for conduct disorder. Moreover, males and females who attempted suicide had earlier onset of substance use disorders.

The study relied on parent and participant retrospective reports regarding onset of symptoms. Generalizations of results were limited given the small sample size and restricted geographic location. The results of the study did demonstrate a clear association between mental illness and suicide attempts among adolescents with substance use disorders.

Klomek, Marrocco, Kleinman, Schonfeld, and Gould (2007) conducted a study that examined the relationship between bullying, depression, and suicidality in a sample of New York state 9<sup>th</sup> –12<sup>th</sup> grade students (n=2,342). Measures included a demographic questionnaire, the Beck Depression Inventory (BDI), The Suicide Ideation Questionnaire, The Diagnostic Review Schedule for Children, and a Bullying questionnaire based on the World Health Organization study. Regression analyses were conducted to determine the relationship between the variables of interest. Thirteen percent of the population reported bullying others frequently and 9% of the sample reported being victims of frequent bullying. Children who were frequently bullied in school had higher rates of depression (29.5%) than students who were not bullied (7.3%). Moreover participants who reported being bullied less than weekly (7%) and frequently (11.5%) reported serious suicidal ideation and suicide attempt (7% and 10.8% respectively). In addition participant who reported bullying others had increased rates of depression (11%-18%), suicidal ideation (6%-7%) and suicide attempts (6-8%).



Klomek and colleagues demonstrated the relationship between bullying, depression, suicidal thoughts, and attempts. However, suicide ideation and attempts were not directly analyzed in this study. Generalization is limited given that the sample was not randomized.

Renaud, Berlim, McGirr, Tousignant, and Turecki (2008) further evaluated the association between mental illness and child and adolescent suicide. Families of 55 Canadian children and adolescents who completed suicide were interviewed using standardized structured interviews. Fifty-five living children and adolescents matched in age and gender comprised the control group. Measures used include: K-SADS-PL and coroner interviews (to determine psychiatric diagnoses), The Brown- Goldwin History of Aggression, The Barratt Impulsiveness Scale, The Buss Hostility Inventory, and The Tridimensional Personality Questionnaire. Prevalence of Psychiatric disorders were higher in the suicide group than the control group. Significant discrepant percentages for specific psychiatric disorders among the suicide group were as follows: Mood disorder (62%), Major Depression and Depression NOS (47.3%), Substance abuse (23.6%), Alcohol abuse (10.9%), Drug abuse (18.2%), Separation Anxiety (6.3), and Brief reactive psychosis (3.6%). Impulsiveness and aggressive behaviors were also higher in the suicide group.

The use of structured interviews and coroners' reports to determine psychiatric disorders in the suicide group decreased the validity of diagnosis and the small sample size limited generalizability. In addition this study did not control for the psychiatric treatment of the control group. Despite limitations, Renaud and colleagues (2008) used a case-control study to demonstrate a significant relationship between psychiatric disorders and completed suicide in children and adolescents.

### Relationship Between Mental Health and Academics

This section presents a critical review of recent studies (1999-present) examining the relationship between mental health and overall achievement; reading and mathematics, school attendance, and school dropout.

#### Overall Achievement

Hill, Locke, Lowers, and Connolly (1999) conducted a longitudinal follow-up study of 123 children and adolescents age 8-18 years whose parents were in a large family study. The children and adolescents were placed into high and low risk for alcoholism groups based on parent alcohol use. The children were administered the Schedules for Affective Disorders and Schizophrenia for School –Aged Children and the Wide Range Achievement Test (WRAT) annually. Grade equivalents based on the reading, spelling and arithmetic subtests of the WRAT were used in this study. The researchers examined the relationship between psychopathology and academic achievement (as measured by the WRAT). Children and adolescents who demonstrated poorer academic achievement demonstrated ongoing psychological problems that later developed into diagnosable mental illness. Hill and colleagues (1999) concluded that achievement deficits might precede psychopathology in children and adolescents. Therefore, identifying decreased academic achievement in children and adolescents may aid in early identification and treatment of psychopathology.

This study did not indicate which types of psychopathologies were more strongly associated with academic deficits. Additionally, the WRAT is a very quick screener which provides a general representation of children's academic abilities in spelling, reading and math. Using a standardized achievement test such as the Wechsler Individual Achievement Test, Woodcock Johnson-III, or Iowa Test of Basic Skills, in conjunction with the child's report card could have provided a more accurate representation of the child's levels of academic functioning. Moreover Hill et al., (1999) did not take into account the implementation of academic, behavioral, or mental health interventions that

may have been provided in the schools. However, if interventions were implemented, they did not affect the overall findings regarding the relationship between academic deficits and psychopathological symptoms in children and adolescents.

#### Internalizing Disorders and Overall Achievement

Glied and Pine (2002) conducted a secondary analysis of the 1997 Commonwealth Fund Survey and examined the correlates and consequences of high levels of depression in adolescents. The Commonwealth Fund Survey was a class-room-based survey that was administered to the students of 297 public, private, and parochial schools. The survey gathered data regarding adolescent's (10-18 years) health status, risk behaviors, and school performance in addition to demographic information. Depressive symptoms of adolescents were assessed using the Children's Depression Inventory (CDI). Four thousand six hundred and forty eight adolescents participated in this study. The prevalence of depression in boys was 5%. The prevalence rate for girls was 9% and it dramatically increased at age 14. Depression was strongly linked to a history of physical or sexual abuse, violence in the home, and severe life stresses. Moreover, depressed adolescents missed more days of school ( $p < .05$ ) than non-depressed children and were twice as likely to have been retained. Depressed adolescents reported higher rates of smoking ( $p < .001$ ), alcohol and drug use ( $p < .05$ ), and binge drinking. In addition suicidal ideation was significantly ( $p < .001$ ) more common in adolescents with depression than those without. This study provided valuable self report data regarding academic and social outcomes of adolescents with depression. However, the data were not confirmed by academic and health records which may limit the validity of the findings.

A retrospective study conducted by Van Ameringen, Mancini, and Farvolden (2003) examined the relationship between academic achievement and anxiety disorders. Two hundred and one patients (18-65 years) admitted to a Canadian mental health treatment facility completed school questionnaires (assessing highest grade completed, reasons for leaving school, influence of anxiety in leaving school, school enjoyment, and

school intimidation) in addition to the Beck Depression Inventory, the Stait-Trait Anxiety Inventory, the Fear Questionnaire, the self-report Social Adjustment Scale, and the Sheehan Disability Scale. All participants met diagnostic criteria for anxiety disorders. Approximately 49% of the participants reported not completing high school. Of those participants, 24% reported anxiety as their reason for dropping out.

The use of retrospective reports limited the validity of the study regarding school completion. Van Ameringen and colleagues (2003) used an inpatient sample therefore results cannot be generalized to community samples, potentially underestimating the prevalence of anxiety disorders in adolescents who do not complete high school.

Shahar, Henrich, Winokur, Blatt, Kuperminc, and Leadbeater (2006) conducted a one-year longitudinal study examining the relationship between adolescent self-criticism and depressive symptoms and grade point average (GPA). Data for this study were collected in 1995. Four hundred and sixty sixth and seventh grade students from a large school district in New York State participated in this study. Self-criticism was measured using the Depressive Experiences Questionnaire for Adolescents. Depressive symptoms were measured using the Beck Depression Inventory (BDI), and GPAs were collected from the participants' report cards for the 1993-1994 and 1995-1996 school years. No gender differences in depressive symptoms were found. In general, boys had lower GPAs and were more self-critical than girls at initial and final evaluations. In addition depressive symptomatology was positively correlated with self-criticism ( $r = .33, p < .01$ ). The higher the number of depressive symptoms the lower the participants GPA ( $r = -.37, p < .01$ ). Similarly self-criticism was negatively correlated with GPA ( $r = -.30, p < .01$ ). High levels of self-criticism and depressive symptoms resulted in a negative effect on GPA ( $\beta = -.19, p < .01$ ). For girls with low levels of self-criticism, symptoms of depression had a negative effect on GPA ( $\beta = -.23, p = .03$ ), however, there was no effect for high levels of self-criticism.

This study is important as it demonstrated a moderate association between depressive symptoms, self-criticism, and academic achievement among middle school students. Given the small sample size and limited geographic location of the sample, generalization to other locations and age groups is limited. Additionally Shahar et al (2006) findings may have been more meaningful if they had used an instrument that is designed for that age group such as the Beck Youth Inventory for ages 7-18.

Grover, Ginsburg, and Ialongo (2007) examined concurrent and long-term outcomes for children with symptoms of anxiety disorders. A community sample of 149 first grade children (ages 5-8) referred by their teachers from Baltimore public schools participated in this study. The majority (87.9%) of the participants were African American. Participants were assessed in the first grade and in the eighth grade. To measure anxiety symptoms Grover et al., used the Baltimore How I Feel- Young Child Version, Child Report and Parent report. Teacher reports were gathered using the Shy Behavior subscale of the Teacher Observation of Classroom Adaptation-Revised in addition to structured interviews to assess children's performance on accepting authority, social participation, and self-regulation. Academic functioning was measured in first grade with the Comprehensive Test of Basic Skills. Eighth grade assessment of academic functioning was measured using the Kaufman Test of Educational Achievement (K-TEA). In the first grade children with symptoms of anxiety were three times more likely to score in the bottom one-third on tests of reading and mathematics than non-anxious children. This finding was consistent for reading achievement at the follow-up assessments conducted in the eighth grade. Moreover, the eighth grade children with anxiety were over two times more likely to be in the bottom one-third of mathematics achievement than children without significant anxiety.

Children and adolescents with anxiety symptoms were 12 times more likely than non-anxious children to be identified as low in social acceptance in the first grade, and three time more likely to be rated low in social acceptance in the eighth grade. Children

with anxiety were additionally identified to be three times more depressed and five times more aggressive than non-anxious children in the first grade. In the eighth grade children with anxiety were rated as being six times more anxious than children in the non-anxiety group. Patterns of aggression were not significantly different in the eighth grade assessments.

Generalization of these findings is limited given the small sample size, confined geographical location, and over representation of African Americans. Additionally, Grover and colleagues did not control for confounding environmental and cultural barriers that could affect outcome measures of academic, social and psychosocial functioning. Moreover, the validity of self-report measures is limited and may not accurately reflect true anxiety symptoms of children and adolescents. The measures of academic functioning at each time period were different. Although both assessments were standardized and normed based, how they measured similar aspects of achievement differed, resulting in the inability to make direct comparisons. This study contributed to the literature in identifying both concurrent and long-term negative outcomes for children with anxiety disorders.

In 2008 Bonifacci, Candria, and Contento conducted two studies examining the effects of anxiety and depression on Italian children's acquisition of reading and writing skills. The first study included 72 third grade children, with a mean age of 8 years, 6 months. None of the children in the study had been previously assessed for learning disabilities or mental illness. Each child was administered an assessment battery in a small group setting which included the following assessments: Anxiety Questionnaire for Children's Developmental Age, Children's Depression Inventory (CDI), Wechsler Intelligence Scale for Children-Revised, and Battery for the assessment of Dyslexia and Dysortography in Developmental Age. Based on the results of these assessments the children were placed into three groups, depressed group (scored higher than two standard deviations (SD) above the mean on the (CDI), anxious group (scored higher than 2 SD on

the anxiety scale), and control group (scored in the average range on assessments of anxiety and depression). There were no differences within or between groups regarding scores on reading accuracy, reading speed, writing accuracy, and writing task. An analysis of variance (ANOVA) was conducted to further examine performance on the writing task. Children who scored high on the depression scale scored worse in writing words and homophones.

Based on the above study, Bonifacci et al (2008) conducted a second study to determine if the relationship between depression and writing skills could be identified at the early stages of writing skills acquisition. One hundred and thirty seven first grade Italian students were assessed in cognitive and affective functions. The instruments used in this study included: Test of Anxiety and Depression, Kaufman Brief Intelligence Test (Italian version) and Cross-linguistic European Project of Evaluation First Stage of Learning-Italian Group (COST). As in the first study, children were divided into three groups based on the results of the assessments (Depressed, Anxious, and Control). None of the students had been previously referred or assessed for learning disabilities or mental illness. Results were similar to the first study. Children who had higher scores on the depression scale scored lower on the writing tasks, specifically writing words versus non-words. Bonifacci and colleagues noted results might have been indicative of a “circular” relationship between depression and writing as opposed to one being the cause of the other.

The Bonifacci et al (2008) studies, although exploratory in nature, provided evidence of a link between depression and the acquisition of writing skills. However, functional impairment was not assessed in children who were placed in the depressed or anxious groups. Given that none of the children had been referred for services for either mental illness or learning disabilities, impairment may have been minimal and therefore generalization of the results to children with more severe mental illness is not possible. In addition the measures used to determine cognitive and affective functioning differed

between the two studies. This may have confounded the results given that assessments were not parallel and therefore may have been assessing different aspects of the same construct.

Davis, Ollendick, and Nebell-Schwalm (2008) conducted a study examining intellectual ability, achievement, and anxiety disorders. Researchers assessed 161 children (mean age 10.56 years) using the Wechsler Intelligence Scale for Children - Third Edition (WISC-III), The Wechsler Individual Achievement Test- First edition, The Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions, and the Continuous Performance Task (CPT). Participants were assessed by clinical psychology doctoral students at a university-affiliated outpatient assessment and treatment clinic. Based on the results of these assessments, the children were divided into two groups, the anxiety disorder group (for children with a diagnosis of anxiety disorders), and the comparison group (children diagnosed with disorders other than anxiety). Assessment profiles of each group were compared. Children with anxiety scored significantly lower on all achievement subtests. Davis and colleagues concluded that anxiety disorders were just as impairing as other psychiatric disorders. Results additionally indicated that anxiety disorders were negatively related to IQ scores in children with comorbid disorders.

Davis et al (2008) did not control for potential effects of comorbid disorders (with the exception of inattention) of children in the anxiety disorder groups. Results cannot be generalized to community samples as participants were referred from an assessment clinic. This study is important as it provides evidence regarding the relationship between psychopathology (specifically anxiety disorders) and impairments in cognitive functioning and academic achievement.

Hughs, Lourea-Waddell, and Kendall (2008) conducted a study examining somatic complaints of children with anxiety disorders compared to non-anxious children to determine if somatic complaints were a predictor of poorer academic performance. Hughs and colleagues used a Structured Diagnostic Interview to assess 108 children ages



8-14 years. Sixty-nine of the children in the study presented with severe anxiety disorder, and 39 children were determined to be non-anxious and served as the control group. Parents were asked to complete the Child Behavior Checklist, and Teachers completed the Teacher Report Form, which consists of 112 items measuring academic and adaptive functioning. The academic performance subscale of the Teacher Report Form was used to measure academic achievement across several subject areas including reading, math, and spelling. This measure allowed researchers to examine the children's academic performance using a nationally normed profile. This study found that higher frequency of somatic complaints was associated with poorer academic performance. Results indicated that the more frequent somatic complaints were made the poorer participants performed academically. This suggests that somatic complaints may play a role in the connection between anxiety disorders and poor academic functioning. Additionally, Hughs and colleagues (2008) stated that early identification and treatment of somatic complaints might result in increased academic achievement for children and adolescents.

This study established a link between somatic complaints and academic achievement; however, the study had some limitations. First the researchers did not assess children in the control group to determine if they had other disorders, nor did they investigate if the children in the anxiety/experimental group for any comorbid disorders which could have accounted for poor achievement. Additionally, Hughs et al (2008) did not indicate if the children in either group were receiving interventions (academic or mental health) in the schools or via community resources.

#### Externalizing Disorders and Overall Achievement

Bennett, Brown, Boyle, Racine, and Offord (2003) randomly sampled non-clinical children from 60 schools in Ontario, Canada who had previously participated in A Tri-Ministry Study evaluating social skills and reading in order to examine the relationship between low reading achievement and conduct problems. The children were in kindergarten or first grade at the time of enrollment in the previous study, completed

all the baseline assessments, and did not meet diagnostic criteria for pre-existing conduct problems (n=549). Conduct problems were measured using the Ontario Child Health Study-Revised scaled for Conduct Disorder. Reading achievement was measured using the Wide Range Achievement Test (WRAT), which only assesses decoding skills. Depression was measured using The Centre for Epidemiological Studies Depression Scale. After controlling for income, gender, conduct disorder symptoms, maternal depression, and family functioning, low reading achievement at school entry was found to be related to an increased risk of conduct problems two and a half years after baseline.

Although Bennett and colleagues noted the importance of early intervention for reading and conduct problems, they did not provide information regarding any interventions that participants may have had between initial and follow-up assessments. In addition, the WRAT only assesses reading decoding skills; measures assessing other aspects reading ability may have provided an enhanced understanding of what aspects of reading achievement were related to conduct problems. Nonetheless, this study is valuable as it demonstrated a link between low reading achievement and conduct problems.

Barbarese, Slavica, Katusic, Colligan, Weaver, and Jacobsen (2007) studied 370 children with ADHD who were a part of a 1976-1982 population-based birth cohort study and 740 control participants from the same cohort study who were non-ADHD. They were followed retrospectively until 18 years of age. The level of reading achievement, absenteeism, grade retention, and school drop out of the ADHD group were compared to the non-ADHD control group. Reading achievement was measured using the reading subtests of the California Achievement Test (CAT). School records were examined to measure absenteeism, grade retention and drop out. School dropout included any student who did not graduate from high school. Children with ADHD had significantly ( $p < .001$ ) lower scores on standardized measure of reading achievement compared to the control group children, higher rates (3%) of absenteeism compared to the control group (2.6%).

Moreover participants with ADHD were three times more likely to be retained a grade than the children in the control groups. Lastly, participants with ADHD were 2.7 times more likely to drop out of school than their non-ADHD peers.

Confounding variables such as learning disabilities, comorbid disorders, or use of medications were not controlled for in this study. This study is significant because it not only demonstrated an association between ADHD and reading achievement, but school functioning as a whole.

Masseti, Lahey, Pelham, Loney, Ehrhardt, Lee, and Kipp (2008) recently completed an eight-year longitudinal study regarding academic achievement of children who met the diagnostic criteria for ADHD. The study involved 255 children, 125 met diagnostic criteria for ADHD and 130 were selected as a control. The children's ages at the time of initial recruitment ranged from three years ten months to seven. All the children were enrolled in structured educational programs. Children in both the experimental and controls groups attended the same schools. Every year for seven years the children were administered ADHD diagnostic assessments. Academic achievement in the areas of reading and mathematics were compared in the first and last waves. Results indicated that when controlling for intelligence, children with the inattentive subtype of ADHD demonstrated problems with academic achievement over time. Inattention predicted lower reading scores. The authors discussed the possibility that the inattentive group may have had serious academic deficits indicative of a learning disability and which resulted in being inattentive. However, this was not investigated in the study. Additionally, if the children with inattentive type of ADHD were impaired in only one environmental setting, that setting was most commonly the school. Children, who met criteria for the inattentive subtype in the initial wave, were likely to continue to meet criteria as they progressed through school. Researchers found that children, whose parents reported them to have high rates of internalizing disorders during the initial wave,

consistently demonstrated lower reading and mathematics scores over the eight year period.

This study demonstrated the negative relationship between inattentive type of ADHD and academic performance over time. It additionally highlighted a relationship between internalizing disorders and poor academic outcomes. Although the Massetti et al., (2008) study controlled for intelligence, which may have effected academic achievement, they did not discuss any interventions or treatments provided to the students in school or other settings. This would have provided pivotal information regarding how various subtypes of ADHD respond over time to intervention.

#### School Attendance/ Dropout Rates

Poor academic achievement in children with psychopathology is additionally complicated due to decreases in school attendance and an increase in school dropout rates. Several studies from 2000-2008 document the relationship between mental illness and school attendance and completion.

French and Conrad (2001) conducted a longitudinal study examining the relationship between school dropout, peer rejection and antisocial behavior. Participants in this study included 516 eighth grader students followed over a two-year period in a suburban school district in the Pacific Northwestern United States. Children were assessed using peer ratings of antisocial behavior and social preference gathered in group assessment sessions. Peer ratings of anti-social behavior were obtained using a 10 item scale completed by same-sex peers using a four point scale focused on features of antisocial behavior. Peer ratings of social preference were obtained using a nine item scale, 4-point scale including questions regarding positive and negative aspects of social preference. Graduation status and achievement scores were gathered from school records. Antisocial behavior was strongly correlated with school dropout. Additionally adolescents who demonstrated antisocial behavior and were rejected by peers had an increased rate of school dropout. Antisocial behavior was also related to poorer academic

outcomes. French et al noted that it was possible for students who displayed antisocial behaviors to fail to be actively engaged in the learning process, leading to poor academic outcomes and subsequent school dropout.

Co-morbidity was not examined or controlled for in this study. Additionally, information regarding interventions for such behaviors and academic performance were not included, thus limiting the results.

Egger, Costello, and Angold (2003) examined the relationship between school refusals and child and adolescent psychopathology. They used eight years of data collected from the Great Smokey Mountains Study. The sample included 4,500 children ages 9, 11, and 13 years who were recruited from the Student Information Management System of public schools in North Carolina. All participants were screened regarding behavioral concerns using the Child and Adolescent Psychiatric Assessment (CAPA) and were individually interviewed. All diagnoses in this study with the exception of ADHD were based on parent and child report obtained through structured psychiatric interviews conducted with participants and their parents. A diagnosis of ADHD was based on structured psychiatric interviews conducted with participant's parents. This study focused on the relationship between psychiatric disorders and school refusals. In general school refusal status was based on parent and child reports. School refusal was broken down into three subtypes including anxious school refusals (i.e., children who did not attend, or left school due to intense anxiety), pure truancy (i.e., children who did not attend school or left school without permission or an excuse, for reasons not associated with anxiety), and mixed school refusals (i.e., children with both anxious and truant refusals). Egger and colleagues (2003) additionally examined school resistance and nonattendance. Results indicated that pure anxious school refusals were associated with depression and separation anxiety; pure truancy was associated with oppositional defiant disorder, conduct disorder and depression. Of children with both anxious school refusals and truancy, 88.2% had a psychiatric disorder. Children and adolescents in this study,

who had school refusals and poor attendance, demonstrated increased rates of emotional and behavioral disorders. Furthermore, Egger et al found that various types of psychosocial variables had different relationships to school refusals. In sum, membership in the anxious school refusals group and truancy group was significantly associated with child and adolescent psychopathology in addition to other adverse experiences at school and home.

Regardless of the psychopathology (anxiety versus conduct disorder) school refusals and decreased attendance occurred. This study did not distinguish between school refusal, psychopathology and school intervention. There was no indication if the children and adolescents who were refusing to attend school received mental health services in the community or school, nor did the researchers report whether any interventions to increase school attendance were implemented.

In summary, there is an abundance of evidence indicating a significant relationship between poor academic outcomes and mental health disorders. The available data indicated poorer outcomes for children with internalizing and externalizing disorders.

#### School-Based Mental Health Services: Effectiveness

School based mental health centers are not available in every school district nor in every state. This section provides a review of the available literature from 1997 to the present regarding the effectiveness of school-based mental health centers. These parameters were selected to provide a comprehensive representation of the most recent literature.

Hoagwood and Erwin (1997) conducted a literature review examining the effectiveness of school-based mental health services over a ten-year period. Five thousand and forty-six published studies regarding mental health services in schools were initially reviewed; however, only 16 met the inclusionary criteria for scientific integrity. Hoagwood and Erwin found that seven of the studies used Cognitive Behavioral

Techniques (CBT) as interventions, primarily for depression. The results for five of the studies indicated significant positive effects while two studies had mixed results. The results of seven studies using social skills training found that six were effective and one was not effective. Teacher use of behavioral consultation was also evaluated. Only two studies met the inclusionary criteria and yielded mixed results regarding effectiveness (1 effective, 1 mixed). Hoagwood and Erwin concluded that there were not enough rigorous studies conducted to accurately evaluate the effectiveness of school-based mental health services. The outcome measures for the school-based services were limited; they examined functioning but not overall symptom reduction and global impact. This review did not provide any information regarding who was implementing the services in the schools, how the children were referred for services, nor acceptance of services by the school or community.

Armbruster and Lichtman (1999) evaluated the effectiveness of school-based mental health clinics in 36 inner city schools. The clinics were staffed with mental health professionals from a university-affiliated children's psychiatric outpatient clinic. Effectiveness of treatment provided to 256 children receiving treatment in school-based clinics was compared to effectiveness of treatment provided to 220 children in a clinic setting. Effectiveness was measured using the Children's Global Assessment Scale and Global Assessment of Functioning Scale. The children received mental health treatment in the school for a five month period. The children in the clinical setting received services for eight months. The children who participated in this study ranged from five to 18 years of age. The referrals were divided into internalizing, externalizing, and other presenting problems. The three groups were matched by age, gender, and ethnicity. Results indicated that even though the school population received treatment for a shorter duration of time, the effectiveness of the mental health interventions were similar. Armbruster and Lichtman (1999) concluded that school based treatment was as effective as clinic based treatment, despite lack of parent involvement in treatment and school systems issues.

Students who participated in the school-based treatment had an increase in attendance and overall improvement in school performance. The majority (92%) of students served in the schools were economically disadvantaged, racial/ethnic minorities, and displayed similar levels of pathology as those children seen in the clinics. Only 48% of the clinic-based samples were economically disadvantaged minorities.

This study demonstrated that school-based mental health services could result in positive school-based outcomes. The study also highlighted the importance of school-based services in treating children and adolescents who may otherwise fall through the cracks. It is important to note that the mental health professionals providing services in this setting were not school personnel, such as school psychologists, but mental health professionals from a psychiatric outpatient clinic.

Rones and Hoagwood (2000) examined the published literature regarding the effectiveness of school-based interventions from 1985-1999 and reviewed 47 studies that used randomized designs, quasi-experimental designs, or multiple baseline designs. Forty-seven studies met the inclusionary criteria. School-based mental health services were defined as: interventions or strategies designed to influence children's emotional, behavioral, or social functioning in a school setting. It is important to note that 22 of the 47 studies addressed conduct problems, 12 addressed substance abuse, six addressed depression, five addressed emotional and behavioral problems, and two addressed stress management.

The effectiveness of the interventions varied across the target problems. Three of the five studies regarding emotional and behavioral problems demonstrated effectiveness, two yielded mixed results. With respect to depression, the results of three of the five studies demonstrated that school-based interventions were effective, two yielded mixed results and two were determined to be not effective. Regarding conduct problems, eight studies found school-based interventions effective, ten yielded mixed results and only four yielded ineffective results. Only three studies yielded effective results regarding



substance abuse, six studies provided mixed results, and three studies found the interventions were not effective.

Rones and Hoagwood (2000) identified several key variables that impacted the success of interventions. Successful programs included parent, teachers and peers, and implemented a number of different treatment modalities. Successful programs were also integrated into the general classroom curriculum, were developmentally appropriate and the treatment was directed toward changing specific behaviors and skills.

A large number of the studies focused on externalizing disorders, and did not indicate who was providing the services to the students in the school setting. However, these studies demonstrated that mental health professionals, with the appropriate training could successfully and effectively implement mental health services in a school. Research regarding the effectiveness of school based mental health services provided by school psychologists or other qualified school personnel is lacking.

#### School-based Mental Health Services: Who is Providing Services?

Foster, Rollefson, Doksum, Noonan, and Robinson and Teich (2005) conducted a nationwide study to determine if school mental health services were being provided and by whom. Areas of interest included school mental health services, delivery and coordination of services, staff providing services, and funding. Surveys were sent to 83,000 public elementary, middle and high schools in the United States. Superintendents were responsible for dispensing the survey to individuals who were most knowledgeable about mental health services. Information regarding the profession of the respondents was not provided. Eighty-seven percent of respondents reported that their schools assessed mental health problems and engaged in consultation, behavior management, and crisis intervention. Of this group 96% of respondents reported providing mental health services to students. Moreover 96% of respondents reported having at least one staff member who was responsible for providing mental health services. Short-term interventions, assessment, behavior management consultation, crisis intervention, and referral services

were the more commonly provided services. Less than half of the schools indicated providing substance abuse counseling. In regards to offering specialized services, 87% provided assessment for emotional or behavioral problems or disorders, 87% provided behavior management consultation, 84% provided crisis management, 84% provides referral to specialized programs, 76% provided individual counseling, 71% provided case management, 68% provided group counseling, 58% provided family support services, 43% provided substance abuse counseling, and 34% provided medication management. Interestingly, social, interpersonal, or family problems were reported as the most frequent mental health problems for students. This study additionally examined who was providing mental health services.

The staff responding to the surveys included: school counselors, mental health counselors, school psychologists, clinical/PhD-level psychologists, social workers, substance abuse counselors, school nurses, and other staff. Foster et al., found that in the 2002-2003 school year approximately 358,000 professionals and support staff provided some level of mental health services. Results indicated that the usual staff providing mental health services to children and adolescent in the schools were school counselors, school nurses, school psychologists, and social workers. Furthermore, respondents indicated that 75% of school had at least one school counselor, 66% had a school psychologist or nurse, and 44% had a social worker on staff.

Foster et al. (2005) found that school counselors spent 52% of their time providing mental health services, school psychologists spent 48% of their time providing mental health services, school social workers spent 57% of their time providing mental health services, and school nurses spent 32% of their time providing mental health services. Although there were more school nurses providing mental health services to children and adolescents than school psychologists or social workers, they spent a smaller percentage of time providing such services.

Foster and colleagues (2005) additionally examined the qualifications of individuals providing mental health service in the schools. Qualifications were based on degree and licensure in each respective field. Among school psychologists 98% held a Master's Degree and 92% were licensed. Of school counselors 93% held a Master's Degree and 87% were licensed. Within school social workers, 87% held a Master's degree and 87% were licensed in their field. For the nurses, 54% held a Master's Degree and 88% were licensed in their field. Some individuals providing mental health service to children and adolescents in schools may not be qualified to do so given that not all Master's level programs and licensing boards require a minimal level of proficiency / competency in the provision of mental health services.

Based on the findings of Foster et al., (2005) it appears that the treatment of mental illness is occurring in the schools. However, the integrity of the mental health services provided is unclear. Moreover, there continues to be a disparity between the numbers of students treated and the number in need of treatment. The higher the number of trained professionals providing services in the schools the better. Schools seem to be taking an active role in recognizing and treating behavioral problems that may arise as a result of an externalizing disorder. Interestingly, school psychologists reported spending 48% of their time providing mental health services. As mentioned previously, these services may not address the full scope of student needs among the student population (i.e., emphasis on addressing behavioral concerns). The use of empirically supported interventions to treatment effectiveness was not evaluated in this study. Furthermore, the surveys were completed by the individuals who district superintendents perceived as most knowledgeable about mental health. An operational definition of mental health services was not provided; therefore a comprehensive understanding of the provision of mental health services was not provided.

As noted previously, implementation of school-based mental health services is crucial to addressing the unmet mental health needs of children and adolescents.

According to the findings of Foster et al., (2005) School Psychologists are the third most likely to provide mental health services. However, this finding is inconsistent with studies examining the role and function of school psychologists (Curtis, Hunley, Walker and Baker, 1999; Bramlett, Murphy, Johnson, and Wallingsford, 2002; Hosp and Reschly, 2002).

### Role and Function of School Psychologists

Studies regarding the roles and functions of school psychologists date back to the 1950's. This section will provide a critical review of available research from 1999-2008 to gain a better understanding of the current roles and functions of practicing school psychologists in the United States.

Curtis, Hunley, Walker, and Baker (1999) conducted a national study regarding the demographics characteristics and professional practice of practicing school psychologists. Twenty percent of all regular members of NASP were surveyed regarding demographic variables in addition to tasks completed as a part of their daily practice during the 1994-1995 academic year. Seventy four percent of those recruited completed the study (n=1,922) Demographically, researchers found that the vast majority (73.4%) of school psychologists were female, 94.5% were Caucasian, 68.2% were more than 40 years of age, and one-third of those surveyed had been practicing in the field over 15 years. Regarding educational backgrounds 40.6% held Master's degrees, 36.6% held Specialist degrees, and 20.6% held Doctorate degrees. In reference to employment settings 69.8% were employed in an elementary setting, 44.4% in a middle school/ junior high setting, and 33.1% in a senior high setting.

Curtis et al (1999) found that 29.8% of school psychologists practicing in the school reported completing 25 or fewer initial special education evaluations, and 60.7% indicated completing 50 or fewer evaluations. Relative to conducting reevaluations 38.4% indicated completing 25 or fewer, and 25.7% indicated completing 50 or more. Results indicated that 59.1% of all respondents spent more than 70% of their time

conducting special education evaluations. Sixty-eight percent of respondents reported spending less than 20% of their time conducting evaluations and twenty-one percent stated that they did not complete any evaluations. When asked about consultation practices, Curtis and colleagues found that 97.4% of respondents engaged in consultation. Approximately 46% indicated serving one to 25 students via consultation, and approximately 25% of psychologists reported providing consultation services to 50 or more students.

Provision of counseling services was also investigated. Approximately 18% of participants indicated that they did not provide any individual counseling with 34.0% with reporting the provision of individual counseling to 10 or more students, 20.3% reported providing group counseling services to 20 or more students; and 46.5% of school psychologists stated that they did not provide any group counseling services.

Eighty-eight point eight percent of psychologists reported providing in-service programs; approximately 18.4% indicated that they had provided five or more in-services. In sum, researchers concluded that 97.4% of psychologists engaged in consultation, 86.4% engaged in individual counseling, 53.5% conducted group sessions, and 77.8% provided in-service education. Psychoeducational assessment and related special education services consumed the majority of their time.

This study provided a comprehensive overview of the demographic and professional practices of school psychologists, but did not operationally define what constituted individual or group counseling. Information regarding why the child was receiving counseling services (externalizing vs. internalizing disorders) was not provided. Although school psychologists indicated that providing counseling was a preferred activity, it was not engaged in as much as other activities, Curtis et al (1999) did not investigate barriers to providing these services.

Bramlett, Murphy, Johnson, and Wallingsford (2002) conducted a national survey of NASP members (n=370) regarding the roles of school psychologists. This study

examined demographic information, professional activities, types of referrals, and crisis intervention activities. Similar to Curtis et al., (1999) the majority (63%) of respondents were female, 40% held Master's degrees, 36% held Specialist degrees, and 24% held Doctoral degrees. The average length of experience in the field was 18 years. Ten percent indicated being in the field less than ten years, 43% indicated practicing for 11-20 years, and 46% reported practicing as a school psychologist of over 20 years.

The participants were asked to indicate the amount of time they engaged in the following activities: assessment, consultation, interventions, counseling, conferencing (e.g., meetings with teachers and parents), supervision, in-service, research, parent training, and other. Overall results indicated that the largest amount of time (46%) was spent on assessment. Consultation accounted for 16% of their time, interventions accounted for 13%, counseling accounted for 8% of the time, conferencing accounted for 7% of their time, supervision accounted for 3% of their time, in-service accounted for 2% of their time, research accounted for 1% of their time and parent training accounted for 1% of their time.

Results also indicated that 49% of psychologists reported providing behavioral consultation, 6% provided mental health consultation and 45% indicated that they utilized "other" forms of consultation, which were not identified. Types of referrals psychologists reported as being most common were reading problems (57%), written expression (43%), followed by task completion (39%), mathematics (27%), conduct (26%), motivation (24%), defiance (17%), peer relationships (16%), listening comprehension (14%), oral expression (11%), mental retardation (10%), truancy (8%), and violence (6%). The least common referral to school psychologists was for internalizing disorders such as depression, anxiety, social withdrawal, and suicidal ideation.

The overall findings of this study were consistent with those of previous studies demonstrating that the activity consuming the majority of time of school psychologists was assessment. This study did not indicate the amount of time spent providing

behavioral intervention versus academic interventions; however, given the breakdown of the most common referrals one could assume that academic interventions accounted for the majority of time. Bramlett and colleagues (2002) did not define counseling, nor did they examine reasons for the provision of counseling services. However, given the low incidence of referrals for internalizing disorders, it is probable that counseling services were for individuals with externalizing disorders. Additionally researchers did not ask why a small percentage of the time was spent providing counseling or mental health services. This study was conducted six years ago and may not provide an accurate representation of the roles and functions of school psychologists in our changing educational climate.

Hosp and Reschly (2002) conducted a study evaluating the regional differences in the practice of school psychology. They also attempted to examine the regional effects of legislation on the roles and functions of school psychologists. This study was designed to answer five questions 1) What are the differences in assessment practices, 2) Are there differences in job satisfaction, 3) Are there differences in beliefs about reform that may prevent/enable different roles, 4) Are there differences in demographic characteristics, and 5) Are there differences in caseloads. Hosp and Reschly surveyed practicing psychologists (n=1,423), who were members of NASP. The respondents were separated by the U.S. census regions. Results indicate that one-half to one-third of school psychologist's time was involved with special education eligibility activities including assessment, IEP meetings, and conferences. Regional differences were noted regarding the typical role of school psychologists. The Northeast region placed an emphasis on determining the underlying reasoning for student difficulties. School psychologists in this region frequently used projective or personality measures, and more time was spent providing direct interventions as opposed to assessment when compared to other regions. In the Southeast Region, more emphasis was placed on psychometrics, intelligence and achievement testing. School psychologists in the Atlantic, Pacific, and Gulf Coasts used

projective and visual-motor assessments more often than those in the Plains, Midwest, and Mountain regions. Demographic findings were similar to those already discussed. The average age was 47.2 years, the majority (66%) was female, one-third to one-half had been in the field for over 15 years, and 28% held Doctoral degrees.

In general, it was found that school psychologists expressed a desire to engage in less assessment and provide more direct intervention, consultation, and research. School psychologists additionally indicated that they preferred to spend equal amounts of time administering assessments, implementing interventions, and providing consultation. School psychologists indicated that they were moderately satisfied with their current role and function. In reference to their attitudes toward reform, most school psychologists, regardless of region, agreed that assisting general education teachers in designing, implementing, and monitoring interventions prior to special education eligibility needed to be a role school psychologists undertook. Participants also agreed that response to interventions and curriculum-based measures should be used to determine special education eligibility. School psychologists did not agree with using a “one size fits all” approach when addressing the needs of students with learning disabilities, mild mental retardation, and students with emotional or behavioral disorders. Based on this finding one could perhaps conclude that similar sentiments would be found when examining the use of Non-categorical classifications. This was not examined in this study. Hosp and Reschly (2002) also did not evaluate the role of school psychologists in providing interventions.

Yates (2003) conducted a study examining the counseling practices of school psychologists (n=242). School psychologists were randomly selected from the NASP data base. School psychologists completed a survey examining demographic information; types of counseling provided, referral problem and time spent providing counseling. Forty one percent of the respondents were from the Northeast. The majority (49%) of respondents were from suburban school districts. The grade level respondents served



ranged from Kindergarten to 12<sup>th</sup> grade. Thirty one percent of respondents reported serving one school building, 69% reported serving two or more school buildings. The majority of respondents (46.4%) indicated their highest level of training was Certificate/Specialist, 23.6% indicated highest level of training was a Doctorate, and 21% reported their highest level of training to be a Master's degree. Forty-two percent of respondent had ten or more years of experience. Nearly 51% of respondents identified their theoretical orientation as cognitive behavioral. Seventy-nine percent of respondents indicated completing 30 or more assessments yearly. When asked who was providing counseling (respondents were able to endorse more than one option) in the schools, 85.1% of school psychologists indicated school counselors/guidance counselors, 77.7% indicated school psychologists, 66.9% school social workers, and 41.7% indicated that school nurses provided counseling services.

When asked questions regarding actual time spent on various roles and desired time spent in the areas of assessment counseling, research, prevention, consultation, and administration; respondents indicated they wished to spend less time on assessments and administrations and more time on counseling, research, prevention, and consultation. Nearly 72% of respondents reported that they provided counseling to students in their schools; however, respondents indicated spending only 17.2% of their time providing counseling services. High levels of counseling (25% of time or more) occurred among respondents who served areas with a lower psychologist to student ratio, completed fewer assessments per year, served in one building, or in high schools. In addition, respondents training in counseling were more likely to engage in counseling.

The majority of respondents (67.8%) reported providing counseling to both general education and special education students. Individual counseling was provided by 61.9% of respondents, group counseling was provided by 41.1%, classroom counseling was provided by 18.2%, and family counseling was provided by 19.1% of respondents.

The majority of respondents (60%) reported academic problems, externalizing issues, peer problems and self-esteem as the most common referral problems.

This study provided information regarding characteristics and counseling practices of school psychologists. Generalization of the results is limited as the majority of the respondents were from the Northeast, and practices may vary regionally.

Villarin (2005) conducted a study examining the effects of state special education laws on the roles and function of school psychologists. Survey packets were mailed to 500 NASP members 177 usable surveys were returned. Demographic data indicated that 68% of respondents were female, 95.5% were Caucasian, and 54% held a Master's degree plus 30 hours and 41% worked in suburban settings. The survey asked questions regarding demographics, actual time spent in various roles (i.e., assessment, counseling, research, consultation, and intervention), perceptions of required roles based on state special education law, and school psychologists' perceptions of various influences on their current roles. Villarin (2005) then conducted in-depth interviews with 10% (n=20) of respondents to provide a validity check of the survey and further investigate determinates of role. Results indicated that school psychologists spent most of their time per week on assessment (M=15.89 hours, SD=10.62), consultation (M=9.07 hours, SD=6.14), and other roles (M=6.27 hours, SD=8.92). Consistent with previous research, Villarin (2005) found that school psychologists spent the least amount of their time on intervention (M= 4.02 hours, SD=4.25), and counseling (M=3.35 hours, SD= 4.83). School psychologists additionally reported that, based on special education law, they believed they should spend more time on assessment and intervention than they did at the current time. School psychologists perceived that state special education laws required less time to be spent conducting research, consultation, counseling, and other roles than they currently spent. Perceived determinants of the roles of school psychologists were laws and regulations and student to psychologist ratio. Other factors determining the amount of time school psychologists spent in various activities included training,

parental/community concerns, state laws and regulations, student to psychologist ratio, personal preferences/skills, and continuing education. The more psychologists perceived training as a determinate of role, the less time they engaged in assessment and the more time they engaged in research. The more school psychologists perceived student/psychologist ratio as a determinate the more time they spent on assessment and the less time they spent on research. The more respondents perceived state special education laws and regulations as a determinate of their role the less time they spent on counseling. In addition the more school psychologists perceived skills as a determinate the more time they spent counseling. In addition the more respondents perceived parent/community concerns as a factor, the more time they spent on counseling. Overall, special education law was ranked as the number one influential determinate of roles; however, the perceptions of state laws and regulations had little effect on the roles and functions of school psychologists.

This study provided an overview of how perceptions of special education law can influence daily roles and practices of school psychologists. Generalization of these findings, however are limited given the small sample size. Moreover, this study included not only school psychologists practicing in schools, but also administrators, which could decrease the validity of results for practicing school psychologists. In addition, the sample was not representative of practicing psychologists from all 50 states, thus limiting generalization to other geographic regions.

Curtis, Lopez, Castillo, Bathe, Minch, and Smith (2008) conducted a study evaluating the demographic characteristics, employment conditions, professional practices, and continuing education of school psychologists. Twenty percent of regular NASP members were surveyed, 1,748 members completed the study. Regarding the demographics for all participants, the majority of participants were female (74%), and 26% male. Ninety-two point six percent of participants were Caucasian, 3% Hispanic, 1.9% African-American, 0.9% Asian/Pacific Islander, 0.8% Native American, and 0.8%

other. The mean age of participants was 46.2 years. Participants had an average of 14.8 years of experience. Regarding level of education, 34.9% of participants had a Specialist degree, 32.6% Master's and 32.4% had a Doctorate.

Demographics were slightly different for participants who practiced in school settings (n=1,654). The majority (77%) were female and 23% male. The mean age of participants was 45.2 years and mean years of experience was 14 years. Thirty-nine point nine percent of practitioners held Specialist degrees, 35.7% held Master's degrees and 24.4% held Doctorates. The researchers found that the most common continuing education/professional development courses offered were: behavioral interventions, standardized psychoeducational assessment, academic intervention, consulting/problem solving, and social/emotional intervention. Regarding consultation services, 47.9% reported consulting on 1-25 cases, 28.5% reported consulting for 50 or more cases. Regarding counseling, 53.7% reported providing individual counseling to 1-15 students, 17.7% provided individual counseling to 15 or more students. The majority of participants (60.1%) indicated they did not provide group counseling.

This study provided an overview of the demographics and professional practices of school psychologists. However, it did not provide the amount of time school psychologists spent providing counseling services. In addition, although the study did collect information regarding Continuing Education/Professional Development, it did not examine whether participating in these educational opportunities affected the practice of school psychologists.

Although the studies reviewed in this section presented an overall picture of the roles and function of school psychologists, none of these studies fully examined school psychologists' role in providing mental health services to students. Although Curtis et al., (1999) and Bramlett et al., (2002) reported information concerning the counseling practices of school psychologists, they did not identify why the children and adolescent were receiving counseling, if pathology was present, nor the nature of the

psychopathology (internalizing vs. externalizing). Nor did they indicate whether empirically supported counseling interventions were being provided. It is important to note that when school psychologists indicated spending time providing mental health services, the most commonly referred problems were for externalizing disorders. Based on this review, and the information on childhood disorders, the current provision of mental health service to children and adolescents for internalizing disorders does not appear to adequately address students' needs. There has not been a national study conducted regarding the mental health practices of school psychologists since the reauthorization of IDEA in 2004 and the freedom to use response to intervention (RTI) to identify children with learning disabilities.

#### The Present Study

The literature clearly demonstrates that there are unmet mental health treatment needs for children and adolescents and that mental illness results in negative outcomes for children. Schools are the ideal place to administer mental health services to children and adolescents. School psychologists can and should be instrumental in the provision of mental health services. Although in the Foster et al (2005) study, school psychologists reported spending 48% of their time providing mental health services, other research regarding the roles and function of school psychologist indicated a much smaller amount of time was spent in this activity. Additionally, to the best of this author's knowledge research regarding the school psychologist's role in providing mental health services and the impact of RTI and Non-categorical classification on such services has not been investigated.

This study will examine the provision of mental health services, amount of time school psychologists spend providing evidence based mental health services to children with both internalizing and externalizing disorders. In addition this study will focus on school psychologists' perceptions of factors limiting the provision of mental health services. This study will additionally examine school psychologists' perceptions of how

RTI and Non-categorical classifications have impacted their ability to deliver mental health services.

## CHAPTER III

### METHODOLOGY

#### Subjects

The participants (N=118) in this study were school psychologists who are members of the National Association of School Psychologists (NASP) listserv and are currently working in a school setting. One thousand individual were recruited, for this study representing each of the five regions of the U.S (East, Midwest, South, MidAtlantic, and West). However, 167 School psychologists responded to the survey. Of 167, 18 did not currently practice in schools and 31 participants did not complete the survey leaving 118 participants and a return rate of 11.8%. Moreover, participants were permitted to skip questions they did not want to answer resulting in a different N for some questions. (Responses to questions with a N lower than 118 are documented in text and tables.) The age of participants was 20 to 60+ years. The participants were 71.2% female , 26.3% male and 89% were Caucasian, 5.8% African-American, 3.39% Hispanic, and 1.69% Asian. Relative to highest degree obtained, the majority of participants (59.3%) held an Educational Specialist degree, followed by Doctorate (18.6%), and Master's (22.1%) The gender, age range, ethnicity, years of experience, of employment, and highest degree obtained are presented in Table 1. Demographic information is similar to a recent study conducted by Curtis et al (2008) evaluating demographic information of NASP members. This study found that more females (77%) than males (23%) are currently practicing in school settings. The mean age of psychologists was 45.2 years, and they had a mean of 14 years of experience. The majority of school psychologists were 92.6% Caucasian, 1.9% African American, 3.0% Hispanic, and 0.9% Asian/Pacific Islander, and 0.8% other. With regards to highest degree obtained Curtis and colleagues found that 39.9% held a Specialist degree, 35.7% a Master's and 24.4% held a Doctorate. State of employment is presented in Table 2.

Due to low numbers of participants in various demographic groups, the following variables were collapsed for data analysis: Age was collapsed into three ranges (20-30yrs, 31-45 yrs, and 46-60+yrs) and Years of experiences collapsed into three categories (1-5 yrs, 6-15 yrs, and 16-30+yrs).



Table 1. Characteristics of Participating School Psychologists

Variable	Frequency	Percentage
<u>Sex (N=115)</u>		
Male	31	27%
Female	84	73%
<u>Age (N=116)</u>		
20-30 yrs	33	28.0%
31-45 yrs	42	35.6%
46-60+ yrs	41	34.7%
<u>Ethnicity (N=118)</u>		
African American	5	4.24%
Asian	1	0.85%
Hispanic/Latino	4	3.39%
Caucasian	105	89.98%
Bi-racial	3	2.45%
<u>Years of Experience (N=110)</u>		
1-5 yrs	46	39.0%
6-15 yrs	33	28.0%
16-30+yrs	31	26.3%
<u>Highest Degree Obtained (N=118)</u>		
Doctorate	22	18.6%
Specialist	70	59.3%
Master's	26	22.1%
<u>Licensure (may be licensed in more than one category)</u>		
Private Practice	13	11.0%
Department of Public Health	1	0.8%
State Education Licensing Board	104	88.1%
State Psychology Licensing Board	11	9.3%
National Certified School Psychologist	45	38.1%
<u>Grade Level Served (may work in more than one setting)</u>		
Birth to Three	13	11.0%
Preschool	56	49.2%
Elementary	98	83.1%
Middle School	75	63.6%
High School	63	53.4%
<u>RTI (N=118)</u>		
Yes	100	84.7%
No	18	15.3%
<u>Non-categorical (N=117)</u>		
Yes	37	31.62%
No	80	68.38%

Table 2. Participants By State of Employment

Variable	Participants (N=117) Frequency	Percentage
<u>State of Employment</u>		
Alabama	1	0.8%
Arizona	2	1.7%
California	3	2.5%
Colorado	1	0.8%
Connecticut	2	1.7%
Georgia	2	1.7%
Idaho	1	0.8%
Illinois	7	5.9%
Iowa	34	28.8%
Louisiana	1	0.8%
Maine	1	0.8%
Maryland	4	3.4%
Massachusetts	2	1.7%
Michigan	3	2.5%
Minnesota	2	1.7%
Missouri	2	1.7%
Nebraska	3	2.5%
New Hampshire	4	3.4%
New Jersey	3	2.5%
New York	5	4.2%
North Carolina	4	3.4%
Ohio	3	2.5%
Pennsylvania	4	3.4%
South Carolina	1	0.8%
Tennessee	8	6.8%
Utah	3	2.5%
Vermont	2	1.7%
Virginia	3	2.5%
Washington	3	2.5%
Wisconsin	3	2.5%

### Instruments

The Mental Health Practices of School Psychologists Survey (MHSPSPS) was developed for this study based on a review of other surveys investigating the roles and functions of school psychologists (Yates, 2003 and Prout, Alexander, Fletcher, Memis, & Miller., 1993) and feedback from two pilot studies. Survey items consist of close ended

questions to obtain specific information regarding the mental health practices of school psychologists.

#### Pilot Study and Revisions

A pilot study was conducted with 10 practicing school psychologists in order to address clarity of the survey, the time spent to complete the survey, and overall quality of the survey. Based on this information revisions were made and the revised survey was completed and reviewed by 10 additional school psychologists. This information was used to construct the final version of the survey. Based on the pilot and revised survey study the MHPSPS was modified to include a question regarding professional development training in the provision of mental health services. In addition the survey was modified to include a category for individuals who have only practiced school psychology under Non-categorical classification and/or RTI. This researcher and her thesis supervisor have reviewed several drafts of this survey and made revisions as needed.

The MHPSPS is divided into three sections. The first section of the survey addresses training in mental health (number of graduate semester hours and professional development hours in the areas of mental health diagnosis, mental health interventions, and behavioral interventions). This section contains 15 questions. The second section of the Survey examines mental health practices of school psychologists (consultation, interventions, individual and group counseling) and contains 30 questions. The final section of the survey consists of 10 questions addressing demographic information (age, sex, ethnicity, years of experience, degree earned, licensure, population served, and state of employment) and the use of RTI and Non-categorical classification. In general, responses to survey questions consisted of simple yes or no, Likert scale, and reporting percentage of time (See Appendix A).

### Procedures

The University of Iowa Institutional Review Board approved this study prior to distribution of emails inviting participants to participate. Given that the study utilized an on-line survey participants were provided general information regarding the study and possible risks in the initial invitation to participate in the study. Participants were made aware that by clicking on the link to the survey they were consenting to participate (See Appendix B). After the duration of one week participants were sent a follow-up invitation. Follow-ups were sent weekly for four weeks (See Appendix B). The purpose of additional follow-up emails was to increase response rate as only 67 surveys were completed during the first week of data collection. After five weeks of data collection 167 individuals responded on-line, 37 of the surveys were omitted due to incomplete data. Of the remaining 130 completed surveys, 12 were completed by individual who were not currently working in a school setting. One hundred eighteen completed surveys met the criteria of currently working in a school setting and were used for data analyses.

### Research Questions and Data Analysis

This was an exploratory study examining the mental health practices of school psychologists.

#### **Research Question # 1-Satisfaction**

Are school psychologists currently satisfied with their role and function? (As measured by section II, question 1 of the survey. Descriptive statistics were used to address this question. To further explain results independent sample t-test and one-way ANOVA's were completed. Independent variables examined for this analysis included, use of RTI, Non-categorical classification, and provision of mental health services. These variables were selected based on prior research and researcher interest in the areas of RTI and Non-categorical classification. The dependent variable was level of satisfaction. For data analysis, scoring of level of satisfaction were reversed, higher scores indicated higher levels of satisfaction.

**Research Question #2 – Mental Health Experts**

Do school psychologists perceive themselves as mental health experts? (As measured by section II, question 2 of the survey. Descriptive statistics were used to address this question. To further explain results independent sample t-test, and one-way ANOVA's were completed. Independent variables analyzed included use of RTI, Use of Non-categorical, level of education and training. Variables were selected based on result of previous studies and research interest in RTI and Non-categorical classification. For data analysis, scoring of agreement to being a mental health expert were reversed, higher scores indicated higher levels of agreement.

**Research Question # 3- Mental Health Role**

Do school psychologists perceive providing mental health services as part of their role? (As measured by section II, question 3 of the survey. Descriptive statistics were used to address this question. Descriptive statistics were used to address this question. To further explain results independent sample t-test, and one-way ANOVA's were completed. Independent variables analyzed included were RTI, use of Non-categorical, and training. These variables were selected based on results of prior research and researcher interest in RTI and Non-categorical classification. The dependant variable was if participants endorsed the survey question regarding role to provide mental health services. For data analysis, scoring of agreement of role were reversed, higher scores indicated higher levels of agreement.

**Research Question # 4- Mental Health Services**

Do school psychologists report providing mental health services to students? (As measured by section II, questions 8-29. Descriptive statistics were used to address this question).

### **Research Question # 5 – Mental Health Services, Demographic Information and Training**

What is the overall relationship between demographic information (e.g., sex, age, ethnicity, degree, licensure, age range of students, state of employment), training, and the provision of mental health services? (As measured by section III, questions 1-15, section II, question 8-29; and section I, questions 1-10).

Descriptive statistics were used to examine the question. To further explain results independent sample t-tests, and one-way ANOVA's were completed to address this question. Independent variables included gender, RTI, Non-categorical classification, and training. These variables were included based on prior research and researcher interest in RTI and Non-categorical classification. The dependent variable was if the participant provided mental health services or not.

## Chapter IV

### RESULTS

The results of this study will be presented in the order of the research questions. Additional analyses were conducted to further explain the results. This was an exploratory study designed to provide descriptive information regarding the mental health practices of school psychologists in school settings. Given the exploratory nature of the study a number of analyses were completed which increases the risk of Type I error.

#### Analysis for Research Question #1

The first research question was: Are school psychologists currently satisfied with their role and function?

To examine this question three types of analyses were completed. The first analysis was descriptive statistics to provide frequencies of various responses of all participants. Participants were asked to indicate how satisfied they were with their current role and function on a 4 point scale (1= Very Dissatisfied to 4=Very Satisfied).

Overall, 24.4% (n=25) were very satisfied, 62.4% (n=73) of school psychologists reported that they were satisfied with their current role and function, 14.5% (n=17) were dissatisfied, and 1.7% (n=2) was very dissatisfied. Descriptive statistics were completed to examine mean levels of satisfaction within various demographic variables and provision of mental health services. Results summarized in Table 3.

The second analyses completed were independent sample t-tests to determine if there were differences in the mean level of satisfaction of participants currently working under a RTI model, as well as those who currently use Non-categorical classification. There was no significant difference in level of satisfaction in those currently implementing RTI and those who were not ( $t(115) = .630, p = .530$ ). In addition, no significant differences were found in regards to level of satisfaction and use of Non-categorical classification ( $t(114) = -1.211, p = .228$ ).

The third analysis completed was an independent samples t-test to determine if there were any differences in the mean levels of satisfaction of participants who currently provided mental health services and those who did not. There were no significant differences ( $t(115) = .708; p = .480$ ).

The fourth analysis was completed to determine if levels of satisfaction differed between various level of education (e.g., Doctorate, Specialist, Master's). A one-way ANOVA was used to compare level of satisfaction and level of education. There were no significant differences ( $F(3,113) = .420, p = .739$ ). See Table 3 for summary of results



Table 3. Means and Standard Deviations for Level of Satisfaction by Demographics

	M	SD
<u>Sex</u>		
Male	2.967	0.657
Female	3.048	0.660
<u>Years of Experience</u>		
1-5 yrs	3.088	0.556
6-15 yrs	3.151	0.507
16-30+ yrs	3.871	0.921
<u>Highest Degree Obtained</u>		
Doctorate	2.909	0.868
Specialist	3.043	0.605
Master's	3.115	0.588
<u>Licensure</u>		
Private Practice	3.076	0.759
Department of Public Health	3.000	0
State Education Board	3.029	0.633
State Psychology Board	2.909	0.700
NCSP	3.111	0.611
<u>Grade level work with</u>		
Birth to three	3.000	0.707
Preschool	3.086	0.629
Elementary	3.041	0.675
Middle School/Junior High	2.960	0.624
High School	2.836	0.668
<u>RTI</u>		
Yes	3.050	0.676
No	2.944	0.539
<u>Non-categorical</u>		
Yes	2.918	0.640
No	3.075	0.655
<u>Provide Mental Health services</u>		
Yes	3.065	0.573
No	2.075	0.790
<u>Provide individual/group counseling</u>		
Yes	3.083	0.590
No	2.982	0.719
<u>Provide Consultation</u>		
Yes	3.036	0.662
No	3.000	0.577

Note: Score of 1=Very Dissatisfied, 2=Dissatisfied, 3=Satisfied, and 4= Very Satisfied.

### Analysis of Research Question #2

The second research question was: Do school psychologists perceive themselves as mental health experts? Several analyses were completed to answer this question. The first analysis used descriptive statistics to provide frequencies and cross tabs analysis of various responses of all participants (n=117). Participants were asked to indicate the extent to which they agree with the following statement: I am a mental health expert (a mental health expert is a person who has a high degree of skill in or knowledge of mental health disorders, treatment, and interventions); on a four point Likert scale (1=Strongly Disagree, 4=Strongly Agree). Overall, 65.8% (n=77) of participants reported that they agreed or strongly agreed that they were mental health experts. Descriptive statistics were completed to examine mean levels of satisfaction within various demographic variables and perception of being a mental health expert. The results are summarized in Table 4.

The second type of analysis conducted to address this research question was the calculation of an independent sample t-test to determine if there were differences between the mean perceptions of school psychologists who currently use RTI and those not using RTI. There was no significant difference between the two groups ( $t(115)=-1.228$ ,  $p=.222$ ). An independent sample t-test was also conducted to examine differences in perceptions of being a mental health expert and use of Non-categorical classification. There were no significant difference ( $t(114)=-1.702$ ,  $p=.092$ ).

The third analysis completed to examine this research question was a one-way ANOVA to examine the difference between self-identification as mental health experts and level of education (e.g., Doctorate, Specialist, and Master's). Results were statistically significant ( $F(2,114)=5.004$ ,  $p=.008$ ) and are presented in Table 4. To further examine this, a Tukey HSD Post Hoc analysis was completed. Results indicate that individuals with Master's degrees reported higher levels of agreement than individuals with Specialist Degrees ( $p=0.029$ ). Moreover, participants with Doctorate

degrees reported higher levels of agreement than participants with Specialist Degrees ( $p=0.044$ ).

A one-way analysis of variance was conducted to evaluate the differences between the extent to which individuals agreed they were mental health experts and the number of graduate hours they completed in diagnosis of mental illness ( $F(2,112)=5.666$ ,  $p<.05$ ), individual counseling ( $F(2,114) = 4.540$ ,  $p=0.013$ ), and group counseling. A Tukey HSD Post Hoc test was subsequently conducted to obtain a pair-wise comparison. Participants with 4-9 graduate hours in diagnosis of mental illness reported higher levels of agreement than participants with 0-3 graduate hours ( $p=.003$ ). Participants who completed 4-9 semester hours reported higher level of agreement to being a mental health expert than those who completed 0-3 graduate semester hours ( $p=.003$ ). ANOVA results for group counseling were not significant ( $F(2,112)=2.287$ ,  $p=.106$ ). The results are summarized in Table 4.

The final analyses conducted to address this question was a one-way ANOVA to evaluate differences in means between the extent to which individuals agreed they were mental health experts and the number of Continuing Education Credits/Professional Development hours completed in diagnosis of mental illness, individual counseling and group counseling. Since the results were statistically significant ( $F(2,112)=10.271$ ,  $p<.01$ ), a Tukey HSD was conducted to provide a pair-wise comparison. Participants who completed 10-16+ CEC/PD hours had higher agreement to being a mental health expert than participants who completed 0-3 CEC/PD hours in diagnosis of mental illness ( $p<.05$ ). Moreover, significant results were found for number of CEC/PD hours in individual counseling ( $F(2,112)=4.469$ ,  $p<.001$ ). A Tukey Post Hoc analysis was completed to make pair-wise comparisons. Individuals with 10-16+ hours in individual counseling reported higher levels of agreement than individuals with 0-3 hours ( $p<.05$ ) and those with 4-9 hours ( $p=.037$ ). Participants who completed 4-9 hours reported in individual counseling higher levels of agreement than participants that completed 0-3

CEC/PD hours ( $F(2,112)=7.697, p<.001$ ). Significant results were also found for number of CEC/PD hours completed in group counseling and agreement to being a mental health expert ( $F(2,112)=7.697, p<.001$ ). Tukey HSD Post Hoc test was completed to make pairwise comparisons. Participants completing 4-9 hours had higher level of agreement than those who completed 0-3 hours ( $p=.006$ ), in addition, participants who completed 10-16+ CEC/PD hours in group counseling reported higher levels of agreement than those with 0-3 hours ( $p=.011$ ). The results are summarized in Table 4.

Table 4 . Means and Standard Deviations for Level of Agreement of Mental Health Expert by Demographics

	M	SD
<u>Sex</u>		
Male	2.900	0.607
Female	2.716	0.794
<u>Age</u>		
20-30 yrs	2.593	0.614
31-45 yrs	2.657	0.745
46-60+ yrs	3.000	0.806
<u>Years of Experience</u>		
1-5yrs	2.606	0.609
6-15 yrs	2.609	0.770
16-30+	3.000	0.806
<u>Highest Degree Obtained</u>		
Doctorate	3.000**a	0.755
Specialist	2.587**b	0.710
Master's	3.000**a	0.748
<u>Licensure</u>		
Private Practice	3.076	0.954
Department of Public Health	4.000	0
State Education Board	2.699	0.764
State Psychology Board	3.090	0.943
NCSP	2.755	0.743
<u>Grade level work with</u>		
Birth to three	2.461	0.877
Preschool	2.620	0.745
Elementary	2.701	0.766
Middle School/Junior High	2.720	0.688
High School	2.650	0.786
<u>RTI</u>		
Yes	2.731	0.782
No	2.944	0.539
<u>Non-categorical</u>		
Yes	2.558	0.823
No	2.855	0.706
<u>Graduate hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.479*b	0.683
4-9 hrs	3.020*a	0.742
10-16+hrs	2.846	0.688
<u>Graduate hours in Individual Counseling</u>		
0-3 hrs	2.488*b	0.726
4-9 hrs	2.978*a	0.774
10-16+hrs	2.900	0.552

Table 4. Continued

<u>Graduate hours in Group Counseling</u>		
0-3 hrs	2.640	0.784
4-9 hrs	2.942	0.764
10-16+hrs	2.9167	0.288
<u>CEC/PD hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.490**a	0.663
4-9 hrs	2.833	0.637
10-16+hrs	3.187**b	0.780
<u>CEC/PD hours in Individual Counseling</u>		
0-3 hrs	2.569**b	0.651
4-9 hrs	2.740**b	0.764
10-16+hrs	3.230**a	0.764
<u>CEC/PD hours in Group Counseling</u>		
0-3 hrs	2.577**b	0.668
4-9 hrs	3.087**a	0.733
10-16+hrs	3.117**a	0.857

Note: Score of 1=Strongly Disagree, 2=Disagree, 3=Agree, and 4= Strongly Agree

\*\* Significant  $p < .001$

\*Significant,  $p < .05$

a, b= Post Hoc test, 'a' significantly differed from 'b'

### Analysis for Research Question #3

The Third research question was: Do school psychologists perceive providing mental health services as part of their role?

Participants (n=118) were asked the extent to which they agreed with the following statement: It is my role to provide mental health services to students. This was measured on a four point Likert scale. Of the 117 who responded to this question, 75.2% agreed to strongly agreed that it was their role to provide mental health services. Results are summarized in Table 5.

To further examine this question independent groups t-tests were used to determine if the level of agreement was the same for participants who implemented RTI and participants who were not currently using RTI. There were no statistically significant

differences ( $t(115)=0.916, p=.361$ ). An independent sample T-test was additionally completed to determine if level of agreement was the same for participants currently using Non-categorical classification and those who were not currently using Non-categorical classification. The results indicated that there were no statistically significant differences ( $t(114)=-1.932, p=.056$ ).

The third analysis completed to address this question was a one-way ANOVA with participant's rating of agreement that providing mental health services was a part of their role as the dependent variable and highest degree obtained (e.g., Doctorate, Specialist, Master's) as the grouping variable. There was no significant effect for highest degree obtained ( $F(2,114)=2.262, p=.077$ ).

The remaining analyses were one-way ANOVAs to determine if participant's ratings of agreement differed based on training. First a one-way ANOVA was completed for level of agreement and number of graduate hours completed in diagnosis of mental illness. Results were significant ( $F(2,112)=4.095, p=.019$ ). A Tukey HSD Post Hoc analysis was completed to examine pair-wise comparisons. Results indicated that participants who completed 4-9 graduate hours in mental health diagnosis reported higher levels of agreement than participants with 0-3 graduate hours ( $p=.026$ ). Second, a One-way ANOVA was completed for level of agreement and number of graduate hours completed in individual counseling. Results were significant ( $F(2,112)=4.374, p=.015$ ). As with previous analyses, a Tukey HSD was completed to provide pair-wise comparisons. Participants who completed 4-9 graduate hours in individual counseling reported higher agreement than those with 0-3 graduate hours ( $p=.014$ ). A one-way ANOVA was additionally completed to examine level of agreement and continuing education credits/professional development in mental illness they completed. The results were significant ( $F(2,112)=6.466, p=.004$ ). A Tukey HSD Post Hoc analysis was completed to provide a pair-wise comparison. Participants who completed 10-16+ CEC/PD hours in diagnosis of mental illness reported higher levels of agreement than

participants who completed 0-3CEC/PD hours ( $p=.004$ ). Lastly, a one-way ANOVA was completed to examine level of agreement and completion of CEC/PD hours in individual counseling. The results were significant ( $F(1,112)= 3.905, p=.023$ ). A Tukey HSD Post Hoc analysis was completed to provide pair-wise comparisons. The results indicated that participants who completed 10-16+ CEC/PD hours reported higher levels of agreement than participants who completed 0-3 CEC/PD hours in individual counseling ( $p=0.17$ ). The results are summarized in Table 5.

Additional descriptive statistics were completed to examine the extent to which participants agreed it was their role to provide individual counseling to students with mental health problems or mental illness ( $n=117$ ). Overall, 63.3% ( $n=74$ ) strongly agreed or agreed that it is their role to provide individual counseling. Means and Standard deviations of results by demographic information and training are reported in Table. 6. In reference to group counseling the majority of participants (61.5%,  $n=72$ ) agreed that it is their role to provide group counseling to students with mental health problems or illness. The results are reported in Table 7.



Table 5 .Means and Standard Deviations for Level of Agreement to Role of Provide Mental Health

		Services	
		M	SD
<u>Sex</u>			
	Male	3.162	0.637
	Female	2.855	0.813
<u>Age</u>			
	20-30 yrs	2.787	0.857
	31-45 yrs	2.926	0.685
	46-60+ yrs	3.048	0.804
<u>Years of Experience</u>			
	1-5 yrs	2.787	0.857
	6-10 yrs	2.926	0.685
	16-30+yrs	3.048	0.804
<u>Highest Degree Obtained</u>			
	Doctorate	3.090	0.610
	Specialist	2.797	0.814
	Master's	3.153	0.731
<u>Licensure</u>			
	Private Practice	3.307	0.047
	Department of Public Health	3.000	0
	State Education Board	2.902	0.773
	State Psychology Board	3.272	1.009
	NCSP	3.066	0.809
<u>Grade level work with</u>			
	Birth to three	2.384	0.960
	Preschool	2.793	0.811
	Elementary	2.866	0.798
	Middle School/Junior High	2.946	0.769
	High School	2.857	0.820
<u>RTI</u>			
	Yes	2.959	0.781
	No	2.777	0.732
<u>Non-categorical</u>			
	Yes	2.729	0.769
	No	3.025	0.767
<u>Graduate hours in Diagnosis of Mental Illness</u>			
	0-3 hrs	2.700*b	0.762
	4-9 hrs	3.096*a	0.747
	10-16+hrs	3.153	0.800
<u>Graduate hours in Individual Counseling</u>			
	0-3 hrs	2.680*b	0.783

Table 5. Continued

4-9 hrs	3.125*a	0.761
10-16+hrs	3.050	0.686
<u>Graduate hours in Group Counseling</u>		
0-3 hrs	2.776	0.831
4-9 hrs	3.166	0.577
<u>CEC/PD hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.706*b	0.794
4-9 hrs	3.040	0.734
10-16+hrs	3.250*a	0.672
<u>CEC/PD hours in Individual Counseling</u>		
0-3 hrs	2.774*b	0.777
4-9 hrs	2.963	0.758
10-16+hrs	3.269*a	0.724
<u>CEC/PD hours in Group Counseling</u>		
0-3 hrs	2.800	0.771
4-9 hrs	3.087	0.668
10-16+hrs	3.294	0.848

Note: Score of 1=Strongly Disagree, 2=Disagree, 3=Agree, and 4= Strongly Agree

\*Significant,  $p < .05$

a, b= Post Hoc test, 'a' group significantly differed from 'b'

Table 6. Means and Standard Deviations for Level of Agreement of Role to Provide Individual Counseling

	M	SD
<u>Sex</u>		
Male	2.806	0.703
Female	2.747	0.853
<u>Age</u>		
20-30 yrs	2.697	0.883
31-45 yrs	2.647	0.798
46-60+ yrs	2.902	0.800
<u>Years of Experience</u>		
1-5 yrs	2.697	0.883
6-15yrs	2.634	0.798
16-30+ yrs	2.902	0.800
<u>Highest Degree Obtained</u>		
Doctorate	2.863	0.639
Specialist	2.623	0.859
Master's	3.000	0.800
<u>Licensure</u>		
Private Practice	3.153	0.987
Department of Public Health	3.000	0
State Education Board	2.718	0.821
State Psychology Board	3.181	0.981
NCSP	2.733	0.836
<u>Grade level work with</u>		
Birth to three	2.230	1.012
Preschool	2.603	0.857
Elementary	2.670	0.825
Middle School/Junior High	2.813	0.800
High School	2.777	0.850
<u>RTI</u>		
Yes	2.787	0.824
No	2.555	0.783
<u>Non-categorical</u>		
Yes	2.594	0.797
No	2.810	0.817
<u>Graduate hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.640	0.802
4-9 hrs	2.865	0.840
10-16+hrs	2.769	0.832
<u>Graduate hours in Individual Counseling</u>		
0-3 hrs	2.617	0.822
4-9 hrs	2.937	0.835
10-16+hrs	2.650	0.745
<u>Graduate hours in Group Counseling</u>		
0-3 hrs	2.671	0.877
4-9 hrs	2.861	0.798

Table 6 Continued.

10-16+hrs	2.916	0.514
<u>CEC/PD hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.603	0.815
4-9 hrs	2.960	0.840
10-16+hrs	2.875	0.793
<u>CEC/PD hours in Individual Counseling</u>		
0-3 hrs	2.564	0.841
4-9 hrs	3.037	0.706
10-16+hrs	2.923	0.796
<u>CEC/PD hours in Group Counseling</u>		
0-3 hrs	2.613	0.836
4-9 hrs	3.087	0.668
10-16+hrs	2.941	0.826

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Note: Note: Score of 1=Strongly Disagree, 2=Disagree, 3=Agree, and 4= Strongly Agree

Table 7 . Means and Standard Deviations for Level of Agreement of Role to Provide Group Counseling

	M	SD
<u>Sex</u>		
Male	2.612	0.715
Female	2.734	0.856
46-60+ yrs	2.804	0.813
<u>Years of Experience</u>		
1-5 yrs	2.636	0.859
6-15 yrs	2.609	0.802
16-30+yrs	2.804	0.813
<u>Highest Degree Obtained</u>		
Doctorate	2.636	0.657
Specialist	2.594	0.828
Master's	3.000	0.848
<u>Licensure</u>		
Private Practice	3.153	0.898
Department of Public Health	3.000	0
State Education Board	2.660	0.823
State Psychology Board	3.090	0.943
NCSP	2.666	0.797
<u>Grade level work with</u>		
Birth to three	2.153	0.898
Preschool	2.586	0.838
Elementary	2.618	0.834
Middle School/Junior High	2.813	0.800
High School	2.682	0.819
<u>RTI</u>		
Yes	2.727	0.830
No	2.500	0.707
<u>Non-categorical</u>		
Yes	2.594	0.797
No	2.734	0.827
<u>Graduate hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.560	0.860
4-9 hrs	2.826	0.759
10-16+hrs	2.692	0.854
<u>Graduate hours in Individual Counseling</u>		
0-3 hrs	2.595	0.851
4-9 hrs	2.833	0.833
10-16+hrs	2.600	0.680
<u>Graduate hours in Group Counseling</u>		
0-3 hrs	2.641	0.882
4-9 hrs	2.750	0.806
10-16+hrs	2.833	0.389
<u>CEC/PD hours in Diagnosis of Mental Illness</u>		
0-3 hrs	2.500	0.842
4-9 hrs	2.960	0.734
10-16+hrs	2.843	0.766
<u>CEC/PD hours in Individual Counseling</u>		
0-3 hrs	2.500	0.844
4-9 hrs	2.963	0.758
10-16+hrs	2.884	0.711

Table 7 Continued.

CEC/PD hours in Group Counseling

0-3 hrs	2.546	0.842
4-9 hrs	3.087	0.596
10-16+hrs	2.823	0.808

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Note: Score of 1=Strongly Disagree, 2=Disagree, 3=Agree, and 4= Strongly Agree

Analysis for Research Question #4

The fourth research question was: Do school psychologists report providing mental health services to students? Two types of analyses were computed to answer this question. The first analysis consisted of descriptive statistics to indicate the frequency of which participants (n=118) reported that they provided mental health services. The majority of participants (65.3%, n=77) reported that they currently provided mental health services. Of the participants who indicated that they currently provided mental health services (n=77), 50.8 % (n=60) reported that they provided individual or group counseling. The results are summarized in Table 8.

Table 8. Provision of Mental Health Services

Variable	n (118)	Percentage
Provide MH Services		
Yes	77	65.3%
No	41	34.7%
Provide individual/Group Counseling		
Yes	60	50.8%
No	58	49.2%
Provide Consultation		
Yes	111	94.1%
No	7	5.9%

Participants were additionally asked what percentage of time they provided mental health services, consultation, and individual/group counseling each week. Descriptive statistics were used to evaluate this question. The results are summarized in Tables 9,10, and 11.

Table 9. Provision of Evidence Based Mental Health Services: Percentage of Time per Week

	None	1-10%	10-20%	20-30%	30-40%	40-50%	50+%
Student (n=107)	3.7% n=4	21.5% n=23	24.3% n=26	21.5% n=23	13.1% n=14	6.5% n=7	9.3% n=10
<u>Students with:</u>							
MH Problems or illness in Sped (n=107)	1.9% n=2	44.9% n=48	25.2% n=27	11.2% n=12	8.4% n=9	4.7% n=5	3.7% n=4
MH Problems or illness in Gen Ed (n=107)	13.1% n=14	48.6% n=52	25.2% n=27	5.6% n=6	3.7% n=4	3.8% n=3	0.9% n=1
Externalizing Disorders (n=107)	1.9% n=2	37.4% n=40	29% n=31	11.2% n=12	8.4% n=9	6.5% n=7	5.6% n=6
Internalizing Disorders (n=105)	3.8% n=4	57.1% n=60	21% n=22	8.6% n=9	4.8% n=5	1.9% n=2	2.9% n=3

Table 10. Provision of Consultation Services: Percentage of Time per Week

	None	1-10%	10-20%	20-30%	30-40%	40-50%	50+%
Student (n=58)	3.4% n=2	51.7% n=30	24.1% n=14	10.3% n=6	5.2% n=3	3.4% n=2	1.7% n=1
<u>Students with:</u>							
MH Problems (n=57)	5.3% n=1	59.6% n=39	24.6% n=18	5.3% n=5	3.5% n=1	0% n=0	1.8% n=1
MH Illness (n=56)	19.6% n=11	55.4% n=31	14.3% n=8	7.1% n=4	1.8% n=1	0% n=0	1.8% n=1
Externalizing Disorders (n=56)	8.9% n=5	57.1% n=32	21.4% n=12	3.6% n=2	5.4% n=3	1.8% n=1	1.8% n=1
Internalizing Disorders (n=54)	7.4% n=4	66.7% n=36	11.1% n=6	7.4% n=4	5.6% n=3	0% n=0	1.9% n=1



Table 11. Provision of Individual/Group Counseling: Percentage of Time per Week

	None	1-10%	10-20%	20-30%	30-40%	40-50%	50+%
Student (n=72)	1.4% n=1	48.6% n=35	25% n=18	8.3% n=6	2.8% n=2	5.6% n=4	8.3% n=8
<u>Students with:</u>							
MH Problems (n=70)	1.4% n=1	55.7% n=39	25.7% n=18	7.1% n=5	1.4% n=1	1.4% n=1	7.1% n=5
MH Illness (n=69)	4.3% n=3	68.1% n=47	14.5% n=10	2.9% n=2	1.4% n=1	2.9% n=2	5.8% n=4
Special Ed (n=71)	2.8% n=2	43.7% n=31	28.2% n=20	9.9% n=7	4.2% n=3	4.2% n=3	7.0% n=5
General Ed (n=72)	23.6% n=17	56.9% n=41	9.7% n=7	6.9% n=5	1.4% n=1	0% n=0	1.4% n=1
Externalizing Disorders (n=70)	1.4% n=1	57.1% n=40	24.3% n=17	2.9% n=2	4.3% n=3	4.3% n=3	5.7% n=4
Internalizing Disorders (n=71)	2.8% n=2	57.7% n=41	22.5% n=16	7.0% n=5	1.4% n=1	4.2% n=3	4.2% n=3

The second analysis consisted of descriptive statistics to indicate if school psychologists perceived a change in their provision of mental health services, since the reauthorization of IDEA in 2004. Many (37.3%, n=44) participants indicated that they started employment after 2004, 32.3% (n=38) reported no change in provision of mental health services, 16.2% (n=19) reported a decrease in provision of mental health services since 2004, and 13.7% (n=16) reported an increase in provision of mental health services since 2004. The results are summarized in Table 12.

Table 12 . Perceived Changes in Mental Health Provision Since Reauthorization of IDEA 2004

Variable	n =117	Percentage
Since Reauthorization of IDEA in 2004		
The time I spend providing direct MH services has.....		
Increased	16	13.7%
Decreased	19	16.2%
No Change	38	32.5%
Started employment after 2004	44	37.6%
n=116		
Since 2004, the time I spend providing Direct MH services to student with Behavior problems has.....		
Increased	27	23.3%
Decreased	13	11.2%
No Change	33	28.4%
Started employment after 2004	43	37.1%
n=112		
Since 2004, the time I spend providing Direct MH services to student with Internalizing disorders has.....		
Increased	16	14%
Decreased	13	13.2%
No Change	40	35.1%
Started employment after 2004	43	37.7%

Participants were asked to indicate barriers to providing mental health service. Participants were allowed to choose more than one barrier, 71.2% (n=84) indicated limited time. The results are summarized in Table 13. Participants who did not provide mental health services were additionally asked to indicate barriers. Of those who did not

provide mental health services 46.3% indicated employer policies and procedures (See Table 14).

Table 13. School Psychologist's Reported Barriers to Providing Mental Health Services

Variable	n	Percentage
Limited time	84	71.2%
Need additional Training	42	35.6%
Limited resources	38	32.2%
Not supported by employer	37	31.4%
Not supported by school administration	21	17.8%
Special Education Law	16	13.6%
Other	13	11%
Not Limited	11	9.3%
No interest	7	5.9%
Not supported by community	0	0%

Forty-one participants (34.7%) reported that they do not currently provide mental health services. Twenty-six (63.4%) of these participants reported that they would like to provide mental health services. Barriers to providing mental health services are provided in Table 14.

Table 14. Barriers to Providing Mental Health Services as Reported by Participants Not Providing Mental Health Services

Variable	n (41)	Percentage
Employer Polices and Procedure	19	46.3%
Limited Time	10	24.4%
Other	10	24.4%
Special Education Law	2	4.9%

### Analysis for Research Question #5

The fifth research question was: What is the overall relationship between demographic information (e.g., sex, age, ethnicity, degree, licensure, age range of students, state of employment), training, and the provision of mental health services? Several analyses were conducted to answer this question; results are presented by participants' responses to the following question:

#### Mental Health Services

Descriptive statistics were completed for demographic variables and the provision of mental health services. The results are summarized in Table 15 .Of the 115 participants 74.19% (n= 23) of men and 64.28% (n=54) of women indicated that they provided mental health services. An independent samples t-test was conducted to examine if the percentages of providing mental health services were the same across participant gender differed. Results from this test were not significant ( $t(113) = -0.998, p = 0.320$ ).

The next analyses examined provision of mental health services and the implementation of RTI. Descriptive statistics demonstrated that 63% of participants who currently implemented a form of RTI reported providing mental health services, while 77.77% of participants who did not implement a form of RTI reported providing mental health services. A independent t-test was conducted to further examine this question, results were not significant ( $t(116) = 1.290, p = .229$ ).

The next analysis examined the provision of mental health services and use of Non-categorical classification systems. Of participants who worked in areas that used Non-categorical classification, 48.65% provided mental health services. Of participant who did not work in an area currently providing Non-categorical classification 72.25% reported providing mental health services. An independent sample t-test was completed. The results were significant ( $t(116) = 2.680, p = .008$ ), indicating that participants who worked in an area using a Non-categorical classification system provided mental health

services less than individuals who do not work in an area using Non-categorical classification systems. The results are summarized in Table 15.

The final analyses conducted were one-way ANOVAs to examine the provision of mental health services by training. Results for completion of graduate hours in group counseling were significant ( $F(2,112)=4.191, p,<.05$ ). A Tukey HSD was completed to make pair-wise comparisons. Participants who completed 10-16+ hour reported higher levels of agreement than those who reported 0-3 hours ( $p=.018$ ) There were no other significant results for training.

#### Individual and Group Counseling

The following analyses were conducted to examine the relationship between demographic characteristics and provision of individual/group counseling. As indicated previously, 50.8% (n=60) of participants reported that they provided individual/group counseling. Table 16 summarizes the provision of individual/group counseling by demographic variables. No analyses were completed regarding individual/group counseling as the focus of the study was overall provision of mental health services.

#### Consultation

The majority of participants (94.1%) (n=111) reported providing consultation services. Table 17 summarized the provision of consultation by demographic variables. No analyses were completed regarding consultation as the focus of this study was overall provision of mental health services.

Table 15. Provision of Mental Health Services by Demographics and Training

Variable	n	<u>Yes</u> %
<u>Sex:</u>		
Male	23	74.19%
Female	54	64.28%
<u>Age:</u>		
20-30 yrs	21	63.63%
31-45yrs	28	66.66%
46-60+yrs	27	65.85%
<u>Highest degree earned</u>		
Doctorate	17	77.27%
Specialist	41	58.57%
Master's	18	75%
<u>Years of Experience</u>		
1-5 yrs	28	60.86%
6-15 yrs	22	66.66%
16-30+ yrs	21	67.74%
<u>Licensure</u>		
DPH	1	100%
State Psychology Board	10	90.90%
Private Practice	11	84.61%
State Educational Board	67	69.42%
NCSP	32	71.11%
<u>Age of students work with</u>		
Birth to 3	9	69.23%
Preschool	34	58.62%
Elementary	60	62.22%
Middle School	46	61.33%
High School	40	63.49%
<u>RTI</u>		
Yes	66	63%
No	14	77.77%
<u>Non-categorical</u>		
Yes	18*	48.65%
No	58*	72.25%
<u>Graduate hours</u>		
Diagnosis of mental illness		
0-3hrs	27	54%
4-9hrs	37	71.15%
10-16+hrs	10	76.92%
Individual Counseling		
0-3hrs	26	55.32%
4-9hrs	33	47.92%
10-16+hrs	15	75%
Group Counseling		
0-3hrs	36	53.73%
4-9hrs	29	80.55%
10-16+hrs	9	75%
<u>CEC/PD hours</u>		
Diagnosis of mental illness		
0-3hrs	33	56.89%
4-9hrs	17	68%
10-16+hrs	24	75%

Table 15 Continued

Individual Counseling		
0-3hrs	36	58.06%
4-9hrs	18	66.67%
10-16+hrs	20	76.92%
Group Counseling		
0-3hrs	44*b	58.67%
4-9hrs	16	69.56%
10-16+hrs	14*a	82.35%

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\*Statistically Significant  $p < .05$

a, b= Post Hoc test, 'a' significantly differed from 'b'

Table 16. Provision of Individual/Group Counseling by Demographics and Training

Variable	n	Yes	%
<u>Sex:</u>			
Male	20		64.52%
Female	39		46.43%
<u>Age:</u>			
20-30 yrs	16		48.48%
31-45yrs	24		57.14%
46-60+yrs	18		43.90%
<u>Highest degree earned</u>			
Doctorate	12		54.55%
Specialist	35		50%
Master's	13		50%
<u>Years of Experience</u>			
1-5 yrs	25		54.34%
6-15 yrs	16		33%
16-30+ yrs	14		49.16%
<u>Licensure</u>			
DPH	0		0%
State Psychology Board	9		81.82%
Private Practice	10		76.92%
State Educational Board	52		50%
NCSP	29		64.44%
<u>Age of students work with</u>			
Birth to 3	6		46.15%
Preschool	29		50%
Elementary	46		46.94%
Middle School	40		57.14%
High School	36		57.14%
<u>RIT</u>			
Yes	50		50%
No	10		55.55%
<u>Non-categorical</u>			
Yes	13		35.13%
No	46		57.50%
<u>Graduate hours</u>			
Diagnosis of mental illness			
0-3hrs	24		48%
4-9hrs	26		50%
10-16+hrs	9		69.23%
Individual Counseling			
0-3hrs	19		40.42%
4-9hrs	26		54.17%
10-16+hrs	14		70%
Group Counseling			
0-3hrs	25		37.31%
4-9hrs	25		69.44%
10-16+hrs	9		75%
<u>CEC/PD hours</u>			
Diagnosis of mental illness			
0-3hrs	26		44.83%
4-9hrs	17		68%
10-16+hrs	16		50%
Individual Counseling			
0-3hrs	28		45.16%



## Table 16 Continued

4-9hrs	17	62.96%
10-16+hrs	14	53.85%
Group Counseling		
0-3hrs	36	48%
4-9hrs	12	52.17%
10-16+hrs	11	64.71%

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Table 17 . Provision of Consultation Services by Demographics and Training

Variable	<u>Yes</u>	
	n	%
<u>Sex:</u>		
Male	29	93.33%
Female	79	94.05%
<u>Age:</u>		
20-30 yrs	29	87.87%
31-45yrs	40	95.25%
46-60+yrs	40	97.56%
<u>Highest degree earned</u>		
Doctorate	19	86.36%
Specialist	66	94.29%
Master's	26	100%
<u>Years of Experience</u>		
1-5 yrs	40	86.96%
6-15 yrs	31	93.94%
16-30+ yrs	31	100%
<u>Licensure</u>		
DPH	1	100%
State Psychology Board	11	100%
Private Practice	13	100%
State Educational Board	98	94.23%
NCSP	42	93.33%
<u>Age of students work with</u>		
Birth to 3	12	92.31%
Preschool	54	93.10%
Elementary	91	92.86%
Middle School	70	93.33%
High School	59	93.65%
<u>RIT</u>		
Yes	96	96%
No	15	83.33%
<u>Non-categorical</u>		
Yes	33	89.19%
No	77	96.25%
<u>Graduate hours</u>		
Diagnosis of mental illness		
0-3hrs	45	90%
4-9hrs	51	98%
10-16+hrs	12	95.30%
Individual Counseling		
0-3hrs	45	95.74%
4-9hrs	44	91.67%
10-16+hrs	19	95%
Group Counseling		
0-3hrs	63	94.03%
4-9hrs	34	94.44%
10-16+hrs	11	91.67%
<u>CEC/PD hours</u>		
Diagnosis of mental illness		
0-3hrs	52	89.65%
4-9hrs	24	96%
10-16+hrs	32	100%

Table 17 Continued  
Individual Counseling

0-3hrs	56	90.32%
4-9hrs	26	96.28%
10-16+hrs	26	100%
Group Counseling		
0-3hrs	68	90.67%
4-9hrs	23	100%
10-16+hrs	17	100%

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## CHAPTER V

### DISCUSSION

The purpose of this study was to evaluate the mental health practices of school psychologists. In this chapter the results of the study will be summarized and discussed in the context of other relevant studies. First, the finding regarding overall demographic information of school psychologists will be presented. Second, school psychologists' level of satisfaction with their current role and function will be discussed. Third, school psychologists' perceptions of being a mental health expert will be discussed. Fourth, the extent to which school psychologists perceived that it was their role to provide mental health services will be discussed. Fifth, provision of mental health services will be discussed. Sixth, a more in-depth examination of the provision of mental health services is discussed in regards to demographic information. Seventh, the limitations of the study will be reviewed. The chapter will conclude with a summary, a discussion of future directions for research suggested by the results of this study, and implications for training and current practice.

#### Demographic Information

Curtis, Lopez, Batshe, Minch, & Smith (2008) evaluated the demographic characteristics of practicing school psychologists who are members of NASP and reported that more females (77%) than males (23%) are currently practicing. The mean age of psychologists was 45.2 years, and they had a mean of 14 years of experience. Curtis et al (2008) found 92.6% of participants self-identified as Caucasian, 1.9% African American, 3.0% Hispanic, and 0.9% Asian/Pacific Islander, and 0.8% other. Overall, Curtis and colleagues (2008) found that there were more school psychologist who held a Specialist degree (39.9%) than a Master's (35.7%) or a Doctorate (24.4%). Moreover, of the NASP members surveyed 93.8% held certification and 30.6% were licensed. The present study is in line with these findings, although there were a higher percentage of participants from Iowa (28.8%).

The present study found 73% of participants were female, 27% were male. The present study reported age in ranges, 35.6% of participants were 31-45 years old, 34.7% were 46-60+ years old and 28.0% were 20-30 years old. Regarding ethnicity, 89.89% of participants were Caucasian, 4.24% African American, 3.39% Hispanic/Latino, 2.45% bi-racial, and 0.85% Asian/Pacific Islander. The present study found that 39% of participants had 1-5 years of experience, 28% had 6-15 years of experience, and 26.3% had 16-30+ years of experience. Regarding level of education, the majority (59.3%) of participants held Specialist's degrees, 18.6% held Doctorates, and 22.1% held Master's degrees. The present study found a higher percentage of participants with Specialist degrees and slightly fewer with Master's degrees. This overrepresentation may relate to the percentage of participants employed in the state of Iowa, given that there are only two school psychology training programs in Iowa and they offer Specialist and Doctorate degrees.

#### Level of Satisfaction

Hosp and Reschly (2002) found that school psychologists' level of satisfaction with work duties was moderate (Mean score of 3.5 on a 5 point Likert scale, 1=Very dissatisfied to 5=Very Satisfied). In this study, the majority of school psychologists (86.8%) reported that they were satisfied with their current role and function (24.4% very satisfied, 62.4% satisfied). The majority (84.7%) of school psychologist who were satisfied worked in a setting implementing RTI. However, only 28.6% of participants who indicated that they were satisfied with their current role and function worked in a setting currently using Non-categorical classification. In addition, 69.4% (n=68) of satisfied to very satisfied individuals reported that they provided mental health services, 55.7% (n=54) provided individual/group counseling, and 100% (n=98) provided consultation services. Level of satisfaction did not differ statistically regarding RTI, Non-categorical classification, level of education, and provision of mental health services

Of the participants who were dissatisfied or very dissatisfied ( $n = 19$ ), 94.7% indicated that they implemented a type of RTI. In addition, 47.4% ( $n=9$ ) reported using Non-categorical classifications. Moreover, only 42.1% ( $n=8$ ) of individuals who indicated being dissatisfied provided mental health services, 31.6% ( $n=6$ ) provided individual or group counseling, and 63.2% ( $n=12$ ) provide consultation services.

#### Mental Health Expert

The majority (65.8%) of participants reported that they were mental health experts, but only 13.6% strongly agreed to this statement and 51.5% agreed to the statement. There were no significant effects for level of education related to identifying self as a mental health expert. Eighty-three point three percent of individuals with doctorate degrees agreed that they were mental health experts, 81.8% of participants with Master's degrees, and 55% of participants with Specialists degree agreed to strongly agreed that they were mental health experts. There was a main effect for level of education. Participants with Doctorate and Master's degrees reported higher levels of agreement to being a mental health expert than participants with Specialist degrees. This finding is interesting given the majority (59.3%) of school psychologists reported having a Specialist degree. Moreover, participants who completed more Graduate and Continuing Education/Professional Development hours reported higher levels of agreement with being experts. Findings cannot be compared to other studies given that no other study in the literature reviewed evaluated school psychologists' perceptions of being a mental health expert.

#### Perception of Provision of Mental Health Services as Role

The majority (75.2%) of school psychologists reported that they agreed that providing mental health services was their role. Of participants who provided mental health services 61.54% ( $n=72$ ) agreed that it was their role to provide individual counseling and 60.86% ( $n=71$ ) agreed to strongly agreed that it was their role to provide group counseling. However, of those who said it was their role to provide mental health

services only 63.3% actually reported that they provided the services. Moreover, only 66.2% of those who agreed it was their role to provide individual counseling provided individual/group counseling and only 66.2% of participants who agreed it was their role to provide group counseling actually reported that they provided this service.

There was a main effect for training. Participants who completed 4-9 graduate hours in diagnosis of mental illness reported higher levels of agreement than those who completed 0-3 hours. Similarly, participants who completed 4-9 graduate hours in individual counseling reported higher levels of agreement than those who completed 0-3 graduate hours. Moreover, participants who completed 10-16+ CEC/PD hours in diagnosis of mental illness reported higher levels of agreement that it is their role to provide mental health services than those who completed 0-3 CEC/PD hours. Also, participants who completed 10-16+ hours in individual counseling reported higher levels of agreement than those who completed 0-3 CEC/PD hours in individual counseling. No other study reviewed evaluated school psychologist's perception of the provision of mental health services as their role.

It is important to note, that of those who agreed it was their role to provide individual counseling (n=74), 66.2% reported that they provided individual/group counseling. In addition, of those who indicated that it was their role to provide group counseling, 66.6% reported that they actually provided individual/group counseling.

#### Provision of Mental Health Services

Most studies have found that school psychologists provide at least some mental health services (Curtis et al, 1999; Bramlett et al 2002; Yates 2003; and Villarín, 2005; Curtis et al, 2008). The amount of time school psychologist spend providing mental health services has differed across studies. In general, the findings indicated that 18%-28.6% did not provide any type of counseling to students (Curtis et al, 1999 & Curtis et al, 2008), 34%-72% provide individual counseling (Curtis et al, 1999; Yates, 2003; and Curtis et al, 2008) and 31.5%- 53.5% provided some form of group counseling (Curtis et

al, 1999 & Curtis et al, 2008). Previous studies indicated that the percentage of time school psychologist engaged in counseling ranged from 8%-17.5% (Bramlett et al, 2002 & Yates, 2003). Barriers to providing mental health services included: not having enough time, the perception that special education laws and regulations did not allow for counseling, and lack of training (Curtis et al, 1999; Yates, 2003; & Villarin, 2005).

The results of the present study are similar to the above studies. Overall, the majority (65.3%) of school psychologists provided mental health services, 50.8% reported providing individual/group counseling. The majority (50%) of participants spent less than 20% of their time per week providing mental health services to students. Moreover, 72% spent less than 20% of their time providing evidence based mental health services to children and adolescents, 72.4% spent less than 10% of their time providing mental health services to students with mental illness, 46% spent less than 10% of their time providing services to students in Special Education, 80.5% spent less than 10% of their time providing services to student in General Education, 58.5% spent less than 10% of their time providing services to students with externalizing disorders, and 60.5% spent less than 10% of their time providing services to students with internalizing disorders. Regarding individual/ group counseling, 55.1% of participants who provided individual/group counseling spent less than 10% of their time providing it. In addition, 75% spent less than 10% of their time providing individual/group counseling with student with mental illness, 66% spent less than 10% of their time providing services with students with externalizing disorder, and 74.1% spent less than 10% of their time providing services to students with internalizing disorders

It is important to note, that of the 34.7% of participants who did not provide mental health services, the majority (65.3%) reported that they would like to provide mental health services. Barriers to providing services differed from those who provided services and those who did not. Participants who did not provide mental health services reported that employer policies and procedures were a significant barrier (46.3%),



followed by “other” (See Appendix C), and special education law (4.9%). School psychologists who provided mental health services most frequently indicated that limited time (71.2%) was a barrier, followed by need for additional training (35.6%), limited resources (32.2%), and not supported by employer (31.4%).

In addition to barriers, participant perceptions of the provision of mental health services since the reauthorization of IDEA in 2004. Results indicated that in general 13.7% reported an increase, 16.2% a decrease and 32.5% no change. It is important to note that 37% of participants who responded to this question did not start employment until after 2004.

#### Demographic and Training Determinates of the Provision of Mental Health Services

Previous studies found that school psychologists were more likely to provide mental health services if there was a lower psychologist to student ratio, and the school psychologists had higher levels of training (Yates, 2003 & Villarín, 2005). Psychologist to student ratio was not examined in the present study. However, school psychologists with higher levels of training in group counseling during graduate school were more likely to provide mental health services. In addition, school psychologists who did not practice in an area that used Non-categorical classification were more likely to provide mental health services than school psychologists who used Non-categorical classification systems.

In reference to training, participants who completed 10-16+ CEC/PD hours in group counseling reported providing mental health services more frequently than those who completed 0-3 CEC/PD hours in group counseling.

In addition, 88% of the participants indicated that they currently work in an elementary setting. This is important to note, because previous research has indicated that mental health services occur at a higher rate in elementary schools as oppose to middle

and high school. It is possible that overall provision of mental health services may have increased given that such a large percentage of participants work in an elementary setting.

### Limitations

There are several limitations that might reduce the reliability and generalizability of the findings of this study. The most significant limitation is the low response rate (11.8%). Given the low response rate, it is not possible to generalize the results. It is possible that other factors may impact school psychologists' provision of mental health services; however, given the limited sample size of the present study statistically significant differences may not have been detected. Secondly, although this study was similar in terms of demographics to other studies, the state of employment was not representative of the distribution of school psychologists nation-wide. A higher than expected number of participants was from the state of Iowa. This may impact the data, given that the number of school psychologists in Iowa is lower than the number of practicing school psychologists in other states such as California. Therefore the results may not be representative of school psychologists across the nation. Participants from Iowa may have been more likely to participate given that the researcher is from Iowa.

The second limitation relates to methodology. Based on reports of participants regarding the MHPSP survey, questions relating to the percent of time participants spent per week providing services were confusing. Participants indicated that they had a difficult time differentiating between various subgroups (i.e., student with mental illness, vs student with mental health problems). The majority of participants who provided comments regarding the survey indicated that they viewed mental illness on a continuum and could not differentiate between subgroups, even with the descriptions provided. Moreover, although the MHPSP survey did provide a definition of externalizing disorders, which included behavioral disorders, questions were not consistent in terminology used. In addition, although a definition of RTI was provided in the study a participant commented that they used RTI, but not to qualify students for special

education services. It is possible that participants endorsed using RTI, even though it did not fit the criterion set in the definitions. This could impact analysis of data, which resulted in no statistically significant findings regarding RTI. In addition, the survey did not include a state certification option in the licensure section of demographics.

#### Directions for Future Research

Future studies should continue to investigate the relationship between Non-categorical classification and the provision of mental health services. A qualitative study should be completed interviewing school psychologists regarding their mental health practices in areas using Non-categorical classifications. Studies should examine what conditions or variables are present within Non-categorical classification that may affect the provision of mental health services. Although there were no statistically significant differences in the provision of mental health services with participants who worked in areas that implemented RTI this could be explored further. Given that some participants a 28% of participants were from Iowa, a state that uses both RTI and Non-categorical classification, and there was a difference for Non-categorical classification. Moreover, a few participants commented that they used RTI, but not for identification for special education. Therefore this may not be an accurate reflection of mental health services provided in areas using RTI. A qualitative study should be conducted to examine mental health practices within areas that implement RTI, as defined in the survey.

In addition, future studies should examine the mental health practices of other professionals in the schools who may be providing services (e.g., school social workers, and school counselors) and whose roles and functions may have also changed. This would provide a more comprehensive view of the mental health services provided to students in a school setting.

Future studies should also examine perceptions of the provision of mental health services in school by employing agencies of school psychologists. Participants in this

study who did not provide mental health services most frequently indicated that employer policies and procedures was the most significant barrier to providing services.

#### Implications of Study Results for Current Practice and Training

Although the majority of school psychologists reported providing mental health services (65.3%, n=77), the percentage of time that they spent doing this was low. The majority (50%) of school psychologist reported spending less than 10% of their time per week providing mental health services to children and adolescents. Moreover, 55.1% spent less than 10% of their time per week providing individual/group counseling to students. In addition, a larger percentage (59%) of participants held a Specialist degree, than any other degree. This is important to note because participants with a Specialists degree reported providing fewer mental health services than individuals with Master's or Doctorates. If this trend is consistent across the nation, then school psychologists may not be providing mental health services to a large percentage of students. This is unfortunate given that one in five children and adolescents currently have or will experience signs and symptoms of a mental health disorder during any given year, and by age 16 one in three children and adolescents will have one or more diagnosable mental health disorders (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). Research has shown that children who suffer with mental illness and do not receive early identification and intervention are at greater risk for poor outcomes such as poor academic functioning, substance abuse, unemployment, poverty, and suicidal behavior (Fergusson and Woodward, 2002).

The results of this study and previous studies indicate that training in the diagnosis and treatment of mental illness and counseling are determinates of the provision of mental health services by school psychologists. Based on these results graduate training programs and continuing education/professional development training for individuals at all levels (Master's, Specialist, and Doctorate) and stages in their career should provide additional training in evidence based mental health services, including

individual and group counseling, to ensure school psychologists have the tools they need to help students be successful.

In-services training regarding the mental health needs of students, availability of services, and the relationship between academics and mental health should be provided to employing agencies of school psychologists, and other school-based mental health professionals. This may help in addressing the most frequent barrier to providing mental health services noted by participants, employer policies and procedures. This may also address some beliefs regarding the role of schools to provide mental health services. Some participants' comments indicated that they do not believe it is the school's or school psychologist's role to provide mental health services (See Appendix D). Participant's additionally commented that other mental health professionals in the schools were providing mental health services (i.e., school counselors). Some participants noted that the school psychologist's provision of mental health services may cause a conflict with the school counselor. Given, the mental health needs of children and adolescents, it is doubtful that there are too many mental health services offered. An in-service will increase their awareness of the need for mental health services in the schools and hopefully promote change in attitudes regarding the provision of mental health services in school resulting in changes in policies and procedures. This shift may also result in employing agencies modifying the current role of school psychologist to allow for the provision of mental health services as limited time was the most frequently reported barrier by those who reported that they currently provide mental health services. This is important, because research has indicated that the educational setting is the most likely setting for students to receive mental health services (Farmer et al, 2003). If barriers, as identified above, are not addressed, many students may not get the services they need, resulting in negative outcomes.

APPENDIX A

MENTAL HEALTH PRACTICES OF SCHOOL PSYCHOLOGISTS SURVEY

## Mental Health Practices of School Psychologists Survey

**Directions:** Use the definitions below to answer the questions.

**Mental health services:** Designing and implementing interventions (e.g., classroom and direct student counseling) for children and adolescents to assist them in overcoming mental health concerns and increase success in school, home and community.

**Mental health problems:** a child or adolescent displaying the signs or symptoms of a mental illness or disorder. These symptoms are that do not meet the intensity or duration necessary for a diagnosis of a mental health disorder. These signs and symptoms may warrant interventions regarding health promotions, prevention and treatment.

**Mental illness:** a DSM-IV-TR diagnosable mental disorder, which is noted by changes in thinking, mood, or behavior that causes distress and/ or impaired functioning.

**Individual Counseling:** Meeting with students one-on-one to facilitate exploration and resolution of students' thoughts, feelings, behaviors, and personal problems or issues based on individual student needs on a regular basis.

**Consultation:** Working cooperatively with school staff to address the mental health and educational needs of students.

**Group Counseling:** Meeting with a group of students to facilitate exploration and resolution of students' thoughts, feelings, behaviors, and personal problems or issues on a regular basis.

**Externalizing Disorders:** Disruptive behavior disorders in which individuals display overt symptoms (e.g., Oppositional Defiant Disorder, Conduct Disorder, and ADHD).

**Internalizing Disorders:** Emotional disorders in which individuals manifest covert or inward symptoms (e.g., anxiety and depression).

**Evidenced Based:** Interventions or treatments based on the integration of the best available research with clinical expertise in the context of student characteristics, culture, and preferences

**Response to Intervention (RTI):** A Tiered model (School wide to individual levels) which focuses on early identification and interventions for children with learning problems. RTI promotes the use of a problem solving framework to provide interventions to students in the general education setting and can be used to determine eligibility for special education services.

**Non-categorical classification:** providing a general label (such as entitled individuals / eligible individual) to all children who are eligible to receive special education services, regardless of impairment (learning disability, behavior disorder, intellectual disabilities, etc...).

### I. Training in Mental Health

1. Please indicate the number of graduate semester hours you completed in courses focusing on diagnosis of mental health disorders.

None	9-12 hrs
1-3 hrs	12-15 hrs
3-6 hrs	15+ hrs
6-9 hrs	

2. Please indicate the number of graduate semester hours you completed in courses focusing on designing evidence-based mental health interventions for students with behavioral problems.

None	9-12hrs
1-3 hrs	12-15 hrs

3-6 hrs            15+ hrs  
6-9 hrs

3. Please indicate the number of graduate semester hours you completed in courses focusing on implementing evidence-based mental health interventions for students with behavioral problems.

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

4. Please indicate the number of graduate semester hours you completed in courses focusing on designing evidence-based mental health interventions for students with internalizing disorders (i.e., anxiety and depression).

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

5. Please indicate the number of graduate semester hours you completed in courses focusing on implementing evidence-based mental health interventions for students with internalizing disorders (i.e., anxiety and depression).

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

6. Please indicate the number of graduate semester hours you completed in courses focusing on individual counseling for students with mental health disorders.

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

7. Please indicate the number of graduate semester hours you completed in courses focusing on group counseling for students with mental health disorders.

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

8. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on diagnosis of mental health disorders.

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

9. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on designing evidence based mental health interventions for students with behavioral problems.

None            9-12hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs

10. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on implementing evidence-based mental health interventions for students with behavioral problems.

None            9-12 hrs  
1-3 hrs        12-15 hrs  
3-6 hrs        15+ hrs  
6-9 hrs



11. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on designing evidence-based mental health interventions for students with internalizing disorders (i.e., anxiety and depression).

None	9-12 hrs
1-3 hrs	12-15 hrs
3-6 hrs	15+ hrs
6-9 hrs	

12. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on implementing evidence based mental health interventions for students with internalizing disorders (i.e., anxiety and depression).

None	9-12 hrs
1-3 hrs	12-15 hrs
3-6 hrs	15+ hrs
6-9 hrs	

13. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on individual counseling for students with mental health disorders.

None	9-12 hrs
1-3 hrs	12-15 hrs
3-6 hrs	15+ hrs
6-9 hrs	

14. Please indicate the number of Continuing Education or Professional Development hours you completed in courses focusing on group counseling for students with mental health disorders.

None	9-12 hrs
1-3 hrs	12-15 hrs
3-6 hrs	15+ hrs
6-9 hrs	

15. Were courses in mental health intervention for children and adolescents required in your graduate training program?

Yes                      No

## II. Professional Practice

*Please indicate the extent you agree with the below statements not necessarily your current practice.*

Please indicate your responses to the following statements by circling your response based on the following definitions.

1. How satisfied are you with your current role as a school psychologist?

Very Satisfied                      Satisfied                      Dissatisfied                      Very Dissatisfied

Please indicate the extent to you agree with the following statements:

2. I am a mental health expert (a mental health expert is a person who has a high degree of skill in or knowledge of mental health disorders, treatment and interventions)

Strongly Agree                      Agree                      Disagree                      Strongly Disagree

3. It is my role to provide mental health services to students.

Strongly Agree    Agree                      Disagree                      Strongly Disagree

4. It is my role to provide mental health services to students with mental health problems.  
Strongly Agree    Agree                      Disagree                      Strongly Disagree
5. It is my role to provide mental health services to students with mental illness.  
Strongly Agree    Agree                      Disagree                      Strongly Disagree
6. It is my role to provide individual counseling to students with mental health problems or mental illness.  
Strongly Agree    Agree                      Disagree                      Strongly Disagree
7. It is my role to provide group counseling to students with mental health problems or mental illness.  
Strongly Agree    Agree                      Disagree                      Strongly Disagree
8. Do you currently provide mental health services to children and adolescents?  
Yes                                              No
- a. If no, why are you not providing services?  
No time                      Employer policies and procedures    Special Education Law  
Other \_\_\_\_\_
- b. Would you like to provide mental health services?  
Yes                                              No
- If yes:
9. Since the reauthorization of IDEA in 2004 the amount of time I spend providing direct mental health services to students has  
Increased                      Decreased                      No Change                      Started employment after 2004
10. Since the reauthorization of IDEA in 2004 the amount of time I spend providing direct mental health services to students with behavioral problems has  
Increased                      Decreased                      No Change                      Started employment after 2004
11. Since the reauthorization of IDEA in 2004 the amount of time I spend providing direct mental health services to student with internalizing disorders (anxiety and depression) has  
Increased                      Decreased                      No Change                      Started employment after 2004
12. What percentage of time per week do you provide evidenced-based mental health services to children and adolescents?  
None                      15-20%                      35-40%  
1- 5 %                      20-25%                      40-45%  
5-10%                      25-30%                      45-50%  
10-15%                      30-35%                      More than 50%
13. What percentage of time per week do you provide evidence-based mental health services to students with mental health problems?  
None                      15-20%                      35-40%  
1- 5 %                      20-25%                      40-45%  
5-10%                      25-30%                      45-50%  
10-15%                      30-35%                      More than 50%
14. What percentage of time per week do you provide evidence-based mental health services to students with mental illness?  
None                      15-20%                      35-40%  
1- 5 %                      20-25%                      40-45%

5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

15. What percentage of time per week do you provide evidence-based mental health services to students with externalizing disorders or symptoms?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

16. What percentage of time per week do you provide evidence-based mental health services to students with internalizing disorders or symptoms (e.g., depression and anxiety)?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

17. What percentage of time per week do you provide evidence-based mental health services to students receiving special education services?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

18. What percentage of time per week do you provide evidence-based mental health services to students in the general education setting?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

19. Do you currently provide consultation services for students?

Yes                      No

If Yes:

20. What percentage of time per week do you provide consultation services for students?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

20. What percentage of time per week do you provide consultation for students with mental health problems or mental illness in the special education setting?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

21. What percent of time per week do you provide consultation for students with mental health problems or mental illness in the general education setting?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

23. What percent of time per week do you provide consultation services for students with externalizing disorders or symptoms?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

24. What percentage of time per week do you provide consultation services for students with internalizing disorders or symptoms (e.g., depression and anxiety)?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

25. Do you currently provide individual or group counseling to students:

Yes                      No

If yes:

25. What percentage of time per week do you provide individual or group counseling for students?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

26. What percentage of time per week do you provide individual or group counseling for students with mental health problems?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

27. What percentage of time per week do you provide individual or group counseling for students with mental illness?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

28. What percentage of time per week do you provide individual or group counseling for students with externalizing disorders or symptoms?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

29. What percentage of time per week do you provide individual or group counseling for students with internalizing disorders (depression and anxiety)?

None	15-20%	35-40%
1- 5 %	20-25%	40-45%
5-10%	25-30%	45-50%
10-15%	30-35%	More than 50%

30. What barriers limit your ability to provide mental health services to children and adolescents?

- |                                                                 |                                                   |
|-----------------------------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> Limited time                           | <input type="checkbox"/> Special Education Law    |
| <input type="checkbox"/> Not supported by employer              | <input type="checkbox"/> Need additional training |
| <input type="checkbox"/> Not supported by school administration | <input type="checkbox"/> No interest              |
| <input type="checkbox"/> Not supported by community             | <input type="checkbox"/> Limited Resources        |

\_\_\_ Other\_\_\_\_\_

31. What barriers limit your ability to provide evidence-based mental health services to children and adolescents?

- |                                            |                              |
|--------------------------------------------|------------------------------|
| ___ Limited time                           | ___ Special Education Law    |
| ___ Not supported by employer              | ___ Need additional training |
| ___ Not supported by school administration | ___ No interest              |
| ___ Not supported by community             | ___ Limited Resources        |
| ___ Other_____                             |                              |

**Directions:** Please answer each question by circling your response.

### III. Demographic Information

1. Sex:

- Male  
Female

2. Age:

- |             |             |             |
|-------------|-------------|-------------|
| 20-25 years | 36-40 years | 51-55 years |
| 26-30 years | 41-45 years | 56-60 years |
| 31-35 years | 46-50 years | 60 + years  |

3. Ethnicity:

- |                  |                |                  |
|------------------|----------------|------------------|
| African American | Asian American | Hispanic/Latino  |
| Native American  | Caucasian      | Pacific Islander |
| Other_____       |                |                  |

4. Highest degree obtained:

- Master's      Specialist      Doctorate      Other\_\_\_\_\_

5. Are you currently practicing as a school psychologist in a school setting? Yes or No

**Directions:** Please write your response in space provided

If yes, how many years since graduation? \_\_\_\_\_

If yes, how many years have you been practicing? \_\_\_\_\_

If no, please stop at this item, and exit the questionnaire.

6. Are you currently licensed to practice school psychology? Yes or No

- |                                                           |           |
|-----------------------------------------------------------|-----------|
| Are you licensed for private practice?                    | Yes or No |
| Are you licensed by the Department of Public Health?      | Yes or No |
| Are you licensed by your State Education Licensing board? | Yes or No |
| Are you licensed by your State Psychology Licensing Board | Yes or No |
| Are you a Nationally Certified School Psychologist?       | Yes or No |

7. With what age range of children do you work (circle all that apply)?

- |                   |                    |
|-------------------|--------------------|
| Birth to Three    | Middle/Junior High |
| Preschool         | High School        |
| Elementary School |                    |

8. In what state are you employed? \_\_\_\_\_

9. Does your school/district/Area Education Agency/ Consortium / Educational Cooperative Agency currently implement a type of Response to intervention?

- Yes      No      Don't Know

10. Does your school/district/Area Education Agency/Consortium/State currently use Non-categorical classifications for students receiving special education services?

Yes

No

Don't Know

**Thank you for completing the survey!**

**If you would like to be included in the drawing one of four \$25.00 Gift cards to Barnes and Noble please send an email to [dmiller@aea267.k12.ia.us](mailto:dmiller@aea267.k12.ia.us), please indicate "Survey Drawing" in the subject line.**

APPENDIX B  
RECRUITMENT FORMS

## Initial Recruitment Email

Dear School Psychologist,

My name is Dana Miller; I am a graduate student in School Psychology program at the University of Iowa.

I invite you to participate in a research study I am conducting as part of my graduate studies. The purpose of the research study is to develop an understanding of the mental health practices of school psychologists.

If you agree to participate, I would like you to complete an on-line survey. The survey asks for your sex, age group, ethnicity, highest educational degree, and your practice setting. If you practice in a school setting you will also be asked about your practice including your job satisfaction, your actual and perceived role as a school psychologist. The survey will take 5-10 minutes to complete. You are free to skip any questions that you prefer not to answer.

At the completion of the survey you will be provided with information, detailing how you can be entered in a drawing for one of four \$25.00 gift certificates to Barnes and Noble that will be awarded to participants in the study.

You will be asked to provide information over the Internet. Information provided via the internet may be viewed by individuals who have access to the computers where the information is collected or stored. It is also possible that your responses could be viewed by unauthorized persons. I will use a secure web site to collect the study information, password protected computers to store the study information. I will not collect your name or any identifying information about you in the survey. The information collected for the awarding of the gift certificates will be kept separate from your survey responses. It will not be possible to link you to your responses on the survey.

Taking part in this research study is completely voluntary. If you do not wish to participate in this study, do not click on the link provided.

If you have questions about the rights of research subjects, please contact the Human Subjects Office, 300 College of Medicine Administration Building, The University of Iowa, Iowa City, IA 52242, (319) 335-6564, or e-mail [irb@uiowa.edu](mailto:irb@uiowa.edu).

Thank you very much for your consideration of this research study.

If agree to participate in this study, please click on the following link or place the web address in your Internet browser:

<http://survey.aea267.k12.ia.us/survey/5677/da5f/>

Sincerely,

Dana Miller, EdS, PhD Candidate  
University of Iowa



### Follow-up Recruitment E-mail

Dear School Psychologist,

My name is Dana Miller; I am a graduate student in School Psychology program at the University of Iowa.

I am extending a follow-up invitation to you to participate in a research study I am conducting as part of my graduate studies. The purpose of the research study is to develop an understanding of the mental health practices of school psychologists. If you have already completed the study survey, thank you for your time. If you have not completed the study survey, I ask that you again consider participation in my study.

If you agree to participate, I would like you to complete an on-line survey. The survey asks for your sex, age group, ethnicity, highest educational degree, and your practice setting. If you practice in a school setting you will also be asked about your practice including your job satisfaction, your actual and perceived role as a school psychologist. The survey will take 5-10 minutes to complete. You are free to skip any questions that you prefer not to answer.

At the completion of the survey you will be provided with information, detailing how you can be entered in a drawing for one of four \$25.00 gift certificates to Barnes and Noble that will be awarded to participants in the study.

You will be asked to provide information over the Internet. Information provided via the internet may be viewed by individuals who have access to the computers where the information is collected or stored. It is also possible that your responses could be viewed by unauthorized persons. I will use a secure web site to collect the study information, password protected computers to store the study information. I will not collect your name or any identifying information about you in the survey. The information collected for the awarding of the gift certificates will be kept separate from your survey responses. It will not be possible to link you to your responses on the survey.

Taking part in this research study is completely voluntary. If you do not wish to participate in this study, do not click on the link provided.

If you have questions about the rights of research subjects, please contact the Human Subjects Office, 300 College of Medicine Administration Building, The University of Iowa, Iowa City, IA 52242, (319) 335-6564, or e-mail [irb@uiowa.edu](mailto:irb@uiowa.edu).

Thank you very much for your consideration of this research study.

If agree to participate in this study, please click on the following link or place the web address in your Internet browser:

<http://survey.aea267.k12.ia.us/survey/5677/da5f/>

Sincerely,

Dana Miller, EdS, PhD Candidate  
University of Iowa

APPENDIX C

OTHER: BARRIERS TO PROVIDING MENTAL HEALTH SERVICES

### **Other: Barriers to Providing Mental Health Services**

1. "Limited number of students with direct psych services."
2. "Not enough time in day, and not seen as part of my role"
3. "Testing is priority"
4. "I am part time - job sharing. Limited available time"
5. "Replication of services offered by counselors"
6. "My role is more administrative"
7. "Services are provided by school counselor"
8. "Caseload of evals"
9. "Until this year I have had 3 schools, one of them with 25% on IEPs."
10. "School social workers duties"
11. "Turf issues with school counselor"
12. "Major emphasis in our agency (over past 5 yrs) has been paperwork compliance"
13. "As stated before, SCHOOLS do not provide mental health services other than referring to an agency and being able to recognize it."

#### **Other Barriers to Providing Mental Health Services By Those Who Provided Services**

14. "We've become clerk-typist for compliance"
15. "Services are provided by school counselor"
16. "Caseload"
17. "Major emphasis in our agency over past 5 years has been paperwork"
18. "EBT has many philosophical flaws, similar to RtI & NCLB"

APPENDIX D  
PARTICIPANT'S COMMENTS

### Participant's Comments

1. "In general, I am very interested/passionate about addressing the mental health needs of all students in our schools. As a school psychologist, I would love to be able to be the person that provides those services to children currently in our system. However, in my graduate program we were required to take one counseling course as well as one course in overall assessment of internalizing/externalizing behaviors. Even still, I don't feel that my graduate program adequately to provide mental health services to students. I will say, however, that my agency uses a very behavioral model to serve students with externalizing/internalizing disorders. Despite the fact that I do not provide direct mental health services, I do work very hard to assess and develop evidence-based behavioral interventions for both special and general education students. The state is really pushing us to limit our role to working only with special education students, so that will probably change over the next few years. Despite this, I would love to see our role in mental health issues expand and have our agency also adopt a mental-health model in conjunction with the behavioral model. For some kids, the behavioral model simply does not address the needs!"
2. "I was a bit confused at times with terms and trying to decide specifically what services I provide, because sometimes we work with students but it is not on a consistent basis. Or our services are recommended to consult with students, but no documentation is provided as to the amount of actual time spent working with students. "
3. "My job is changing this year. I am supposed to work with special education students more and not do as much paperwork. Hopefully that will happen. "
4. "I believe that the mental health training I have received is wasted because of restrictions by my employer. "
5. "I found some items confusing, i.e. the percentage of time spent on different populations providing different services. My responses may seem contradictory for this reason. "
6. "I have a social work partner that does most of the counseling for the students on our caseload. I spend the majority of my time working on RTI things and handle more of the academic cases. "
7. "I work in a geographical area with excellent community based mental health services, and with generally good health insurance coverage for most residents. That precludes an active school role in providing mental health services. In addition, there are insufficient school resources to provide mental health services."

8. "I work as a school psychologist in a non-traditional role. Other school psychologists provide direct services. My role is strictly consultation-based. "
9. "I would love to do more with mental health interventions for students. but #1, it seems to be the case that in PA, we are primarily "testers" and there is little time for anything else. I feel lucky when I can get some consultation into my day. My district is starting to do RTI and I think it will take a few years before I notice a difference in the amount of testing I am doing, and hence the amount of time I have for other pursuits, and #2, I feel like I need more training in MH interventions. It has been a few years now since I finished grad school, and I have forgotten a lot of it due to not using it."
10. "Felt survey was comprehensive and thorough and captured appropriate data for many of the tasks a school psychologist is and will be expected to deliver."
11. "My primary role is testing to determine eligibility for Special Education. "
12. "Options for state certification and state licensure should be listed as they are not equal. I am not licensed in my state BUT I am certified."
13. "Part of my graduate program was in a clinical psychology program, which significantly affected how I answered questions related to course work."
14. "I am currently employed as a consultant to provide psychoeducational evaluations and support to the district in which I am contracted. The schools have school-based clinicians who are employed to provide mental health services to the students."
15. "Wrap around services will not be highly effective in largely rural states, such as the one I work in. Those with training in mental health (School Psychologists, School Social Workers, Guidance Counselors, and many School Nurses) need to work together to meet this need. The idea that these professions are gened or sped is inaccurate. These individuals are, of course, pupil service providers and all have a valuable service to provide to ALL students. "
16. "I think the boundaries for what is "mental health services" is fuzzy. At one time, this was defined by where the service was delivered - if it was delivered by mental health center staff, it was "mental health services". When those are delivered by school staff, the definition is murkier. I would argue a well-designed IEP based on a comprehensive evaluation is good preventative mental health. So is helping a school design and implement a PBIS system. Sometimes counseling is not the most effective or pervasive delivery system to meet mental health goals. However, I also have colleagues, trained as school psychologists as I am but coming from different training programs, argue that what they do is not mental health services, nor do they nor can they provide mental health services. I'd be very interested in your results - good luck! "

17. "School Psycs are not the only mental health providers in schools. School Psycs in LA, are certified by the LA State Dept of Ed, and many are not licensable through PSYC Board. I am credentialed as a School Psyc, but also have licensure as LPC/LMFT, and national certification through NAMP (NCP) & NBCC (NCC, NCSC) as I am not eligible for NASP certification b/c my Spec and doctorate degrees wasn't NASP approved. Thanks"
18. "You appear to be attempting to make some fairly nuanced distinctions in your defined categories, but I find it difficult to assign percentage categories to variables that seem to overlap. Best wishes with your research."
19. "My urban district is one of the poorest cities in the country, and our district has always supported an expanded role model for its school psychologists. I conduct assessment activities in the mornings, and do two hours of counseling interventions in the afternoons. "
20. RTI has been a disaster as far as diagnosis of "LD" is concerned. It is a great intervention approach (Teach, Test, Teach), and should be required prior to diagnosis of LD, but it is worthless in distinguishing between LD and Slow Learner.
21. "With my district, assessment is far and away our focus as school psychologists. We're pushing for a more consultative model, but progress is slow. Right now, we provide consultation as needed and as we're available, and it is an expectation that we consult. However, we consult only as we have time. If we're swamped with assessment cases, finding that time becomes more difficult... Thanks and good luck!"
22. "You will see overlap with your questions regarding percentages of time b/c many students I work with fall into similar categories. Good luck on completing your research!"
23. "I am interested in the findings of this study. "
24. "I am very fortunate in my current role, as I am expected to provide mental health services to students identified with Emotional Disabilities. My district is one of few in Arizona where school psycs are acknowledged as mental health professionals in addition to the typical role of assessment specialist. The greatest barrier to most districts is administrative perception that mental health issues should be minimally addressed in the school setting, which clearly comes from a lack of appreciation for mental health, as a part of comprehensive health, is essential to academic motivation and success. I have spent years advocating for increased awareness of mental health in the schools, but have often been met with puzzled looks or administrative reminders that counseling

should be academically focused (e.g. "We're not in the business of mental health"). It seems that any positive change in this area will only result from increased emphasis on educating district and school administrators.”

25. “Very difficult to provide actual direct service to students with identified mental health needs. Much of time is spent on consultation, crisis intervention, and gathering information for functional behavioral analysis and behavior intervention plan.”
26. “Going to Non-categorical has been a disaster in Iowa, we are not allowed to use any standardized assessment, reading assessment is only correct words per minute even at high school level, correct digits per minute, correct English language sequences; we have no mental health or counseling professional development in our AEA; we are not allowed to take anything including NASP offered professional development in executive functioning because our (ex-school psychologist) professional development head said "executive functioning is not researched based nor are processed and memory interventions" We have spend an inordinate amount of time in secretarial/clerk typist activities rather that working with students. Special education law, we've been told prohibits funding for work with other that special education students.”
27. “I was not sure exactly what constitutes “mental health” services. My answers may have changed if this was broken up into the specific mental health services.”
28. “Survey was relevant”
29. “I was surprised by my role as a school psychologist that I was not allowed or required to spend more time in counseling services. I feel that after several years of not providing these services, I would need training and assistance in utilizing up to date strategies.”
30. “I feel I'm highly qualified in MH but that is because my master's was in MH and I was a therapist for 10 years prior to becoming a school psych.”
31. “FYI, in my state there is only certification of school psychologists--not licensure. But I checked the box that seemed to fit most closely even though it was not representative of my credential.”
32. “I would have responded slightly dissatisfied if that was an option. My training was in a dept of psychology and I identify myself as a psychologist (have my license) rather than an educational specialist. I get more satisfaction from my private practice which includes more therapy.”
33. “My role has changed drastically in the past two years - previously I provided direct mental health services to a variety of students but now those



responsibilities have shifted to special education teachers with psychologists doing more consultation. It has been a challenging transition.”

34. “It was difficult to accurately respond yes/no to the question regarding whether my district/school is implementing some form of RTI. I feel it is very minimal, in name only. We certainly don't use RTI for eligibility decisions. Most of our teachers and some administrators have still never heard of RTI. We still operate under a traditional discrepancy model for sp ed eligibility. Yet, as the district has typically done for the past 20 years or so, there is some form of problem solving and intervening prior to special ed referral. So the response was a judgment call and I felt we are not really doing much RTI as it is currently being presented.”
35. “The question pertaining to % of time consulting is difficult to answer, I spend about 20-25% of my time consulting on internalizing, externalizing and mental health issues for all children (I have no idea how much of that 20-25% is spent in the individual tasks you describe ... so I may not have answered correctly.”
36. “Somewhat confused by the percentage questions.”
37. “I am very hopeful that our agency will allow us to become psychologists again rather than clerical staff. It has been very demoralizing to see our role become limited to paperwork and compliance. There is a definite need for mental health services in the schools and we should be involved in addressing this need.”
38. “This survey doesn't really ask questions that pertain to what we do in the schools.”
39. “Because the role of the school psychologist is so varied for one individual, training programs are forced to pack in a wide variety of coursework to meet all the demands placed on the school psych. As a result, we are expected to be mental health experts and yet our training program had one course in counseling children and adolescents; that course happened to be poorly run. As a result I am being asked to provide services I desire to provide, but do not feel nearly qualified to perform. Time is a huge factor - in my schools there are no guidance counselors. The principals do classroom guidance and I do the individual and group counseling for students who need it. But, I'm also responsible for all the special education paperwork and services as well. As a result, my special education hat often has to trump my mental health services due to compliance with the law.”
40. “I'm not sure I answered the questions involving % correctly - were they cumulative? Or each cluster/topic individual???? Sorry if I did it wrong. Regarding graduate courses, I don't recall exactly what the classes were - sorry.....”

41. "I work with all students on real-life problems. I rarely think of them as possessing a mental illness or some invented DSM condition... I rarely use labels but my district/public/field does (that's a conflict). EBT, like RtI, somehow makes the counselor responsible for student's actions (similar to RtI/NCLB) - counseling is governed by rule of the thirds -- accountability and documentation of progress is good, but no counselor can show 100% successes -- anyway, nice survey..."
42. "Good luck with your career."
43. "A distinction should be made between those students with mental health problems who do not exhibit adverse behaviors at school, versus those students with mental health problems who do exhibit adverse behaviors. The job of the school psychologist should not be to provide mental health services for children who have problems at home but not at school. We are school psychologists and should deal with problems that exist in a school setting. All too often, a parent calls requesting counseling for their child because of a divorce, death, etc. When checking with the teacher, the child is doing fine in school. Do we have a duty to serve that child? I don't think so. We are not an outpatient mental health clinic. In addition, early in my career I saw many children for individual or group counseling. As my evaluation load and other duties increased, I found it more difficult to provide the consistency that students need when receiving counseling services at school. Thus, I now rarely see anyone, and if I do, it is for a one time session."
44. "I don't like the movement to "legislating clinical practice." For example, the movement to limit or eliminate IQ testing as part of clinical practice. This requirement is similar to stating that physician's treating Medicare and Medicaid patients are not allowed to order specific tests-ever! In my experience regarding school psychological training, it would be "best" served by having the student obtain either an M.A. or M.S. in Clinical-Child Psychology and a CAGS/CAS or Ed.S. in school psychology. RTI can be done by anyone, and will be since school psychologist come at a "higher price" typically. Fight for master's level licensure for private practice school psychologists, after all, school psychologists may need another job opportunity in the future."
45. "I think this is a good survey all around and will give great insight in to the role of a School Psychologist and the training background. Good luck with using the data. I will be interested in knowing the findings."

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