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An exploration of the current involvement of school psychologists in prevention programming

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An exploration of the current involvement of school psychologists
in prevention programming

by

Melissa Bernadine Cermak

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Psychology (Counseling Psychology) and (School Psychology)

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For the Major Program

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ABSTRACT

School psychologists have been seeking to identify the ways in which they can have the greatest impact on the schools, students, and families they serve, while expressing a desire to decrease their involvement in the role of “gate keepers” for special education. With recent reforms in education and health care and a growing awareness of the mental health needs of children and adolescents, school psychologists have been called to expand their roles, taking greater leadership in comprehensive systems of care. Prevention, particularly primary prevention, has been identified as a key area for role expansion, along with being a cost-effective means for reducing the need for costly evaluations and placements in special education. While roles in consultation and intervention have been well documented in the literature, very little is known about practitioners’ involvement in prevention. This study explored school psychologists’ current level of involvement in prevention programming and examined factors that might contribute to or serve as obstacles to the provision of prevention programs in school settings. Data were collected from a national sample of 320 practitioners. A large majority of practitioners surveyed reported little or no involvement in prevention programming, spending half their time on assessment activities. Practitioners did indicate a preference for reducing the amount of time spent in assessment, while increasing their involvement in other professional roles, including prevention programming. Practitioners reported a greater degree of preparation for and confidence in more traditional roles (e.g. psychoeducational assessment, intervention) versus prevention activities. Despite feeling less confident and prepared to assume prevention roles, practitioners identified a lack of time

as the major obstacle to their involvement in prevention activities, followed by lack of support from administrators/employers and lack of coordination with other mental health service providers. Implications for future research and role expansion into the area of prevention programming are discussed.

CHAPTER 1. INTRODUCTION

Throughout the history of school psychology there has been ongoing discussion about the roles and functions practitioners should serve. Within this search for a professional identity, school psychologists have been looking to identify ways they can have the greatest impact on the schools, students, and families they serve. The role frequently placed on school psychologists is that of the “assessor” or “sorter” of children, with the goal typically being the identification and placement of children with disabilities into special education. While incentives and supports exist at the district, state, and federal levels for school psychologists to play a primary role in the assessment and classification of children, this role has not always been the most satisfying for professionals in the field. Despite the fact that intervention and consultation roles have been promoted and encouraged, school psychologists frequently find their work weeks filled with activities that focus on student-specific concerns and the remediation of existing problems. Practitioners often find themselves playing “catch-up,” trying to address student concerns or problems, while having little or no time to proactively address the needs of the schools they serve.

While dissatisfaction over traditional assessment roles has been widespread, external factors in the forms of educational and health care reforms and increased awareness of the mental health needs of children and adolescents have also resulted in a push in school psychology for role expansion. Reform movements have favored taking a more holistic and ecologically-oriented perspective on student concerns, calling for a more comprehensive approach to the physical and mental health needs of children, adolescents, and their families. Within emerging models of comprehensive systems of care is the belief that schools should

provide a full continuum of services, ranging from prevention to treatment. While school psychologists have demonstrated effectiveness in diagnostic, intervention, and treatment roles, little is known about their level of preparedness, interest or involvement in preventive activities. Prevention, particularly primary prevention, has been identified as a key area for role expansion, along with being a cost-effective means for reducing or eliminating the need for costly evaluations and placements (National Association of School Psychologists [NASP], 1999). Furlong, Morrison, and Pavelski (2000) called for a reinvention of the profession of school psychology that included a greater focus on the reduction of risks and the enhancement of protective factors, both of which are key components in prevention programming.

Rationale

Children and adolescents in society today are facing a growing number of issues and challenges as a result of changes in the family unit, the economy, and society as a whole. School violence, sexual behaviors, substance use/abuse, and mental health issues are examples of issues that students are coping with at earlier points in their development. Many students lack the skills and competencies to address such issues, putting more demands on school personnel to meet the educational, emotional, social, and psychological needs of students. Estimates regarding the prevalence of psychiatric disorders and other factors that impact psychological health indicate that a growing number of students may be at risk for serious maladjustment and difficulties that impact their ability to benefit from educational services (Doll, 1996). "School success is facilitated by factors in students' lives such as psychological health, supportive social relationships, positive health behaviors, and schools free of violence and drugs" (NASP Position Statement [On-line], 2003). While the concerns

and problems impacting student learning are increasing in frequency and complexity, children and adolescents seem to be lacking the social and emotional supports necessary to weather such challenges.

Schools are recognized as the most “logical point of entry to increase the efficacy of mental health services to children and adolescents,” and school psychologists are viewed as being in a position to be at the forefront of mental health service delivery in the schools (NASP [On-line], 2003). The National Association of School Psychologists suggests that the public school system is the sole service provider for approximately 50% of students who are receiving mental health services. Schools offer the perfect intervention site for a variety of educational and social problems (Cole, 1996). Outside of offering the optimal setting for intervention and treatment, schools are the most significant settings in children’s and adolescents’ lives (Knoff & Batsche, 1990; Knoff, 1996). Schools represent a primary socialization system, where personality development is shaped (Biber, 1961; Zaki & Partok-Engel, 1984). Within the school setting, students are presented with various opportunities to develop academic, social and personal competencies, which result in schools being one of the “most potentially protective environments” for children and adolescents (Doll & Lyon , 1998). In addition, Knoff and Batsche (1990) argue that school-based intervention, prevention, alternative education strategies, and parent training and outreach have been shown to have clear clinical benefits for children with mental health concerns, while also being sensible, accessible, and cost effective venues for programming and services (Power & Heathfield, 1999; NASP 2003).

Growing awareness of the challenges facing children and adolescents has resulted in an increased commitment to educational and health care reform that favors more

comprehensive school-based services. Nastasi (1998) suggested that the current scope of student concerns warrants and demands a more comprehensive approach to the mental health needs of students and their families. The needs of children and adolescents in the schools require effective prevention and treatment programs that address the “multiplicity of physical, social, emotional, and academic problems” (Minke & Bear, 1997, p. ix). Similarly, Franklin (1995) argued that the demands placed on schools require the adoption of additional roles and services being added to traditional models of service delivery. This argument for more comprehensive approaches to student needs is consistent with NASP’s *Position Statement on Mental Health Services in the Schools* (2003), which states that, “NASP advocates the inclusion of effective, comprehensive mental health services in the schools, emphasizing prevention and early intervention.” Prevention and early intervention programming enhance mental health, which is defined by NASP as “the achievement of expected developmental, cognitive, social, and emotional milestones” and is evidenced by students being able to form secure attachments, develop satisfying social relationships, and utilize effective coping strategies (NASP, 2003).

Despite numerous arguments for comprehensive systems of care in schools, school psychologists have continued to play a limited role in mental health programming in schools, typically relegated to assessment and remedial treatment roles (Knoff & Batsche, 1991). In addition, prevention programming and health promotion are often marginalized, being viewed as an add-on or lower priority in current/traditional service delivery models (Adelman & Taylor, 2000). Health and wellness promotion have been viewed as second to the diagnosis and treatment of problem behaviors (Minke & Bear, 1997). Many in the field have called for a shift in the focus of practice from remediation to prevention (Zins &

Wagner, 1997; Sheridan & Gutkin, 2000). Franklin (1995) argued that practitioners need to be on the “front-end” of the prevention-treatment continuum versus the “back-end” of “reactive crisis intervention.” In addition to being overly reliant on crisis-oriented or remedial services, Schrag (1996) argued that current service delivery models are focused on deficits/flaws and result in a compartmentalization of problems, rather than addressing the interconnected nature of the problems of students and their families.

While the match of the school setting to the delivery of mental health services is well-conceived, school psychologists have yet to play significant roles in school mental health services, particularly in the area of prevention programming despite educational and health care reforms and calls within the profession promoting such roles. Comprehensive mental health services are viewed as critical in enabling school psychologists to break from traditional assessment roles and be involved in “systematic, prevention- and intervention-oriented coordinated services” (Dwyer & Berstein, 1998). School psychologists possess training and expertise in program development, implementation, administration, and evaluation that would make them the perfect choice to head up prevention and mental health programming in the schools. While school psychologists are viewed as capable of providing a variety of mental health services, many do not have specific training in prevention science and empirically based prevention methods. Minke and Bear (1997) suggested that for prevention efforts to become a more significant part of educational reform and current practice in the schools, it is “essential that programs and strategies are selected on the basis of their effectiveness” and must be “carefully planned, implemented with integrity, and evaluated thoroughly” (p. xi).

With increased pushes for more comprehensive services in schools, questions have been raised regarding what roles school psychologists will play in emerging models (DeMers, 1995), along with what is the state of readiness of school psychologists to assume such roles (Christenson, 2000). Relating to the issues of preparedness, Adelman and Taylor (1998) acknowledged a need to further explore whether school psychologists have sufficient training in the areas in which they are being called to take leadership roles. Nastasi, Varjas, Bernstein, and Pluymert (1998) pointed out that school psychologists' involvement in mental health programs has not been well documented, with program evaluation identified as a particular area of weakness. They recommend a random sampling at the national level of school psychologists to address the scope of mental health services provided by practitioners in the schools and to explore the factors that influence effective provision of services. Kratochwill and Stoiber (2000) identified research into prevention and intervention as just one of the critical research agendas facing school psychology in the future. More specific to prevention, Strein, Cramer, and Lawser (1999) identified a perceived need by school psychology faculty and practitioners for research focused on primary and secondary prevention.

While roles in consultation and intervention activities have been researched and well documented in the literature, very little is known about school psychologists' involvement in prevention activities in school settings. The current study is exploratory in nature, hoping to look at current levels of school psychologists' involvement in prevention programming, including program design, implementation, and evaluation. Moreover, it will attempt to explore factors that facilitate or inhibit roles in prevention programming. In addition to issues related to training, other obstacles, such as time, job demands, role perceptions, and

practitioner competence and interest will be explored to determine how they may be impacting the degree to which school psychologists assume more active roles in prevention programming.

Research Questions and Hypotheses

While it is known that assessment, intervention, and consultation activities represent the primary roles of school psychologists, much of the literature addressing future directions for the field of school psychology suggest that prevention activities should garner more attention and effort on the part of practitioners. This study explores the current status of prevention activities as they are performed by practicing school psychologists with the belief that practitioners' engagement in prevention activities may vary depending on a variety of practitioner characteristics, including competency and interest in the area of prevention. This study assesses what, if any, role school psychologists are playing in prevention programming, and, to do so, prevention was not limited to any particular targeted area of concern. The present study addresses four questions regarding the role school psychologists play in mental health programming in the specific area of prevention activities.

The first research question examined in the present study is as follows: To what extent are practitioners engaging in prevention programming? The goal is to go beyond quantifying the exact number of hours that practitioners are spending on prevention activities. The study will examine both the focus of prevention (e.g. drug prevention; violence prevention; positive youth development; prevention of academic, behavior, and/or social problems; mental health prevention; suicide prevention) along with the types of activities in which school psychologists are engaged. Are school psychologists engaging in program development, implementation, evaluation and/or research in the field of prevention?

Based on a review of the literature, it is hypothesized that very few practitioners will report engaging in prevention programming at this point in time. For those who report engaging in such activities, it is predicted that the focus of prevention programming will be directed at violence prevention, prevention of academic difficulties (e.g. literacy), and prevention of behavioral concerns.

The second area of inquiry will examine if there are differences between those practitioners that report being engaged in prevention activities versus those who report no involvement in prevention activities. More specifically, the second research question is as follows: How are practitioners who engage in prevention activities different from those who do not engage in prevention activities? The influence of service delivery models, level of training/certification, administrative support, professional interest, competency, expertise, student ratios, and school and practitioner demographics will be explored. It is hypothesized that practitioners newer to the field may be more likely to be involved in such activities because they are more likely to be trained in programs that promote an expanded role for school psychologists. In addition, younger professionals are less likely to be tied to the traditional role of assessor. An additional hypothesis is that there will be a significant difference due to level of professional degree acquired with doctoral level professionals more likely to be engaging in prevention activities. Those practitioners who are affiliated and/or involved with professional organizations and who are active in the scholarly literature (subscribers and/or contributors) are viewed as more likely to engage in prevention activities versus those practitioners who are less actively involved in the professional and academic communities. In terms of service delivery models, it is hypothesized that school psychologists who are more closely employed or tied to their districts will be engaging in

prevention activities. One would expect to see practitioners who are directly employed by the school district or those who serve a single school building will be more likely to engage in prevention activities versus those practitioners that work for a third party (e.g. area education agency, service consortium) or who serve multiple buildings and/or districts. This hypothesis is based on the belief that those practitioners that directly serve a district or single building are more engaged in the day to day activities of the setting and are more aware of the needs for prevention services within those settings. They are also likely to demonstrate a greater commitment to the wellness of the setting because they have a greater sense of connection with and ownership in the school community. This area overlaps with hypotheses related to student service ratios, with the prediction being that lower student-practitioner ratios will coincide with more time on the part of practitioners to engage in prevention activities. In terms of setting (e.g. elementary, junior high, high school, medical setting), it is hypothesized that prevention activities are more likely to be occurring with younger student populations. Finally, practitioners serving suburban versus urban and rural school settings are more likely to be engaging in prevention activities. No gender differences in involvement in prevention activities are predicted.

The third area of inquiry focuses on the impact that competence and interest have on involvement in prevention programming. The following research question is being explored: Do school psychologists feel adequately prepared to engage in prevention activities and do they report interest in expanding into a prevention role? In terms of preparation and training, the study will explore if practitioners report feeling more prepared and confident to serve in traditional roles/functions versus prevention related roles. In addition, differences in practitioners' degree of preparation and confidence in intervention/traditional versus

prevention program development, implementation, and evaluation will be assessed. It is hypothesized that practitioners will report less confidence and preparation for prevention activities versus more traditional roles. Practitioners will also report less training or continuing education opportunities in the area of prevention programming. Practitioners will report adequate to high degrees of skills in the area of program development, implementation and evaluation due to their training in these particular areas.

The final question will explore obstacles to school psychologists' involvement in prevention activities: What do practitioners view as the key obstacles to their involvement in prevention activities? It is hypothesized that lack of time followed by a lack of training/expertise in prevention science will be identified as the main obstacles to role expansion in this area. Other obstacles explored include: lack of support on the part of supervisors and administrators and an inability to show immediate results or value of services or a lack of interest are also predicted as noted obstacles. No differences in the rankings of obstacles are expected by gender. The influence of employment and educational characteristics on practitioners' rankings of obstacles will be examined.

CHAPTER 2. REVIEW OF THE LITERATURE

Status of school-based mental health services

Before we can adequately address the issue of mental health services in schools and the role school psychologists play in such services, it is best to begin by taking a look at the current status of our school-based psychological services and the needs of school-aged populations. It is difficult to go through the day without some reference being made to the growing needs of children or adolescents in our society. We are frequently inundated with media and personal stories focusing on children and adolescents as victims or perpetrators of violence. Reports of school shootings and other forms of school-related violence, while shocking and saddening, seem to be growing more common and less surprising. Drug and alcohol use and abuse, teenage sexual behavior/assault/abuse, suicide, and mental health concerns, such as depression, eating disorders, and anxiety disorders also garner a great deal of attention in the media and their mention continues to strengthen the argument that children and adolescent populations have significant social, emotional, and psychological needs. Poverty and changes in the structure of the family unit (e.g. the increase in single parent families) may also represent “economic and emotional disruptions” (Pfieffer & Reddy, 1998) that contribute to the stress experienced by students. These additional stressors, risk factors, and needs only add to the developmental, social-emotional, and educational tasks that children and adolescents are trying to successfully maneuver during their school years.

While statistics regarding the prevalence of mental health disorders may be subject to scrutiny as a result of confusion regarding appropriate definitions and diagnostic criteria, the estimates provided in the literature highlight the needs of children and adolescents and cannot be ignored easily. When one looks at prevalence estimates in comparison to statistics

reflecting the current utilization of services by child and adolescent populations, it becomes clear that not enough is being done to help students with mental health needs.

Prevalence of Mental Health Issues

While estimates of the prevalence of specific disorders range from study to study, a number of statistics are frequently cited in the literature. Figures and estimates address a wide variety of issues, disorders, and concerns facing school-age populations, with children who are labeled seriously emotionally disturbed (SED) or with emotional and behavioral disorders (EBD) being referred to most frequently. Prevalence estimates for psychiatric disorders in youth populations have tended to range between 5 and 15% (Doll, 1986), with estimates reported as high as 22 % (Costello, 1989a). Doll (1996) cited epidemiological studies sponsored by the National Institute of Mental Health that estimate between 180 to 200 of every 1000 school-age students have a diagnosable psychiatric disorder, with anxiety and behavioral disorders being the most prevalent within this population. Pfeiffer and Reddy (1998) cited a number of epidemiological studies that estimated that one in five students have significant mental health needs, including serious conduct disorders, attention deficit disorders, affective disorders, and eating disorders (Costello, 1989a, 1989b; Velez, Johnson, & Cohen, 1989). Similarly, McDermott and Weiss (1995), using a national sample, estimated that 20% of children need mental health services. Within this population, 5.2% were classified as “seriously maladjusted” and an additional 16.2% were labeled “at risk” for serious maladjustment. Looking at the prevalence of school adjustment and emotional-behavioral problems in children, Nafpaktitis and Perlmutter (1998) cite a range in prevalence estimates from 7 to 8% of school children having emotional and behavioral problems severe enough to warrant treatment (U.S. Department of Education [USDOE], 1994) to three out of

10 school children experiencing moderate to severe school adjustment problems (California Department of Mental Health [CDMH], 1992).

Authors frequently cite prevalence estimates for the seriously emotionally disturbed (SED) and emotional and behavioral disorders (EBD) when discussing student needs. A great deal of confusion exists in terms of diagnostic criteria and the definitions for SED and EBD in the literature. Prevalence estimates have been somewhat lower for children and adolescents labeled SED, with prevalence usually being estimated between 2 and 5% (Brandenburg, Friedman, & Silver, 1987 in Friedman & Duchnowski, 1990). Estimates for students with EBD have been higher than for students labeled as having SED. Quinn and McDougal (1998) cited prevalence estimates for emotional and behavioral disorders in the literature ranging from 11 to 26% of the youth population. Looking at students labeled as EBD, it is believed that 75% of those with externalizing disorders will progress from mild to more severe forms of social maladjustment (Loeber, 1982; Reid, 1993), indicating that emotional and behavioral disorders frequently result in long-term difficulties for children and adolescents.

Within the realm of social and emotional disorders, depression is viewed as one of the most common mental health disorders among adolescents, with up to 3% of adolescents being affected by depression at any given point in time (Clarke, 1993). In reviewing the literature, Clarke also suggested that depression is “intimately associated” with anxiety disorders, substance abuse, delinquency, and suicide. Adolescent suicide and suicide related behaviors represent a major concern for school personnel (Mazza, 1997), with suicide representing a leading cause of death in adolescents between the ages of 15 and 19 (National Institute of Mental Health, 1992). In a review of school-based suicide prevention programs,

Mazza pointed out that there has been a dramatic increase in the suicide rate for pre-teen students. He also suggested that suicide rates do not accurately depict the severity of the problem because they do not reflect the full range of suicidal behavior, which includes suicidal ideation, intent, and actual attempts (Ladame & Jeanneret, 1982; Reynolds, 1988). Studies of the prevalence of suicide attempts and suicidal ideation indicate that 7 to 8% of high school students attempt suicide each year (CDC, 1991; Dubow, Kausch, Blum, Reed & Bush, 1989; Garrison, McKeown, Valois, & Vincent, 1993), while as many as 10 to 13% of high school juniors and seniors endorse having “moderate to severe levels of suicidal thoughts” (Garrison, Addy, Jackson, McKeown & Waller, 1991; Reynolds, 1988; Smith & Crawford, 1986).

The Impact of Mental Health Disorders

While the estimates regarding the percentage of students with psychiatric disorders are disheartening, the picture becomes worse when we consider the impact such disorders can have on educational and daily functioning of students, along with considering the cost to society as a whole. Emotional and behavioral disorders in children and adolescents have been shown to be related to increases in drop-out rates, lower grade point averages, increased absenteeism, and decreased participation in school activities (Forness & Hoagwood, 1993; Quinn & McDougal, 1998). In addition, such disorders have also been seen to develop concurrent with impaired cognitive functioning, difficulties with social competence, and language deficits. Mental health concerns in school-aged populations can be viewed as being highly associated with a number of “social morbidities” (e.g. sexual behaviors and risks, violence, physical and sexual abuse, poverty, etc.), which are growing in prevalence (DiClemente, Hansen, & Ponton, 1996; Sells & Blum, 1996). Knoff and Batche (1991)

viewed these “social morbidities” or problems facing society as either “an antecedent or a consequence of school failure and mental health problems” and estimated that treatment of child and adolescent mental illness is costing \$1.5 billion each year (U.S. Department of Health and Human Services, 1990).

In addition to representing a huge financial cost to society, mental health concerns in school-age populations represent a huge challenge in terms of available professional staff to address such concerns. Considering the prevalence estimate of 180 to 200 out of every 1000 students cited earlier in this chapter, Doll (1996) pointed out that “a school psychologist working under the recommended ratio of one school psychologist to every 1000 students (NASP, 1992) would have to see a different student each day of the school year in order to meet every student with a diagnosable psychiatric disorder.” Dwyer (1995) estimated that an additional 25,000 school psychology practitioners are needed to provide mental health services for all school-age students. He went on to point out that the U.S. Congress Office of Technology Assessment’s (1986) estimate of approximately 8 million children having “significant emotional or behavioral problems blocking educational success and warranting mental health services in the schools” would result in a 1 to 450 ratio of school psychology practitioners to students with emotional/behavioral disorders, ignoring the needs of all other disability groups or children needs.

The Student Need-Available Services Discrepancy

Such practitioner to student ratios, also referred to as service ratios, highlight the gap or discrepancy that exists between the current mental health needs of school-age students and the services provided. Knoff and Batsche (1990) concluded that students with social and emotional disorders “represent one of the most inadequately and underserved populations in

the schools,” citing research that indicates that only 57% of this disability population get identified as receiving services (U.S. Department of Education, 1988). Similarly, McInenery, Kane, and Pelavin (1992) reported 16% of students with emotional and behavioral disorders receive services through the Individuals with Disabilities Education Act (IDEA). Within that same population, Knitzer (1993) reported as few as a “third of all children or adolescents with emotional or behavioral disorders are receiving appropriate services within the mental health system.” Doll (1996, 1999) showed that while as many as one in five children and adolescents met the diagnostic criteria for a psychiatric disorder, fewer than one in twenty received some type of mental health support. Pfeiffer and Reddy (1998) cited a similar ratio of one in five students having mental health needs requiring support services or assistance, but they report that only 1% of these students are identified as in need of services, while 3% receive some form of community-based services.

Various issues and obstacles have been identified as contributing to the discrepancy that exists between student needs and available mental health services. In reviewing the literature, numerous authors have pointed to problems related to a lack of communication and collaboration between school- and community-based mental health service providers (Knoff & Batsche, 1990; Friedman & Duchnowski, 1990; Nafpaktitis & Perlmutter, 1998; Shrag, 1996; Doll, 1999; Adelman & Taylor, 1998, 2000). Collaboration and coordination of services are critical when addressing the needs of students with social, emotional, or behavioral disorders. This population presents with a variety of issues and concerns, which are often addressed by several agencies. Limited collaboration between service providers results in fragmented and uncoordinated services (Nafpaktitis & Perlmutter, 1998; Doll &

Lyon, 1998; Adelman & Taylor, 1998, 2000), which impacts the effectiveness of these services.

Fragmentation of Services

Fragmentation of services results in a waste of resources, along with under- and over-utilization of available services. Tharinger (1995) described the services available in most schools as a “combination of traditional special education-related services and student guidance programs, along with piecemeal support services.” Doll and Lyon also argued that fragmentation of services is one of the greatest challenges in meeting students’ needs, particularly as it relates to prevention programming, stating, “piecemeal services from a variety of educational, mental health, and social service agencies are unlikely to yield the types of concerted, organized efforts that resilience programs will require.”

Along with calls for greater collaboration between schools and community-based agencies comes support for a more holistic approach to students and their presenting concerns. Indoe (1998) argued that mental health concerns typically go unacknowledged “unless confined narrowly within the terms of emotional and behavioral difficulties, social skills, aggression, bullying or stress.” In contrast to a holistic view, Indoe described current services as a series of “bit” approaches – “this ‘bit’ of the child (usually described as learning/emotional/behavioral difficulties) is special education needs, this ‘bit’ (usually described as psychological disturbance or emotional difficulties) is health, and this ‘bit’ (usually described as delinquent, antisocial, criminal) is social services.” While psychological problems have been shown to correlate with educational problems and vice versa, there exists a gap or dichotomy between the intellectual and emotional development of students in need (Knoff & Batsche, 1991; Sandoval, 1999). In addition, it can be argued that

services that are geared toward remediating specific flaws or deficits in children often fail to attend to and address the interconnected problems of children, their families, and the community as a whole. Knoff and Batsche (1991) push for the need to recognize how schools, communities, and families are interdependent and how they may impact the creation and solution of student problems. The “compartmentalization of problems” (Melaville & Blank, 1994) often contributes to the fragmentation of services with school personnel frequently focusing on discrete problems. Programs and interventions are developed and implemented in isolation (Melaville & Blank, 1993, Adelman & Taylor, 2000). They tend to be too “narrowly focused, short-term, and cost intensive” (Adelman & Taylor, 1998) or result in an over-reliance on crisis-oriented services, focusing on deficits and flaws and failing to address the interconnected nature of the problems of children and their families.

Marginalization of Services

While fragmentation of services is an issue, Adelman and Taylor (2000) have argued that the marginalization of mental health services is a greater concern. Implemented in isolation and with a lack of coordination within the school and with outside agencies while addressing discrete student concerns, school-based mental health services often are viewed as a “supplementary item” and operate on an “ad hoc basis.” In school districts where funding is often tight and various programs and educational initiatives are competing for allocations in the form of money, staffing, and inclusion in the already-packed curriculum, mental health services are often over-looked or viewed as a lower priority. In particular, prevention programming is often viewed as a “frill” or supplement when compared to more immediate, short-term intervention services directed at problem students.

Marginalization of services brings up another important issue – what mental health needs/issues are the greatest priorities to address? A definition of the target audience for mental health services in the current system represents a major dilemma for school districts wanting to meet the needs of students. As previously mentioned, funding in the schools is often limited, placing school districts in a position of having to decide whether to direct mental health services, programs, and efforts toward the needs of the most seriously disabled or whether to fund prevention and early intervention programs geared toward the needs of the entire school population. While prevention and early intervention programming is appealing, educators and mental health services providers often have to be practical and focus their efforts on the immediate needs of students with more severe problems (Friedman & Duchnowski, 1990).

School Psychology Services

The role of the school psychologist is often limited to the assessment and identification of students for special education services versus more desired roles involving both direct (e.g. intervention and prevention program implementation) and indirect (e.g. consultation and collaboration with other stakeholders and service providers) services to students in need. When surveyed regarding how school psychologists allocate their time between different professional activities, less than a fifth of the work week was spent in direct intervention activities (Huebner, 1993), while as much as two-thirds of their time was spent on classification for special education programs (Reschly, 1988). Doll used these statistics to conclude that student needs, as related to direct intervention services, were most likely not being met by school psychologists. Reeder, et al. (1997) made a similar argument, stating that while the primary goal of school psychology is to meet the diverse needs of

students, this goal remains “elusive.” They quote Gutkin and Conoley (1990) who stated that “visions of what school psychology should be and could be are not congruent with the reality of what school psychology has come to be.” This should not be viewed as blaming school psychology for the current status of school-based mental health services.

School psychology is a profession that has been influenced throughout its history by a number of forces, including the child guidance movement, educational reform, and legislation. As a result of these forces and its theoretical foundations in both psychology and education, the profession has found itself in a search to develop a professional identity.

Many in the field are not satisfied with their role as “gatekeeper” for special education, and there have been many calls in the literature for an expansion in the roles school psychologists play. The historical and current roles associated with school psychology will be explored in the following section. We will also address more recent calls for role expansion into the area of health and mental health programming, with special attention to prevention programming as means for the profession to better meet student needs and validate its worth in emerging models of service delivery that call for more comprehensive systems of care.

School Psychology: History of Roles and Functions

Historical Influences on the Profession

Current practice in school psychology continues to be heavily influenced by three major historical movements: the social reform movement, the mental health movement, and the testing movement. In addition, the work of the “founding fathers” of school psychology, Lightner Whitmer and G. Stanley Hall, continue to influence the roles and functions school psychologists perform in current practice. School psychology originated primarily in response to the social reform movement of the late nineteenth and early twentieth centuries.

This reform movement encompassed interest and developments in the areas of the juvenile justice system, child labor laws, mental health concerns, and efforts to serve children with special needs (Fagan, 1992). The social reform movement also coincided with a shift in the status of children and adolescents in society. Childhood and adolescence emerged as distinct stages in the life cycle, and children came to be viewed as the “redeemers” or “raw materials” of society (Fagan, 1994). Compulsory education garnered the most attention in the social reform movement, in that the education of children was viewed as important in developing the best natural resources of the country – the children. Compulsory education led to the need to utilize both medical and psychological inspections to identify exceptional children (Wallin, 1914). The field of school psychology grew out of a need for “experts in child selection” to help identify children with mental and educational problems. This role of identifying, labeling, and placing children in segregated, special classes has continued to dominate much of the history and current practice of school psychology.

The mental health movement of the 1920’s with its emphasis on early treatment and preventative measures in mental health can be traced to the work of Lightner Whitmer, who has been referred to as the “bellwether” of both clinical and school psychology. Whitmer stressed the importance of psychological services directed primarily at the individual child or student. He worked inductively, generalizing from the individual to the general condition. Using extensive intake interviews and observations in his assessment of children with learning problems, Whitmer focused his efforts on clinical/diagnostic teaching, with the overall goals of prevention and intervention. The development of special education classes and the training of the psychologists and educators who staffed them have been influenced greatly by Whitmer’s work.

During the same period of time, G. Stanley Hall was also making important contributions to the development of the profession of school psychology. Hall's child study movement helped to invent the "normal" child versus the atypical child on which Whitmer focused his attention. The child study movement emphasized the influence of both hereditary and early environmental factors on the development of the child. Hall's approach can be described as having a nomothetic emphasis, focusing on directing services at the broader ecological system of the school (educational administrators, teachers, and parents) instead of the individual child. Hall's work focused heavily on deducing the general laws of child behavior and learning.

The most influential movement on the development of the profession of school psychology is the testing movement. The use of psychological services has continued to grow and flourish with the development of psychological and educational tests and ongoing interest in segmenting the population according to levels of intelligence. Simon and Binet are recognized for their work in the area of individual testing, while group-administered standardized testing originated with the use of Army Alpha and Beta tests during World War I. Psychological tests offered a means of reliably quantifying human ability and levels of achievement. With the development and use of psychological measures, the role of the school psychologist has primarily revolved around the administration and interpretation of tests and the use of diagnostic measures for the placement of children into special education. The role of assessor and "sorter" has been deeply entrenched in the profession of school psychology, making it difficult for school psychologists to move away from their role as "gatekeepers" of special education. The "gatekeeping"/ "sorter" role has been a continued source of dissatisfaction for practitioners and has been viewed by some in the field (Short,

1999; Fagan, Gorin, & Tharinger, 2000) as a significant obstacle in progress toward greater diversification and expansion in the current roles and functions school psychologists play.

Socio-Political Influences

Similar to the forces influencing practitioners in the late nineteenth and early twentieth centuries, school psychologists and the schools they serve are subject to the effects of political, economic, and social forces. *School Psychology: A Blueprint for Training and Practice II* (1997) provides a good discussion of the current challenges that practitioners, schools, and society face today. The school-age population has continued to grow in both numbers and diversity, straining the capacity of community resources. Both additional schools and school personnel are needed to meet the educational needs of students. While the population has grown and diversified, the financial resources needed to support this growth have declined. The resources available to schools are not equally distributed over geographic regions and economic segments of the population. Urban/inner city and rural areas continue to have fewer resources available to them, resulting in programs of questionable quality.

The student population has also changed, particularly in light of IDEA (1997, 2004) and federal requirements for free and appropriate education to all students. Schools are legally obligated to meet the needs of students with a wider range of disabilities. Changes in family structure and roles have also impacted the schools. More children are being raised in single-parent homes, in homes where both parents must work, or at the poverty level. These children are entering school lacking appropriate supports and basic social skills, and the schools are struggling to meet these increasing demands. School psychologists are also facing similar changes and challenges, as they assume the lead in dealing with social,

economic, and political issues. These issues and challenges are leading to a re-evaluation on the part of practitioners and the profession as whole regarding what roles and functions school psychologists need to assume to meet the growing needs of student populations.

Development of a Professional Identity

Issues related to professional identity and role expansion are not new to school psychology. Fagan and Wise (1994) examined the historical development of school psychology, labeling the years between 1890 to 1969 as the “Hybrid” years and the 1970’s to the present as the “Thoroughbred” years. The beginning decades of the profession were characterized by a lack of professional identity with “school psychologists” representing a blend of practitioners from the fields of education and psychology. In addition, the profession also lacked professional requirements or guidelines for training, credentialing and practice. With the 1960’s came recognition that the field was lacking a professional identity and practitioners began to voice growing dissatisfaction with the traditional assessment role that had dominated school psychology practice. The growing emphasis on prevention and mental health in the 1960’s also had an impact on school psychology with practitioners calling for an expansion of roles into the areas of consultation and intervention. Early articles by Bindman (1964), Trow (1966), and Bardon (1968) provide a view into the professional climate of school psychology and the push for a re-evaluation of the field and the roles assumed by practitioners.

The lack of a unifying professional identity has and continues to represent a challenge for the field of school psychology. Instead of representing a profession with a unified identity, school psychology is characterized by a field of practitioners with a broad array of skills that greatly overlap with and are difficult to differentiate from those of school guidance

counselors, social workers, and psychiatrists (Bindman, 1964). Similarly, Silverman (1969) described school psychology as an “interdisciplinary endeavor” drawing on the work of “clinical psychologists, counseling specialists, educational psychologists, and special education teachers.” Rather than developing, Bardon (1983) described school psychology as “accumulating” as a profession, resulting in “uneven layers of functions and roles, practiced by persons who differ greatly in background and training.” This “accumulation of duties, functions, [and] roles” represents a “wide array of activities practiced by persons with differences in competence, knowledge, acumen, aspirations, and expectations.”

As seen in the previous discussion of the historical origins of the field, the roles and functions of the school psychologist have often been more greatly influenced by forces external to the field. As a result, Bardon argued that a great deal of role confusion develops from the discrepancy that exists between what school psychologists view as their roles and functions (e.g. “internal inconsistencies”) and the “misperceptions of others” as to what the role of the school psychologist should be (Ysseldyke & Weinberg, 1981). The perceptions, or misperceptions, of others and the accumulation of roles and functions is illustrated in Trow’s (1966) reflection on the role of the practitioner, stating that roles have been “thrust upon [him] so that there is at present no little uncertainty as to his proper function.” In addition to searching for a professional identity, school psychology has been attempting to establish professional legitimacy and acceptance from its fields of origin, education and psychology (Reilly, 1984).

The search for identity and professional recognition is not a thing of the past, but continues to permeate the school psychology literature. Conducting content analysis of recent articles (1991-2000) in the *School Psychology Review*, a leading journal in the field,

Harrison (2000) and Shapiro (1995) identified a concentration of articles in the area of role and function and professional issues, with an annual high of 31.9% of articles published in the journal addressing this topic in 2000. In examining the content of articles published during her tenure as editor of this journal, Harrison concluded that school psychology was at a “crossroads” based on the demands for services and those being placed on practitioners by school districts to expand roles to better meet student needs. With the 21st century, there has been a renewed call to examine roles and functions as leaders in the field attempt to predict future directions for school psychology (Fagan & Sheridan, 2000).

Roles and Functions

Within the literature investigating the roles and functions of school psychologists, much attention has been placed on differences between the actual roles school psychologists assume and the roles they prefer (Reschly & Wilson, 1995). This research focuses heavily on exploring the concepts of role relevance and role engagement. Role relevance refers to the degree to which particular roles are viewed as being relevant to the field of school psychology, while role engagement is defined as the roles that school psychologists play. In addition, researchers have also explored differences between the actual roles (what practitioners do on the job), preferred roles (what practitioners would like to do), and perceived roles (what others outside the field think or wish practitioners would do) of school psychologists. While differences may exist between the actual, preferred, and perceived roles of school psychologists, there is also a great deal of overlap between these views of practitioner roles, and each has had a strong influence on the development and future directions of school.

Role Determinants

Before discussing specific roles it may be helpful to explore factors that influence current practice. Fagan and Wise (1994) identified three determinants of school psychology roles: personal factors, job-site characteristics, and external factors. Personal factors can be defined as what a person brings to the job in the way of personal characteristics (e.g. gender, age, ethnic/racial identity, personality style, marital status, and cultural background) and professional skills and training factors. Practitioners' theoretical orientation is influenced greatly by the time in history they received training, the faculty under which they studied, the department affiliation (e.g. education or psychology) of the program, and experiences in school. Different programs emphasize different areas of specialization, particularly doctoral programs.

Job-site characteristics also can influence the roles and functions of a school psychologist. In particular, the service ratio of school psychologists to students has a profound impact on the type of roles and functions that practitioners perform. Lower ratios lead to expanded roles while higher ratios typically mean that assessment activities will be the primary role of the school psychologist. The type of school and location (rural vs. non-rural) of schools served also impacts the roles and functions of school psychologists. Practitioners serving elementary schools typically find themselves focusing on very different student problems and issues than colleagues serving middle and high school populations. In primary/elementary education settings, assessment and interventions typically focus on academic difficulties, such as literacy skills, and student difficulties with attending to instruction. Interventions at this level are more likely to include classroom and behavior modifications (Eidle, Truscott, Meyers, & Boyd, 1998). Eidle et al. found that referrals at the

secondary level more often addressed outside or community-based behavioral concerns such as student drug use, attendance, and delinquency. Additional job-site factors that influence school psychologists' roles and functions include the role of the practitioner's predecessor in the setting and people they work with, such as their immediate supervisor or related professionals (e.g. social workers, guidance counselors, at-risk coordinators, etc.). Last, external factors in the way of social, economic, and political forces can have a profound impact on practice, such as legal cases involving the over-representation of minority group members in special education classes and how this may result from test bias.

Primary Roles and Functions of School Psychology

Regardless of the variety of factors influencing roles and functions, assessment, consultation, and direct intervention are the roles in which school psychologists most frequently engage. Roles in program evaluation, research, systems/organizational consultation, staff/in-service training, and the training and supervision of other school psychology practitioners may also be found, but typically comprise a minor portion of practitioners' workloads. While there has been a call for changes in the roles and functions of school psychologists, it is important to recognize that the assessment role has a long history in school psychology and continues to dominate current practice. The assessment role has also changed or evolved over time, particularly as a result of legal challenges to more traditional assessment practices. *Larry P. v. Riles* (1984) questioned the over-reliance on intelligence testing for placement in special education services and highlighted the need for multicultural assessments. In addition, pushes at the federal level for an increase in non-categorical services and intervention services in the general education setting have created a greater interest in alternative assessment methods. Behavioral observations and curriculum-

based assessment methods have increased in use and popularity with practitioners, educators, and parents demanding assessments that are more strongly linked to curriculum, instruction, and interventions. Assessments should not be limited in determining whether a student is eligible for services, but should also tell assessors and educators what interventions and services would most benefit the student.

Assessment: The Defining Role

The assessment/testing role has been both a unifying and powerful force in past and current self-definitions of practitioners and their roles/functions and a major challenge for role expansion. While the testing movement during the “Hybrid years” (Fagan & Wise, 1994) may have helped school psychology establish its primary role in schools, legislation and legal issues continued to shape and define the professional identity of school psychologists in the 1970’s and 1980’s. Fagan and Wise highlighted the impact that *Larry P. v. Riles* (1984), the Education for All Handicapped Children Act (PL 94-142; 1975), and other legislation has had in promoting free and appropriate public education for all children. As a result, the assessment and placement of children in special education became an even more essential role for school psychologists. While assessment has been a primary role for practitioners, it is a role that many view as not coming without its sacrifices or problems. Bardon (1968, 1983) argued that restricting practice to assessment has resulted in school psychology being “pushed to the edges of practice” and kept the profession from contributing more significantly to the process of schooling. While school psychologist have been pushed into prominent roles as diagnosticians and gatekeepers for special education through PL 94-142 and IDEA (1997), Pfeiffer and Reddy (1998) suggested this has resulted in roles in mental health services being viewed as lower priorities, thus, restricting role expansion.

Surveys of school psychology practitioners have revealed that a majority of school psychologists would like to see the amount of time devoted to psychoeducational assessment reduced to 25 percent of their time (Reschly & Wilson, 1995; Wilson & Reschly, 1995; Wilson & Reschly, 1996). This practitioner preference has been supported in the literature. Reschly and Wilson (1995) found a movement toward a reduction in the emphasis on psychoeducational assessment. In its place, school psychologists prefer and are engaging in a more problem-solving oriented approach to practice, emphasizing direct interventions and collaborative consultation.

School Psychologists as Consultants

Practitioners have indicated significant interest in engaging in consultation, and much of the school psychology literature has been devoted to the school psychologist as consultant to a variety of stakeholders (e.g. educators, parents, and other service providers). It has been estimated that school psychologists spend approximately 16% of their time engaging in problem-solving consultation and less than 5% of their time in systems-organizational consultation, with practitioners preferring to see these time allotments increase significantly (Reschly & Wilson, 1995). Consultation refers to a mutual problem-solving process between two or more professionals engaged in a collaborative relationship (Fagan, 1994).

Kratochwill (1999) viewed consultative services as extending beyond the problem-solving process, serving as a “knowledge linking process” in which psychologists advance knowledge in schools to various mediators who provide instruction, education, socialization skills, and services to children and families. Consultation is viewed as an indispensable role in the schools because it allows for the rapid communication of information and serves as a knowledge linking tool, facilitating the broad scale dissemination of information through a

“negotiated personal interaction with consultees” (Kratochwill, 1999). The consultation role is important to the current study because it is a role that emphasizes and shares key characteristics with prevention. Kratochwill viewed consultation as an excellent vehicle for school psychologists to convey to their school-based consultees the importance of prevention programming and pre-referral interventions. Like prevention programming, consultation has the unique advantage of providing opportunities to make an impact or influence a larger number of students.

Obstacles to Role Change

Bradley-Johnson and Dean (2000) pointed out that calls for change in the roles of school psychologists have been on-going for the past 50 years, but that while change has occurred, it has not been widespread. They argued that progress toward changing roles has been slow and a result of individual practitioners and programs. A number of researchers have examined the factors that have impacted or interfered with changes in the role and function of school psychologists. Lund, Reschly, and Connolly-Martin (1998) researched the impact of the current shortage of school psychology practitioners on school psychology services. A shortage in personnel is an important factor influencing current roles and functions (Fagan & Wise, 1994) and is linked to a number of job characteristics that may be affecting the number of people pursuing careers in the field. While the number of school psychology training programs has increased, the number of graduates has not been sufficient to meet the demands for personnel created by attrition in the field. Attrition has been associated with the high numbers of practitioners approaching retirement age and others experiencing professional “burn-out.”

Overall job satisfaction has been found to be high among school psychologists (Reschly, 1998; Reschly & Wilson, 1995), with more research needed to examine the factors that contribute to attrition in the field. Fagan and Wise cited research by Anderson, Hohenshil, and Brown (1984) and Levinson, Fetchkan, and Hohenshil (1988) that indicated that dissatisfaction seems to be closely related to school system policies and procedures and a perceived lack of opportunities for professional advancement in the field. Service ratios are highly dependent on having an adequate number of practitioners to meet the growing demands of students. While a ratio of 1,000 students to one school psychologist is recommended (NASP, 1992) and viewed as “necessary for implementation of all features of a broad role that includes substantial commitments to prevention and direct intervention” (Lund, et. al), few school districts are able to meet this recommendation. Reschly (2000) identified the following factors as influencing the number of school psychology practitioners employed in the public school setting: economic and employment conditions, “legal requirements concerning provision of services to groups of students such as students with disabilities (p.515),” and the roles of other related personnel (e.g. educational diagnosticians). Public education is financed by funds from federal, state, and local sources, resulting in stringent budgets that impact the types of services and personnel funded.

Shortages in personnel and high student ratios typically result in school psychologists having less time to take on alternative roles. Time allocation represents another obstacle to role expansion. Nastasi, Varjas, Bernstein, and Pluymer (1998) pointed out that time allocation has been shown to be critical in school psychologists being able to participate in mental health programming versus traditional assessment roles. They suggested a number of examples of how practitioners may be able to reallocate their time to allow them to

participate in a wider range of roles or activities. Suggestions include renegotiating role responsibilities with school administrators, reassigning some responsibilities to other staff (e.g. support staff implementing direct interventions), and examining or modifying current referral and assessment practices, which can be seen in systems that use a problem-solving approach or building/student assistance teams for prereferral interventions and data-collection.

Role perception has also been argued to be a major obstacle to role change and expansion. Narrow conceptualizations of the nature of psychological services by school administrators have a profound impact on the roles school psychologists assume in schools. At the most basic level, school psychologists are often viewed as a “guest” in the public school setting, and schools frequently have their own “house rules” that include what they view as the role and function of the school psychologists (Fagan & Wise, 1994). As guests, school psychologists may be perceived as not an integral member of the school setting or their involvement may be viewed as limited to serving special education populations, a point to return to shortly.

Administrators and others’ perceptions of school psychology roles are influenced by personal contact with school psychology practitioners, the history of services (e.g. dominance of the testing role) and continued mandates from the local, state, and federal levels that promote testing/assessment as the primary role of school psychologists. Bardon (1968) pointed out that public perception of school psychology is based on parents’, administrators’, and educators’ personal contact with practitioners in the field of school psychology. Based on these contacts, the public is discerning what are the services school psychologists provide that are “important and distinct enough to justify [their] being in the schools.” While the

mission of school psychologists is to serve all students, Sheridan and Gutkin (2000) argued that policies and mandates continue to focus services on remediation of problems. Similarly, Fagen and Wise (1994) stated that despite being in an “era of ideological transition to treatment and prevention in educational settings, we continue to see [some] educators and practitioners insisting on testing functions.”

School psychologists’ own perception of their roles and their definition of professional identity also impact role expansion. Nastasi (2000) viewed professional competence and professional development and identity as major challenges that inhibit school psychologists from more actively participating in comprehensive health care. Nastasi argued that practitioners need to change how they function and perceive themselves to bring about change in others’ perceptions of the profession and to bring about true role expansion. Rather than being insulated consumers of science that react to social and educational trends, she argued for a change in the role of practitioners to that of “action researchers,” -- proactively defining the scope of practice and their own professional identity. In response to this view of practitioners as more active participants in comprehensive health care, Christenson (2000) pointed out that practitioners will need to re-examine their professional identities, looking at how they envision their roles as well as addressing their own competencies and “states of readiness to engage in interprofessional collaboration for the education of all students.”

School psychology’s history and close affiliation with special education also represents a major barrier to role expansion. Fagan, Gorin, and Tharinger (2000) suggested that role expansion will continue to be stalled by school districts’ needs to maintain compliance with special education regulations and personnel shortages in the coming years.

Short (1999) argued that the assessment role has led to the alignment of school psychology with special education and that this alignment has resulted in limited opportunities for school psychologists to broaden their impact in the school setting. Aligning with special education has also created a lack of identification on the part of school psychologists with professional psychology outside the school setting. Finally, Short argued that aligning with special education reinforces a view of services as setting- or program-based versus “a broader child-based focus.” A more holistic view of student needs and services leads to a greater push for comprehensive services and a greater need for collaboration on the part of practitioners to provide these services. Short promoted the idea of school psychology adopting a professional identity that extends to cover a full-range of student and family needs. Similarly, DeAngelis (2000) stated that following the 1999 incident at Columbine High School, there has been a trend in redefining professional roles away from “isolated special education assessors” to increased collaboration to provided broad-based mental health services to students. Dwyer and Berstein (1998) also supported comprehensive mental health programming as enabling school psychologists to break away from special education and traditional assessment roles and be involved in “systematic, prevention- and intervention-oriented activities.”

Future and Evolving Roles

Fagan and Wise (1994) described the roles and functions of school psychologists as evolving through time. They described the field as moving through a series of phases, with “roles of necessity” broadening to “roles of possibilities” and the 1960’s through 1980’s being marked by a period of role preferences and dissatisfaction. The last phase in their history is characterized by growing opportunities for role expansion, which has been echoed

in the literature. In looking at school psychology within the 21st Century, Harrison (2000) described the field as at a “crossroads” and promoted the notion of practitioners taking an active role in addressing health and mental health needs of students. While caution must be given to the “futility of preparing practitioners to be all things to all people,” (Fagan & Sheridan, 2000), there exists a number of opportunities for expansion into broader roles in full-service schools and comprehensive systems of care. With this in mind, the following point of view from Sheridan and Gutkin (2000) provides a basis for looking at the future roles of school psychology:

We believe that school psychologists are the most highly trained mental health experts in the schools...It is our ethical responsibility to become involved in programs aimed at problems that are broader than assessing and diagnosing what is wrong with a child...school psychologists must become invested in addressing social and human ills...we must have a role in ameliorating their impact on the lives of children.

To be able to assume broader roles in schools, Tharinger (1995) argued for a greater awareness and preparedness by school psychologists for roles in emerging models of school-based and school-linked health and mental health services.

Prior to describing emerging models and the roles that school psychologists will be assuming in such models, it is important to look at shifts that the field must make in its views of services. Nastasi (2000) compared and contrasted the conceptual frameworks, professional identities, and professional practices of school psychology in the 20th and 21st Centuries. The 21st Century represents a shift in viewing the relationship between the person and environment as separate, but interacting entities, to viewing the person and his/her environment as “inextricably linked.” While past practitioners tended to focus on the individual’s functioning within the school, Nastasi promoted a framework in which the relationship between the person and his/her environment is dynamic and “synergistic,” with

practitioners adopting a more ecological perspective that looks at the individual within multiple contexts and domains of functioning (e.g. physical, social, emotional, and cognitive). Within such a framework, practice expands beyond the role of special education assessor reacting to the social and educational trends outlined by legislative and funding streams to a proactive professional and partner in comprehensive health care, which is defined as “an integrated system of culture-specific services ranging from prevention to treatment directed toward health, mental health, and related needs of students and their families” (Nastasi, Varjas, Bernstein, & Pluymert, 1998).

Reeder, Maccow, Shaw, Swerdlik, Horton, and Foster (1997) argued that changes in the provision of health care services is the “current impetus for the development of full-service schools,” with families seeking more expanded psychological services from schools because such services are not accessible through outside service providers. Accessibility has been impacted by escalating health care costs, increases in the number of uninsured individuals, and greater consolidation and streamlining of health and mental health services (DeMers, 1995). Reeder et al. viewed legislation and funding structures that result from reforms in the areas of health care, education, and social services as contributing to the push for expanded services in schools. Similarly, Reschly (2000) predicted that changes in school psychology roles will continue to be influenced by legal mandates and regulations, particularly with current reform highlighting comprehensive health service in schools and increasing access to health and wellness services and programs geared at improving mental health. Inherent in the language of the current reform movements is the holistic view of the child (Power & Heathfield, 1999). School psychology is viewed as an integral member of education and psychology, and both fields are in a state of transition with health care and

education reform movements (Alpert & Rigney, 1999). Alpert et al. predicted a broader role for school psychologists in preventive activities as a result of current reform movements, citing the Health Security Act of 1994 and its focus on health, prevention, social issues, and integrated communities. Power and Heathfield suggested that current reforms promote roles for school psychologists in the areas of prevention, intervention, program development and evaluation, and training.

As school psychologists approach expanding their roles in comprehensive systems of care, it becomes even more important for them to demonstrate their cost-effectiveness (Carney, 1996) and make themselves “indispensable” to the schools and communities they serve (Sandoval, 1999; Short, 1999; Alpert & Rigney, 1999; Doll, 1999). In particular, roles in the areas of consultation and collaboration, prevention, and early intervention are viewed as being cost-effective and central to emerging models that call for more comprehensive and cohesive services. Sheridan and Gutkin (2000) identified a number of roles for school psychologists in the 21st century, particularly in the areas of program evaluation and the implementation of empirically validated interventions and instructional methods. In addition, roles in pre-referral intervention, health, and mental health services were also recommended. Sheridan and Gutkin also recommended a need for school psychologists to move away from strictly focusing on microsystemic problems and move toward attending to macrosystemic issues affecting the schools, students, and families they serve.

This emphasis on macrosystemic issues promotes a greater role for practitioners in organizational change and reform. The notion of school psychologists taking a more active role in larger systems change is echoed in the literature. Knoff (1996) promotes the idea of school psychologists assuming roles as advocates at the state legislative and government

levels. Similarly Doll (1996) pointed out how practitioners have “not been active directors of the national paradigm shift toward new and more responsive ways of providing emotional and social support and treatment for children and youth with mental health needs.” Doll argued that practitioners need to “remind policy makers of the centrality of student mental health to national educational goals.” Beyond advocating for students, many have argued that school psychologists need to become more active in legislative and government levels to shape and influence policies that mandate the services and roles they provide (Adelman & Taylor, 1998, 2000; Knoff, 1996; Reeder, et al. 1997). Rather than passively reacting to policies and mandates, school psychologists need to be shaping the laws that dictate practice.

In addition to acting as direct service providers, a number of other indirect or consultative roles have been promoted in the literature. Silverman (1968) suggested that school psychologists become more instrumental in curriculum development, along with engaging in activities that shape the school environment and community efforts. Teaching and in-service training for school faculty and staff have also been widely encouraged roles. Reeder, et al. (1997) explored educational training of students, parents, and school personnel in the areas of mental health, learning and development, psychological aspects of illness, risk behaviors, and pregnancy-related issues. Silverman also viewed a role for practitioners in teaching about mental health and psychology as a trend for the future. Nastasi, et al. (1998) promoted the role of trainer or teacher consultant.

Related to providing professional development and training opportunities for school personnel, Bradley-Johnson and Dean (2000) argued that school psychologists should focus their attention on changing the behavior of “those who work with students daily” by engaging in consultation, in-service training, research, and program development for systems

change. In the area of research, a number of research agendas have been suggested, including epidemiological research (Doll, 1996), research exploring the efficacy and impact of integrated service delivery approaches (Shrag, 1996), evaluations of programs and interventions (Adelman & Taylor, 2000), and research looking at primary and secondary prevention (Kratochwill & Stoiber, 2000).

Consultation and increased collaboration with community agencies, particularly in the area of mental health programming has been viewed as a vital area for role expansion (Silverman, 1969; Reeder, et al. 1997; Carney 1996; Power & Heathfield, 1999). Carney argues that school psychologists need to work more closely with other community resources and develop school-wide programs aimed at enhancing mental health behaviors of students. Similarly, school psychologists are encouraged to focus on capacity building of schools and communities through the training and expansion of the work force, integration of community resources, and training and consultation with school professionals (Power & Heathfield, 1999). Consultation and collaboration is viewed as “greatly facilitating the delivery of preventive and intervention services” (Carney, 1996). In addition to consultation and in-service training on mental health topics, Tharinger (1995) envisioned roles for school psychologists in the assessment of emotional disturbances, the delivery of short-term individual/group/family counseling, and in primary and secondary prevention of mental health problems.

While roles in the design, implementation, and evaluation of mental health programs has been viewed as critical for the future, there has been some opposition to an expansion of school psychology into the area of mental health services (Bardon, 1968, 1983; Reilly, 1984). Bardon argued that the mental health orientation of practitioners will only result in greater

confusion in the relationship between school and external mental health providers, contributing to less role differentiation from other service providers. Similarly, Reilly encouraged greater professional identification with the field of education, focused on identifying new methods for enhancing student learning. He argued that “there are other types of psychologists much better trained to deal with mental health problems than school psychologists.” Despite these arguments, mental health programming, particularly in the areas of primary and secondary prevention, seems to represent an area in which school psychologists are viewed as being in a prime position to expand their roles and make significant contributions to society.

Prevention: Primary and Secondary

Prevention services are recognized as an important component of comprehensive systems of care and integrated services. Within the continuum of services described in more recent models of comprehensive systems of care, prevention is typically identified as the earliest level of service or care for students with mental health needs (Pfieffer & Reddy, 1998; Nastasi, 1998, 2000). Beyond being identified within the context of emerging models of service delivery, prevention has been promoted by the National Association of School Psychologists (NASP) as an important part of school psychological services. The NASP mission statement (1997) states: “The mission of the NASP is to promote educationally and psychologically healthy environments for all children and youth by implementing research-based, effective programs that prevent problems, enhance independence, and promote optimal learning.” The mission statement is supported by a push by NASP for an increased focus on prevention and early intervention in the training and continued professional development of current and future practitioners as well as at the policy level (e.g. federal

government and organizational policies promoting prevention programming). The Health Security Act (1994) and NASP initiatives focused on violence prevention and early intervention are examples of the promotion of prevention services through policy. An increased focus on training in prevention and health promotion was also predicted by Swerdlik and French (2000). Swerdlik and French identified growing opportunities for training programs to offer subspecialties or special proficiencies in the areas of preventive mental health services in the 21st Century.

The argument for greater involvement in prevention activities has not developed as a result of recent trends toward comprehensive mental health services in schools, but has surfaced at earlier points in the literature. As early as 1985, Bloom promoted roles for school psychologists in prevention, arguing that “if we insist on waiting until all direct treatment needs are met before allocating resources to prevention, we will doom our profession to continuation of the hopeless downward spiral in which we find ourselves now.” While school psychologists have typically focused on their roles as “sorter” and “repairer” through assessment and remedial interventions to address problems, more time, money and energy needs to be allocated to prevention and early intervention services (Hightower, Johnson, & Haffey, 1995). Hightower et al. addressed the paradigm shift from treatment to prevention as not involving a major change for practitioners in the field, arguing that prevention and treatment technologies can be similar, with the major differences being the time and target of intervention. They concluded: “The ever present need for more school psychology services, the continuing shortage of school psychologists, and the relatively small gains made in *treating* various learning problems, behavioral conditions, or mental disorders, all point to the need for further adoption of effective prevention programs.”

Caplan Model of Prevention

Caplan's (1964) conceptualization of prevention services is the most widely used model in the literature, with prevention being divided into three types or levels of programming/services: primary, secondary, and tertiary. Primary prevention is viewed as a means of "reducing the incidence or the number of new cases of a disorder occurring within a given population" (Zins, Conyne, & Ponti, 1988). Primary prevention "universally seeks to change the incidence of new cases by intervening proactively" or before disorders occur (Hightower, et al., 1995) and is directed at individuals who have not yet developed problems or who may be at risk for developing problems. The targets of intervention at the primary prevention level usually are groups versus individuals. In addition to being aimed at preventing problems, primary prevention is also directed at fostering or optimizing health, wellness and protective factors. Secondary prevention was described by Alpert and Rigney (1999) as "early treatment" of a disease or disorder and has been defined as the "early identification of problems and intervention before problems become severe" (Hightower, et al., 1995). Secondary prevention is aimed at "shortening the duration" and minimizing the intensity of symptoms or problems, with the overall goal of "reducing the prevalence of disorders" (Hightower, et al.). While primary prevention focuses on preventing the occurrence of problems, secondary prevention focuses on reducing existing problems. Hightower et al. suggest that children's psychological malleability and flexibility make them the optimal targets for secondary prevention efforts. They also limit their definition of "prevention" to primary and secondary prevention, viewing tertiary prevention as a form of treatment. Tertiary prevention is targeted at individuals who already exhibit moderate to severe symptoms or problems and encompasses all rehabilitative actions or attempts to

prevent further deterioration or to minimize the long-term effects related to these problems (Caplan, 1964; Zins, et al., 1988; Alpert & Rigney, 1999).

The three types of prevention outlined by Caplan are echoed in Nastasi's model for mental health programming (1998) and comprehensive health care (2000). Nastasi presents a conceptual framework for comprehensive services that includes a 4-level continuum of care: Level I/Prevention, Level II/Risk Reduction, Level III/Early Intervention, and Level IV/Treatment. Nastasi's prevention/Level I is directed at all students through integration into the general curriculum and system-wide programming while Level II/Risk Reduction is targeted more specifically at groups identified as being at high risk. Levels I and II are comparable to Caplan's definition of primary prevention, while Level III and Level IV closely follow the characteristics of secondary and tertiary prevention respectively. While primary prevention has been identified as being a "desirable, economical, and potentially worthwhile approach" (Zins et al.), school psychology has tended to focus on tertiary prevention or treatment, occasionally being involved in secondary prevention services. Eidle, Truscott, Meyers, and Boyd (1998) provided evidence of this in their qualitative investigation of four pre-referral intervention teams at the primary and secondary level. They found that none of the interventions designed and implemented by pre-referral teams were focused at lower levels of prevention or risk reduction. They concluded that remediation versus prevention was the typical focus of pre-referral or early intervention in response to student problems.

Characteristics of Primary Prevention

While exploring primary prevention as a means for school psychologists to expand their impact in the school setting, Zins et al. (1988) outlined a number of dimensions or

characteristics of primary prevention. Consistent with current and evolving service delivery models, primary prevention was characterized by an ecological orientation directed at three target levels: (1) the agents (e.g. people or things that create problems for students), (2) the environments or places where students experience health promoting or debilitating effects, and (3) the hosts or students themselves. In addition to drawing on an ecological perspective, Zins et al. viewed primary prevention as being focused or oriented toward the concept of wellness, stating that the focus is typically on groups of students who are currently functioning adequately. The problems or concerns that students are at-risk for developing may include demographic or genetic factors, life transitions, or normal developmental crises (e.g. adolescence). Primary prevention activities may include direct or indirect services and are proactive and may also seek to empower individuals to develop higher levels of functioning.

Primary prevention may also be characterized by a number of proactive efforts or methods (Zins et al., 1988; Hightower, et al., 1995). Enhancing student competencies through education and activities geared at informing, alerting, and increasing student awareness represent a preferred form of primary prevention. Examples would be direct instruction in decision-making or conflict resolution skills. Competency promotion or the development of coping strategies to deal more effectively with negative life demands, stressors, or crises may be a method of primary prevention. Primary prevention methods may also attempt to modify the environment by reducing or counteracting negative or harmful circumstances. This can be done by creating or enhancing social support systems and fostering positive relationships among community members and agencies. In addition to enhancing support systems, primary prevention may also be directed at empowering students

by helping them identify and utilize available resources more effectively. Finally, consultation and collaboration are vital components to primary prevention, with school psychologists and other service providers sharing their knowledge, skills, and expertise while working toward a goal of improved outcomes for all students.

Alpert (1985) expanded on the concept of primary prevention by describing three models of primary prevention and potential activities that school psychologists may assume within each of these forms/models of primary prevention: community, environmental, and individual primary prevention. Individual primary prevention is based on the underlying belief that individual's are vulnerable to maladjustment or problems as a result of a lack of skills. Individual primary prevention focuses on "the fostering of individual's skills and competence" by developing adaptive strengths and teaching skills. Environmental primary prevention occurs "within the school and involves social system analyses and modification," along with addressing the fit or degree of match between the person and his/her environment. Examples of environmental primary prevention include programs addressing dropout prevention and modifications or changes to the school environment (Alpert & Rigney, 1999). Community primary prevention involves interactions between the school and the community and examples include parent training programs or child respite centers providing respite services for families of children with disabilities. Regardless of the type of primary prevention, Alpert and Rigney argued that primary prevention should be a part of the role of school psychologists within the school and community contexts.

Roles in Prevention

Hightower, Johnson, and Haffey (1995) outlined a number of important roles or functions that school psychologists may assume when adopting a primary prevention

program. The roles or steps identified by Hightower et al. when adopting a primary prevention program are in line with the training and skills that school psychologists possess currently in intervention and program development, implementation and evaluation. Within the development or design stage of program adoption, Hightower et al. draw on the skills and expertise of school psychologists as they apply to conducting a formal needs assessments and engaging in systems analysis, along with their strengths and training in consultation. School psychologists may play an important role in identifying the needs and concerns of the school and its students, while identifying the current structures or resources within the school/community that may facilitate or support program implementation. Practitioners may have first-hand knowledge of the issues or concerns facing students, along with insight into the interventions that have been used in the past to address these concerns. The formal needs assessment may also require school psychologists to advocate for a shift in the orientation of the school setting away from addressing problems to a focus on issues of wellness and competency development. The training of school psychologists typically provides them with expertise and skills in critically reviewing the literature and empirical research on interventions, which is directly applicable to assuming a role in the review of existing prevention programs. Consultation skills of practitioners are important in developing relationships with shareholders and garnering their support for the adoption of a program.

Once an existing program has been identified or a prevention program has been designed, school psychologists have expertise and skills that are critical to the implementation stage of the process. Because of their experience and training in assessment and intervention, school psychologists are well-equipped to direct the implementation and ongoing evaluation of a program. Within the implementation process, school psychologists

may take a role in training and supporting school personnel who may be directly administering the primary prevention program. Their expertise in evaluation and data-based decision-making also prepares them for developing and incorporating an evaluation component into the program implementation stage. Once implemented, school psychologists support the maintenance of prevention programs through on-going consultation and evaluation addressing both the integrity and efficacy of the program. In addition to roles in the development, implementation, and evaluation of primary prevention programming, Hightower et al. encourage practitioners to become involved in research and training in this area. More research needs to be done to determine the efficacy of existing primary prevention programs, including research that seeks to validate the effectiveness of such programs across different settings, target populations, and over the course of time.

Obstacles to Prevention Program Adoption

If school psychologists already possess the skills for program design, implementation and evaluation, what seems to get in the way of school psychologists applying these skill to the adoption of primary prevention programs? Hightower, Johnson, and Haffey (1995) discussed a few of the obstacles to primary prevention programming. One of the major obstacles to prevention is the perception or attitudes of school professionals and shareholders toward the need for prevention programs. School psychologists face a major challenge in trying to shift the focus of their work from addressing problems to issues of wellness and prevention. Faced with pressing student problems, school professionals often look for immediate solutions to these problems, with little time or consideration given to identifying the potential causes and to preventing or intervening earlier. School personnel may also have unrealistic expectations when it comes to prevention programming, particularly as it relates

to the time involved to demonstrate program effectiveness. Hightower et al. pointed out that “it takes time to *prevent* something or to know if something has been prevented.” School personnel looking for an immediate change or impact may view prevention programs as unsuccessful. Hightower et al. highlighted the fact that research evaluating the impact and effectiveness of primary prevention programming is in its infancy. School personnel are more likely to recognize the importance of primary prevention programming when there is empirical evidence supporting its usefulness and effectiveness in preventing and reducing the occurrence of student concerns. Hightower et al. also pointed to a lack of federal or state funding or policy mandates that promote the adoption and implementation of prevention programming in the schools. While placement of students in special education programs may result in increased funding for resources and student services in school districts, there are few funding streams for successful prevention programs. Hightower et al. pointed out that some state departments of education and mental health have issued “Requests for Proposals” that promote prevention programming. In addition, they also highlighted the existence of federal agency grants that have been earmarked for prevention program implementation and research.

Beyond obstacles related to support for, funding for, and time directed toward prevention programming, the competencies of school psychologists may also represent potential obstacles to roles in primary prevention programming. While school psychologists have documented skills, knowledge and expertise in the areas of consultation, collaboration, and intervention, less is known about the preparedness and ability of school psychologists to take leadership roles in the area of prevention programming. Typically, school psychology training programs do not address prevention science within their curriculum or training

experiences. A lack of specialized training in prevention science, along with practitioners' interest/attitudes and self-perceived competencies in prevention activities may represent a major obstacle for roles in prevention programming.

Implications for Training

Training and continued professional development are vitally important to effective and responsive services that address the needs of schools, students, and their families/communities. Carey and Wilson (1995) argued that the impact of practitioners' training on their practice throughout their career is significant. They cited research by Lambert (1993) that showed that most practitioners and trainers continue to rely heavily on the techniques and tests learned in their university training programs throughout the length of their careers. Despite training programs having a profound impact on the current and future practice of school psychologists, Fowler and Harrison (1995) argued that the estimated half-life of school psychology training is between three to five years. The needs of schools and communities are constantly changing, and the skills, knowledge base, and expertise of practitioners attempting to meet those needs must change and expand to stay relevant and applicable. Friedman and Duchnowski (1990) viewed a widening gap existing between public sector or school approaches and needs and the emphasis and content of university-based training programs. As the needs of schools/society and the roles/functions of practitioners change, the emphasis and curriculum of training programs must also evolve. In addition, continuing professional development plays a critical role in keeping practitioners current with trends/shifts in service delivery.

With the numerous calls for role expansion and various predictions for the future of school psychology as a profession, there exists a variety of suggestions regarding the

preparation, training and continued professional development of practitioners in the field. The literature regarding future directions of the field and their implications for the training of practitioners includes calls for increased or enhanced training in skill or competency areas already viewed as critical to the field (e.g. consultation, direct intervention, evaluation/research skills, etc.), along with suggestions for an expansion of training content and experiences to develop new or previously ignored skills and knowledge bases. Training in health-related issues, behavioral health, intervention strategies, pharmacological treatments, ecologically-oriented assessment and intervention, educational reform, and crisis intervention represent just a few of the training areas that have been discussed in the literature (Friedman & Duchnowski, 1990; Carey & Wilson, 1995; Reeder, Maccow, Shaw, Swerdlik, Horton, & Foster, 1997; Nastasi, 2000).

While school psychologists are viewed as having expertise and extensive knowledge in consultation skills and models of consultation, many authors push for further expansion or enhancement of training in the area of consultation (Knoff, 1990; Carey & Wilson, 1995; Sheridan & Gutkin, 2000). This is often predicated on the realization that consultation skills will be essential for school psychologists in forming collaborative relationships with school and community professionals to bring about changes in the perceived roles and functions of school psychology practitioners. “We can train school psychologists in all sorts of direct service skills, but if they are unable to get resistant systems to accept these services, then all the training is for naught” (Knoff, 1990). Sheridan and Gutkin argued for a reevaluation of school psychologists’ skills, pointing out that current training in behavioral change may be more useful if directed toward influencing teachers and administrators who are often responsible for implementing programs. All three of these authors, along with Nastasi

(2000), favor expanding training to include more attention to and increased opportunities for joint training experiences with other professional disciplines, arguing that interdisciplinary experiences will enhance collaboration and understanding among professionals in the schools. In addition to increasing opportunities to train and collaborate with other disciplines, Nastasi (2000) and Reeder, et al. (1997) argued for more experiences in systems-level and organizational consultation. Curtis (2000) suggested that the absence of training in systems-level change in both specialist and doctoral training programs continues to hinder practitioners' efforts to engage in prevention and intervention-based services.

Consultation, particularly as it relates to systems-level or organizational change, is viewed as one of the critical skill areas for expanded roles in prevention and health promotion. Systems-level and organizational consultation are viewed as essential for the role of capacity building in schools and communities (Nastasi, 2000). Capacity building includes skills to accurately assess the needs of the target community, along with skills to plan programs that will sustain such needs (Power, 2000). Nastasi argued for expanded skills and knowledge in health risks, social morbidities, and prevention research and practice. Sandoval (1999) echoed this argument, promoting the need for training that emphasizes health and barriers to normal development versus focusing on pathology. Training should include "research-based models of the causes of the conditions we are hoping to prevent" and should address research and information about stress, coping, resiliency, and public health models. While Reeder et al. (1997) argue that an increasing number of training programs provide training in preventative mental health programs, Cole (1996) cited research by Furlong, Babinski, Poland, Munoz and Boles (1996) that suggested that while school psychologists are involved increasingly in school violence prevention programs, many do not

feel competent in providing such programs. Furlong et al. cited a lack of specialized training in prevention programming as impacting practitioner competence. Zins and Wagner viewed a greater understanding of prevention and wellness promotion programming and their benefits as critical components in the preparation and training of school psychologists. They argued that skills and expertise in this area has been viewed as a “frill” versus an “essential ‘survival’ skill” for practitioners entering the workforce. Despite a lack of training in prevention and health promotion, Zins and Wagner (1997) argued that consultation skills and behavioral-change strategies that school psychologists already possess are applicable to health promotion and prevention programming. With the prediction for more prevention and promotion services and comprehensive health programs in schools, Zins and Wagner promoted further training in these areas to prepare practitioners for leadership roles in the changing school environment. The evaluation and research skills that school psychologists possess are also applicable for preparing them for leadership roles in prevention programming. Sandoval (1999) argued that by utilizing outcome data and skills/expertise in program evaluation, school psychologists will be in a better position to gain the support of school administrators who make decisions regarding the implementation of programs. By also showing that prevention programming works, practitioners will become more indispensable to the schools and communities they serve, while expanding their professional identity (Sandoval, 1999).

CHAPTER 3: METHOD

Participants

The present study surveyed a national sample of school psychologists from the National Association of School Psychologists (NASP) and Division 16 of American Psychological Association (APA). Participants for the current study were randomly drawn from membership lists from both NASP and the APA's Division 16. A sample of 500 members of NASP and 500 members of Division 16 of APA was randomly drawn from 2003 membership lists. A comparison of APA and NASP membership lists was conducted to eliminate duplication of participants solicited and to ensure unique participant samples. Of the 1,000 surveys mailed, 21 were returned as undeliverable. A total of 14 sample participants indicated they were not eligible for the study because they were not currently working as practitioners in school psychology (e.g. students in graduate programs in school psychology, faculty in training programs, or retired practitioners). Of the remaining sample members (N = 965), 320 participants returned usable surveys for a return rate of 33.2%.

Procedure

Return rates for national school psychology surveys have been highlighted in the literature as a major methodological issue that complicates interpretation of empirical results (Reschly & Wilson, 1995). The current study utilized surveying procedures similar to that of Reschly and Wilson (1995), which resulted in return rate of 80% for school psychology practitioners and 78% for faculty surveys. Participants received a cover letter, survey, and self-address, postage-paid envelope for the return of the survey. The cover letter briefly described the purpose, the associated risks, and the estimated time it would take to participate in the study. Participants were instructed to complete and return the survey within 8 weeks.

While Reschly and Wilson limited the mailing of reminder postcards to non-respondents, the current survey was anonymous with reminder postcards being mailed to all participants 10 days and 4 weeks after the original instrument was mailed. School psychologists' participation in the survey was voluntary and confidential. Completion and return of the survey served as consent to participate in the study. No identifying information was collected or used in the current survey to preserve the anonymity and confidentiality of participant responses. The current study and all related documentation (e.g. letter of solicitation, postcards, and survey) were reviewed by the Iowa State University Institutional Review Board and received an exemption (see Appendix A). The solicitation letter and reminder postcards are in Appendix B.

Measures

The survey was developed for use in the current study (see Appendix C). The first section of the survey asked participants to provide demographic information, including gender, race/ethnicity, age, primary field(s) of graduate study, highest educational degree earned, and number of years of work experience as a school psychologist and in current school psychology position. Section II of the survey addressed information about employment setting demographics and professional roles/activities. Information on employment demographics/characteristics was collected, including the nature of employment setting (e.g. rural/urban/suburban, school/clinic/private practice), types of schools served (e.g. elementary, middle school, high school), and size and racial/ethnic make-up of student population (e.g. practitioner to student ratios). Participants were asked about their involvement in scholarly and professional activities, including participation in professional organizations, contributions to journals, and presentations at conferences. Respondents were

asked about the estimated amount of time they spend engaging in special education eligibility services, intervention services, and prevention activities.

The third section of the survey assessed practitioners' involvement in and obstacles to prevention programming. Levels of prevention activities were defined in the survey and participants were asked to classify their involvement based on these definitions. In regard to prevention, participants were asked to estimate the amount of time they spend per week on primary, secondary, and tertiary prevention activities. In addition, respondents were asked to indicate the types of prevention programming they have engaged in, including the focus of prevention programs (substance abuse prevention, violence prevention, mental health prevention, and the prevention of academic and social/behavioral problems), level of prevention (primary, secondary, and tertiary), and types of prevention activities (program development, implementation, and evaluation/research). Two self-report measures of current involvement in prevention activities were used to examine differences between practitioners who reported greater or less involvement in prevention: (1) percent of time spent on prevention programming and (2) a calculated percent based on the number of hours per week participants reported spending in primary prevention. In regard to obstacles, participants were asked to rate each on the degree to which they represent an obstacle to the provision of prevention programming using a 4-point likert scale.

Section IV of the survey required participants to use a likert scale to rate the degree to which their training program prepared them for roles in prevention programming, along with a variety of more traditional professional roles and functions. Participants were also asked to rate the degree to which each skill was developed through continued professional

development opportunities. Finally, practitioners were asked to rate their level of confidence in each skill areas.

CHAPTER 4: RESULTS

Sample and Demographics

The practitioner sample consisted of 79 males (24.7%) and 241 females (75.3%), which was comparable to the APA and NASP membership lists that were used for selection of the random sample. The APA list from which we sampled consisted of 36.3% males and 63.3% females, while the NASP membership list was 72.9% female and 27.1% male. The age of participants ranged from 23 to 79 years old, with a mean age of 46 years old ($SD = 12.3$). There was a statistically significant difference ($t[288] = 3.65, p = .0001$) between the mean age of males ($M = 51.0, SD = 10.4$) and the mean age of females ($M = 44.7, SD = 12.4$) in the sample.

In regard to ethnicity, 92.2% ($N = 295$) of the respondents identified as Caucasian, 2.8% ($N = 9$) as African American/Black, 2.8% ($N = 9$) as Hispanic/Latino, 1.3% ($N = 4$) as American Indian or Alaska Native, and 0.9% ($N = 3$) as multiethnic. These values were again comparable to the NASP membership characteristics, which were as follows: 90.7% Caucasian, 2.6% African American/Black, 3.6% Hispanic/Latino, 1.2% Asian American, 0.5% American Indian, and 1.4% other/unspecified. The characteristics of the APA membership populations from which we sampled followed a similar pattern: 71.4% Caucasian, 1.4% African American/Black, 3% Hispanic/Latino, 0.3% Asian, 0.3% Multi-ethnic, and 23.6% unspecified. A more detailed breakdown of ethnicity by gender is presented in Table 1. No statistically significant differences were found in the ethnic distributions between genders, but 4.1% of females in the sample identified as African American/Black while no males in the sample identified in this ethnic group.

Table 1. Ethnic demographic groups by gender of participants.

ETHNICITY	<u>MALES</u>	<u>FEMALES</u>
	Percent (n = 79)	Percent (n = 241)
Caucasian	94.9% (n = 75)	91.7% (n = 221)
African American/Black	0	4.1 (10)
Hispanic/Latino	2.5 (2)	4.1 (10)
American Indian/ Alaska Native	2.5 (2)	0.8 (2)
Asian/Pacific Islander	0	0
Multiethnic	0	1.2 (3)

Educational Background

Participants were asked to provide information on their educational training. A majority of respondents (55.6%, $N = 178$) reported completing a doctoral degree in school psychology, while 35% had a specialist degree ($N = 112$) and 9.4% ($N = 30$) had a masters degree in school psychology. A summary of the highest degree earned in school psychology by gender is presented in Table 2. There were no significant gender differences for highest degree earned.

Table 2. Highest degree earned in the field of school psychology by gender of participants.

	<u>MALES</u>	<u>FEMALES</u>
	Percent (n = 79)	Percent (n = 241)
Masters Degree	5.1% (n = 4)	10.8% (n = 26)
Specialist Degree	30.4 (24)	36.5 (88)
Doctoral Degree	64.6 (51)	52.7 (127)

A majority of practitioners sampled (87.5%, $N= 279$) reported having earned graduate degrees in school psychology. Participants were also asked to indicate if they had completed graduate degrees in other related fields (e.g. counseling psychology, educational psychology, school counseling, etc.). Of the practitioners survey, 19.1% ($N = 61$) reported earning a graduate degree in educational psychology, followed by 12.9% ($N = 41$) reporting degrees in clinical psychology, 7.2% ($N = 23$) in counseling psychology, and 6.9 % ($N = 22$) in school counseling or counselor education. Outside of these primary fields of study, 16.9% ($N = 54$) reported earning graduate degrees in “other” related fields, including, but not limited to, education, educational administration, developmental psychology, community psychology, special education, applied behavioral analysis, and joint programs in clinical and school psychology. A summary of the degrees earned in various fields of study by gender is presented in Table 3. Chi-square analysis revealed a significant difference in the percentage of females versus males who held degrees in school counseling or counselor education ($X^2 = 5.43$, $df = 1$, $p = .02$). A greater proportion of males (12.7%, $N = 10$) reported earning degrees in the fields of school counseling or counselor education versus 5% of female practitioners. A marginally significant gender difference in graduate degrees earned in school psychology ($X^2 = 3.98$, $df = 1$, $p < .05$) was also found with a greater proportion of females in the sample earning graduate degrees in school psychology (89.6%, $N = 215$).

Since school psychology training programs are often affiliated with a number of different colleges (e.g. colleges/departments of psychology and/or education) which may contribute to differences in training philosophy, participants were asked about the academic department or college with which their school psychology training program was affiliated. Most participants (42.5%, $N = 138$) reported that their training program was affiliated their

university's college or department of education, while 31.2% of participants' programs ($N = 99$) were affiliated with a department of psychology and 18.3% ($N = 58$) were affiliated with joint psychology and education departments. Three participants did not respond to this question and 22 participants (4.3%) indicated that their school psychology training program was affiliated with some other academic college or institution, including professional schools of psychology or counseling departments. Of these 22 practitioners, the majority selected "other" because they had earned separate graduate degrees from both departments of education and psychology.

Table 3. Graduate degree fields of study by gender of participants.

	<u>MALES</u> Percent (n = 79)	<u>FEMALES</u> Percent (n = 240)
School Psychology	81% (n = 64)*	89.6% (n = 215)
Counseling Psychology	8.9 (7)	6.7 (16)
Educational Psychology	20.3 (16)	18.8 (45)
Clinical Psychology	10.1 (8)	13.8 (33)
School Counseling/ Counselor Education	12.7 (10)*	5.0 (12)
Other Related Fields	19 (15)	16.3 (39)

* Significantly different at $p < 0.05$ level

Employment Demographics

Participants were asked to provide information about their employment status, including whether they worked part-time or full-time, the number of years of school psychology experience they had, and the number of years in their current position. Of the participants who answered regarding employment status, 82.3% ($N = 256$) reported working

full-time. A marginally significant difference was found in the percentage of females (79.9%, $N = 187$) versus males (89.61%, $N = 69$) who were employed full-time ($X^2 = 3.74$, $df = 1$, $p = .053$). The mean for the number of hours worked for participants reporting part-time employment was 21.1 hours per week ($SD = 6.5$).

Years of experience in the field of school psychology ranged from 0 to 40, with the mean number of years being 14.9 years ($SD = 10.3$). A statistically significant gender difference ($t[311] = 5.39$, $p = .0001$) in the number of years worked in the field of school psychology was found with females having worked in the field for a mean of 13.2 years ($SD = 9.6$) and males working for a mean of 20.1 years ($SD = 10.6$).

Last, the range for the number of years in the practitioners' current position was 0 to 32 years, with the mean number of years in current position being 9.4 ($SD = 8.5$). Similar to the gender differences found for number of years of experience in school psychology, there was a statistically significant difference ($t[299] = 3.61$, $p = .0001$) in the mean number of years in their current position between males (12.5 years, $SD = 9.9$) and females (8.4 years, $SD = 7.8$).

Practitioners were asked about specific characteristics of their employment setting. A large majority (86.8%, $N = 275$) of practitioners reported that their primary work setting was in a school or school district, while 4.7% ($N = 15$) work primarily in private practice and 1.3% ($N = 4$) work in a hospital setting. A small number of respondents (7.3%, $N = 23$) stated they worked in a setting "other" than a school, private practice, or hospital. Within this category, practitioners reported that their primary work setting was a residential treatment facility, university, non-profit agency, research institute or was evenly split

between the above mentioned settings (e.g. half time in the schools and half time in private practice). No gender differences were found in regard to the type of work setting.

Practitioners were also asked about the geographic nature of their primary work setting (e.g. largely urban, largely suburban, largely rural or other). Of the 315 respondents to this question, 54.3% ($N = 171$) reported working in a largely suburban setting, while 25.1% ($N = 79$) labeled their primary work setting as largely urban and 14.9% ($N = 47$) as largely rural. For those responses falling into the other category (5.7%, $N = 18$), most represented a work assignment that was a combination of the three above mentioned categories. No statistically significant differences were found for geographic nature of primary work setting based on gender.

In addition to a primary work setting, 34.4 % of practitioners ($N = 110$) reported working in a secondary employment setting. A total of 100 people specified a secondary employment setting and within this group, 22 practitioners were teaching at the college level and 51 practitioners reported working in private practice. Chi-square analysis revealed a statistically significant difference ($X^2 = 15.44$, $df = 1$, $p = .0001$) in the percentage of males (53.2%, $N = 42$) versus females (28.8%, $N = 68$) who reported working in a secondary employment setting.

In regard to employer characteristics, practitioners were asked to indicate who employed them as a school psychologist. A majority of practitioners (80.7%, $N = 251$) reported being directly employed by a school district while only 8% ($N = 25$) of practitioners reported working for an educational agency/intermediate unit/special education cooperative, and 4.5% ($N = 11$) were employed by a private school. Twenty-one practitioners (6.8%) responding to this question reported being employed as a school psychologist by someone

other than a school district, private school, or educational agency. Employers mentioned under the category of “other” included non-profit community agencies, hospitals, universities, or self-employment. No significant gender differences were found for type of employer.

Practitioners were asked to indicate the number of schools they served in their current position. The range for total number of schools served was 0 to 43, with a mean of 2.84 ($SD = 4.16$) schools served. Of practitioners surveyed, 29% reported serving only elementary schools, 14.3% served elementary and middle school populations, and 21.7% served elementary through high school populations. A little over one third of practitioners surveyed (34.9%) did not serve an elementary school setting. Practitioners were asked to provide an estimate of the ratio of school psychologists to students in their work setting. The distribution for the service ratio was positively skewed, with a minimum value of 30 and a maximum value of 17,000. The median value for the practitioner to student ratio was one school psychologist to 1,250 students ($SD = 1440.5$). No statistically significant differences in number of schools served or service ratio were found based on gender.

Professional Activities and Involvement

Practitioners were asked to report on their involvement in professional organizations/associations and professional activities (e.g. teaching, presentations, and publications). Practitioners reported membership in NASP, APA, both APA and NASP, and neither (e.g. other professional organizations other than NASP and APA). Half of the practitioners surveyed (50%, $N = 158$) reported sole membership in NASP, while 11.4% ($N = 36$) reported membership in APA. Of the practitioners surveyed, 32.6% ($N = 103$) reported joint membership in both APA and NASP, while 6% ($N = 19$) of practitioners reported that

they were not members of either APA or NASP. In addition to membership in national professional organizations, 57.9% of practitioners ($N = 183$) reported membership in their state school psychology association. The percentage of males and females by professional organization are presented in Table 4. Chi-square analysis showed a significant gender difference for affiliation in professional organizations ($X^2 = 9.119$, $df = 3$, $p = .028$) with a larger percentage of males reporting membership in APA versus females.

Table 4. Professional organization affiliation by gender of participants.

	<u>MALES</u> Percent (n = 78)	<u>FEMALES</u> Percent (n = 238)
NASP	47.4 (n = 37)	50.8 (n = 121)
APA	20.5 (16)	8.4 (20)
NASP & APA	28.2 (22)	34 (81)
Neither	3.8 (3)	6.7 (16)

Practitioners were asked to report the number of workshops, in-service training sessions, and seminars they have taught/facilitated in the past five years. The mean number for seminars/in-services/workshops taught during this time period was 5.7 ($SD = 10$). In addition, practitioners were asked about the total number of articles they have had published in professional journals. The mean for total number of articles published was 0.8 ($SD = 2.2$) articles. Finally, practitioners were asked about the number of presentations (including posters) they have given at professional conferences. The mean for presentations at professional conferences was 2.2 ($sd = 5.1$). No differences were found for these variables in regard to gender.

Based on the assumption that doctoral-level practitioners may be more involved in professional activities, including research, it was decided to conduct further analysis looking at potential differences in the number of published articles, workshops presented, and presentations at professional conferences based on highest degree earned. Mean number of workshops taught, articles published, and presentations at professional conferences by highest degree earned is reported in Table 5. Effect sizes for the difference in the means were also calculated (Cohen's *d*) and are reported in Table 5. Significant differences were for the number of articles published and number of presentations at professional conferences when practitioners were grouped by the highest degree earned. An analysis of variance and post hoc tests showed no significant difference between practitioners with a specialist degree versus masters degree for these three measures of professional activities. On the other hand,

Table 5. Mean and standard deviations for number of workshops taught, articles published, and presentations by highest degree earned.

	<u>Masters</u> Mean (SD)	<u>Specialist</u> Mean (SD)	<u>Doctoral</u> Mean (SD)	<u>F</u>	<u>p</u>	<u>d*</u>
Workshops	3.80 (5.5) _a	3.78 (4.9) _a	7.21 (12.4) _b	4.66	.013	0.34
Journal Articles	0.33 (0.8) _a	0.19 (0.7) _a	1.23 (2.8) _b	8.72	.0001	0.44
Presentations at Conferences	0.77 (0.3) _a	0.75 (0.2) _a	3.35 (0.5) _b	10.70	.0001	0.52

Note. Means in the same row with the same letter do not differ significantly from one another.

* Cohen's *d*

doctoral level practitioners were significantly different from specialist-level practitioners on the numbers of workshops/trainings taught in the past 5 years, number of published journal articles, and number of presentations at professional conferences. Doctoral level practitioners reported presenting a mean of 7.21 workshops/seminars in the past five years

versus masters ($M = 3.80$) and specialist practitioners ($M = 3.78$). Similarly, doctoral level practitioners reported a mean of 1.23 articles published in professional journals compared to their non-doctoral counterparts whose average number of publications was less than one article. Last, doctoral level practitioners reported a greater number of presentations at professional conferences ($M = 3.35$) versus masters ($M = 0.77$) and specialist ($M = 0.75$) level school psychologists.

Tests of Research Questions

Question # 1: To What Extent Are School Psychologists Engaging In Prevention Activities?

Prevention involvement: Engagement of time

Involvement in prevention activities was quantified in three ways in this study: percent of current time spent in prevention activities; number of hours spent on primary, secondary, and tertiary prevention activities; and the types/focus of prevention activities. All measures were based on self report. Participants were asked first to estimate the percent of time that they currently devoted to the following six role/activity categories: psychoeducational assessment, intervention, problem solving consultation, systems/organizational consultation, research/evaluation, and prevention programming. Each role category included a brief description/definition of the types of activities falling in the category. Prevention programming was described as including the “development of new programs, review of existing prevention programs, implementation of prevention programs, evaluation of the effects/integrity of prevention programs, and research on prevention programming.” Participants were directed that the percentage of time spent in each of the six categories should sum to 100%. Participants’ self report of the percentage of time spent on

prevention programming provided the first measure of general involvement in prevention programming and will be referred to in this discussion as the reported percent involvement in prevention.

To further explore practitioner engagement in the three levels of prevention (primary, secondary, and tertiary prevention), practitioners were presented with definitions for the three levels of prevention programming and asked to estimate the number of hours per week they spent on each type/level of prevention programming. This resulted in three values: the number of hours per week spent in primary, secondary, and tertiary prevention. It should be noted that upon examination of these values, there was a trend for the hours spent in prevention activities to be inflated by respondents (e.g. participants reporting that they spent a total of 40 or more hours per week when the values for all three levels of prevention activities were summed. It was assumed that participants may have believed that they had to account for their entire work week under the three headings of primary, secondary, and tertiary prevention. In examining the data, it appeared that there was good consistency in participants' interpretation of the activities falling under that heading of primary prevention, but less consistency in what many participants considered to be secondary or tertiary prevention. It appears that many roles/functions (e.g. intervention, etc.) that do not fall under the heading of prevention were being considered as secondary or tertiary prevention. Based on the greater consistency in the literature and in the data around what constitutes primary prevention, it was determined that the focus of the data analysis would be on involvement in primary prevention.

The reported hours per week for primary prevention were standardized using a 40-hour work week. Because the sample surveyed included full-time and part-time

practitioners, these corrected prevention hours were converted to a percent of total time worked during a week. Full-time employment was based on 40-hour work week and thus, 40 was used as the denominator in calculating the self-reported percentage of time spent in prevention activities. For part-time practitioners, the number of total part-time hours per week was used as the denominator for calculating the percent of primary prevention involvement, with the number of hours per week spent in primary prevention as the numerator. This resulted in a value for each participant called the *calculated primary prevention percent*.

Table 6. Frequency distribution for current percent of time spent in prevention activities.

<u>Current % time spent in prevention activities</u>	<u>Frequency</u>	<u>Cummulative Percent</u>
0	138	45.0
1	16	50.2
2	10	53.4
3	10	56.7
5	64	77.5
6-10	49	93.5
15-20	14	98.0
25-45	6	100

The frequency distributions for the reported percent of involvement in prevention and for calculated primary prevention hours were positively skewed. The frequency distribution for practitioners' reported percent of current involvement in prevention programming is presented in Table 6. Less than half of the practitioners (45%) reported no involvement in prevention currently. The median was 1% (or approximately 0.4 hours in a full-time work week) of participants' current time being spent on prevention programming. A similar pattern was seen for the calculated/corrected primary prevention hours, with the mean being

2.4 hours per week of primary prevention and the median being less than 0.5 hours per week of primary prevention (or 1.25% of his/her full-time work week). A majority of practitioners surveyed (90%) reported doing less than 6 hours of primary prevention activities per week. The values for the calculated primary prevention hours/percents are slightly higher than those for the reported percent of prevention involvement as expected with the inflation by respondents.

Prevention involvement: Focus of prevention

In addition to being asked about the amount of time spent in primary prevention activities, school psychologists in the study were asked to report their involvement in prevention activities targeting violence prevention, substance abuse prevention, mental health prevention, and the prevention of academic and behavioral/social problems. Of those reporting involvement in primary prevention activities, 33.6% ($N=99$) reported involvement in the prevention of social/behavioral problems, 30.1% ($N=89$) reporting involvement in the prevention of academic problems, 24.8% ($N=73$) in mental health prevention, and 24.4% ($N=72$) in violence prevention programming. Less than 10% ($N=29$) reported being involved in primary prevention programming geared at substance use/abuse.

Within each of these target areas of prevention, participants were asked to report whether or not they were involved in the development, implementation, and evaluation of primary prevention programs and primary prevention research. Evaluation of primary prevention programs is comprised of formative and summative evaluation to determine the effectiveness of the program during or after its implementation, while primary prevention research is viewed as any other activities in which practitioners may be investigating primary prevention programming and reporting their results. In addition, they were asked whether

Table 7. Percent of practitioners reporting involvement in target areas of prevention and types of programming activities.

<u>All participants responding to this item (N = 292-296)</u>					
	<u>Violence Prevention</u> (N= 295)	<u>Substance Abuse Prevention</u> (N= 292)	<u>Mental Health Prevention</u> (N= 294)	<u>Academic Prevention</u> (N = 296)	<u>Behavioral/Social Prevention</u> (N= 294)
Program Development	33.2% (n = 98)	11.6% (n = 34)	41.8% (n = 123)	50.3% (n = 149)	59.5% (n =175)
Program Implementation	35.6 (105)	16.8 (49)	51.4 (151)	56.8 (168)	64.7 (191)
Program Evaluation	18.6 (55)	7.5 (22)	28.9 (85)	38.5 (114)	42 (124)
Prevention Research	4.1 (12)	1.0 (3)	5.4 (16)	5.1 (15)	7.1 (21)

<u>Individuals who reported being involved in primary prevention the following target areas</u>					
	<u>Violence Prevention</u> (N= 72)	<u>Substance Abuse Prevention</u> (N= 28)	<u>Mental Health Prevention</u> (N= 72)	<u>Academic Prevention</u> (N = 89)	<u>Behavioral/Social Prevention</u> (N= 98)
Program Development	66.7% (n = 48)	57.1% (n = 16)	70.8% (n = 51)	75.3% (n = 67)	79.4% (n= 77)
Program Implementation	77.8 (56)	75.0 (21)	86.1 (62)	78.7 (70)	85.7 (84)
Program Evaluation	38.9 (28)	28.6 (8)	47.2 (34)	56.2 (50)	56.1 (55)
Prevention Research	12.5 (9)	3.6 (1)	9.7 (7)	9.0 (8)	11.2 (11)

they were involved in research of primary prevention programming in these target areas. A summary of practitioners' involvement in the development, implementation, evaluation and research of primary prevention programs in the five target areas of prevention is presented in Table 7. The top portion of the table represents the percent of involvement in the different types of prevention activities across the five target areas for all practitioners who responded to these items. The bottom half of the table provides the percent of involvement in the different prevention activities for those individuals who reported doing primary prevention in each of target areas of prevention. Data are reported for those practitioners who reported being involved in primary prevention in each target area. Based on visual examination of the data, the pattern was for practitioners to be much more involved in the development and implementation of prevention programs than in program evaluation or research in primary prevention. In contrast, involvement in program evaluation and research in primary prevention is substantially lower in each of the five target areas than reported involvement in development and implementation.

Question # 2: How Are Practitioners Who Engage in Prevention Activities Different From Those Who Report No Involvement in Prevention Activities?

Personal demographics and educational background

The self-reported percent of current time spent on prevention programming and the calculated (corrected) percent of primary prevention time was used to determine if there were any differences between practitioners who reported greater or lesser involvement in prevention. An analysis of variance determined no differences between genders on either of the quantitative measures of prevention involvement. In addition, no differences were found between minority and majority (Caucasian) ethnic groups. Practitioners' age was not found

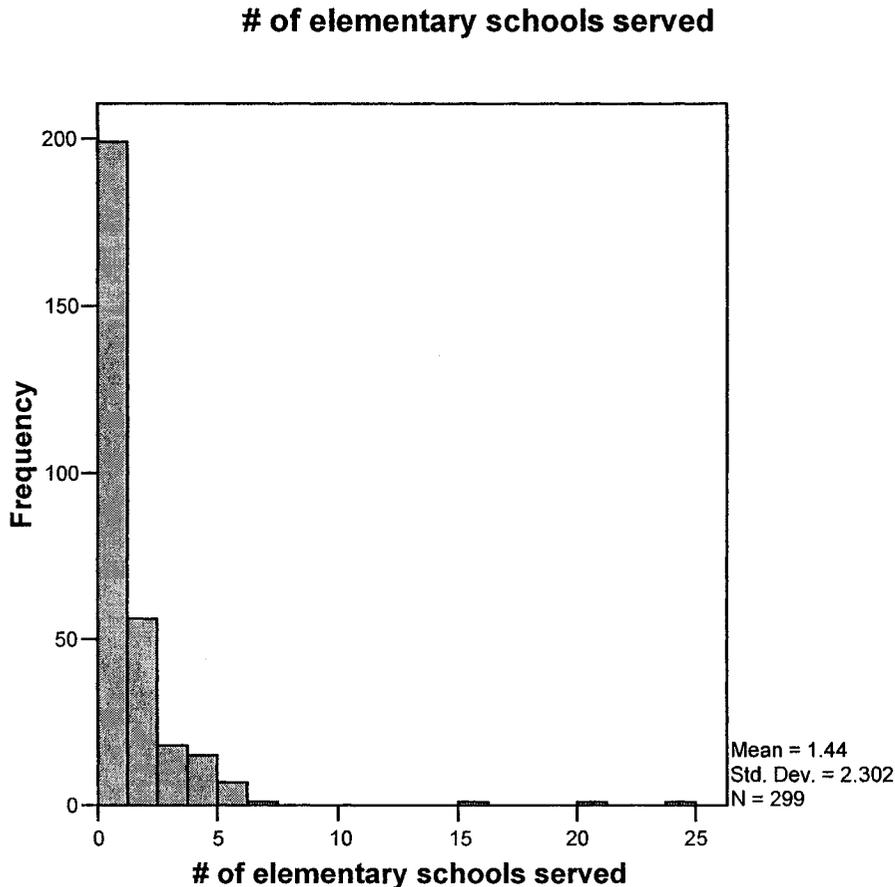
to correlate significantly with either of the quantitative measures of prevention involvement. While there was no significant difference on either measure between levels of degree earned (e.g. masters, specialist, and doctoral), there was a significant difference between practitioners who had earned a degree in school psychology versus those who did not have degrees in school psychology for self-reported percent of involvement. Practitioners who had not earned a degree in school psychology reported spending a greater percent of time on prevention programming than those with a degree, 6.7% versus 4.0% of his/her time, respectively ($F = 6.02, df = 1, p < .02$). No significant differences were found for any of the other degree fields (e.g. counseling, clinical, education psychology, etc.). Last, no differences were found based on the affiliation of the school psychology training program.

Employment demographics

A significant negative correlation was found between the self reported percent of time spent in prevention programming and the service ratio of school psychologists to students ($r = -.15, p = .011$). Practitioners with higher service ratios reported spending less time currently on prevention programming. While not significant, there was a similar trend for the calculated percent of time spent in primary prevention activities.

Analysis of variance was also used to explore potential differences in involvement in prevention programming based on employment characteristics. No differences were found for the self-reported or calculated percentages of time spent in prevention between full and part-time practitioners. In addition, no differences were found based on the nature or type of primary and secondary employment settings, type of employer, or number of years in current position or in the field of school psychology.

Figure 1. Histogram of number of elementary schools served.



Participants were asked to report the number of each of the following schools served in their current position: elementary schools, middle/junior high schools, high schools, or alternative school placements. The number of elementary schools served by practitioners ranged from 0 to 25, with a mean of 1.4 ($SD = 2.3$). Figure 1 provides a graph of the distribution for the number of elementary schools served. For analysis, it was decided to convert this variable to a categorical variable and four groups emerged: practitioners serving no elementary schools, one elementary school, two elementary schools, and three or more elementary schools. The mean calculated primary prevention percent for the elementary

schools served groups is presented in Table 8. An analysis of variance and post hoc tests revealed a significant difference between practitioners who served one versus no elementary schools on the calculated percent of time spent on primary prevention ($F = 3.190$, $df = 3$ $p < 0.05$). Practitioners who served one elementary school had significantly higher values for their calculated percent of time spent on primary prevention programming (8.6%) versus practitioners who did not serve an elementary school (4.0%). Based on calculations of Cohen's d , the calculated percent of time spent on primary prevention programming was found to be 0.40 standard deviations greater for practitioners serving only one elementary school versus practitioners serving no elementary schools. A similar trend was found for the self-reported percent of time spent in prevention programming between practitioners who served one versus no elementary schools, but this difference was not statistically significant.

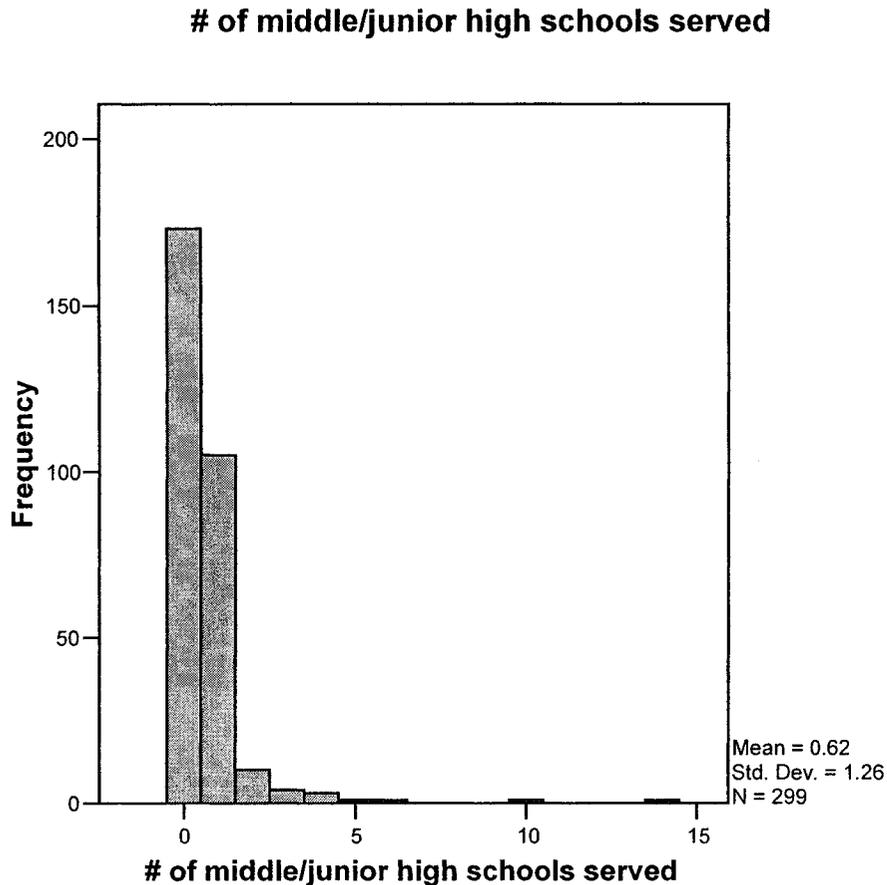
Table 8. Means and standard deviations for calculated percent of time spent in primary prevention by number of elementary schools served.

	<u>Mean</u>	<u>SD</u>	<u>N</u>
No elementary schools	4.02 _a	6.00	85
One elementary school	8.60 _b	14.19	98
Two elementary schools	4.53 _a	5.98	53
3 or more elementary schools	5.50 _a	13.66	42

Note. Means in the same column with the same letter do not differ significantly from one another.

Similar analysis was used to look at differences based on the number of middle schools, high schools, and alternative school programs served. Figures 2 and 3 provided a graph of the distribution of number of middle and high schools served, respectively. The

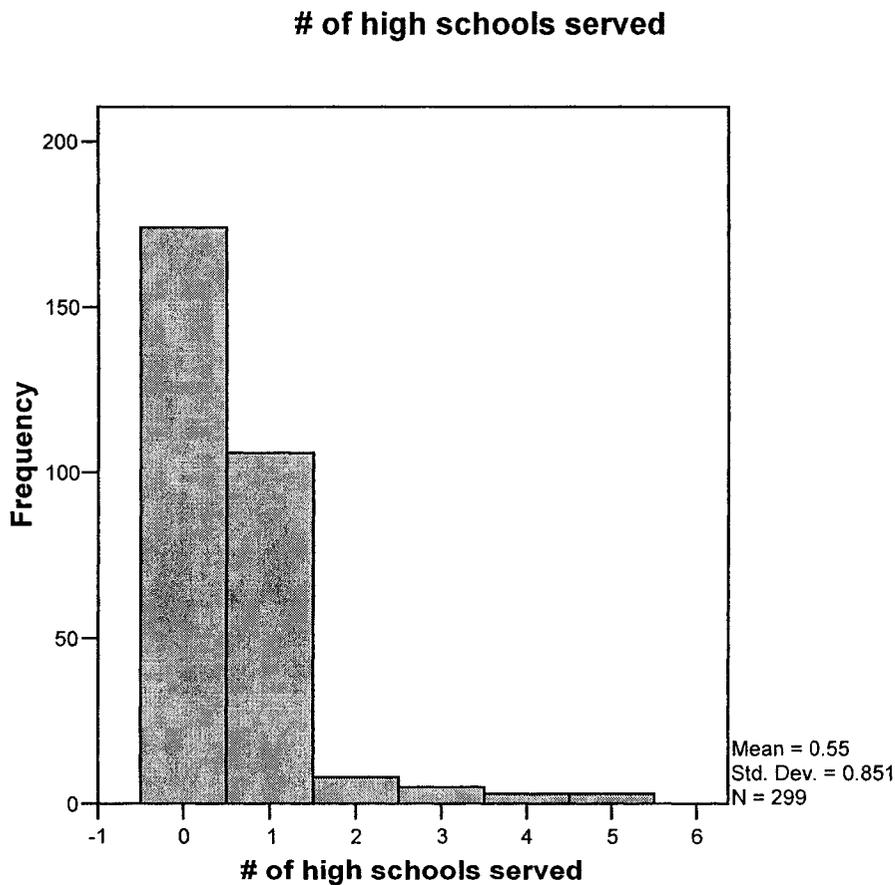
Figure 2. Histogram of number of middle schools served.



number of middle schools served ranged from zero to 14 ($M = 0.62$, $SD = 1.26$) while the number of high schools served ranged from zero to 5 ($M = 0.55$, $SD = 0.85$). Both variables were grouped into two categories: none or 1/+ middle or high schools served. The same pattern was found for the number of middle schools served as was found for the elementary school categories. A one-way analysis of variance showed that practitioners who served one or more middle schools had higher values for the calculated percent of time spent in primary prevention activities (7.5%) versus practitioners that did not serve a middle school (4.8%, $F = 4.00$, $p < 0.05$). No significant difference was found for the self-reported percent

of time spent on prevention programming between these two groups. No significant differences were found in the self-reported or calculated percent of time spent in prevention programming for number of high schools or alternative schools served. No differences were found for the self-reported or calculated percent of prevention involvement when the overall total schools served was examined.

Figure 3. Histogram of number of high school served.



Practitioners were asked to identify the professional organizations in which they had membership, with the focus being on membership in APA, NASP and joint membership in both organizations. An analysis of variance revealed no differences in practitioners' self-

reported and calculated values for percent of involvement in prevention programming based on professional organization affiliation. In looking at practitioners self-reported professional activities (e.g. number of workshops presented in the past 5 years, number of journal articles published, and number of presentations at professional conferences), the number of workshops presented in the past 5 years correlated significantly with both measures of involvement in prevention programming. Correlations between these measures are presented in Table 9. A significant positive correlation was found between the self-reported percent of time spent in prevention programming and the number of workshops, seminars, and/or in-services that practitioner reported teaching/facilitating in the past 5 years ($r = .240, p < .01$). Similarly, the calculated percent of time spent in primary prevention programming positively correlated with the number of workshops/seminars/in-services that practitioners reported facilitating ($r = .301, p < 0.01$). There was concern that possible outliers in the distribution of the number of workshops/seminars/in-services might be influencing or driving this correlation. The range for the number of workshops/seminars/in-services that practitioners reported facilitating was zero to 100 in the past year. The following 8 categories were used to re-examine the relationship between the number of workshops facilitated and both measures of prevention programming involvement: 0, 1, 2, 3, 4, 5, 6 to 10, and 11 or more workshops facilitated in the past 5 years. While the degree of the correlation was somewhat lower, the positive correlations between the number of workshops taught and the self-reported percent of time spent in prevention programming ($r = 0.151, p < 0.01$) and the calculated percent of time spent in primary prevention programming ($r = 0.117, p < 0.05$) remained significant.

Table 9. Correlations between percent of time spent in prevention programming and calculated primary prevention percent and numbers of workshops presented, articles published, and conference presentations.

	<u>Current % prevention</u>	<u>Calculated % primary prev.</u>	<u>Workshops presented</u>	<u>Articles published</u>	<u>Conference Presentation</u>
Current % time prevention programs	1	.436*	.240*	.050	-.002
Calculated primary prevention percent	.436*	1	.301*	.035	.052
Workshops presented	.240*	.301*	1	.154*	.297*
Journal articles published	.050	.035	.154*	1	.574*
Conference presentations	-.002	.052	.297*	.574*	1

*Note: Correlations are significant at the 0.01 level.

Question # 3: Do School Psychologists Feel Adequately Prepared to Engage in Prevention Activities and Do They Report Interest in Expanded Professional Roles in Prevention?

In regards to preparation and skill development, practitioners surveyed were asked to rate the degree to which their training program had prepared them for a variety of professional skills, roles and functions. Ratings were on a scale from 1 to 4, with 1 meaning that they felt their training program offered very little preparation in a particular skill and 4 being the felt their training program offered extensive preparation in a particular skill. In addition, they were asked to rate the degree they have developed these skills through in-services or continued professional development. This rating was also on a 4 point likert scale with 1 meaning that they had engaged in very little continued professional development/training in specific skills areas and 4 meaning they had extensive training/continued professional development in specific skill areas. The 20 professional skills, roles, and functions that were rated fell into two main clusters: traditional and

prevention-related roles/functions. The traditional cluster was made up of skills, roles, and functions that are typically associated with school psychology practice. The prevention cluster was made up of activities in which the word “prevention” was included in the name of the activity. The only exception to this was “health promotion and wellness activities” which were included because they represent a critical aspect of prevention programming. A list of the specific roles, skills, and functions associated with each cluster is presented in Table 10.

In addition to rating their degree of preparation through training programs and continued professional development, practitioners were also asked to rate how confident they were in their abilities or knowledge in the 20 professional skill areas. A 4-point likert scale was also used, with 1 representing little confidence and 4 being strong confidence.

Individual ratings within the traditional and prevention clusters was used to

Table 10. Professional skills and roles by traditional and prevention clusters.

<u>Traditional Skills Cluster</u>	<u>Prevention Skills Cluster</u>
Defining problem behaviors/student concerns	Prevention of social/behavioral problems
Problem Analysis	Prevention of academic problems
Psychoeducational assessment to determine eligibility for services	Prevention of mental health concerns
Development of programs/interventions for individual services	Development of prevention programs
Implementation of programs/interventions for individual services	Implementation of prevention programs
Evaluation of programs/interventions for individual services	Evaluation of prevention programs
Data collection	Knowledge of prevention science
Group Interventions	Health promotion and wellness activities
Parent/teacher training	
Consultation with parents/teachers	
Systems/organizational consultation	
Research and statistical proficiency	

calculate an average score for the three scales, yielding six scores for each participant:

traditional training program score, prevention training program score, traditional continuing

education score, prevention continuing education score, traditional confidence score, and prevention confidence score. The means and standard deviations for each of the scores are provided in Table 11.

Table 11. Mean and standard deviations for practitioners' traditional and prevention skill cluster scores.

	<u>Traditional Skills</u> Mean (SD)	<u>Prevention Skills</u> Mean (SD)	<u>t</u>	<u>p</u>	<u>d*</u>
Preparation by training program	2.81 (0.57)	2.13 (0.66)	25.06	0.0001	1.12
Preparation by continuing education	2.73 (0.64)	2.34 (0.60)	14.27	0.0001	0.58
Level of confidence	3.15 (0.61)	2.54 (0.44)	23.59	0.0001	1.16

* Cohen's d

Paired samples t-tests were used to make the following comparisons: traditional versus prevention training program scores, traditional versus prevention continuing education scores, and traditional versus prevention confidence scores. The difference in the means for traditional versus prevention training scores were statistically significant, with practitioners rating their preparation by their training programs in traditional skills/roles higher than ratings of preparation in prevention-related skills/roles ($t[313] = 25.06, p < 0.0001$). Statistically significant differences in the same direction were also found between ratings for traditional versus prevention continuing education scores ($t[307] = 14.27, p < 0.0001$) and between practitioner ratings for confidence in traditional versus prevention skills/roles ($t[308] = 23.59, p < 0.0001$).

Within the self-ratings of preparation and confidence in professional skills and functions, program development, implementation, and evaluation were assumed to be critical

skills that would generalize from traditional interventions to prevention programming. This assumption was examined by having practitioners rate their level of preparation (by training program and through continued professional development) and confidence in program development, implementation, and evaluation for both traditional programs/interventions and for prevention programs, using paired-item comparisons. Practitioners' ratings of degree of preparation and confidence in traditional forms of program development, implementation, and evaluations were compared to their ratings for similar skills applied to prevention programming (e.g. primary prevention program development, implementation, and evaluation). Paired samples t-tests were used to explore potential differences in practitioners' ratings of preparation and confidence between traditional intervention programming and prevention programming. Statistically significant differences were found between ratings for traditional and prevention programming preparation and confidence in all three types of programming involvement. Means ratings for training program preparation for program development, implementation, and evaluation using paired-items comparisons are presented in Table 12 as well as the test statistics.

Table 12. Mean and standard deviations for ratings for degree of preparation from training program for program development, implementation, and evaluation.

	<u>Traditional</u> <u>Programs</u> Mean (SD)	<u>Prevention</u> <u>Programs</u> Mean (SD)	<u>t</u>	<u>df</u>	<u>p</u>	<u>d*</u>
Program Development	2.64 (0.92)	1.84 (0.83)	15.75	311	0.0001	0.89
Program Implementation	2.69 (0.91)	1.89 (0.88)	15.45	309	0.0001	0.87
Program Evaluation	2.35 (0.99)	2.01 (0.94)	8.55	309	0.0001	0.48

* Cohen's *d*

The pattern was for practitioners to report greater degree of preparation by their training programs for program development, implementation, and evaluation when utilized in traditional intervention versus prevention programs

Table 13 provides the mean practitioner ratings for degree of skill development in the areas of traditional and prevention programming development, implementation, and evaluation through continued professional development. Paired-item comparisons of program activities for traditional and prevention programs yield the same differences for preparation through continued professional development as were found for preparation by training programs. Practitioners reported feeling more prepared through continued professional development in program development, implementation, and evaluation when these skills were applied to traditional intervention/programs rather than prevention programs.

Table 13. Mean and standard deviations for ratings of degree of skill development through continued professional development for program development, implementation, and evaluation.

	<u>Traditional Intervention Programs</u> Mean (SD)	<u>Prevention Programs</u> Mean (SD)	<u>t</u>	<u>df</u>	<u>p</u>	<u>d*</u>
Program Development	2.93 (0.83)	2.11 (0.88)	15.79	305	0.0001	0.91
Program Implementation	2.77 (0.89)	2.13 (0.86)	11.97	302	0.0001	0.68
Program Evaluation	2.19 (0.94)	1.92 (0.87)	7.01	301	0.0001	0.41

* Cohen's *d*

The mean practitioner ratings for practitioner level of confidence in the areas of traditional and prevention programming development, implementation, and evaluation are

presented in Table 14. Similar to the ratings of preparation, school psychologists reported a significantly higher degree of confidence for traditional program development, implementation, and evaluation versus when these skills were applied to prevention programming.

Table 14. Mean and standard deviations for ratings of professional confidence for program development, implementation, and evaluation.

	<u>Traditional Intervention Programs</u> Mean (SD)	<u>Prevention Programs</u> Mean (SD)	<u>t</u>	<u>df</u>	<u>p</u>	<u>d*</u>
Program Development	3.15 (0.79)	2.37 (0.82)	16.39	305	0.00	0.93
Program Implementation	3.07 (0.78)	2.37 (0.84)	13.70	300	0.00	0.80
Program Evaluation	2.57 (0.86)	2.24 (0.88)	8.45	300	0.00	0.49

* Cohen's *d*

To gauge practitioner interest or preference toward greater involvement in prevention, school psychologists in the sample were asked to estimate both the percent of time that they currently devote to the six role/activity categories (e.g. psychoeducational assessment, intervention, problem-solving consultation, systems/organization consultation, research/evaluation, and prevention programming) and the percent of time they would prefer to devote to each category of professional activities. Paired samples t-tests were used to determine if differences existed between the percentages of time spent in each of the six activity/role categories for both current and preferred percent of time. Within this analysis, practitioners' estimated/preferred percentages were treated as repeated measures. Table 15 provides the mean score and rank order for practitioners' current percent of involvement in the six activity categories. The letters next to the mean denotes whether the value is

significantly different from means for other activity categories. Those means with the same letter are not statistically significant from each other.

Table 15. Percent of time practitioners currently spend in professional roles (descending order).

	<u>Mean % of time</u>	<u>S.D.</u>
Psychoeducational assessment	50.20 _a	27.15
Interventions	20.28 _b	16.02
Problem solving consultation	16.99 _c	13.00
Systems/organizational consultations	5.14 _d	9.21
Prevention programming	4.28 _d	6.38
Research/evaluation	2.01 _e	4.15

Note. Means in the same column with the same letter do not differ significantly from one another.

Similarly, the means and rank ordered for practitioners' preferred percent of involvement in the different role/activity categories are presented in Table 16. It should be noted that the ranking of the categories is similar for current versus preferred with the

Table 16. Percent of time practitioners prefer to spend in professional roles (descending order).

	<u>Mean % of time</u>	<u>S.D.</u>
Psychoeducational assessment	29.86 _a	18.65
Interventions	27.21 _a	15.10
Problem solving consultation	18.78 _b	10.65
Prevention Programming	10.27 _c	8.29
Systems/organizational consultation	8.03 _d	8.72
Research/evaluation	5.59 _e	6.19

Note. Means in the same column with the same letter do not differ significantly from one another.

exception that involvement in primary prevention moves up to the fourth position, indicating a preference for increased involvement in prevention programming. In addition, the percent of time spent in assessment is not statistically different from the percent of time practitioners would prefer to spend on interventions.

Table 17. Mean and standard deviations for practitioners' current and preferred time allotment to roles/activities.

<u>Role/Activities</u>	<u>Current % Time Mean (SD)</u>	<u>Preferred % Time Mean (SD)</u>	<u>t</u>	<u>df</u>	<u>p</u>	<u>d*</u>
Psychoeducational Assessment	50.41 (27.00)	29.83 (18.63)	16.64	298	< 0.01	0.96
Interventions	20.12 (15.97)	27.27 (15.10)	-9.41	296	< 0.01	0.55
Problem Solving Consultation	16.91 (12.8)	18.76 (10.65)	-3.16	296	< 0.01	0.81
System/Organizational Consultation	5.08 (9.21)	8.01 (8.72)	-7.48	297	< 0.01	0.43
Research/Evaluation	1.99 (4.16)	5.51 (6.09)	-11.19	297	< 0.01	0.69
Prevention Programming	4.31 (6.44)	10.25 (8.27)	-12.67	297	< 0.01	0.74

* Cohen's *d*

Paired samples t-tests were used to compare practitioner means for current versus preferred allotment of time in the six role/activity categories to determine practitioner interest in the various categories. The means for current percent of time and preferred percent of time in the six role categories are presented in Table 17. All the paired samples t-tests were significant. For the assessment category, practitioner means for current ($M = 50.41$, $SD = 27$) was statistically greater than that for the preferred percent of time spent in assessment activities ($M = 29.83$, $SD = 18.63$; $t[298] = 16.64$, $p < 0.01$). While practitioners indicated a

preference to cut back on assessment activities, they indicated a preference to spend more time in the other areas surveyed. Central to the focus of this study, practitioners indicated a desire to spend almost double the time they are currently spending on prevention activities. The means for preferred ($M = 10.25$, $SD = 8.27$) and current ($M = 4.31$, $SD = 6.44$) time spent in prevention programming were significantly different ($t[297] = -12.67$, $p < 0.01$).

Question #4: What Do Practitioners View As Key Obstacles to Greater Involvement in Prevention?

School psychology practitioners were provided with a list of eight potential obstacles to engagement in prevention programming and were asked to rate each using a 4-point likert scale on the degree to which they were viewed as an obstacle in practice (1 being not an obstacle and 4 being a major obstacle). The potential obstacles rated were: (1) not enough time, (2) lack of support from employer/district, (3) limited knowledge of prevention programming, (4) lack of training/professional development in prevention programming, (5) lack of professional interest in prevention activities, (6) an inability to demonstrate immediate results from prevention programs, (7) other professional disciplines being responsible for prevention programming, and (8) lack of coordination or communication with community-based mental health providers.

The mean rating for each of the potential obstacles in descending order for the sample of practitioners surveyed is presented in Table 18. The letters next to the name of each potential obstacle denotes whether the mean ranking for that obstacle is significantly different from other values. Those obstacles/means with the same letter are not statistically significant from each other. Paired samples t-tests were used to determine if there were

significant differences between the ratings for each obstacle. Overall, practitioners felt that lack of time was the largest obstacle to the provision of prevention programming.

Table 18. Mean ratings for potential obstacles in descending order.

	<u>Mean</u>	<u>S.D.</u>
Not enough time or other demands on time	3.46 _a	0.88
Lack of support from employer/district administrator	2.38 _b	1.11
Lack of coordination/communication with community-based mental health providers	2.37 _b	0.99
Other professional disciplines are responsible for prevention programming	2.24 _b	1.05
Inability to demonstrate immediate results	2.02 _c	0.91
Lack of training/professional development in prevention programming	1.84 _d	0.81
Limited knowledge of prevention programming	1.78 _d	0.80
Lack of professional interest in prevention activities	1.47 _e	0.70

Note. Means in the same column with the same letter do not differ significantly from one another.

Paired samples t-test showed a significant difference with the mean rating for lack of time ($M = 3.46$) being significantly higher than that for the mean ratings for lack of support ($M = 2.38$) from employers ($t[301] = 15.41, p < 0.0001$) and for lack of coordination or communication with community-based mental health providers ($M = 2.37, t[302] = 16.46, p < 0.0001$). The mean ratings for the obstacles of lack of employer support and lack of coordination with community-based mental health providers were not significantly different from each other and did not differ significantly from the mean rating for next highest obstacle, the belief that other professional disciplines were responsible for prevention programming, but were significantly different from lower rated potential obstacles. A

statistically significant difference did exist between the mean ratings for “inability to demonstrate immediate results” ($M = 2.02$) and for “other professional disciplines are responsible for providing prevention programming” ($M = 2.23$, $t[298] = -2.88$, $p < 0.01$). In addition, the mean rating for the obstacle of inability to demonstrate immediate results differed significantly from that of the obstacles of lack of training/professional development ($t[299] = -2.93$, $p < 0.01$) and from that of limited knowledge in prevention programming ($t[299] = -3.90$, $p < 0.0001$). The mean ratings for lack of training ($M = 1.84$) and limited knowledge of prevention programming ($M = 1.78$) did not differ significantly from each other, but were significantly higher than the rating for lack of interest in prevention programming ($M = 1.47$, $t[302] = 6.35$, $p < 0.0001$).

A series of two-way between- and within-subjects analyses of variance was used to determine if individual, educational, and employment demographics had any influence on practitioners' ratings of potential obstacles. Within this analysis, practitioners' ratings for each of the eight potential obstacles were treated as repeated measures. We were primarily interested in the potential interaction. When significant interactions were detected, they were explored with Tukey's post hoc tests. A statistically significant main effect for gender was found ($F = 7.69$, $df = 1$, $p < 0.01$) with males having significantly higher ratings of obstacles ($M = 2.32$) than females ($M = 2.15$). Multivariate tests revealed a marginal, but not significant interaction with gender resulting in slightly different rank ordering of obstacles based on gender ($F = 1.88$, $df = 7$, $p = 0.07$). The means and rank order of obstacles by gender are presented in Table 19. It should be noted that lack of time is consistently rated as the major obstacle in the provision of prevention services. While the order varies slightly

Table 19. Mean ratings for potential obstacles to prevention by gender (descending order).

<u>Male (N = 76)</u>		<u>Female (N = 219)</u>	
<u>Obstacle</u>	<u>Mean (SD)</u>	<u>Obstacle</u>	<u>Mean (SD)</u>
Not enough time or other demands on time	3.55 (0.77) _a	Not enough time or other demands on time	3.43 (0.90) _a
Lack of support from employer/administrator	2.61 (1.06) _b	Lack of coordination/communication with community-based providers	2.36 (1.00) _b
Lack of coordination/communication with community-based mental health providers	2.38 (0.94) _{bc}	Lack of support from employer/administrator	2.30 (1.12) _b
Inability to demonstrate immediate results	2.17 (0.96) _c	Other disciplines are responsible for prevention programming	2.27 (1.06) _b
Other disciplines are responsible for prevention programming	2.14 (1.03) _c	Inability to demonstrate immediate results	1.97 (0.89) _c
Lack of training/professional development in prevention programming	2.01 (0.78) _c	Lack of training/professional development in prevention programming	1.77 (0.81) _d
Limited knowledge of prevention programming	2.00 (0.83) _c	Limited knowledge of prevention programming	1.71 (0.76) _d
Lack of professional interest in prevention	1.72 (0.84) _c	Lack of professional interest in prevention	1.39 (0.63) _e

Note. Means in the same column with the same letter do not differ significantly ($p > 0.05$) from one another.

between the genders, the same obstacles are consistently ranked in the top three. Females tended to discriminate more between obstacles than male practitioners.

A significant main effect for highest degree earned was also found for rankings of potential obstacles to prevention programming ($F = 4.58$, $df = 2$, $p = 0.01$). In looking at highest degree earned, practitioners with a specialist degree ($M = 2.31$) were found to have a tendency to rate obstacles higher than their masters ($M = 2.18$) and doctoral level ($M = 2.13$) counterparts. No significant interactions were found between obstacle rankings and highest degree earned. No significant main effect or interaction was found for the college/department affiliation of training programs.

Most of the employment demographics were not related to practitioners' ranking of obstacles to prevention programming. No significant main effects or interactions were found based on employment status, types/number of schools served, or nature of school setting (e.g. rural/urban/suburban). A significant main effect was found for primary employment setting ($F = 10.41$, $df = 3$, $p < 0.01$). Practitioners working in school settings had statistically higher rankings of obstacles ($M = 2.24$) versus practitioners in private practice ($M = 1.57$), but they did not differ significantly from practitioners working in hospital settings ($M = 2.21$). Analysis also revealed a marginally significant main effect for ratings of obstacles based on who employed practitioners as school psychologists ($F = 2.71$, $df = 3$, $p < 0.05$). School psychologists employed by school districts had higher rankings for potential obstacles ($M = 2.24$) versus practitioners who were self-employed or were employed by a university, hospital, or community-based agency ($M = 1.98$). School psychologists employed by educational agencies ($M = 2.16$) and private schools ($M = 2.03$) did not differ significantly

from these other two groups of practitioners. No significant interactions were found based on employer or primary work setting.

Multivariate tests revealed a statistically significant interaction for practitioner rankings of obstacles based on affiliation with professional organizations ($F = 1.67$, $df = 21$, $p = 0.03$), but no significant main effect was found for professional organization affiliation. The mean rankings for each obstacle and the rank order for practitioners that reported membership in APA, NASP, both APA and NASP, and neither are presented in Table 20. While it appears that practitioners who were affiliated with NASP or were members of both organizations seemed to discriminate more between obstacles, the differences between the means were larger for practitioners who were members of APA or neither organization. This pattern appears to be related to having greater power for the NASP and “both” groups. Larger sample sizes for the APA and neither groups may have resulted in more significant differences between the mean ratings. Similar to previous findings, lack of time continued to be the top-ranked obstacle, followed by lack of support and lack of coordination with other agencies. Practitioners who reported no affiliation with APA or NASP had a different ranking of obstacles compared to the other professional affiliation groups. They ranked “other disciplines are responsible for prevention programming” as the second greatest obstacle to their involvement and engagement in prevention programming. They also ranked limited knowledge of prevention programming as being a greater obstacle than the other groups. This is in contrast to a pattern of lack of training in and limited knowledge of prevention programming and a lack of professional interest being generally ranked the lowest in terms of being viewed as obstacles to prevention programming.

Table 20. Mean ratings for potential obstacles to prevention by professional affiliation (descending order).

<u>NASP (N = 148)</u>		<u>APA (N =34)</u>	
<u>Obstacle</u>	<u>Mean (SD)</u>	<u>Obstacle</u>	<u>Mean (SD)</u>
Not enough time or other demands on time	3.43 (0.88) _a	Not enough time or other demands on time	3.44 (0.82) _a
Lack of coordination/communication with community-based providers	2.43 (0.99) _b	Lack of support from employer/administrator	2.59 (1.05) _b
Lack of support from employer/administrator	2.40 (1.15) _{bc}	Lack of coordination/communication with community-based providers	2.44 (0.82) _b
Other disciplines are responsible for prevention programming	2.18 (1.04) _c	Other disciplines are responsible for prevention programming	2.21 (0.98) _{bc}
Inability to demonstrate immediate results	2.11 (0.90) _{cd}	Inability to demonstrate immediate results	2.00 (0.85) _c
Lack of training/professional development in prevention programming	1.95 (0.84) _{de}	Lack of professional interest in prevention	1.74 (0.86) _c
Limited knowledge of prevention programming	1.86 (0.87) _e	Lack of training/professional development in prevention programming	1.71 (0.84) _c
Lack of professional interest in prevention	1.47 (0.73) _f	Limited knowledge of prevention programming	1.65 (0.77) _c

Note. Means in the same column with the same letter do not differ significantly ($p > 0.05$) from one another.

Table 20. (continued)

<u>APA & NASP (N =93)</u>		<u>None (N = 18)</u>	
<u>Obstacle</u>	<u>Mean (SD)</u>	<u>Obstacle</u>	<u>Mean (SD)</u>
Not enough time or other demands on time(A)	3.53 (0.88) _a	Not enough time or other demands on time(a)	3.44 (0.86) _a
Lack of support from employer/administrator (B)	2.33 (1.07) _b	Other disciplines are responsible for prevention programming (b)	2.67 (1.03) _b
Lack of coordination/communication with community-based providers (B)	2.31 (1.05) _b	Lack of support from employer/administrator (bc)	2.22 (1.06) _{bc}
Other disciplines are responsible for prevention programming (B)	2.26 (1.09) _b	Limited knowledge of prevention programming (c)	2.11 (0.68) _c
Inability to demonstrate immediate results (C)	1.96 (0.94) _c	Lack of coordination/communication with community-based providers (c)	2.06 (0.80) _c
Lack of training/professional development in prevention programming (D)	1.69 (0.75) _d	Lack of training/professional development in prevention programming (c)	1.94 (0.73) _c
Limited knowledge of prevention programming (D)	1.66 (0.67) _d	Lack of professional interest in prevention (c)	1.83 (0.71) _c
Lack of professional interest in prevention (E)	1.33 (0.54) _e	Inability to demonstrate immediate results (c)	1.72 (0.83) _c

Note. Means in the same column with the same letter do not differ significantly ($p > 0.05$) from one another.

CHAPTER 5: DISCUSSION

General Discussion

Prevention programming and services are viewed as an emerging and critical area for role expansion in the field of school psychology. The increased push for comprehensive systems of care based in the school system has brought greater attention to the provision of prevention programming. With increased attention and awareness of the potential impact of prevention in the reduction of student referrals for evaluation and placement in special education programs, leaders in education and school psychology have become more interested in what role school psychology practitioners may play in the provision of prevention services. In addition, there is an awareness of the lack of documentation regarding practitioners' involvement in mental health programming (Nastasi, Varjas, Bernstein & Pluymert, 1998) and, more specifically, prevention programming (Kratochwill & Stoiber, 2000). The primary goal of the current study originated out of this call for further exploration into the involvement of school psychologists in prevention programming. In addition to attempting to survey and quantify practitioner involvement in prevention programming at the most general level, the current study also sought to explore what factors may contribute to or serve as obstacles to the provision of prevention programming in schools.

Based on a review of the literature looking at past and current roles of school psychologists, it was hypothesized that less than half of the practitioners in the current sample would report engaging in prevention activities at this point in time, with practitioners continuing to spend a majority of their time in assessment roles. In regard to both measures of practitioner involvement in prevention used in this study (e.g. reported percent of current

time spent in prevention programming and the calculated percent of time spent in primary prevention activities), this hypothesis was supported despite some concerns with possible inflation by practitioners of the hours spent per week in prevention. The median score for current percent of time spent in prevention was 1%, which represents only 24 minutes of a full-time work week. Similarly, using the calculated percent of time spent in primary prevention activities, a large majority of practitioners (90%) reported spending less than 6 hours per week in primary prevention activities, with a median of 1.25% of the work week (or 30 minutes) devoted to these activities. The calculated percent of time spent in primary prevention was based on the assumption of a 40-hour work week. It is possible that practitioners may be working more than 40-hours per week, which means that practitioner involvement in primary prevention may be even lower than reported above. Consistent with the literature, school psychologists reported spending approximately half of their time on assessment activities and about one-fifth of their time on interventions, indicating that practitioners are strongly tied to more traditional roles and functions.

Consistent with previous research (Reschly & Wilson, 1995; Wilson & Reschly, 1996), school psychologists indicated a preference for reducing the percent of time spent on assessment activities by almost 20% and reallocating this time to activities involving direct interventions, collaborative consultations, and prevention programming. While prevention programming was ranked fifth out of six professional activities in practitioners' current allocation of time to different professional roles, it was fourth in practitioner's rankings of preferred roles, placing it above systems/organizational consultation and research/evaluation. This indicates at least some interest on the part of practitioners to increase their involvement in prevention programming. This finding is further supported by practitioners' rankings of

potential obstacles to the provision of prevention programming. Lack of professional interest in prevention activities was consistently ranked the lowest in terms of the potential obstacles survey in this study.

As hypothesized, the major obstacle that seems to contribute to limited involvement of school psychologists in prevention activities is time. Lack of time and other demands on practitioners' time consistently ranked as the largest obstacle to providing prevention services, around a 3.4 on a 4-point scale. Based on the previous information presented on current roles in practice, practitioners have limited time outside of assessment and intervention activities to get more involved in prevention programming. With practitioners focusing their time on the identification and remediation of student problems, school psychologists and other professionals in the school have limited time to develop and implement programs geared at developing and promoting competencies that may prevent problems. Despite calls for a greater focus on the reduction of risks and the enhancement of protective factors (Furlong, Morrison, & Paveleski, 2000), practitioners continue to be on the "back-end" of the prevention-treatment continuum (Franklin, 1995).

Similar to lack of time, lack of support from employers and administrators and lack of coordination and communication with other shareholders were also consistently rated among the top obstacles to the provision of prevention programming. This was consistent with reviews of the prevention literature by Hightower, Johnson, and Haffey (1995) that pointed to a lack of support for prevention programming, primarily as this support relates to fiscal resources. The issue of lack of coordination and communication among service providers is also consistent with the literature addressing the need for, but absence of, coordinated services directed at the needs of students (Adelman & Taylor, 2000; Doll, 1999; Friedman &

Duchnowski, 1990; Knoff & Batsche, 1990; Nafpaktitis & Perlmutter, 1998; Shrag, 1996).

Lack of coordination and communication among school- and community-based service providers perpetuates concerns with the fragmentation and marginalization of services, in particular prevention programming.

While lack of support by employers and lack of communication/coordination with other services providers were expected based on a review of the literature, they were not hypothesized to rank higher than obstacles related to practitioner training and knowledge. While school psychology training programs offer specialized instruction and training in the development, implementation, and evaluation of interventions and assessment, they do not generally address prevention programming and prevention science within the curriculum or training experiences. It was hypothesized that this lack of specialized training would be perceived by practitioners as a key obstacle in the provision of prevention programming. In contrast, limited knowledge of prevention programming and a lack of training or professional development opportunities in prevention programs tended to be ranked relatively low by practitioners in comparison to other obstacles surveyed.

Despite these rankings, practitioners did report a greater degree of preparation by their training programs in more traditional professional skills, such as problem definition, problem analysis, assessment, intervention, and consultation, versus prevention skill areas. Similarly, they also reported a greater degree of development of these traditional professional skills through in-service and continued professional development opportunities compared to degree of skill development in prevention skill areas. Both degree of preparation by training program and degree of skill development through continuing professional development seemed to contribute to school psychologists rating their confidence higher for traditional

skills and roles versus prevention-related skills. While the differences between mean ratings for traditional and prevention skills were significantly different for all of the measures, it should be noted that there was a pattern for differences in means between traditional interventions and prevention programs to be greater for program development and implementation activities versus program evaluation. For example, the mean rating for degree of preparation by training program in the area of program development of traditional interventions was 2.64 while the mean rating for degree of preparation for the development of prevention programs was 1.84, resulting in a difference of 0.80. The same magnitude of difference was found between the means for traditional intervention implementation and the implementation of prevention programs. In contrast, the difference between the mean ratings for degree of preparation by training program for traditional program/intervention evaluation (2.35) and for the evaluation of prevention programs (2.01) was smaller (a difference of 0.34). This pattern was found between the means for level of preparation by continuing professional development and for degree of confidence in these skill areas. The smaller difference in means between the evaluation of (traditional) programs/interventions and the evaluation of prevention programs supports the idea that school psychologists have expertise in program evaluation that is more easily generalized to the evaluation of other types of programs and research. As Sandoval (1999) argued, school psychologists may be in a good position to take leadership roles in prevention programming by utilizing their knowledge and expertise in the area of program evaluation.

Sheridan and Gutkin (2000) identified roles in program evaluation and the implementation of empirically validated interventions and instructional methods as important roles for school psychologists in the 21st century. Despite having potential skills in the areas

of program evaluation and research design, it appeared that practitioners who did report involvement in primary prevention programming were less involved in research and evaluation of these programs. Practitioners indicated greater involvement in the implementation of primary prevention programs, followed by the development of programs and the evaluation of these programs. It is not surprising that practitioners would be more likely to report involvement in the development and implementation of primary prevention programs over evaluation and prevention research. Prevention programming is viewed as a critical research agenda for the field of school psychology (Kratochwill & Stoiber, 2000) because not much is currently known about prevention as it relates to school psychology. Sandoval (1999) did argue that for practitioners to be viewed as indispensable to the schools and communities they serve, they need to show that prevention programming works. Evaluation of prevention programs and other related areas of research are critical to role expansion and the adoption of a shift in services from remediation to prevention. Based on the results of this study, more needs to be done to increase practitioner involvement in the evaluation of and research involving prevention programming.

While we have looked at the important findings related to involvement in prevention programming and potential obstacles, we have not yet addressed what factors may contribute to practitioners being engaged in prevention activities. As predicted and previously alluded to in the discussion of time as an obstacle to prevention programming, service ratios were negatively correlated with practitioners' reported percent of time spent in prevention programming. The correlation between service ratio and calculated percent of time spent in primary prevention activities indicated a similar trend, but was not significant. School psychologists who reported higher service ratios reported less involvement in prevention

programming than practitioners who served fewer students. No difference in prevention involvement was found based on the number of schools, which may not represent an accurate view of the demands on practitioners to meet the needs of the students they serve. School psychologists working in private practice may not be assigned or responsible for particular schools, but may be serving a large number of students.

Although prevention is important at all levels of instruction, involvement in elementary schools was the most predictive of practitioner involvement in prevention programming. Serving a middle school was also found to be predictive of practitioner involvement in primary prevention, but to a lesser extent than elementary schools. School psychologists who served one elementary school were found to spend more time in primary prevention programming than their colleagues who did not serve any elementary schools, as measured by the calculated percent of time spent in primary prevention. While not significant, there was a trend for a similar pattern when the reported percent of time in prevention programming was used as the measure of involvement. Similar results were found for practitioners serving one middle school in comparison to colleagues serving no middle schools, but this pattern was not found when we looked at practitioners serving high school populations. This may reflect the idea that students who are at risk are likely to have already manifested problems that schools are trying to prevent, and prevention programming with this population is a little too late to produce effective changes in student outcomes and behavior. The absence of these results for high schools may also reflect the structure of many school districts where a larger number of elementary schools feed into a smaller number of middle schools, eventually feeding into an even smaller number of high schools. Within this infrastructure, school psychologists often serve only one high school, if any at all.

These findings may also be interpreted as practitioners who serve just one elementary or one middle school may feel greater ownership and connection with the schools and students they serve and therefore, may have greater opportunity to serve in a wider range of services to students, including social skills groups and other widely used prevention programs. Serving more than one elementary or middle school may further impact the amount of time practitioners have available to be involved in prevention programming, but this was not statistically significantly.

While other characteristics related to professional involvement did not seem to impact engagement in prevention programming, the number of workshops, in-services, and seminars practitioners reported teaching in the past five years was found to be positively correlated to amount of time practitioners reported spending in prevention activities, using both reported and calculated measures of involvement. A possible interpretation for this finding is that practitioners who are involved in prevention programming may have an overall interest in programming and instruction at all levels. In addition to being involved in providing instructional opportunities for parents, educators, and other service providers, they are also active in programming for the student populations they serve, including providing prevention programs. The absence of results linking prevention involvement to number of articles published or number of presentations at professional conferences may reflect a general lack of involvement and interest in research activities as seen in by low scores for current and preferred percent of time spent in research and evaluation activities.

A number of personal, educational, and occupational characteristics were hypothesized to be associated with greater involvement in prevention programming. It was predicted that younger practitioners may be more likely to report being involved in

prevention programming because they were more likely to be trained in graduate programs that promoted diverse and expanded roles for practitioners over traditional assessment roles. Practitioners who were older and been in the field and their positions longer were viewed as being more strongly tied to traditional views of practice and the assessment role. This hypothesis was not confirmed; age and number of years of work experience were not found to influence practitioners' amount of involvement in prevention activities. This can be interpreted to mean that training programs have yet to make substantial changes in the promotion of expanded roles for school psychologists, particularly in the area of prevention programming. In addition, younger practitioners may have pressures to conform to expected roles that employers and administrators hold for them and may lack the power or confidence to shift or transform these roles based on their limited experience in the field.

In contrast, practitioners who reported earning graduate degrees in areas other than school psychology were found to have higher involvement in prevention programming versus practitioners with degrees for school psychology training programs. This result may be based on the fact that training programs in related fields may be less focused on psychoeducational assessment, providing trainees with skills in other areas of service delivery. These practitioners may feel less tied to assessment roles and may have more expertise and interest in non-assessment activities, such as prevention programming.

In addition, it was hypothesized that doctoral-level school psychologists would report greater involvement in prevention programming. Doctoral-level practitioners were hypothesized to have more opportunities for specialized training in prevention programming and may have greater interest in less traditional roles. Doctoral-level practitioners were viewed as possibly having greater involvement in professional organizations and activities

and being more in tune with research initiatives in the field, resulting in more awareness of the need to take leadership roles in comprehensive systems of care. The current study did not support the hypothesis that doctoral level school psychologists would report greater involvement in prevention activities. No differences in prevention involvement were found between practitioners based on the highest degree earned or based on affiliation with professional organizations. Again, this may reflect the current status of training programs in school psychology. Doctoral-level training programs may continue to lack sufficient opportunities to gain knowledge and specialize in the area of prevention programming and health promotion.

It was somewhat surprising that employment status or employment characteristics did not appear to impact practitioners' involvement in prevention activities. It was expected that practitioners who worked part-time or split their work hours between primary and secondary work settings would report less involvement in prevention activities. With less direct contact hours in the school, it was hypothesized that these practitioners would not be involved in prevention programming. The lack of support for this hypothesis may be related to the degree in which the distributions for the reported and calculated time spent in prevention programming were positively skewed, with a majority of practitioners reporting fewer than 6 hours per week of prevention involvement. Practitioners who reported a secondary employment setting indicated teaching college courses or working in private practice, both of which may be a supplement to full-time employment in the schools and therefore, would not significantly impact the time they would have to work in the schools or provide prevention programming. This explains why practitioners working in a secondary work setting would not be different from practitioners who only worked in a primary employment setting. Last,

the nature of the work setting did not impact level of involvement in prevention programming. While it was hypothesized that practitioners serving suburban settings would be more involved in prevention programming, there seemed to be some overlap in the types of setting served. No differences were found based on whether practitioners served largely suburban, urban, or rural populations.

Limitations of the Study

The shortcoming or limitations of the current study are primarily related to weaknesses that are inherent to survey research. While surveys offer a relatively quick and simple way to collect data from a large number of individuals, there are always concerns related to how representative the sample is of the overall population and concerns with how respondents may differ from non-respondents. The response rate for the current study was 33.2%, which is adequate and comparable to much of the literature on survey research, but was not consistent with response rates for a similar study by Reschly and Wilson (1995). Differences in response rates between the current study and previous research by Reschly and Wilson can be attributed to the length of the current survey and the lack of name recognition for this investigator. At four pages, the current survey can be described as long and complex, which may have negatively impacted response rates. At the time of Reschly and Wilson's 1995 study, the principle investigator of that study was serving as president of NASP, which most likely positively influenced rates of return.

The 33.2% response rate results in questions regarding the ability to generalize interpretations to the population of practitioners as a whole. The practitioners surveyed in the current study were all drawn from membership lists from the American Psychological

Association (APA) and the National Association of School Psychologists (NASP). While sampling practitioners from these professional organizations may have simplified the process, the sample may not be representative of all school psychology practitioners, particularly those practitioners who are not involved with national professional organizations, but may be more connected and involved with more local organizations and initiatives.

While the field of school psychology has been working to increase the ethnic/racial diversity of practitioners, the respondents in the current study predominantly identified as Caucasian, raising questions about the ability to generalize results to practitioners who identify in other racial/ethnic groups.

The literature has supported the fact that specialist-level preparation dominates current practice and graduate program enrollment (Reschly & Wilson, 1997). In contrast, the APA membership in which participants were sampled was predominantly made up of doctoral-level practitioners (78.1%). The educational background of the NASP membership list in which the participants from the current study were sampled from was: 27.5% doctoral level, 20% specialist, 36.5% masters plus 30 hours advanced training, and 9.8% masters-level. The educational characteristics of both lists are consistent with perceptions in the literature of APA-affiliated school psychologists being more likely to have doctoral degrees and practitioners affiliated with NASP being more likely to have non-doctoral degrees (Bardon, 1983). A little over half the respondents (55.6%) in the current study reported earning a doctoral degree, which also raises questions about the degree to which the results of this sample are representative of the population of school psychologists as a whole.

The over-representation of doctoral-level practitioners provides critical evidence for potential differences between practitioners who returned completed surveys and non-

respondents and may have influenced the results in regards to involvement in prevention practice. In my experience as a school psychologist working for an area education agency, a majority of the doctoral-level practitioners employed by our agency held positions that involved significant administrative duties that would have impacted the amount of time they spent directly serving schools. Doctoral-level practitioners were often involved in training and research-based initiatives in the agency and spent a fraction of their work-week in a school setting. Within this type of model, doctoral-level practitioners may report limited time to engage in activities falling outside of those traditionally viewed as their primary responsibilities. While the current study revealed no significant differences in practitioner involvement in prevention programming based on highest degree earned, the over-representation of doctoral-level practitioners in the study and the assumption that doctoral-level practitioners in educational settings may be more tied to administrative duties leads to the need to replicate the study with a more representative sample of practitioners. It is possible that a more representative sample with a majority of specialist level-practitioners may result in different estimates of practitioner involvement in prevention activities, with the assumption that involvement may be slightly higher.

Another inherent weakness of surveys is that questionnaire items are often designed to take in account the broadest definitions of constructs and, in doing so, they may represent a fairly superficial assessment of the complex reality of human experiences. It is difficult to gain a complete sense of the total life situation that respondents are thinking about and drawing on when completing the survey. Variations in how participants interpret and make judgments about how they categorize their experiences to answer questions are lost when data are collected using a survey. Respondents do not have an opportunity to ask for

clarification on the type of information for which the researcher is asking, and in turn, researchers often must make judgments about ambiguous responses. As a result, the interpretation of results is limited. While practitioners were provided definitions for a number of constructs used in the survey, we cannot be sure what activities they were thinking about when they reported the current percent of time they spent on prevention activities or the number of hours per week spent on each of the levels of prevention. As was seen, some respondents did indicate spending a significant number of hours in primary, secondary, and tertiary prevention, but did so after indicating they spent little or no time on prevention programming on the preceding page of the survey.

Related to the issue of how accurately a survey can measure practitioner behavior, attitudes, and interest, the current study sought to explore practitioner involvement in prevention programming at the broadest level. Instead of choosing to survey practitioners on a specific area of prevention services, such as Nickerson and Zhe (2004) did with crisis prevention and intervention, practitioners were asked to report their involvement in prevention across levels of prevention, targets of prevention, and types of involvement. By doing so, there is again a sacrifice in terms of the specificity in which interpretations can be made about practitioner involvement in prevention activities. The current study sought to gain a sense of the extent to which practitioners reported being involved in prevention programming at its most general level, and in doing so, there were limitations in the degree of information that could be gathered about the specific characteristics of this involvement. For example, practitioners were asked to indicate if they were involved in violence prevention activities, but little is known about whether practitioners were considering social skills instruction, peer mediation programs, or other forms of violence prevention, such as the

use of metal detectors in schools, when responding. In addition, the target areas of prevention programming assessed in the current study were not mutually exclusive. There may be a great deal of overlap between the various areas of prevention. For example, programming addressing bullying or other forms of school violence may be viewed by practitioners as falling under the broader category of the prevention of social/behavioral problems.

Finally, the information that is gathered through surveys is based on self-report and can be influenced by participants' perceptions of what is being asked or attitudes toward the topic being surveyed. Respondents in the current study may have been motivated to respond because they are in favor of practitioners' expanding their roles into prevention and they were reporting their involvement in prevention to support the argument for expanded roles. This may possibly explain why some practitioners seemed to over-report when it came to numbers of hours spent on primary, secondary, or tertiary prevention. Similarly, the differences between current and preferred roles in which prevention increased in its ranking, may result from participants responding in a way that they feel may be viewed as favorable by the researcher. In contrast, practitioners returning surveys may have done so because they are not in favor of school psychologists becoming more involved in prevention. Based on this view, current involvement in prevention programming may be under-reported.

Conclusion and Future Directions

The on-going debate about what roles and functions school psychologists should play has become strongly tied to on-going discussion about comprehensive systems of care and the adoption of a public health approach to school services. Within these discussions, school psychologists have been encouraged to move away from their roles as assessors for special

education by allocating more time to roles that support a broader continuum of services. Braeden, DiMarino-Linnen, and Good (2001) reported that the traditional role of practitioners is constantly being called to be “recast” into that of a provider of mental health services to the general school population, a consultant to teachers, parents, and administrators, and an expert in development, learning, and mental health.

Despite a great deal of support and promotion for expanded roles in mental health services in the school and for more prevention involvement, many authors have commented on the lack of movement toward the adoption of these roles. Johnson, Malone, and Hightower (1997) commented on how the long-standing calls for the development and implementation of school-based primary prevention programs and renewed optimism for these efforts have not translated into the implementation of primary prevention programs or increased involvement on the part of practitioners in this type of programming. The status of preventive, comprehensive mental health programming has been described as “islands of hope in a sea of despair,” with limited evidence existing for school psychologists’ roles and leadership in mental health programming. The literature on prevention programming identifies exemplar programs that are being conducted by school psychologists, but this involvement has not been viewed a widespread within the field. The current study adds to the literature in providing further evidence for the limited involvement of school psychologists in prevention programming and more specifically primary prevention activities. Based on the results, it is safe to say that a majority of practitioners reported minimal or no involvement in these activities. The study also supports previous studies in the literature that have indicated a desire on the part of practitioners for a reallocation of roles. Consistent with previous studies, practitioners reported a preference to decrease the

amount of time they spend in assessment activities. In place of assessment, school psychologists indicated a desire to increase their involvement in all other areas of practice assessed. Of particular importance to this study, practitioners' reported a desire to spend up to one-tenth of their time in prevention programming.

Preferences for a change in the allocation of time to various roles is consistent with Adelman and Taylor (2003), who stated, "Probably few school psychologists will argue against the desirability of being involved in a broadened agenda for policy, practice, and research" (p. 90). They went on to identify that the real problem that impedes a change is not the development of new ideas and roles, but escaping the old ones. The current study explored how practitioners' degree of preparation and level of confidence differed for traditional versus prevention roles. In all cases, practitioners reported feeling more prepared by their training program and continued professional development opportunities to engage in traditional versus prevention roles. Similarly, they reported greater preparation and confidence for traditional versus prevention roles across all levels of programming (e.g. development, implementation, and evaluation/research). While this may lead one to expect that practitioner knowledge or training in prevention would be perceived as a major obstacle to involvement in prevention programming, this was not the case. Lack of time, support from employers/administrators, and lack of coordination/communication with other mental health providers were consistently among the greatest obstacles, and it is interesting to note that each of these are related to more systems-level factors versus individual characteristics of the practitioner. The amount of time practitioners have to spend on prevention is directly related to expectations and demands placed on them by administrators or the educational system to provide assessment services. The results indicating that lack of support by

employer/administrator was a major obstacle to primary prevention programming further supported the literature/research in this area. Johnson, Malone, and Hightower (1997) have argued that a lack of commitment/support for prevention by school administrator is a major barrier to the implementation of primary prevention programs. In addition, they also point to a lack of support as defined by the allocation of financial resources as another barrier.

Funding for prevention programming is viewed as minimal and generally not being designated for prevention in the area of mental health concerns. A future direction for the current study is to explore potential obstacles at a more specific level. While the broad term “support” was used in the study, future research could explore support as it applies to the allocation of money and tangible resources, along with less tangible forms of support such as commitment by administrators and teachers to expanded roles in prevention. More specific exploration of the obstacles based on the coordination and or communication with other mental health service providers would also be recommended.

While the research has supported evidence-based programs and the use of prevention programming, authors have been quick to point out the gap that exists between research and its application/implementation in the schools (Braeden, et. al., 2001; Weist, 2003). Adelman and Taylor (1993) argued that more is needed than support for a public health perspective and a valid empirical based for intervention. They suggest that only by exploring “the bigger vision of what society wants its schools to do” will school psychologists be able to move out of the “box” of traditional practice and narrow the gap between research and implementation. Adelman and Taylor point to the need to realize that schools are in the education business, not the business of physical or mental health, and that schools view much of what school psychologists do as supplementary to their overall mission of socializing and preparing for

students to play a role in continuing the nation's economic viability. Inherent in the current model is the belief that there is a dichotomy that exists between learning and non-subject matter outcomes. Braeden, DiMarino-Linnen, and Good (2001) argue that this is a false dichotomy that needs to be challenged through the school psychology training that emphasizes familiarity with instructional practices, regular and special education curriculum, systems and school infrastructure, the history of educational policy, and with intervention and prevention focused on the mental health needs of typical students. Future research into the paradigm shift from remediation (reactive) to prevention (proactive) practice needs to explore the ways in which school psychologists are being prepared for roles in comprehensive systems of care.

While the current study set out to explore school psychologists' involvement in prevention programming at the most basic level, future research should focus on exploring involvement and factors that enhances or serve as obstacles with greater specificity. More information needs to be gathered on what types of activities practitioners are labeling as prevention programming. To do so, it may be best to look at empirically validated methods of prevention in key areas of prevention programming and the unique obstacles that may arise in different areas of prevention programming (e.g. violence prevention, suicide prevention, etc.). In addition it may be useful to survey practitioners who are working in schools that have a proven track record of commitment to innovative programs in prevention and comprehensive systems of care to see if they differ significantly from their counterparts in terms of their attitudes, values, interests, and levels of confidence/preparedness in primary prevention programming. This comparison should also look at the presence or absence of support for prevention programming both at the local and national policy levels to assist in

identify pathways to shifting the focus from the individually-focused interventions and treatment to population-based prevention and support for positive outcomes for all children.

APPENDIX A

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office of Research Compliance
Vice Provost for Research and
Advanced Studies
2810 Beardshear Hall
Ames, Iowa 50011-2036
515 294-4566
FAX 515 294-7288

DATE: October 14, 2004
TO: Melissa Cermak
FROM: Ginny Eason, IRB Administrator
RE: IRB ID # 04-479

STUDY REVIEW DATE: October 13, 2004

The Institutional Review Board has reviewed the project, "*An exploration of the current involvement of school psychologists in prevention programming*" requirements of the human subject protections regulations as described in 45 CFR 46.101(b) 2. The applicable exemption category is provided below for your information. Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.

The IRB determination of exemption means that this project does not need to meet the requirements from the Department of Health and Human Service (DHHS) regulations for the protection of human subjects, unless required by the IRB. We do, however, urge you to protect the rights of your participants in the same ways that you would if your project was required to follow the regulations. This includes providing relevant information about the research to the participants.

Because your project is exempt, you do not need to submit an application for continuing review. However, you must carry out the research as proposed in the IRB application, including obtaining and documenting (signed) informed consent if you have stated in your application that you will do so or required by the IRB.

Any modification of this research must be submitted to the IRB on a Continuation and/or Modification form, prior to making any changes, to determine if the project still meets the Federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

cc: Psychology
Douglas Epperson

APPENDIX B

IOWA STATE UNIVERSITY

OF SCIENCE AND TECHNOLOGY

Melissa Cermak, M.S.
 Department of Psychology
 Iowa State University
 W112 Lagomarcino Hall
 Ames, IA 50011-3180

Phone: (716) 688-0054
 Email: cermakresearch@yahoo.com

Participant Name
 Participant Address
 Participant City, State, Zipcode

Participant Salutation (Dear Colleague):

My name is Melissa Cermak, and I am a School and Counseling Psychology doctoral student in the Department of Psychology at Iowa State University. My advisor (Douglas L. Epperson, Ph.D.) and I are conducting a research study looking at the current involvement of school psychologists in prevention programming. This letter is an invitation to participate in that study. Participation in the study requires that you simply complete the enclosed survey, which will take you 30 minutes or less, and mail the survey back to us by **December 15, 2004**. In exchange for your time and effort participating in this research, you are invited to return the enclosed postcard for entry into a drawing to win a \$100 gift certificate to Amazon.com.

We apologize for the length of this letter, which is necessary to ensure that you fully understand the study and to discharge our responsibilities in conducting research with human participants. We have used headings to help organize the information for you and make the letter more easily read. Please take a few minutes to carefully read the letter and decide if you would be willing to participate in our study. Please also feel free to direct any questions that you have about this study to me using the contact information in the letterhead (email is the most reliable method). Before describing the study, let me inform you that you were randomly selected from a national sample of school psychologists to participate in this study.

Background and Purpose of the Study

Children and adolescents are facing a growing number of issues and challenges as a result of changes in the family unit, the economy, and society as a whole. School violence, sexual behaviors, substance use/abuse, and mental health issues are just a few of the issues that students are coping with at earlier points in their development. Estimates regarding the prevalence of psychiatric disorders and other factors that impact psychological health

indicate that a growing number of students may be at risk for serious maladjustment and difficulties that impact their ability to benefit from educational services.

Given the demand for services to meet student health and mental health needs, schools have been viewed as the optimal intervention site for a variety of educational and social problems. The National Association for School Psychologists suggests that the public school system is the sole service provider for approximately 50% of students who receive mental health services. Beyond representing an important setting for intervention and treatment, schools are one of the most significant settings in children and adolescents' lives, serving as a primary socialization system for the social and emotional development of students. Within the school setting, school psychologists are viewed as being positioned to be at the forefront of mental health service delivery in the schools due to the breadth and depth of their training.

While school psychologists have demonstrated their effectiveness in the diagnosis/assessment and treatment of student concerns/disorders, little is currently known about school psychologists' level of preparedness, interest, and current involvement in prevention programming in the school setting. In addition, there is a lack of information about the obstacles that currently stand in the way of school psychologists taking a greater role in the prevention of academic, behavioral, and social/emotional problems of children and adolescents.

We are engaged in a national study of school psychology practitioners to gain a better understanding of their current level of involvement in prevention activities, their degree of preparation and expertise to assume such roles, and their level of interest and confidence in prevention activities. We invite you to assist us in this important research by **anonymously** completing the attached survey and returning it in the enclosed postage-paid envelope.

Description of Procedures

If you agree to participate in the study, your participation will last for 30 minutes or less. Participation in the study requires that you simply respond **anonymously** to a survey of professional practice and prevention experiences. The survey asks participants to provide demographic information, information regarding their current employment settings and professional roles, and information about their level of involvement in prevention programming. In addition, participants are asked to rate themselves in regard to their level of preparation, expertise, and confidence in a variety of professional roles. You may skip any questions that you do not wish to answer.

The survey contains no identifying information (names, id numbers, etc.), and you should not write any identifying names or id numbers on the survey. This procedure ensures that your responses are **completely anonymous and confidential**, which makes it impossible to link surveys to individuals or to even know who participated and who did not.

Please mail the completed survey to the principal researcher using the enclosed postage-paid envelope.

Risks

Survey items address practitioner demographics, characteristics of employment settings, and practitioner roles and are therefore unlikely to result in any degree of harm or discomfort. None of the items are likely to elicit any discomfort or result in any level of risk to research participants.

Benefits

If you decide to participate in this study there will probably be no direct benefit to you beyond the opportunity to win a gift certificate. The benefits of the study are focused on expanding professional knowledge regarding school psychology practice and its determinants. It is hoped that responses to this survey will help us better understand school psychologists' involvement in prevention programming, while also looking at the factors that promote or serve as obstacles to greater involvement. By identifying obstacles, training programs and professional organizations may be better able provide opportunities for practitioners to expand their skills to provide a broader continuum of mental health services in the schools.

Costs and Compensation

Your only cost in participation is the time that you invest in completing the questionnaire (30 minutes or less). Enclosed with your survey is a postcard for you to return separately from the survey to ensure that the survey responses are anonymous. This postcard provides you with the opportunity to have your name entered in a drawing to win a \$100 gift certificate to Amazon.com. When you have returned your completed survey, or however much of it you were willing to complete, simply mail the post card to us and we will enter you in the drawing for the gift certificate. Please note that postcard entries are addressed to a different mailing address to ensure the anonymity of participants. A winner will be sent a gift certificate at the completion of data collection (December 20, 2004). Chances of winning are less than 1 in 1000.

Participant Rights

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled. If you choose to discontinue participation at any time, we simply ask that you return your partially completed survey to us.

Confidentiality

Your responses to the survey are totally **anonymous** and **confidential**. There are no identifiers of any kind that are used in this study, so it is literally impossible to link surveys to particular practitioners.

Questions or Problems

If you have any questions about this study, you are encouraged to direct those questions to the principal investigator, Melissa Cermak (cermakresearch@yahoo.com) or Dr. Douglas L. Epperson (dle@iastate.edu).

If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; austingr@iastate.edu or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; dament@iastate.edu

Consent

Completing and returning the enclosed survey indicates that you have voluntarily agreed to participate in this study under the conditions described above.

Sincerely,

Melissa Cermak, M.S.
Doctoral Student and Principal Investigator



Douglas L. Epperson, Ph.D.
Professor of Psychology

Reminder Postcard

Front

Douglas L. Epperson, Ph.D.
Department of Psychology
W112 Lagomarcino Hall
Iowa State University
Ames, IA 50011

Participant's Name and Address

Back

Ten days ago you received a request to participate in a national study being conducted at Iowa State University.

If you have already completed the survey enclosed with that request, please accept our thanks and ignore this reminder.

If you haven't yet completed that survey, please consider this as a first reminder.

If you have misplaced the survey and would like another copy, please check this box and return this card in an envelope addressed to:

Douglas L. Epperson, Ph.D.
Department of Psychology
W112 Lagomarcino Hall
Iowa State University
Ames, IA 50011

Second Reminder Postcard

Front

Douglas L. Epperson, Ph.D.
Department of Psychology
W112 Lagomarcino Hall
Iowa State University
Ames, IA 50011

Participant's Name and Address

Back

Two weeks ago you received a request to participate in a national study being conducted at Iowa State University.

If you have already completed the survey enclosed with that request, please accept our thanks and ignore this reminder.

If you haven't yet completed that survey, please consider this as our final reminder.

If you have misplaced the survey and would like another copy, please check this box and return this card in an envelope addressed to:

Douglas L. Epperson, Ph.D.
Department of Psychology
W112 Lagomarcino Hall
Iowa State University
Ames, IA 50011

Drawing Entry Postcard

Front

Melissa Cermak, M.S.
Iowa State University
Department of Psychology
Ames, IA 50011-3180

Melissa Cermak, M.S.
87 Bywater Drive
Getzville, NY 14068

Back

We appreciate your participation in this survey.

If you would like to be entered in a drawing to win a \$100 gift certificate for Amazon.com, please provide an address in which your prize may be sent and return this card by mail:

Name (optional): _____

Mailing Address: _____

Thank you again for your participation

APPENDIX C

Practice and Prevention Survey 2004

Section I: Background Information:

1. Sex (check one) Male Female 2. Age (write in) _____
3. Ethnicity (check all that apply)
 American Indian/Alaska Native Asian/Pacific Islander African American/Black
 Hispanic/Latino Caucasian Other
4. Highest level of graduate education in school psychology? (Check one)
 Masters Level (30-59 sem. hrs.) Specialist (60 + sem. hrs.) Doctoral degree
5. Indicate field in which graduate degrees were earned (Please indicate degree earned in space)
 School Psychology Counseling Psychology Educational Psychology
 Clinical Psychology School Counseling/Counselor Education
 Other (specify: _____)
6. College affiliation of school psychology training program? (Check one)
 Psychology Department/Arts & Sciences College Joint Psychology & Education Dept.
 Education Dept./ College of Education Other (specify: _____)

Section II: Employment & Professional Information:

1. Employment status (check one): Full-time Part-time (specify hours/week _____)
2. Years of school psychology experience: _____ 3. Years in current position: _____
4. What is your primary employment setting? (check one)
 School Private practice Clinic Hospital
 Other (specify: _____)
5. What is the nature of your primary work setting? (check one)
 Largely urban Largely suburban Largely rural
 Other (specify) _____
6. Do you have a secondary employment setting? (check one)
 No Yes (specify) _____
7. Who employs you as a school psychologist? (check one)
 School District Educational Agency Private School
 Other (specify) _____

8. What is the approximate ratio of school psychologists to students in your setting? (e.g., one psychologist per 2,000 students): 1 to _____
9. Please indicate the number of schools served in current position: (Enter the appropriate number next to each type of school)
- _____ Elementary School(s) _____ Middle/Junior High School(s) _____ High School(s)
 _____ Alternative School Placement(s) _____ Other (specify: _____)
10. Please check each organization to which you belong:
- _____ NASP _____ APA Division 16 _____ APA Other Division _____ State school psych. Assoc.
 _____ Other (specify: _____)
11. How many workshops/in-services/seminars have you taught in the past 5 years? _____
12. How many articles have you had published in journals? _____
13. How many presentations (including posters) have you given at professional conferences? _____
14. **Current versus preferred roles:** Please estimate the percentage of time that you currently devote to each of the following role/activity categories and then indicate the percentage that you would prefer to devote to each of the roles/activity categories. Please make sure that the total percentage in each column sums to 100%.

Role/Activity	Percent of Time Spent	
	Current	Preferred
Psychoeducational Assessment (Includes evaluations for diagnosis of disabilities; testing, scoring, and interpretation; report writing; eligibility or placement conferences with teachers and parents; reevaluations)	_____%	_____%
Interventions (Direct work with students, teachers, and parents to improve competencies or to solve problems; counseling; social skills groups; parent/teacher training, crisis intervention)	_____%	_____%
Problem Solving Consultation (Working with consultees [teachers or parents] with students as clients; problem identification; problem analysis; treatment design and implementation; treatment evaluation)	_____%	_____%
Systems/Organizational Consultation (Systems level changes; improve organizational functioning; school policy; general curriculum issues)	_____%	_____%
Research/Evaluation (Program evaluation; grant writing; needs assessment, determining correlates of performance; evaluating effects of programs)	_____%	_____%
Prevention Programming (Development of new programs; review of existing prevention programs; Implementation of prevention programs, evaluating the effects/integrity of prevention programs; Research on prevention programming)	_____%	_____%
Column totals (must equal 100%)	100%	100%

Section III: Prevention and Practice: Assume the following definitions (note primary and secondary do not refer to the age/grade of the children served)

Primary Prevention – prevention activities that are directed at groups/individuals who have not developed problems and which focus on fostering wellness and preventing specific problem behaviors.

Secondary Prevention – prevention activities that focus on reducing existing problems or early treatment of symptoms.

Tertiary Prevention – prevention activities targeted at individuals who already exhibit moderate to severe symptoms with the goal of preventing further deterioration and minimized long-term effects related to these problems

1. Estimate the number of hours per week you spend on the following prevention activities/programs (write in the appropriate number of hours for each category of prevention activities):

Primary Prevention Activities: _____ hours per week

Secondary Prevention Activities: _____ hours per week

Tertiary Prevention Activities: _____ hours per week

2. Rate the degree to which each of the following represents an obstacle to you providing prevention programming. Circle the appropriate number for each potential obstacle (1 = “this not an obstacle” through 4 = “this is a major obstacle”)

Potential Obstacle	Is Not an Obstacle			Is a Major Obstacle
Not enough time or other demands on time	1	2	3	4
Lack of support from employer/district/administrator	1	2	3	4
Limited knowledge of prevention programming	1	2	3	4
Lack of training/professional development in prevention programming	1	2	3	4
Lack of professional interest in prevention activities	1	2	3	4
Inability to demonstrate immediate results from prevention programs	1	2	3	4
Other professional disciplines are responsible for providing prevention programming	1	2	3	4
Lack of coordination or communication with community-based mental health providers	1	2	3	4

3. For each of the areas of prevention activities listed below, please indicate whether or not you have been involved in that activity. If you have been involved in an area of prevention activities, please also indicate the type of prevention you were involved in (primary, secondary, tertiary – using the definitions provided on the previous page) and your level of involvement. For level of involvement, please use the categories defined below: (please skip this section if you have had no involvement in prevention activities).

Program Development (D)– activities that result in a formal plan for a prevention program including conducting a needs assessment, defining the behavior/problem to be addressed and goals of the program, reviewing existing programs, and/or developing a new program to meet needs.

Program Implementation(I) – implementation of the program, including monitoring treatment integrity, collection of data, and monitoring participant progress toward program goals.

Program Evaluation (E) – formative and summative evaluation of data to determine the effectiveness and impact of the program on target behaviors or outcome measures.

Prevention Research (R) – activities that add to the scholarly literature, such as outcome-based research on prevention methods and publication of data and research findings.

In which of the following target areas of prevention have you engaged? For each that apply, indicate the main type of prevention and your level of involvement.

Prevention Area	Involved? (circle one)	If Answer to Involvement is Yes:			
		Type of Prevention (circle all that apply)			Level of Involvement (circle all that apply)
		P = Primary Prevention S = Secondary Prevention T = Tertiary Prevention			D = Program Development I = Program Implementation E = Program Evaluation R = Prevention Research
Violence	Yes No	P	S	T	D I E R
Substance Abuse	Yes No	P	S	T	D I E R
Mental Health Problems	Yes No	P	S	T	D I E R
Academic Problems	Yes No	P	S	T	D I E R
Behavioral/Social Problems	Yes No	P	S	T	D I E R

Section IV: Preparation and Professional Confidence

Instructions: Please read the following skills/roles/functions domains and circle the number that best represents your response to the questions in the three columns to the right of each domain.

Item #	Professional Skills, Roles & Functions	A. To what degree did your <u>training program</u> prepare you in this skill/role? 1 = very little preparation to 4 = extensive preparation	B. To what degree have you developed this skill through in-services or <u>continued professional development</u> ? 1 = very little training to 4 = extensive training	C. How <u>confident</u> are you in your abilities or knowledge of this skill area? 1 = little confidence to 4 = strong confidence
1	Defining problem behaviors/student concerns	1 2 3 4	1 2 3 4	1 2 3 4
2	Problem analysis (e.g. functional behavioral assessment)	1 2 3 4	1 2 3 4	1 2 3 4
3	Psychoeducational assessment to determine eligibility for services	1 2 3 4	1 2 3 4	1 2 3 4
4	Development of programs/interventions for individual services	1 2 3 4	1 2 3 4	1 2 3 4
5	Development of prevention programming	1 2 3 4	1 2 3 4	1 2 3 4
6	Implementation of programs/interventions for individual services	1 2 3 4	1 2 3 4	1 2 3 4
7	Implementation of prevention programming	1 2 3 4	1 2 3 4	1 2 3 4
8	Evaluation of programs/interventions (e.g. integrity, effectiveness)	1 2 3 4	1 2 3 4	1 2 3 4
9	Evaluation of prevention programs (e.g. effectiveness, integrity)	1 2 3 4	1 2 3 4	1 2 3 4
10	Data collection (e.g. observations, record reviews, etc.)	1 2 3 4	1 2 3 4	1 2 3 4
11	Group interventions (e.g. social skills groups)	1 2 3 4	1 2 3 4	1 2 3 4
12	Parent/teacher training	1 2 3 4	1 2 3 4	1 2 3 4
13	Consultation with parents/teachers	1 2 3 4	1 2 3 4	1 2 3 4
14	Systems/organizational consultation	1 2 3 4	1 2 3 4	1 2 3 4
15	Knowledge of prevention science	1 2 3 4	1 2 3 4	1 2 3 4
16	Research and statistical proficiency	1 2 3 4	1 2 3 4	1 2 3 4
17	Prevention of academic problems	1 2 3 4	1 2 3 4	1 2 3 4
18	Prevention of mental health concerns	1 2 3 4	1 2 3 4	1 2 3 4
19	Prevention of social/behavioral problems	1 2 3 4	1 2 3 4	1 2 3 4
20	Health promotion and wellness activities	1 2 3 4	1 2 3 4	1 2 3 4

Thank you for taking the time to complete this survey – Your participation is greatly appreciated.

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