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Impact of Training on School Psychologists' Knowledge and Attitudes Regarding Children with Chronic Health Issues

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THE IMPACT OF TRAINING ON SCHOOL PSYCHOLOGISTS' KNOWLEDGE AND ATTITUDES REGARDING CHILDREN WITH CHRONIC HEALTH ISSUES

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Dissertation Approval

This is to certify that the thesis presented to us by __Abby Baker___________

on the _31_____ day of ___May____________, 2007_, in partial fulfillment of the

requirements for the degree of Doctor of Psychology, has been examined and is

acceptable in both scholarship and literary quality.

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Abstract

Children who have chronic medical illnesses must rely on their families and schools to create an environment that allows goals in the areas of development, of academic, social, familial and life-skills to be individualized to accommodate the capabilities of each child. School psychologists are an essential part of blending a child's needs and academic fit. Although school psychologists receive some training in child psychopathology, they lack the necessary training in the areas of acute and chronic illness, in order to work with the health care system and to collaborate with pediatricians. The emergence of the field of Pediatric Psychology in 1995, however, is developing and educating psychologists, who now possess the medical knowledge to work with children who have chronic health issues. There were 469 school psychologists surveyed about their knowledge and attitudes regarding children with chronic illness, and the results of the study revealed that school psychologists have not only limited knowledge of children with chronic health issues, but also negative attitudes towards this sample of children. School psychologists, who received their certification after 1995, possessed more knowledge and more favorable attitudes regarding these children than did school psychologists, who received their certification prior to 1995. Limitations of the study and directions for future research are also addressed.

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Statement of the Problem

Children with chronic medical issues are an ever expanding sample (Brown, 1999). There are almost 8,000 children between the ages of 0 – 17 who are described by their parents as having moderate or severe health problems (Child & Adolescent Health Measurement Initiative, 2005). However, according to the 2000 National Census data, there are over two million children classified with one disability and over five hundred thousand children with two or more disabilities (Annie E. Casey Foundation, 2000). In 2004 in the United States of America, 8.4% of children ages 5 to 17 were identified with activity limitation resulting from one or more chronic health conditions (Centers for Disease Control and Prevention, National Center for Health Statistics, 2006). According to the United States Department of Health and Human Services, (2003), Americans with disabilities have lower levels of educational attainment than those without disabilities; one in five adults with disabilities has not graduated from high school, compared with fewer than one of ten adults without disabilities. National graduation rates for students who receive special education and related services have remained at 27 percent for the past three years, but rates for students who do not rely on special education services are at 75 percent (United States Department of Health and Human Services, 2003).

As a result of the advances in medical technology, most of these children will reach adulthood, an outcome not typically achieved previously (Ell & Reardon, 1990). Increasingly, these children with chronic health issues are attending school with the general sample of their age-mates. Advances in health care indicate that children's chronic medical issues are increasingly being addressed at home or at school rather than during lengthy hospitalizations

(Brown, 1999). Integrating children with chronic illnesses, some of whom are dependent on technology and specialized care, into the daily routines of school life poses many challenges for the children, their classmates, educators, families, and health care providers (Rehm & Rohr, 2002). Given the fact that children are surviving chronic and serious medical issues in greater numbers than in the past, effectively addressing academic factors is a necessary role for school psychologists to embrace (Tarnowski & Brown, 1995).

More and more, school psychologists are addressing health-related issues in school and in medical settings (Drotar, 1998). Among the roles that many school psychologists find themselves assuming are parent training, child advocacy, assessment, service coordination, counseling, program development, and research (Brown, 1999; Power et al., 1998). School psychologists, with their knowledge of school systems, with consultation expertise, with clinical skills and research training, are well positioned to work with children who have chronic medical issues (Drotar, 1998).

Historically, educational services for children with chronic illnesses were developed to address specific diseases such as polio and tuberculosis (Lynch, Lewis, & Murphy, 1992). These services typically followed a medical model and were offered in special schools or in centers that segregated students from their peers (Brady, 1988). As the number of these diseases decreased, the school’s responsibility became more diffuse. In 1975 the enactment of civil rights legislation, The Education for All Handicapped Children Act (Public Law 94-142), served to sensitize school districts to the increased need for availability and implementation of special education, including psychological services for all handicapped children (Fagan & Wise, 2000). Even following the enactment of this law, there is considerable variability in the types of services available, in their delivery and in their administration (Lynch, Lewis, & Murphy, 1992).

Despite the increase in the numbers of children with chronic illness and the new challenges they present, few studies have investigated the issues that schools and families encounter in their efforts to meet the needs of these children (Lynch, Lewis, & Murphy, 1992).

Purpose of the Study

Because of the increase of children with chronic health issues in schools, there is an escalating need for school psychologists to have the knowledge to address the requirements of this sample of children. It is also important for school psychologists to be aware of their attitudes toward this sample. Increasing a school psychologist's knowledge of and attitudes toward children with chronic health issues will help school psychologists to provide better service in the school as a whole and as a part of an interdisciplinary team.

There is a clear need to explore the general fount of knowledge and the attitudes that school psychologists possess and to identify these areas of weakness that will help to improve programs of study. Surveys used in this study will be distributed nationwide to provide an enhanced examination of school psychologists, of their levels of training and the comprehensiveness of training. The interaction between knowledge and attitudes will be explored. This researcher will also explore the impact of training programs on a school psychologist's knowledge and attitude(s) regarding children who have chronic health needs by furthering the work done by Christina Esposito (2004) for her Doctoral Dissertation.

Esposito (2004) utilized a sample of school psychologists from the Commonwealth of Pennsylvania who are listed as members of the National Association of School Psychologists (NASP). She created the two surveys used in her study and in the present study. These two surveys are the Knowledge of Chronic Illness in Children (KCIC) and the Attitudes of Chronic Illness in Children (ACIC). Esposito's study involved the mailing of 898 surveys to potential participants; from this group, 256 eligible participants were gleaned. Overall her study revealed that there was inadequate knowledge and negative attitudes among school psychologists regarding children who have chronic illnesses. This study aims to further this research.

The present study will attempt to gain a better understanding of school psychologists' knowledge base and current attitudes regarding students with chronic health issues. This research proposes to extend the work of Esposito (2004) in two key ways. First, the study will use a national, randomized sample as opposed to a sample taken from one specific state. Second, this study may help school psychology training programs, as well as national school psychology credentialing agencies, to improve their programs of study. The present evaluators hope to bring the issue of chronic health issues to the forefront of American consciousness. Also, it will allow school district personnel to become more conscious of making appropriate accommodations for students with chronic health issues, of providing training not only for the school psychologist but also for all school personnel in order to increase their sensitivity and understanding.

History of Chronic Illness

A chronic illness is defined by Perrin (1985) as "one that lasts for a substantial period of time or that has symptoms that are debilitating for a long period of time" (Perrin, 1985, p. 2). Pless and Pinkerton (1975) describe a chronic medical condition as one that interferes in daily life for longer than three months in a year or requires hospitalization for more than one month in a year. The most common chronic condition is asthma, followed by sensory disorders and nervous system disorders. Examples of chronic illnesses include HIV (Human Immunodeficiency Virus) and other sexually transmitted diseases, diabetes, lupus, cystic fibrosis, anorexia nervosa, spina bifida, and cardiovascular disease (Boice, 1998). In the past, children with many of these illnesses may not have lived long enough to become adolescents. However, in the past 25 years, the survival rate for children with cystic fibrosis has increased 700%; for spina bifida, the increase has been 200% and for congenital heart disease, 300% (Blum, 1992).

By its very nature, a chronic illness denotes a condition in which the patient tries to cope with his or her disease on a daily basis for months or years. Some patients' illnesses or diseases are not altered by what the patients do (e. g., multiple sclerosis); other illnesses may depend greatly on patient performance of therapeutic or diagnostic maneuvers on a daily basis. This is the case with diseases such as asthma and diabetes (Cohn & Brouhard, 2000). Many of these children may present both as physically and as psychologically well (Noll, Ris, Bukowski, & Koontz, 1992).

Technology Dependent Illnesses. Advances in medical technology have dramatically altered the lives of many children. A growing number of conditions that were once classified as terminal are now viewed as chronic but not necessarily life threatening (van Eys, 1979). A child who in the recent past would not have left the hospital may now attend a neighborhood school in a wheelchair with a ventilator and gastrostomy tube (Sirvis, 1988). Families with children who would not have survived because of severe heart, liver, and kidney problems have new hopes with transplanted organs and advanced treatments (Lynch, Lewis & Murphy, 1992). The Office of Technology Assessment estimates that as many as 100,000 infants and children may rely on technology in some way to handle health problems, (U. S. Congress, Office of Technology Assessment, 1987). This group of children, referred to as medically fragile or technology dependent (Council for Exceptional Children, 1988), presents new challenges to teachers, administrators, and families (Lehr, 1990). Thus educators must rely most heavily on parents and school nurses for information about how the children's health care needs should be met (McCarthy, Williams, & Eidahl, 1996).

It is estimated that in any given year between 11,000 and 68,000 children are dependent on technology. These children fall into four categories: ventilator dependence, intravenous nutritional support, other respiratory or nutritional support, and medical devices that compensate for vital bodily functions (Rehm & Rohr, 2002). Despite these dependencies, there are advantages to a school-based education. These advantages fall into three main groups: education and skill attainment, socialization, and provision of respite care for families (Rehm & Rohr, 2002).

Attitudes of Chronic Illness. Parental attitudes are crucial regarding the successful integration of children with chronic illness into the school environment. Parents can be not only powerful advocates for their children but also can also be strong sources of support. However, a parent’s own anxieties and attitudes can interfere with a successful integration process. A parent’s over protectiveness can lead to a lack of appropriate expectations and boundaries for children (Clay, 2004). Also there is a great deal of emotional and physical effort that parents must exert to get a child back into a school routine and this can seem overwhelming when the child resists (Clay, 2004). Unfortunately, parents consider school merely as a means to achieve education without fully understanding the role that school plays regarding the child’s social development (Clay, 2004).

Parents often prefer their children to be educated in the school because of their perceptions that home teachers and therapists are less knowledgeable, with a lesser range of specialized skills than educators and therapists available in the school (Rehm & Rohr, 2002). Parents also express frustration that the teachers at home or even at school underestimate their child’s abilities and appear reluctant to build on previously acquired skills or knowledge. Parents and health care givers also recognize the normalizing role of school (Rehm & Rohr, 2002). Enabling children to participate in school-based education is reported as a vital agenda item of parents (Elder, 2001).

School personnel are at a distinct advantage to assess whether or not a child is coping with his or her illness. For several reasons, school psychologists are influential in recognizing children who may need help coping within the school setting. First, children spend a large portion of their waking hours in school. The school personnel who spend time with them can observe much of their daily behavior (Clay, 2004). Second, school personnel are able to observe the children as they interact or choose not to interact with their peers in various social situations (Clay, 2004). Finally, school psychologists are able to identify and observe children’s development, such as cognitive and physical abilities (Clay, 2004). A school psychologist has the knowledge and training to recognize strengths and weaknesses in these developmental areas relative to the other children. They can also identify changes over time with a specific child (Clay, 2004).

Developmental Coping. A school psychologist has a unique role in which to help children with chronic health conditions. These children are at increased risk of experiencing adjustment problems, behavior problems, emotional distress such as sadness and anger, difficulty in social relationships, social anxiety, negative self-image, and poor school performance (Cohen, 1999). All children must confront the developmental tasks and challenges of childhood and adolescence as they mature. No child can escape the day-to-day challenges that are a natural part of growing up. Children and adolescents are not immune to experiencing daily life issues (Clay, 2004). The common developmental and social problems that are experienced by many children tend to occur more often and more intensely for children who have health-related stressors (Clay, 2004). Not only are these children faced with threats to their physical health but simultaneously they must cope with the emotional and social implications of their health issues (Clay, 2004).

As infants and as toddlers, children generally have minimal understanding of their illnesses. Because of emerging but limited verbal skills, they often must use other means of communicating their needs to adults. Young children begin to develop a sense of trust and an overall sense of security at this stage. Illness-related experiences such as pain, hospitalization, invasive treatments, and restriction of motion may create new challenges for children and possibly interfere with the development of their sense of trust, safety, and security (Clay, 2004).

Children from the ages of three to five have the desire and need for autonomy and this becomes extremely important. Preschool age children may realize that they are sick, but they may not understand what caused their illness or symptoms. A hospital stay and rigorous medication schedules can challenge a preschool child's natural desire at this developmental stage to do more by themselves. Preschool age children may counter this lack of control over their world by then challenging the limits that are set by the adults around them. Adult caregivers can help by providing children with the choices that they can make, but working with them to complete aspects of the treatment that must be done (Clay, 2004).

Children in the first few years of elementary school continue to seek a sense of independence and mastery over their environments. At this age, children are cognizant of, and can articulate reasons for, their illnesses although these reasons may not seem to make sense to the adults around them. During this developmental period, children exhibit "magical thinking," in which they believe that they are the cause of the events. For example, a child may believe that he or she has caused the illness because they lied to their parents or did not eat their vegetables.

The illness can begin to affect peer relationships because children at this age become aware of how they are different from their peers (Clay, 2004).

Older school age children are better able to understand their illnesses and their treatment. Certain children at this age may appear quite mature, leading some adults to assume that children's understanding and responses are similar to their own. A child's strong desire and need to belong may be threatened if he or she feels left out when absent from school or from social activities with their peers. There is a strong desire for adults to protect an ill child by restricting him or her from activities with other children. This may be done in the child's best interest, but adults also need to realize the distress this can create for the child. These types of restrictions can interfere with a child's independence and sense of mastery. Whenever possible, it is believed that adults should help ill children to stay involved in some manner and participate in whatever way they can (Clay, 2004).

During the teenage years, developmentally, a personal identity separate from family begins to emerge. The importance of appearance and self-image increases. This can create difficulties when medication or treatment results in changes in appearance, such as loss of hair, bloating, or weight gain. Because of their increasing sense of independence, it is typical for teens to go through times of denial regarding their illnesses. This denial may be evident when an adolescent neglect to take medication, follow special diets, or check blood sugars. Also, natural physiological changes that are occurring during this period can possibly lead to symptom changes necessitating changes in medication dosages. Adults can best help adolescents by supportively encouraging them to manage their diseases (Clay, 2004).

School Psychologist

A school psychologist is often the person called on to impart advice and guidance to teachers, paraprofessionals, students, and families regarding children with special needs. One special needs category is chronic illness. Advances in medical treatments and home-care regimens for serious childhood health conditions have resulted in a growing sample of children that may be impaired in certain activities of daily life but are capable of participating in a wide range of academic and social endeavors (Rehm & Rohr, 2002).

The advancement of technology has freed children from the hospital or home and has led them into the world. More and more, children who have chronic illnesses are attending regular schools and living their lives more normally. A school psychologist is called on not only to help these children adjust in the school setting but also to help others they interact with on a daily basis adjust to their special needs. The effectiveness of the school psychologist in this role will be influenced by his or her breadth of knowledge and by his or her personal attitude regarding a chronic health sample. Academic and social problems are as universal in children with chronic medical issues as they are in children without chronic medical issues (Brown & DuPaul, 1999). These issues, however, are likely to impact more on the learning of a student who has chronic health illness needs.

Coordination with agencies, with health care providers, and with families is essential in addressing the needs of children who receive special education. Responsibility for providing services to these children rests with an interdisciplinary team (Golin & Duncanis, 1981). Collaboration and consultation across disciplines facilitates a successful educational process for students not only by enhancing teacher effectiveness and satisfaction, but also by extending a teacher's capacity to meet the needs of these students (Sheridan, 1992). Although the leadership of a team may shift in relation to the changing nature of the task, a consistent coordinator is essential (Barrett, 2000).

One leader of this team is the School Psychologist. The National Association of School Psychologists (NASP) defines a school psychologist as having specialized training both in psychology and in education. School psychologists use their training and skills to team with educators, parents, and other mental health professionals to ensure that every child has a safe, healthy, and supportive environment for learning. School psychologists understand school systems, effective teaching strategies and successful learning, and conduct ecologically valid assessments and intervene to promote positive learning environments. Children from diverse backgrounds can then have equal access to effective educational and psychological services to promote healthy development (Archival Description of the Specialty, 1998).

School psychologists typically work with the children and with their parents or guardians as their primary clients. However, with the growth of consultation in the field, teachers and parents have more often become the primary service recipients rather than the children. School-age children continue to be the most common direct service recipients, as well as the primary target of indirect services delivered through other recipients. The classification of school-age children has expanded in recent decades to include the ages from 3 to 21; some school psychologists provide services to persons outside of this age range (Fagan, 2005).

School psychologists serve many roles within the school system. The first role has been as a sorter, entailing the psychoeducational assessment of children for placement in special education programs. However, school psychologists now work as members of service teams in which a more comprehensive approach to assessment is taken (Fagan, 2005). A second role has become the school psychologist's engaging in individual and group interventions. This role has expanded with a gradual shifting of administrator's thinking in the direction of serving children's mental health as well as academic needs (Fagan, 2005). A third role is as a consultant who can also augment the prior role as interventionist. A fourth role is that of engineer, in which the practitioner works with the overall service delivery schemes. This extension of the consultation role broadens to systems analysis and development that focuses its assessment, interventions and preventive strategies at systemic needs, not only the needs of individual children, parents, or educators (Fagan, 2005).

The development of many group and individual ability and achievement tests in the early decades of the twentieth century has facilitated the desire of educators for student differentiation. These also became the forte of psychologists serving educational settings. There was opposition regarding the validity and reliability of these tests but there was also widespread acceptance of them and their use by educators and psychologists. Therefore psychological and educational test administration and interpretation became the major identifying characteristic of those psychologists employed in the school setting. Interpretation of these tests became the primary role and function of early school psychologists (Fagan & Wise, 2000). School achievement and aptitude tests developed rapidly after 1910 with the growth of educational psychology. Individual and group counseling functions of present day school psychologists have early origins in vocational guidance (Fagan & Wise, 2000).

School psychologists work to uncover the best solution for each student and each particular situation. They also employ varying strategies to address individual student needs and to improve school and district-wide support systems. School psychologists work with students individually and within a group setting. They can help to develop programs to train teachers and parents regarding effective teaching and learning strategies. They can identify and help to implement effective techniques to manage behavior at home and in the classroom. They can help others to work with students who have disabilities or who have special talents who may have problems with substance abuse. Moreover, they can help prevent and manage crises (NASP, 2006). Additionally, school psychologists provide the following services: consultation, evaluation, intervention, prevention, research and planning.

History of Special Education - IDEA

The late nineteenth and early twentieth centuries brought many changes to school enrollments. Earlier generations viewed the father as savior of the child; however, at the turn of the century there was strong sensitivity to the proposition that in children lay the salvation of society or to the child as redeemer (Wishy, 1968). This improved the condition of children's lives, through systematic education. A pervasive theme in twentieth-century United States education has been that by properly educating children society could rise above its problems (Fagan & Wise, 2000). There was an increasing movement toward enforcement of compulsory schooling and of the attendance laws between 1870 and 1930 that served to change public education dramatically. More children of diverse backgrounds attended school for longer periods of time. In addition, many children had little, if any, prior record of schooling and as such, age was not a reliable estimate of proper grade placement (Thorndike, 1912).

Compulsory attendance was gradually enforced only for "normal" school children, and many states failed to provide comprehensive services for the handicapped until legislative initiatives of the post-World War II era (Fagan & Wise, 2000). Dunn's (1973) figures suggest that less than 1% of the school sample was represented by special needs children as compared with present times, during which special education enrollment represents at least 10% of the school sample (Fagan & Wise, 2000). Schools were inundated with unanticipated children with disorders and forced to cope by using unproven interventions. During this period special education programs emerged. They were small in number by current comparison but they were available in many urban and in some rural school systems by 1910 (Van Sickle, Witmer & Ayers, 1911). Seriously atypical children were "educated" in facilities apart from the regular schools.

Education Laws. The most significant event to affect modern schooling was the creation in 1975 of landmark civil rights legislation. The Education for All Handicapped Children Act (Public Law 94-142) was enacted by Congress on November 29, 1975, which sensitized every school district to the need for the availability and implementation of special education (Fagan & Wise, 2000). This law, which was influenced by Section 504 of the Rehabilitation Act of 1973, was intended to support states and localities in protecting the rights of, meeting the individual needs of, and improving the results for infants, toddlers, children and youths with disabilities, as well as their families. This Act created legislation to ensure a child's right to a suitable education regardless of the nature of the handicap. This was followed by a long, historical struggle of guaranteeing education to women and to minorities, such as Native Americans, Hispanics and African-Americans (Fagan & Wise, 2000).

An extension of Public Law 94-142 was made in 1986 to grant aspects of this law to infants and toddlers by using the individualized family service plan (IFSP) (Public Law 99-457). The implementation of this legislation and that of the 1974 Public Law 94-142 extended the educational rights of the handicapped to begin at the time of their births. In 1974, legislation regarding the handling and confidentiality of school records (Public Law 93-380) brought attention to service issues in special and regular education (Fagan & Wise, 2000). The Family and Education Rights and Privacy Act of 1974 (FERPA, Public Law 93-380) clarified the rights of parents and students, ages 18 and over, to inspect, challenge and correct records; it also granted written permission for the gathering and dissemination of records (Fagan & Wise, 2000).

Public Law 94-142 was reauthorized in 1997 as the Individuals with Disabilities Education Act (IDEA, Public Law 105-17) and was again reauthorized in 2004. All of the above laws are considered civil rights acts for the disabled, entitling children to a free and appropriate education (FAPE), nondiscriminatory assessment practices, due process procedures and an individualized education plan (IEP) for services to be delivered under the least restrictive environment (LRE) concept. The passage of these laws concluded an era in which student records were liberally shared among school personnel and community agencies, the evaluation of students for special education was conducted without prior parental consent, and the segregation of the delivery of special education was in practice (Fagan & Wise, 2000). Some of the more controversial features of this legislation for the handicapped are the provisions for nonbiased assessment, due process, informed consent, and educational placement in the least restrictive environment. Section 504 is more inclusive and requires services for some children who are not eligible according to IDEA. Both Section 504 and IDEA have overlapping protection for children and families; these are related to due process, assessment, educational plans (Fagan & Wise, 2000).

Part B of IDEA allows children with mental retardation, hearing deficiencies, speech and language impairments, specific learning disabilities, visual impairments, emotional disturbances, orthopedic impairments and a variety of medical conditions that may interfere with education (categorized as Other Health Impaired (OHI)) to receive special education services. To meet these eligibility criteria, a child’s disability must interfere with the educational process and normal school performance to the extent that special education assistance is needed (Committee on Children with Disabilities, 1999). In addition, children with chronic illnesses and disabling conditions often require related services. Related services are typically viewed by health care professionals as medically necessary or at the least, helpful for children with chronic illnesses. Related services are those such as speech therapy, occupational therapy, physical therapy and nursing care that are provided to the students in school because they are related to the students' educations (Committee on Children with Disabilities, 2000).

Prior to the Individuals with Disabilities Education Act (IDEA), children with disabilities were denied access to education and opportunities to learn. For example, in 1970, United States schools educated only one in five children with disabilities and many states had laws excluding certain students from its schools. This excluded children who were blind, deaf, emotionally disturbed or mentally retarded. IDEA legislation enabled school districts to create early intervention programs and services that are provided to more than 200,000 eligible infants, toddlers and their families, and about 6.5 million children and youths receive special education and related services to meet their individual needs. Most students with disabilities are now attending schools in their own neighborhoods. Far fewer students with disabilities are now in separate buildings or classrooms (on school campuses) and are learning in classes along with children without disabilities (U.S Department of Education, 2006).

In 2004, President Bush and Congress proceeded to reauthorize legislation regarding IDEA. Specifically, it allowed states to establish goals for the performance of children with disabilities aligned with each state's definition of "adequate yearly progress" under the No Child Left Behind Act of 2001 (NCLB). The NCLB and IDEA work together to hold schools accountable for making sure students with disabilities achieve appropriate standards. IDEA is now aligned with the important principles of NCLB in promoting accountability for results, enhancing the role of parents and improving student's achievement through instructional approaches that are based on scientific research. IDEA focuses on the needs of individual students and NCLB focuses on school accountability. Both laws share the goal of improving academic achievement through high expectations and high-quality educational programs. The combined intentions of these laws is to improve educational outcomes by allowing children with disabilities not only to gain physical access to the education system, but also to achieve full access to high-quality curricula and instruction (U.S Department of Education, 2006).

Evidence for the success of this approach is shown by the increasing numbers of students with disabilities graduating from high school rather than dropping out. The National Longitudinal Transition Study-2 (NLTS2) tracked the experiences of a national sample of students with disabilities over several years as they moved from secondary school into adult lives. This revealed the fact that the incidence of students with disabilities completing high school rather than dropping out increased by 17 percentage points between 1987 and 2003. During this same period, their participation in postsecondary education more than doubled to 32 percent. In 2003, 70 percent of students with disabilities, who had been out of school for up to two years, had paying jobs; this is in comparison with only 55 percent of disabled students in 1987 (U.S Department of Education, 2006).

Court Rulings Regarding IDEA Interpretation. Medical services covered under IDEA are those services provided by a licensed physician for diagnostic or evaluation purposes. All other medical services provided by a licensed physician are excluded (Katsiyannis & Yell, 2000). However, a school health service may be required if the service is necessary to assist a child with disabilities in benefiting from special education; the service must be performed during school hours, and can not be provided by a person other than a licensed physician, for instance a school nurse or another trained school employee (Katsiyannis & Yell, 2000). A particularly troublesome issue for school districts and courts has been in identifying situations in which school health services become so complex and burdensome that they become medical services not required under the IDEA (Katsiyannis & Yell, 2000).

In the case of Irving Independent School District v. Tatro (1984), the Supreme Court addressed the issue of whether or not catheterization was a related service under the IDEA. The Supreme Court ruled that the requested catheterization was a supportive service within the legal parameters of the IDEA because the service was necessary for the student to attend school. Therefore without the catheterization service, the student could not benefit from the special education program (Katsiyannis & Yell, 2000). In Tatro, the Supreme Court adopted a “bright-line test” for lower courts to follow: if a physician is needed to provide the health care services, the school district is not responsible for providing the services (Katsiyannis & Yell, 2000). Therefore the only services that school districts do not have to provide are those services that can be performed only by a licensed physician (Katsiyannis & Yell, 2000). Also, because of the complex health services which may be requested and provided within the parameters of IDEA, the possibilities for injury and liability have substantially increased (Katsiyannis & Yell, 2000).

School Setting

There are federal laws and regulations to ensure that all children have access to a free and public education in the least restrictive setting and to require programs and services for students with disabilities. The result of these federal laws and regulations is an American classroom that includes students with chronic illnesses and with disabilities (Gearheart, Weishahn & Gearheart, 1996). This American classroom is often the regular public classroom, where the teacher and other school personnel have had little or no previous interaction with children having medical or physical disabilities. Even so, school personnel are being asked to assume increased responsibilities by including children with special needs into the regular classroom (Williams, 1990). About 10% of the school-age sampling, i.e. more than 5 million children, have disabilities which qualify them for special education services under the Individuals with Disabilities Education Act (IDEA 2004). These children are a heterogeneous sample, providing a myriad of challenges for the teacher and for the educational system (McDonnell, McLaughlin & Morrison, 1997).

Absence from School. All school-age children are entitled to obtain an education in a school setting. This recommendation exists not only because of legal mandates but also because of the social and developmental advantages that the school setting provides for children. Federal and state legislation clearly dictate that the most appropriate setting for education is the school. This setting should be provided in the least restrictive environment possible so children can achieve their maximum potential. At times, chronic medical issues preclude school attendance. When this occurs, evaluation and plans should be in place for children to receive non-school-based instruction and then to return to school as early as possible (Committee on School Health, 2000).

Homebound or home instruction is governed by federal and state laws; however, implementation may vary not only from state to state, but also from one school district to another. Homebound instruction is meant for acute or catastrophic health problems that confine a child or adolescent to home or hospital for a prolonged but defined period of time. This is not intended to relieve the school or parent of the responsibility for providing education for the child in the least restrictive environment (Committee on School Health, 2000).

Absence from school for any period of time will disrupt the educational process and should prompt the school administrator, school nurse, child's primary care physician, or child's parent to request non-school-based instruction. Non-school-based instruction should be considered as soon as possible for a child who may be absent for prolonged periods of time or for a child repeatedly absent for brief periods of time. Non-school-based instruction should attempt, at a minimum, to mirror the progress the child would make in the classroom. The pediatrician should assess whether or not the child places the teacher at medical risk, and whether or not a parent/caregiver should be available during instruction. Instruction hours and contacts should be based on the health status of the student and on available resources (Committee on School Health, 2000). The decision for non-school-based instruction must be reviewed yearly by the school team with the goal of maintaining academic progress and returning the child to school as soon as possible (Committee on School Health, 2000).

School Professionals. Schools provide wonderful opportunities for understanding the functioning of children across multiple domains in naturalistic settings (Power, DuPaul, Shapiro, & Kazak, 2003). The mission of schools is typically the promotion of competence and health as opposed to a deficit-focused orientation prevalent in health and mental health clinics (Power, DuPaul, Shapiro, & Kazak, 2003). However, the extent that public funds are available (local tax revenues, federal and state educational funding and Medicaid) makes the financial cost of health services provided in schools relatively low (Power, DuPaul, Shapiro, & Kazak, 2003).

Schools employ professionals with expertise in a wide range of educational and mental health care issues, but knowledge regarding serious medical issues of these professionals may be limited (Power, DuPaul, Shapiro, & Kazak, 2003). The school nurse is the professional who is typically designated as the school health expert, although the availability of nurses and the knowledge base of school nurses can be highly variable. Schools are embedded in neighborhoods and are highly accessible for families and have the ability to provide services in a culturally responsive manner (Power, DuPaul, Shapiro, & Kazak, 2003). Many families, however, feel disconnected from the school and perceive school personnel as unresponsive to family and community needs (Christenson & Sheridan, 2001). Fragmentation between the school and community is often the biggest issue in neighborhoods of low social economic status in which school staff may not be sufficiently responsive to the needs of families from diverse ethnic and cultural groups (Comer, et al., 1996).

School personnel are often uninformed and inexperienced at dealing with the difficult re-entry and continued integration issues for children with chronic health issues (Clay, 2004). Teachers may feel particularly overwhelmed, unsure of what to do and uncomfortable in dealing with the challenging issues that accompany these children (Clay, 2004). School personnel can feel overwhelmed by the extensive needs of children with chronic health issues when the school typically has limited resources to execute the needs outlined in the IEP or 504 Plan. Educators can become angry, resentful and resistant when confronted with the need to handle these complex needs (Clay, 2004). These negative attitudes can be detrimental to the process of fostering a nurturing environment for re-entry (Clay, 2004). Also, teachers have difficulties with taking on the role of educating children about another child's illness (Clay, 2004).

Integration

Many of the disease-specific symptoms of chronic illness, such as: pain, deformity, nausea, fatigue, weakness, lethargy, susceptibility to infection, limited mobility, and cognitive impairment make it impossible for children to attend school (Clay, 2004). A disease may alter a child's physical appearance in a manner that precludes the child from being seen by other children or adults (Clay, 2004).

There are many barriers that may preclude a child's participation in school. Children may experience social and/or emotional difficulties associated with their illnesses and treatment (Clay, 2004). Children may feel ashamed, frightened, or fearful of what others might say or do, have concerns relative to falling too far behind in schoolwork, uneasiness about feeling "different", anxious about separating from their parents and afraid of not knowing how to respond to peers' inquiries (Clay, 2004). Although the immediate impact of delayed reentry may seem positive, however, this delay tends to reinforce the child's perceived hopelessness and unhealthy avoidant coping behavior (Clay, 2004).

Children may also experience academic difficulties due to missing too many days of school. Children who have not had academic challenges prior to the onset of their illness have a tendency to do well in school once they have caught up on their studies (Clay, 2004). Children who have learning problems prior to the diagnosis and treatment of their conditions are at a greater risk for problems once they reenter the school environment (Clay, 2004). Teachers might initially overlook these problems as being due to a child's illness and they do not immediately intervene. But it is essential to identify and address these problems to keep the child from becoming frustrated and from experiencing additional academic failures (Sexson & Madan-Swain, 1993).

An illness or its treatment can limit the type or the number of activities that a child can safely participate in during the school day. Limitations in activities may impact the child academically and standing out from the other children can have significant social consequences (Clay, 2004). Being excluded from activities can make children feel ashamed, embarrassed, worthless and inadequate (Clay, 2004). Young people with chronic health conditions appreciate teachers who are sensitive to their needs and are willing to adapt lessons so that they can participate in meaningful ways (Mukherjee, Lightfoot, & Sloper, 2000). Youth also prefer that teachers consult them about constructive alternative arrangements when modifications are necessary (Mukherjee, Lightfoot, & Sloper, 2000).

Taking the time and effort to successfully integrate children with special health care needs into schools is worthwhile for everyone. The child with a chronic illness is provided an opportunity to develop healthy peer relationships and gain exposure to a wide range of activities (American Academy of Pediatrics, 2005). Furthermore, children without special health care needs learn about diversity and tolerance. Children, from an early age, are given the chance to learn about the range of needs and the capacities of others in a supportive and caring environment (American Academy of Pediatrics, 2005). For educators, integrating children with diverse needs demonstrates the fact that sometimes only minor modifications are required to meet a child’s needs. Also, school personnel can learn to appreciate the uniqueness of each child (American Academy of Pediatrics, 2005).

The success of school integration models depends on the effectiveness of the process through which the program is delivered, as well as the specific strategies employed (Power, DuPaul, Shapiro, & Kazak, 2003). Establishing strong connections between educational and medical professionals is essential. Bronfenbrenner’s (1976) developmental-ecological theory provides a useful framework for linking the family, health care, and school systems (Power, DuPaul, Shapiro, & Kazak, 2003). According to this model, it is essential to know how a child functions within each major system in which he or she operates, and to understand how functioning in each system serves to promote or impede adaptation in another system (Pianta, 2001). Understanding child adaptation within and across multiple contexts requires multi-informant, multi-method assessment involving the input of family members, school personnel, and health care professionals (Power, DuPaul, Shapiro, & Kazak, 2003). The process of the child's integration into the school setting must be continuous with modifications of the interventions based on data that is collected through a formative evaluation process. The monitoring of student progress must be responsive to the changing needs of the child, as well as to the changing capacity of the family, school, and health care systems to meet these needs (Power, DuPaul, Shapiro, & Kazak, 2003).

Collaboration with Physicians. The development of a collaborative relationship with physicians or other health care providers can be important to providing support to children with chronic health issues that possibly impact their academic performance and overall school experience (Shaw, Clayton, Dodd & Rigby, 2004). However, there are many barriers that can make this collaborative relationship challenging. For example, school and health care providers typically have different definitions of what constitutes a disability. There can be misunderstandings regarding the role of the educator versus the role of the parents and the health care providers and there can be many different approaches to supporting children with acute and chronic health conditions (Shaw, Clayton, Dodd & Rigby, 2004).

These barriers may prevent effective communication and collaboration between the school and health care providers. This breakdown in communication can leave the child and his or her family to align medical and school supports. Also, educators many find themselves in an adversarial relationship with health care providers. For instance, a physician might demand that a school provide special education or therapeutic services. In turn, the educator may view the physician as arrogant, disrespectful of school policies, of school laws and regulations (Shaw, Clayton, Dodd & Rigby, 2004). On the other hand, physicians may receive an IEP filled with educational and legal jargon. In turn, the physician may view the educator as practicing medicine without a license and misinforming parents (Shaw, Clayton, Dodd & Rigby, 2004). These perceptions interfere with the relationships between educators and physicians (Shaw & Paez, 2005). A physician has limited resources with which to establish the lines of open communication. Typically it falls on school personnel to establish the lead in creating a constructive working relationship with health professionals (Shaw, Clayton, Dodd & Rigby, 2004).

Teamwork needs to be established to create a plan for an understanding of any impingement on a student's school performance before these two professional groups can work collaboratively (Shaw, Clayton, Dodd & Rigby, 2004). Effective collaboration means respecting the professional boundaries of the medical and educational professions established by state certification and licensure laws (Drotar, 1995). Next, an ability to understand the nature of health problems and the different perspectives and responsibilities of health care providers and educators is also important. Professional judgment and decisions about how to apply specific information should be handled exclusively by the appropriate professional (Shaw, Clayton, Dodd & Rigby, 2004). Essential steps in this process include inviting the participation of professionals, creating a cross-disciplinary relationship and establishing effective communication. Effective communication includes returning phone calls in a timely manner, being available to others and relaying jargon-free communications (Shaw, Clayton, Dodd & Rigby, 2004).

The use of liaisons such as school nurses, school, social workers and school psychologists who are versed in medical and educational terminology can ensure that the several professionals understand each other (Shaw, Clayton, Dodd & Rigby, 2004). The establishment of a medical transition team can take the lead in addressing the educational needs of students with medical problems. The two most important parts of this collaboration are: 1) present the facts clearly and 2) most importantly, engage the parents in this whole process yet respect their wishes for privacy (Shaw, Clayton, Dodd & Rigby, 2004).

Home-School Collaboration. Home-school collaboration is an attitude not an activity. It happens when parents and educators share common goals, are seen as equals, and both contribute to the process (Christenson, 2002). This process is prolonged with a “want to” motivation rather than an “ought/obliged to” orientation from individuals. Collaboration is the establishment of a mutually agreed upon goal between and among educators and parents to create a culture for learning. Home-school collaboration takes place when parents are viewed as essential resources who work to improve their own children’s education and the education of all children (Christenson, 2002). Home-school partnerships are made possible and are mediated by the following variables: 1) the extent to which a shared responsibility for learning outcomes exists, 2) the extent to which parents and educators engage in perspective taking and non-blaming interactions, 3) the extent to which the elements of collaboration, especially mutual sharing of information, are present, 4) the extent to which educators share the language of schooling with parents, 5) the extent to which the goal of home-school collaboration is to enhance the educational success of children and 6) the extent to which parents have several options for their degree of participation (Christenson, 2002). Collaboration and communication between home and school facilitates successful education for all students. A collaborative home-school relationship is ongoing, reciprocal, mutually respectful and student-centered (Bos, Nahmias & Urban, 1999).

One partnership within the home-school collaboration is the parent-teacher collaboration. Parent involvement is seen as a critical influence on student achievement. Communication between home and school is a key factor in improving parental involvement. Developing effective methods of communicating with parents about school programs and student progress is vital to successful parental involvement (Epstein, 1998). A strong communication bond can be created between the home and the classroom when parents keep a home journal that they use to record observations of their child or children and formulate questions for discussion with the teacher(s) (Morningstar, 1999). A stronger working relationship is created when schools improve the level of communication and parents often respond reciprocally (Robinson & Fine, 1994). There are two levels to this parent-teacher collaboration: surface – volunteering efforts (e.g. shelving library books and making copies) and meaningful – parental assistance for the teacher in the class (Criscuolo, 1984).

There are many barriers to overcome in creating this complex home-school collaboration. There is an increased ethnic and cultural diversity among student samples so that in developing the policies and procedure for this collaboration, schools and teachers must become more sensitive to the ethnic balance and diversity within their own community (Caplan. Hall, Lubin & Fleming, 1997). Certain minority parents may view schools with a sense of mistrust and alienation because they may not comprehend school operations, procedures and policies. Minority parents may feel intimidated or unwelcome because they may feel that they do not share the same level of income, education, or background of the teachers and administrators at their child’s school (Dunlap & Alva, 1999).

A second partnership within the home-school collaboration is the school-community collaboration. Schools develop partnerships with local businesses and civic organizations, with public libraries and universities. These partnerships are developed by involvement in the learning community by networking with school staff and neighborhood contacts and with the district, regional, and national offices and organizations (Harada & Donham, 1998). These collaborations can help teachers increase their effectiveness and become more innovative. A teacher's sense of isolation is lessened as they work with parents and community to improve student-learning outcomes. Community partnerships with business and civic organizations should be built and maintained to ease the school's burden of taking care of students completely on their own.

Pediatric Psychology

Psychology training programs specializing in the preparation of child-oriented professionals have been designed historically to educate students to work within a particular range of settings and to focus on specific aspects of child development (La Greca & Hughes, 1999). Clinical child psychology programs have historically trained students to work in mental health settings and to focus on addressing the behavioral, emotional and social aspects of child development (Power, Shapiro, Edward & DuPaul, 2003). Pediatric psychology training programs, which are generally nested within clinical child and health psychology programs, have prepared clinicians to work in health care settings and to focus on promoting the healthy development of children coping with illness and disability (Power, Shapiro, Edward & DuPaul, 2003). School psychology training programs, however, have traditionally prepared professionals to work in educational settings and to focus on promoting cognitive and emotional development by implementing interventions to help children adapt in school (Power, Shapiro, Edward & DuPaul, 2003).

Child-oriented psychology training programs typically have focused on preparing professionals for the delivery of services to children and adolescents with identified problems (Kolbe, Collins & Cortese, 1997). The components of training within a service delivery perspective have included screening and assessment, intervention and consultation. These types of training programs have placed minimal emphasis on program development related to the prevention of health risk and the promotion of positive academic, social and emotional development (Power, Shapiro, Edward & DuPaul, 2003).

Pediatric psychologists typically have a working knowledge of health care systems, including the knowledge of how to collaborate effectively with physicians and allied health professionals on interdisciplinary teams to address the health needs of children (Drotar, 1995). Also, many pediatric psychologists have been trained to conduct ecological assessments of families and to promote collaborative relationships between health care and family systems (Kazak & Simms, 1996). Pediatric psychologists have advanced training related to illness, have expertise regarding medical and psychological interventions for illness, possess an understanding of health systems, have expertise collaborating with physicians and allied health providers and have expertise promoting collaboration between health and family systems (Power, DuPaul, Shapiro, & Kazak, 2003).

Training and the Linking of Systems of Care

The many social and political reforms, along with the advancements in pediatrics, psychology and education, have created the progressive need for professionals to serve as leaders in linking systems of care to develop intervention and prevention programs for children and their families (Power, McGoey, Heathfield, & Blum, 1999). Several specialties have emerged in the field of psychology to address the needs of children and adolescents, including pediatric psychology, school psychology, clinical child psychology, community psychology, and family psychology. These specialties have numerous assets to integrate systems of care in addressing the health needs of children; however, each specialty encounters limitations in responding to the challenges of reform (Power, Dupaul, Shapiro & Kazak, 2003).

School psychologists remain in a uniquely advantageous position to respond to reforms related to health care because of their positions in the school setting (Dryfoos, 1994). School psychologists are in an optimal position to collaborate with other school professionals, such as guidance counselors, school nurses and special/general education teachers, in developing programs to address the special health care needs of students (Power, Dupaul, Shapiro & Kazak, 2003).

A school psychologist's training has prepared him or her, in part, to address the needs of children with health difficulties. School psychologists are being prepared for roles related to intervention and outcome evaluations and are working to expand their roles in schools to include these activities (Ysseldyke, et al., 1997). School psychology has also increasingly emphasized the importance of functional behavioral assessment in developing educational and behavioral programs for children, including children with chronic illnesses (McComas & Mace, 2000). In addition, many school psychologists have been trained to conduct ecological assessments of systems and to promote collaboration between systems, particularly the family and the school (Sheridan, Kratochwill & Bergan, 1996) and between the school and mental health care systems (Reeder, et al., 1997).

Despite these advantages, the profession of school psychology has been limited. Although school psychologists typically receive training in child psychopathology, they lack training in the areas of acute and chronic illness. School psychologists have limited training in working with the health care system and collaborating with pediatric care providers (HaileMaraim, Bradley-Johnson, & Johnson, 2002). Even though school psychologists have important positions in community-based settings, they tend to focus on school issues. Their work generally does not extend into the community and often fails to link systems of care for children in the neighborhoods served by their schools (Nastasi, 2000; Power, 2000). The systemic demands for the completion of service-related activities limits a school psychologist's ability to capitalize on the school's assets related to prevention (Power, 2000).

Unlike school psychologists who lack training in the area of chronic illness, pediatric psychologists are uniquely trained to address the health needs of children (Power, Dupaul, Shapiro & Kazak, 2003). These psychologists have advanced training specific to medical conditions and to the challenges these children and their families experience in coping with acute and chronic illnesses (Power, Dupaul, Shapiro & Kazak, 2003). Pediatric psychologists typically base their research and practice on the biopsychosocial model. This model acknowledges that behavior is determined by a complex transaction of biological, psychological, and social factors, and that a multimodal intervention program that includes medical and psychosocial treatments, is often necessary to achieve successful outcomes (Roberts & McNeal, 1995).

Pediatric psychologists have expertise regarding a wide range of medical interventions for chronic illnesses and mental health disorders (Armstrong & Horn, 1997). Classically, pediatric psychologists have been trained in the use of psychosocial interventions for the treatment of chronic illnesses and mental health disorders. They generally understand health care systems and know how to collaborate effectively with physicians and allied health professionals in interdisciplinary teams to address the health needs of children (Drotar, 1995). Pediatric psychologists, like school psychologists, have been trained to conduct ecological assessments of families and to promote collaborative relationships between health care and family systems (Kazak & Simms, 1996).

Despite this vast foundation of knowledge in addressing the health issues of children and their families, pediatric psychologists are limited in their understanding of the school system and in methods of consulting with school personnel (Power, Dupaul, Shapiro & Kazak, 2003). Pediatric psychologists are typically employed in hospital settings. This places limits on their ability to understand how children function in the community and limits their ability to promote coordination among community-based systems of care (Power, Dupaul, Shapiro & Kazak, 2003). Even though training of pediatric psychologists in methods of prevention has been emphasized by leaders in the field (La Greca & Hughes, 1999), they still generally focus their practices on intervention and consultation and engage in a limited amount of prevention activity (Roberts, 1992).

School and pediatric psychologists need to expand their roles and develop new areas of expertise to meet the demand of the new reforms (Power, Dupaul, Shapiro, & Parrish, 1995). School psychologists need to increase their knowledge base about the management and prevention of health problems and about linking of the health care system with the school and family systems (Power, 2002). Pediatric psychologists need to increase their knowledge base about the school system and about methods of integrating the school with health care and family systems (Power, DuPaul, Shapiro & Kazak, 2003).

Recent reforms in health care, emphasizing the need to contain health care costs while improving access to services, have had a dramatic effect on the terms of health and mental health services to children and their families (American Academy of Pediatrics, 2000). These reforms have shifted the focus of service delivery from secondary and tertiary care settings to community-based settings, including primary care practices and schools (Strosahl, 1998). There has been an increase in primary care settings in schools that are fulfilling important gate-keeping functions and serving as sites for the provision of health and mental health services. The emphasis at these sites has been health prevention and health promotion (Power, Shapiro, Edward, & DuPaul, 2003).

The challenge of reform requires a blurring of the traditional distinctions among the various specialties of child psychology (La Greca & Hughes, 1999). School psychologists need to learn about pediatric (and clinical child) psychology and pediatric psychologists need to learn more about school psychology (Power, Dupaul, Shapiro & Kazak, 2003). However both groups can continue to keep their individual identities. School psychologists can expand their role by focusing on the health care system to promote the cognitive and social development of each child (Power, Dupaul, Shapiro & Kazak, 2003). Pediatric psychologists can expand their role by focusing on the school system to promote the healthy functioning of children throughout the day and across settings (Power, Dupaul, Shapiro & Kazak, 2003).

Training Guidelines. Many task forces have been created to develop training guidelines for child-oriented psychologists. The following three sets of guidelines are the most recently developed to prepare child-oriented psychologists to respond to reforms in health care, mental health, and education (Power, DuPaul, Shapiro, & Kazak, 2003).

The National Institute of Mental Health (NIMH) Task Group convened in 1992 to establish guidelines for the preparation of psychologists to serve the needs of children and adolescents. This task force identified ten principal areas of training: 1) developmental psychology, 2) developmental psychopathology, 3) assessment, 4) intervention, 5) professional, ethical, and legal issues, 6) research methods and program evaluation, 7) diversity issues and multicultural competence, 8) prevention and health promotion, 9) integrating multiple disciplines and systems and 10) social issues (Roberts, et al., 1998). These areas have since been used to delineate core areas of training for pediatric psychologists (Power, DuPaul, Shapiro, & Kazak, 2003).

The Practice Doctorate of the American Psychological Association (APA) was convened in 1996 to establish standards for practice and training for professionals in child and adolescent psychology (Power, DuPaul, Shapiro, & Kazak, 2003). The core competencies identified by this task force are 1) culturally responsive assessment and intervention services, 2) collaborative and interprofessional relationships, 3) brief, empirically supported interventions, 4) focused assessment methods that are directly linked to problem solving, 5) program evaluation and outcome assessment, 6) program and professional development skills, including grant writing and marketing, and 7) administration, supervisory, and staff development skills (APA, 1998). This task force highlighted the importance of acquiring skills in intersystemic collaboration to promote the coordination of care for children and families.

The National Association of School Psychologists (NASP) convened a task force in the mid-1990's to develop core domains of practice and training for school psychologists (Ysseldyke, et al., 1997). The report was called, *School Psychology: A Blueprint for Training and Practice II* and identified ten core domains: 1) data-based decision making and accountability, 2) interpersonal communication, collaboration and consultation, 3) effective instruction and development of cognitive/academic skills, 4) socialization and development of life competencies, 5) student diversity in development and learning, 6) school structure, organization and climate, 7) prevention, wellness promotion and crisis intervention, 8) home-school-community collaboration, 9) research and program evaluation and 10) legal, ethical practice, and professional development (Ysseldyke, et al., 1997). Many of these areas overlap with the NIMH Task Group recommendations.

School psychology training programs need to be reformed to respond to the emerging challenges for school psychologists (Power, 2000). Some reforms for consideration of school psychologists as health care providers in the 21st century are 1) school psychologists need to receive training in aspects of pediatric psychology to learn methods of assisting children with chronic health problems in community settings and to develop ways of linking the educational and health systems of care (Power, DuPaul, Shapiro, & Parrish, 1995), 2) school psychologists need training in community psychology to evaluate the existing capacity of community resources and to learn methods of linking systems and building the capacity of community agencies to meet the needs of children, 3) school psychologists need training in public health to assist them in conceptualizing their role as systems change agents in promoting the healthy development of all children (Short & Talley, 1997), 4) the research training provided to school psychologists needs to include instruction and mentoring in action research methods that have been developed primarily in the fields of anthropology and educational psychology, and 5) school psychologists need to develop skills in grantsmanship (Power, 2000).

The health care team is the key to effective reentry and integration. The actions of the health care team, not their written or verbal expressions, can create barriers. The team needs to communicate effectively and clearly to the family that it is necessary for the child to return to school as soon as possible in order to further a child's social, developmental and academic progress (Clay, 2004). Additionally, effective communication between the health care team and school personnel is imperative.

Models of Comprehensive Care. Recently, professionals from various disciplines have recognized the need for integrated service delivery to tackle the health, mental health, educational, and social service needs of youth (Nastasi, 2000). Many different models for comprehensive health care have been proposed and there are several common key components to these models: a) the integration of educational, health/mental health, and social services within and across professional disciplines, b) specific attention applied to the multitude of ecological contexts that influence children and adolescents (school, family, group and community), c) developmentally, culturally, and individually appropriate services, d) a continuum of services from prevention to treatment, e) systematic evaluation of program process and outcome, and f) the provision of care based upon empirical evidence of the various complexity of factors that influence the well-being of children, adolescents, and their families (Nastasi, 2000).

The following, a model that reflects an extension of existing models of school psychology, places school psychologists in the central position for orchestrating necessary systems changes and sustaining the health care process (Nastasi, 2000). The foundational components of the model supply the conceptual, methodological and procedural bases for design, implementation and evaluation of comprehensive health care (Nastasi, 2000). The conceptual component in the model is created from Bronfenbrenner's (1989) ecological-development theory. The methodological, development, implementation, and evaluation of services are fixed in action research. Procedurally, school psychological service provision is identified not only by the active participation of key stakeholders but also by interdisciplinary professional collaboration (Nastasi, 2000).

The framework for this model is divided into action research, participatory, interdisciplinary and ecological. Action research is characterized by the use of qualitative or naturalistic research; for example, it requires the use of observation, interviewing, surveys and inquiry. These techniques are similar to techniques already in use by school psychologists (Nastasi, 2000). The goals of participation are to promote ownership and to prepare stakeholders (teachers and administrators) in the process of designing, implementing and evaluating interventions through the process of participatory collaboration (Nastasi, 2000). Providing services within an interdisciplinary context requires bringing together teachers, psychologists, social workers, school nurses, etc… An ecological perspective highlights the importance of school psychologists in considering both personal and environmental factors that contribute to healthy development and to health problems (Nastasi, 2000).

Comprehensive health care is divided into a continuum of care, integrated services and culture specificity. A full continuum of services is necessary; this ranges from prevention, risk reduction, early intervention, and treatment. Integrated service delivery requires a formal system that coordinates the work of participating agencies. All of these interventions must address the role of culture in development and maintenance of individual behavior. In conclusion, this comprehensive health care model represents an extension of current conceptions of school psychological practices (Nastasi, 2000).

Lehigh University and CHOP. A training program linking pediatric and school psychology was established in 1997 through a grant funded by the United States Department of Education, Office of Special Education Programs. This program is a joint effort between Lehigh University and the Children's Hospital of Philadelphia (CHOP) (Power, Shapiro, Edward & DuPaul, 2003). This program was designed for students in the doctoral school psychology training program at Lehigh University. The third and fourth year students in the doctoral training program may choose to enroll in this program (Power, Shapiro, Edward & DuPaul, 2003).

The goal of the Lehigh/CHOP program is to improve educational outcomes for children. The program trains school psychologists as leaders in connecting health, educational and family systems to address the needs of children with, or at risk for, chronic health conditions and mental health disorders. The focus of the program is specifically designed to train leaders in practice and research to address the needs of children from low-income, urban, underserved samples (Power, Shapiro, Edward & DuPaul, 2003). The students who elect to enroll in this program are expected not only to acquire the four core competencies in the standard Lehigh training program (social and biological bases of behavior, research design and application, psychological applications, and professional/multicultural issues) but also an additional set of competencies in pediatric and school psychology (Power, Shapiro, Edward & DuPaul, 2003).

The courses that are specific to the Lehigh/CHOP program are offered to third and fourth year students who choose to enroll in the program. These courses are taken both at the university (Lehigh) and at the medical (CHOP) school setting (Power, Shapiro, Edward & DuPaul, 2003). The coursework in the first year of specialization focuses on intervention for children with identified medical problems. During this first year of specialization there is a course offered at Lehigh that helps students to learn about a wide range of health conditions and to develop a conceptual framework to be able to provide interventions (Power, Shapiro, Edward & DuPaul, 2003). After completing this course, students are provided with a course at CHOP that focuses on linking research and practice by providing intervention for children with health problems. The second year of specialization focuses on developing an understanding of the basic principles of prevention and health promotion. The first course, offered at Lehigh, focuses on developing an understanding of the basic principles of prevention and health promotion (Power, Shapiro, Edward & DuPaul, 2003). The second course, at CHOP, focuses on translating research into practice by learning how to develop community-based prevention programs. Students are also expected to take, at Lehigh, advanced courses in child psychopathology, neuropharmacology, child and family intervention, multicultural counseling, organizational management and child development (Power, Shapiro, Edward & DuPaul, 2003).

A critical component of the specialization is an integrated set of practicum experiences, which are divided equally between school and health care settings. Students spend approximately three full days per week between the two settings during the two years of the specialization program. Students ultimately acquire 960 practicum hours (Power, Shapiro, Edward & DuPaul, 2003). The school-based practica are conducted in one of two school districts (Allentown or Philadelphia). Students are expected to focus on developing strategies of intervention for children and families coping with chronic illnesses. The training involves learning to collaborate with school staff, with family members and with community residents to help develop prevention initiatives (nutrition education, literacy development, etc…) (Power, Shapiro, Edward & DuPaul, 2003). The health care practica are offered in primary care hospital-based clinics in the Lehigh area or at CHOP. Students receive training in assessment, child and family intervention, in consultation and health education, both in general and in specialty outpatient pediatric clinics. Students also participate in the development of intervention plans to address the school and the family needs of children with health problems (Power, Shapiro, Edward & DuPaul, 2003). These practicum placements are intended to support the development of research projects by offering students the opportunity to develop and pilot intervention and prevention programs and to devise methods of evaluating outcomes for their dissertations (Power, Shapiro, Edward & DuPaul, 2003).

Research Question

The present study is an attempt to identify the weaknesses within the school psychology curriculum relative to working with and helping children who have chronic health issues. This evaluator theorized that school psychologists have minimal interaction with children who have chronic health issues; they also may have biased attributions regarding this sample and have less knowledge regarding this topic. This evaluator was interested in how these questions would be answered prior to the creation and after the creation of the new field of pediatric psychology.

For purposes of this study, chronic illness is operationally defined as one that has a biological basis that lasts or is expected to last for at least 3-12 months and is accompanied by one or more consequences; these include 1) a need for services beyond routine medical care; 2) limitations on routine day-to-day functioning; and 3) reliance on compensatory modalities such as medications, special diets, and assistive devices (Stein et al., 1993). As cited from Esposito's (2004) study, knowledge is operationally defined as the understanding of and the familiarity with chronic health problems in children, acquired by the school psychologist, through education or experience. Also, as cited by Esposito (2004), attitudes are operationally defined as favorable or unfavorable beliefs, assumptions and feelings toward chronically ill children.

Specific Hypotheses

1. Through the use of a national sample, the frequency of knowledge items answered correctly will be less than or equal to 65% as indicated by scores on the KCIC.
2. School psychologists who have had more coursework and in-service experiences have higher levels of knowledge regarding children with chronic health issues.
3. School psychologists who have had more coursework and in-services experiences have more favorable attitudes regarding children with chronic health issues.

4. School psychologists who have been certified prior to 1995 (Pediatric School psychology became a term and field of practice) have lower levels of knowledge regarding children with chronic health issues.
5. School psychologists who have been certified prior to 1995 have less favorable attitudes regarding children with chronic health issues.

Chapter 2

Method

Procedure

In February 2007, the survey packet was mailed to 469 randomly selected members of the National Association of School Psychologists (NASP) from across the United States. Eligible participants included school psychologists who are certified professionals and who have worked in a school setting for five or more years. Participants were mailed a packet that contained the following items: a cover letter describing the study and inviting them to participate, a questionnaire packet containing the demographic form, a Knowledge of Chronic Illness in Children survey (KCIC), the Attitudes of Chronic Illness in Children survey (ACIC), a stamped postcard and a self-addressed, stamped envelope to return the questionnaire, in which the completed surveys were returned by the participants. In addition, a postcard provided in the packet, was returned by the participants separately. The purpose of the postcard is not only to monitor which participants fail to respond to the survey but also to protect their anonymity. A copy of the letter used in the packet is found in Appendix A. Copies of the demographic form, KCIC and ACIC survey are found in Appendix B.

Measures

Demographic and background characteristics of each participant were collected. Characteristics included gender, age, race, ethnicity of descent, numbers of years working with specific samples (pre-school, elementary school, middle school and high school students), highest formal degree, school location (rural, suburban, or urban), employment setting (public, non-public, private, and approved private school), time spent working at different school locations, place of present employment, training/classes in working with children with chronic illnesses, if they attended any classes specifically oriented towards learning about children with health issues, professional journal subscriptions regarding children with health issues, number of cases in which they have been involved regarding children with chronic health issues, other members who participated in the child's case, types of communication with these other members and training or classes in working with children with chronic illnesses. Participants were deemed ineligible if they worked in a school setting fewer than five years.

Knowledge of Chronic Illness in Children (KCIC). The KCIC questionnaire was used to assess school psychologists' current levels of knowledge concerning chronic illness. The KCIC, a questionnaire developed by Christina Esposito (2004), is used to measure school psychologists' knowledge of children who are chronically ill and the impact of their illnesses on various relevant issues. The KCIC consists of 29 items representing knowledge of chronic illness, of social factors, academic factors, behavioral factors, of medication compliance issues, mental health issues and team collaboration issues. Each item is self-rated according to a true or false measure. To date, no psychometric properties have been published regarding this instrument.

Attitudes of Chronic Illness in Children (ACIC). The ACIC questionnaire was used to survey attitudes of school psychologists regarding children with a chronic illness and the effects of the illness on the various factors named in the KCIC measurement. The ACIC is a 22 item scale using a 4-point Likert scale, including strongly disagree (SD), disagree (D), agree (A), and strongly agree (SA). To date, no psychometric properties have been published regarding this instrument.

Esposito (2004) pilot tested the KCIC and ACIC on a small group of school psychologists. The two survey forms and a cover letter were given to 18 school psychologists. The results of this pilot study revealed grammatical errors that were corrected at the conclusion of the pilot study. Both positively and negatively worded items were included on the surveys and colored paper was used to help increase response rates. Overall, the study revealed that among school psychologists, there is not only inadequate knowledge, but also negative attitudes regarding children who are classified with a chronic health issue.

Of the 469 surveys mailed, 141 (30%) surveys were returned to the investigator and 134 participants were eligible to participate in the study.[1] There were 45 returned envelopes due to incorrect addresses; 134 postcards were returned. Of the surveys returned, the overall response rate was 31%; 29% of the postcards were returned and 9.5% of the envelopes were returned.

Participant and Professional Characteristics

Tables 1 and 2 present the personal and professional characteristics of the participants. The majority of the sample was female (67.7%), in the 51-60 age brackets (50.7%) and Caucasian (92.5%). There were 3.7% African-American, 1.5% Bi-racial, and 2.2% were Hispanic with .7% Puerto Rican and 1.5% Mexican participants. The sample had 32.3% male respondents. There were 7.5% participants over 61; 50.7% between the ages of 51-60; 19.4% between the ages of 41-50; 15.7% between the ages of 31-40 and 6% between the ages of 21-30. Over one-third of the participants had a Master's +30 degree (36.6%), 32.8 % had a doctorate, 18.7% had an Ed. S. and 4.5% had a Master's degree. Relative to work setting, 50% worked in an urban setting, 50.7% worked in a rural setting, and 60.4% worked in a suburban setting. The majority of the participants (98.5%) reported working in a public school setting, 9% worked in a non-public school, 15.7% worked in a private school, and 7.5% worked in an approved private school.

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[1] Two of the participants were deemed ineligible because one was missing a survey when it was returned and the other one had too many questions unanswered. Five of the participants were deemed ineligible because there was too much missing data from the surveys and/or demographics form.

Fewer than half of the participants reported having any classes specifically geared to learning about children with chronic illness (45.5%), while obtaining their degrees. Of these, participants indicated attending classes on exceptional learning of children (34.3%), health psychology (3.7%), pediatric psychology (6%), social basis of behavior (19.4%), biological basis of behavior (20.1%), professional/multicultural issues (14.9%), child psychopathology (29.1%), child and family intervention (17.9%), child development (36.6%), neuropharmacology (7.5%) and prevention and health promotion (5.2%). Twenty-five percent of the participants took these classes while they were working on their Master's degree, 23.1% took these classes while they were working on their Master's +30, 13.4% took these classes while working on their Ed. S., and 16.4% took these classes while working on their doctorates.

Many of the participants had worked with children who have chronic illness. There were 6.7% of the participants who had never worked with children with chronic health issues, 32.1% who had worked with fewer than five cases, 26.1% had worked with between five and ten cases, 11.9% had worked with 10-15 cases, and 22.4% had worked with more than 15 cases.

Table 1

Participant Personal Characteristics (N=134)

Characteristic	Frequency	Percent
Gender		
Male	43	32.3
Female	90	67.7
Age		
21-30	8	6.0
31-40	21	15.8
41-50	26	19.5
51-60	68	51.1
Over 61	10	7.5
Race/Ethnicity		
Caucasian	124	93.9
African-American	5	3.8
Bi-Racial, Multicultural	2	1.5
Hispanic Descent	3	2.2
Other	1	0.8

Table 1

Participant Personal Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Highest Degree Completed		
Master's	6	4.5
Master's +30	49	36.6
Ed. S.	25	18.7
Doctorate	44	32.8
Other	10	7.5
Year of School Psych Certification Received		
2000-2004	21	15.6
1999-1995	23	17.1
1994-1990	16	11.9
1989-1985	23	16.9
1984-1980	22	16.3
1979-1975	23	17.1
Before 1975	6	4.3

Table 2

Participant Professional Characteristics (N=134)

Characteristic	Frequency	Percent
Number of Years Practicing in a Pre-School Setting		
None	44	33.8
Less than 5	30	23.1
5 to 10	25	19.2
11 to 15	8	6.2
16 or more	22	16.9
missing 3		
Number of Years in Practicing in an Elementary School Setting		
None	5	3.8
Less than 5	9	6.8
5 to 10	43	32.1
11 to 15	22	16.5
16 or more	54	40.6
missing 1		

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
No. Years Practicing in a Jr. High/ High School Setting		
None	13	9.8
Less than 5	33	24.8
5 to 10	35	26.3
11 to 15	10	7.5
16 or more	42	31.6
Missing 1		
School Location		
Urban	67	50.0
Urban - Have not worked in this setting	48	35.8
Rural	68	50.7
Rural – Have not worked in this setting	49	36.6
Suburban	81	60.4
Suburban – Have not worked in this setting	45	33.6

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Current Place of Employment		
Public	132	98.5
Non-Public School	12	9.0
Private	21	15.7
Approved Private School	10	7.5
Other	10	7.5
Subscribe to Professional Journals about Children with Chronic Health Issues		
Yes	42	31.6
No	91	68.4
Missing 1		
Number of Seminars/Conferences Regarding Children with Chronic Health Issues Attended		
None	99	73.9
1-5	30	22.3
More than 10	5	3.6

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Number of Workshops Regarding Children with Chronic Health Issues attended		
None	77	57.5
1-5	49	36.5
6-10	6	4.4
More than 10	2	1.4
Number of Formal Coursework Regarding Children with Chronic Health Issues Completed		
None	126	94.0
1-5	6	4.4
6-10	2	1.4
Number of Lectures Regarding Children with Chronic Health Issues Completed		
None	112	83.6
1-5	17	12.7
More than 6	5	3.6

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Number of cases involving children with chronic health issues		
None	9	6.7
1-5	43	32.1
5-10	35	26.1
10 -15	16	11.9
More than 15	30	22.4
Other Participants on a Child's Case*		
No one	133	99.3
Community Representative	33	24.6
School Nurse	110	82.1
Child Advocate	28	20.9
Clergy Person	2	1.5
Child's Pediatrician	61	45.5
Family Member	107	79.9
Teacher	123	91.8
Teacher's Aid	69	51.5
School Administrative Staff	99	73.9

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Other Participants on a Child's Case continued		
Guidance Counselor	57	42.5
School Counselor	48	35.8
Other	44	32.8
Communication with others Regarding a Case with Children who are Chronically Ill Via		
Phone Conference	105	78.4
Written Correspondence	95	70.9
Formal Consultation	97	72.4
Informal Consultation	85	63.4
Other	11	8.2

* Percentages add up to more than 100 due to multiple responses for each item.

Table 2

Participant Professional Characteristics (N=134) (continued)

Characteristic	Frequency	Percent
Specific Classes Attended Regarding Children with Chronic Health Issues		
Yes	61	45.5
No	66	49.3
Do Not Recall	6	4.5
Specific Classes/Topics Attended Regarding Children with Chronic Health Issues		
Exceptional Learning	46	34.3
Health Psychology	5	3.7
Pediatric Psychology	8	6.0
Social Basis of Behavior	26	19.4
Biological Basis of Behavior	27	20.1
Professional/Multicultural Issues	20	14.9
Child Psychopathology	39	29.1
Child and Family Intervention	24	17.9
Child Development	49	36.6
Neuropharmacology	10	7.5
Prevention and Health Promotion	7	5.2
Other	10	7.5

Chapter 3

Results

The data obtained generated support for two of the five hypotheses as follows.

Knowledge of Chronic Illness in Children (KCIC) Characteristics

Table 3 presents the KCIC items in detail. There are a total of 29 items on the KCIC; therefore, the highest possible score on this measure is a 29 which would indicate that the participant possess a high degree of knowledge regarding children with chronic illness.

There was one item on the KCIC that all school psychologists answered as being true. The item was number eight and the statement was, “Socialization is an important goal of regular school attendance for children with a chronic illness”. There are eight statements to which all participants responded, in addition to the one mentioned above. These are: 1) Effects of chronic illness should be considered when administering assessment batteries, 2) It is better not to talk about the disease with a child who is chronically ill, 3) Collaboration between the school, physician and family is imperative to school success for children with chronic illness, 4) All teachers and support staff who interact with a child should be aware of his or her condition, 5) Children with chronic illnesses are more likely to be classified as learning disabled, 6) I am aware of the health care services provided in the communities surrounding my school and 7) Pre-service and in-service training on chronic illness should be required by all school districts. Of the remaining 21 statements, at least one or more participants did not respond.

There are six statements to which the responses of this sample of participants were almost split down the middle. Please refer to Table 3 for the percentages. The statements reflected the many different spheres of a child’s life as well as the comfort levels of school psychologists regarding their work with this sample. Some of the items specifically dealt with how a child’s peers relate to him or to her, differences of lifestyle and how parents deal with the child's illness. There were other items that focused on how the school and the school district helped or did not help to integrate this sample into the mainstream. There were also specific items that requested the school psychologists to identify how well informed they felt regarding specific chronic illnesses.

There are three items on the KCIC that are of concern regarding the knowledge base of this sample of school psychologists. Please refer to Table 3 for specific percentages. The three items were 1) it is better not to talk about the disease with a child who is chronically ill, 2) children with chronic illnesses are almost always compliant with their medication and treatment schedules and 3) peers are accepting of children with chronic health problems.

Table 3

Number of Respondents and Percentage Correct for the KCIC Items

Item	Correct Answer	No. Respondents Answering Correctly	Percentage Correct
1	True	110	82.1
2	True	108	80.6
3	True	106	79.1
4	True	68	50.7
5	True	17	12.7
6	True	132	98.5
7	True	132	98.5
8	True	134	100
9	True	11	8.2
10*	False	5	3.7
11*	False	42	31.3
12*	False	28	20.9
13	True	132	98.5
14*	False	103	76.9
15	True	123	91.8
16	True	41	30.6
17	True	98	73.1

Table 3

Number of Respondents and Percentage Correct for the KCIC Items (continued)

Item	Correct Answer	No. Respondents Answering Correctly	Percentage Correct
18	True	124	92.5
19*	False	89	66.4
20	True	69	51.5
21	True	56	41.8
22	True	70	52.2
23	True	69	51.5
24	True	71	53.0
25	True	101	75.4
26	True	119	88.8
27	True	65	48.5
28	True	106	79.1
29	True	109	81.3

Note. KCIC = Knowledge of Chronic Illness in Children. The KCIC is a true/false scale.

*KCIC items marked were reversed scored.

Attitudes of Chronic Illness in Children (ACIC) Characteristics

Tables 4 and 5 present the ACIC items in detail. There are a total of 22 items on the ACIC. The total score on this measure could range from 22 to 88 points. The responses to the ACIC are negative indicators, which means that the higher the score the more negative the attitude. Item 15 on the ACIC represented the most negative attitude among the participants in this study. This item stated that children in chronic pain require a lot of attention to get through the day and 65.6% either strongly agreed or strongly agreed with this statement.

Seven items on the ACIC represent more positive attitudes among the participants. Please refer to Table 4 for specific percentages. These seven items are specific relative to how a child with chronic illness handles himself or herself in the school environment; to the effects of his or her illness and to how the school integrates the child into the mainstream. Specifically, these respondents observed that children with a chronic illness are better served in the school and do not use their diseases to get out of completing schoolwork. Although the child is well enough to attend school, he or she still needs assistance managing his or her condition. These school psychologists believe that children with chronic illnesses are as sick as they say they are, a child who needs special assistance to attend field trips should have that special assistance, children with chronic illness do not exaggerate their symptoms to avoid attending school and children with chronic illnesses will not be less successful in life than healthy children. According their scores on the ACIC, school psychologists in this study reflect a positive attitude regarding children with chronic illness.

Table 4

Mean Scores and Standard Deviations for the ACIC Items

Item	Mean	Standard Deviation
1	1.60	.57
2*	1.71	.55
3	2.15	.50
4	1.76	.60
5	1.59	.55
6	2.04	.64
7	2.52	.64
8*	1.43	.58
9	1.47	.56
10*	2.47	.80
11	2.38	.57
12	1.95	.45
13*	1.45	.56
14	2.28	.74
15*	2.66	.53
16*	1.43	.51
17*	1.54	.30

Table 4

Mean Scores and Standard Deviations for the ACIC Items (continued)

Item	Mean	Standard Deviation
18*	1.91	.64
19	2.23	.64
20	1.76	.45
21*	2.00	.55
22	1.83	.59

Note. ACIC = Attitudes of Chronic Illness in Children. The ACIC is a four point Likert scale with 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree.

*ACIC items marked were reversed scored

Table 5

Negative Attitude Endorsed on the ACIC

Item	Frequency	Percent
Children in pain require a lot of attention to get through the day		
Strongly Disagree	1	.7
Disagree	45	33.6
Agree	85	63.4
Strongly Agree	3	2.20

Note. ACIC = Attitudes of Chronic Illness in Children.

KCIC-Percentage Correct

It was predicted that school psychologists have limited knowledge of children with chronic health issues in the school setting. The first hypothesis stated that the frequency of knowledge items answered correctly will be less than or equal to 65%. The mean score of knowledge items answered correctly was 65% ($M = .64$, $SD = .108$), which means that this hypothesis is significant.

KCIC and Education

It was predicted, in the second hypothesis, that those school psychologists who have had more coursework or in-services would have more knowledge regarding children with chronic health issues in the school setting. A one-tailed Pearson product-moment correlation was computed to explore the relationship between the school psychologists' years of training and the frequency of KCIC items answered correctly ($r = +.29$, $n = 134$, $p = .048$, one tailed). The results failed to support this hypothesis, showing no relationship between years of training and knowledge.

ACIC and Education

It was predicted, in the third hypothesis, that those school psychologists who have had more coursework or in-services would have more favorable attitudes regarding children with chronic health issues in the school setting. A one-tailed Pearson product-moment correlation was computed to explore the relationship between the school psychologists' years of training and the frequency of ACIC items answered favorably ($r = +.29$, $n = 134$, $p = .048$, one tailed). The results failed to support this hypothesis, showing no relationship between years of training and attitude.

KCIC and Year of Certification

It was predicted, in the fourth hypothesis, that school psychologists who received their certification prior to 1995 would have had less coursework or in-services, and therefore, less knowledge regarding children with chronic health issues in the school setting. The data regarding date of school psychology certification was divided into two categories: 1) certification received prior to 1995 and 2) certification received after 1995. The mean score of knowledge items answered correctly was 67% (*M*= .66, *SD*= .111) for school psychologists who received their certifications after 1995. The mean score of knowledge items answered correctly was 64% (*M*= .64, *SD*= .108) for school psychologists who received their certifications prior to 1995. Although there was a minor difference between school psychologists' knowledge of chronic illness when certified after 1995 or prior to 1995, this difference is neither significant nor meaningful. School psychologists in this study who were certified after 1995 do not necessarily have more knowledge of children who have chronic illness than school psychologists who were certified prior to 1995.

ACIC and Year of Certification

It was predicted that school psychologists who received their certifications prior to 1995 would have less favorable attitudes regarding children with chronic health issues in the school setting. The data regarding date of school psychology certification was divided into two categories: 1) certification received prior to 1995 and 2) certification received after 1995. The mean score of attitude items answered favorably was 47% (*M*= .47, *SD*= .049) for school psychologists who received their certifications after 1995. The mean score of attitude items answered favorably was 45% (*M*= .45, *SD*= .051) for school psychologists who received their certifications prior to 1995. Although there was a minor difference between school psychologists' attitudes regarding children who have chronic illnesses if certified after 1995 or prior to 1995, this difference is neither significant nor meaningful. School psychologists in this study certified after 1995 do not necessarily have more positive attitudes regarding children who have chronic illnesses than school psychologists who were certified prior to 1995.

Chapter 4

Discussion

This researcher furthered Dr. Christina Esposito's (2004) work regarding school psychologists' knowledge and attitudes regarding students who have chronic health issues. The data revealed similar results to that of Esposito (2004).

KCIC

Based on the results of the KCIC, the data indicates that school psychologists have limited knowledge regarding children with chronic health issues. The data was further analyzed to identify whether or not the emergence and presence of Pediatric School Psychology that occurred in 1995 as a distinct field within psychology had an impact on school psychologists' knowledge. The results indicate that school psychologists certified after 1995 did not possess an increased knowledge base as compared with those certified prior to 1995.

Further review of the items on the KCIC that were endorsed by this sample of school psychologists offers further details. Three of the items highlighted areas that are not well understood by school psychologists. First, 96.3% of participants in this study think it is better not to talk about the chronic health issue with the child who is chronically ill. This is contrary to the literature that shows that school psychologists, because of their knowledge of school systems, consultation expertise, clinical skills and research training, are in the best position to be leaders in servicing the interdisciplinary service provision of children with chronic medical issues (Shaw & Paez, 2004). School psychologists provide most of the emotional and cognitive rehabilitation in the school setting (Power, Heathfield, McGoey, & Blum, 1999). Counseling and rehabilitation of academic impairments are within the realm of many school psychologists' skills (Shaw, et al., 1995). Rehabilitation that focuses on academic and social emotional functioning is an important, yet usually forgotten piece of a child's recovery from illness and injury (Stuart & Goodsilt, 1996). A school psychologist may compromise his or her own ability to help a child with a chronic illness if he or she chooses not to discuss the chronic health issue with the child.

Second, the majority of school psychologists in this study (76.9%) believed that children with chronic illnesses are almost always compliant with their medication and treatment schedules. Although some students with chronic health issues may fit this profile, research has shown that adherence to treatment regimens is one of the challenges with which medical professionals contend. Approximately half of all patients do not adhere to their prescribed treatment regimens (Burrell & Levy, 1895). This number is even higher for children and others with chronic health issues. Even treatments that are life altering such as insulin injection for diabetics (48% compliance) and antiasthmatic treatment (46% compliance) often are not followed (Burrell & Levy, 1985). Psychotropic medications are estimated to have a 35% rate of treatment compliance (Shaw & Paez, 2004). Approximately 10% of hospital admission can be traced to failure to use medications properly (Burrell & Levy, 1985).

Finally, 76.9% of the participants in the study think that peers are not accepting of children with chronic health problems. The literature is quite mixed regarding this issue. Children with chronic illnesses may often look or act differently from their peers, because of the effects of their particular illness or specific treatments (Clay, 2004). These children who may look or act differently often become victims of bullying, ridicule and teasing (Clay, 2004). Over one-third of the children with chronic health issues may be teased or bullied (Mukherjee, et al., 2000). The bullied children may be socially ostracized by peers. It is the responsibility of the educator to deal directly and quickly with these issues. The question of disclosure becomes an important issue. Because children are naturally curious, they are likely to ask questions of the teacher as well as of the child with the chronic illness (Clay, 2004). In a study of 58 families of children in school who have chronic health issues, these children expressed the need for teachers to help explain their health conditions to the other children (Mukherjee, Lightfoot, & Sloper, 2000).

On the other hand, families of children with chronic health issues may or may not want other children or school officials to be familiar with their diseases (Clay, 2004). Children with chronic health issues identified the reasons why they wanted their peers to know about their health issue; these reasons were 1) knowing what to expect from their peers (?) , 2) knowing what their peers should do during a medical emergency, 3) knowing how to interact (socialize) appropriately to decrease risk of infection, etc. and 4) knowing that peers can possibly show more empathy or understanding of the child's health situation (Mukherjee, Lightfoot, & Sloper, 2000). One reason for children and their families to reject disclosing chronic health issues is the hesitancy to discuss personal or embarrassing matters in front of peers; other reasons are to prevent discrimination by other children or by school officials and the fear of teasing. In addition to ethical issues there are also legal issues for school officials to bear in mind. School administrators may become involved in legal trouble by sharing health information that the family and child wish to be kept private (Clay, 2004).

In the survey, both item 16 and item 21 are considered true, as stated. However, the participants in this study answered these items as false; 69.4% considered item 16 as false and 52.2% considered item 21 as false. The participants in this sample indicated that children with chronic illness are not more likely to be classified as learning disabled; however, in fact the opposite is true. Also, the respondents indicated that the peers of children with chronic illness do not perceive these children as sick, when in fact the opposite is true. There was some concern noted among the researchers regarding the participants' answers to item number 25; the answer is considered true, as stated. However, 75.4% of the participants indicated the statement as false. This demonstrates the fact that these participants do not feel that children who have chronic illnesses are bullied by their peers, when in reality they are.

Item numbers 9, 20, 22, 24, and 27 are all true, yet these respondents had varying percentages regarding the correct answers. Of the participants, 91% replied false to item 9, indicating that these participants felt that children with chronic health issues do not exhibit more behavior problems than children without chronic health problems. School problems, adjustment disorders, somatic complaints of unknown origin, panic attacks, hyperactivity, noncompliance with medical treatment, social withdrawal and peer conflict are typical responses of chronically ill children (Shaw & Paez, 2004).

Participants' responses to items 20, 22, 24, and 27 were almost split down the middle. Participants' responses reflected the following percentages: item 20 – 42.5% False and 48.5% True; item 22 – 45.5% False and 52.2% True; item 24 – 40.3% False and 53.0% True and item 27 – 45.5% False and 51.5% True. The correct answer to all of these items is true. Fewer than half of the participants (48.5%) felt that parents often keep their children with chronic health issues home due to fear of illness (item 20). There are two ways to look at this issue; attending school provides benefits to most children who have chronic health issues, including opportunities for skill acquisition, socialization, and respite care for families. There are, however, real risks involved, such as obtaining appropriate care, exposure to infection and social isolation and teasing (Rehm & Rohr, 2002).

A little more than half of the participants (52.2%) felt that children with chronic health issues maintain a lifestyle that is significantly different from their peers (item 22) and 53.0% felt that children with chronic health issues have educational needs different from children without chronic health issues (item 24). These statements are true because children with chronic health issues and the families of these children have to handle a variety of medical issues that healthy children do not face. The educational needs of these children vary greatly, depending on abilities that are independent of their illnesses, the type and severity of their illnesses or medical conditions and their individual abilities to cope with the associated learning, emotional and social problems (Clay, 2004). Therefore the type of accommodations that children with chronic health issues require can range from minor ones (e.g., providing more time to get from one class to the next, or sitting closer to the blackboard) to more significant ones (e.g., providing intermittent home instruction, reducing academic workload, providing special transportation and providing medical procedures or treatments in the school environment) (Clay, 2004).

Fewer than half of the participants (48.5%) felt that school-based health care centers can provide the most effective health care for children with chronic health issues (item 27). Schools employ professionals with expertise in a wide range of educational and mental health care issues, but their knowledge regarding medical issues may be limited. The school nurse is the professional that is typically identified as the school health expert, although the availability and expertise of school nurses can be highly variable (Clay, 2004). Unfortunately, the involvement of external health care and mental health care professionals to provide interdisciplinary services is generally limited. Many families feel disconnected from the school and perceive school professionals as unresponsive to family and community needs (Christenson & Sheridan, 2001). This fragmentation between the school and community is often the most problematic in low-income neighborhoods where school staff may not be sufficiently responsive to the need of the families from diverse ethnic and cultural groups (Comer, et al., 1996). Unfortunately, a school-based health care system would be ideal; however, there are many obstacles that need to be overcome before that can be a properly implemented solution.

In general, the findings from this study suggest that school psychologists have limited knowledge regarding children with chronic health issues. However, the item analysis illustrates the fact that the limits in their knowledge are based on specific details. In contrast, many of the participants showed proficient general knowledge concerning children with chronic health issues. For example, chronically ill children: 1) are at greater risk for having co-morbid psychiatric problems, 2) are at greater academic risk, 3) may have prolonged absences that may impact on a child's ability to maintain friendships, 4) must have the chronic illness considered during an assessment battery, 5) must have the effects of the chronic illness included in a psychoeducational evaluation, 6) must have those who work with them be aware of the importance of socialization in a child's normal development, 7) do not necessarily exhibit more behavior problems than children who do not have chronic medical issues, 8) must have the importance of the collaboration between the school, doctors and family considered, 9) have the school staff that interact with them be aware of their illnesses, 10) are at greater risk for exhibiting more symptoms of depression and anxiety, 11) is absent from school it is probably due to their illness. Further, school psychologists should feel they are aware of the health care services that are available in their community, and pre-service and in-service training on children with chronic illness should be required.

ACIC

Results indicate that these participants have relatively positive attitudes regarding children with chronic health issues. The data was further analyzed to identify whether or not the emergence and presence of Pediatric psychology that occurred in 1995 as a distinct field within psychology would have an impact on school psychologists' attitudes. The results indicate that school psychologists who were certified after 1995 had a slightly more positive attitude than those certified prior to 1995, but not significantly so.

There was only one item on the ACIC which showed an expression of a negative attitude among these participants and this item indicated that children in chronic pain require a lot of attention to get through the day (item 15); 65.6% either strongly agreed or strongly agreed with this statement. The evaluator is reporting this as a negative attitude statement but actually it is unclear if this sample truly feels this is negative or are they giving a child a bit more attention in order for them to achieve their potential.

In general, findings from this study suggest that school psychologists have fairly positive attitudes regarding children with chronic health issues. Many of the participants showed an overall positive attitude regarding children with chronic health issues which may be a reflection of the knowledge that these participants possess.

KCIC-Percentage Correct

The first hypothesis suggested that school psychologists have limited knowledge of children with chronic health issues in the school setting. Over 50% of the sample of participants was in the 51-60 age brackets and 61.2% had worked with 5-15 or more cases of children with chronic illness. However, the knowledge level for this sample was only at the 65% level. Although this hypothesis was significant from a research perspective, from a school psychologist perspective, this is a negative significance. This finding identifies a distinct lack of training, understanding or perhaps willingness or motivation to learn more about a specific sample. This begs the question about school psychologists' abilities to work effectively with a specific sample when they do not possess the knowledge or possibly do not have the willingness to gain that knowledge.

This clearly speaks to the lack of training that was available to this sample of participants while they were in school or to the types of training/in-services that were available to or were attended by these participants. There appears to be a lack of understanding and possibly respect for this sample. Many of the laws to help special populations of children and adults were enacted, beginning in 1975; this time was after these participants had already received their training. These findings are in agreement with the results gathered from the KCIC survey as illustrated in the beginning of the Discussion section.

KCIC, ACIC and Education

The second and third hypotheses predicted that if a school psychologist had more coursework or in-services he or she would have more knowledge and more favorable attitudes regarding children with chronic health issues. Unfortunately, the results failed to support either of these hypotheses. The majority of participants either did not have or did not remember formal classes (94%), formal lectures (83.6%), workshops (57.5%) and conferences (73.9%) that they completed regarding children who have chronic health issues. This researcher questions the degree to which the overall age of the participants would factors into these numbers. As mentioned above, these respondents did not receive formal education or training regarding children with chronic health issues.

One of the fastest growing samples of children with specialized needs entering the education system involves children with chronic health issues. This sample is also placing some of the biggest financial burdens and time demands on the school system. The federal initiatives of No Child Left Behind (NCLB) and IDEA (2004) are creating an environment in which all children are to be educated in the same environment and given all of the same advantages as children without specialized needs.

KCIC, ACIC and Year of Certification

The fourth and fifth hypotheses predicted that school psychologists who received their certifications prior to 1995 would have had less coursework or in-services and therefore would have more limited knowledge and less favorable attitudes regarding children with chronic health issues. The data regarding date of school psychology certification was divided into two categories: 1) certification received prior to 1995 and 2) certification received after 1995. In an examination of the data, it was revealed that there was a minor, but not significant, difference between the two samples.

Training Programs

One program that is increasing psychologists' knowledge of systems of health care and the linking of systems is the collaboration between Lehigh University and the Children's Hospital of Philadelphia/University of Pennsylvania. This program follows the National Institute of Mental Health guidelines for preparing professionals in child and adolescent psychology (Power, Shapiro, Edward & DuPaul. 2003). These guidelines can be embedded in graduate programs specializing in clinical child, pediatric, school, community and family psychology.

The partnership was developed to prepare school psychologists to coordinate community-based systems of care and to promote positive educational and health outcomes for children (Power, Shapiro, Edward & DuPaul. 2003). The program provides integrated experiences both in health care and in educational settings. This program was funded by a grant from the U. S. Department of Education, Office of Special Education Programs (Power, Shapiro, Edward &

DuPaul. 2003). This is one example of the changing landscape of programs for school psychologists and for psychology training as a whole.

The training to link systems of care for children with, or at risk for, health problems can be embedded in doctoral training programs related to a wide range of child specialties. Students need a sequence of interrelated courses and a wide range of practicum experiences in pediatric, community and school settings to develop expertise as multisystem change experts (vanEys & Dodge, 1999). Implementing this particular area of specialized training within the context of a clinical child or pediatric psychology program presents different challenges from those that arise in integrating this specialty into school psychology programs. The challenges posed by linking these training models are development of creative partnerships with other departments and other institutions to locate the additional resources. In addition, it requires a strong investment on the part of university faculty and administration because establishing these partnerships can be challenging and time consuming (Power, Shapiro, & DuPaul, 2003).

National Health Initiatives

The changing view in psychology programs to increase awareness is also part of a two part national campaign. The New Freedom Initiative was announced by President George W. Bush on February 1, 2001 as part of a nationwide effort to remove barriers to community living for people with disabilities (U. S. Department of Health & Human Services, 2003). This initiative supports states' efforts to meet the goals of the Olmstead v. L. C. Supreme Court decision issued in July 1999. This decision requires states to administer services, programs and activities "in the most integrated setting appropriate to the needs of qualified individuals with disabilities." (U. S. Department of Health & Human Services, 2003). The Olmstead decision resulted from the interpretation of Title II of the American with Disabilities Act (ADA), which gives civil rights and protections to individuals with disabilities. It guarantees equal opportunities for individuals with disabilities in public accommodations, employment, transportation, State and local government services and telecommunications (U. S. Department of Health & Human Services, 2003).

This Initiative is a comprehensive plan that represents an important step to ensure that all Americans have the opportunity to learn and develop skills, engage in productive work, make choices about their daily lives and participate fully in community life (U. S. Department of Health & Human Services, 2003). The Initiative's goals are to a) increase access to assistive and universally designed technologies, b) expand educational opportunities, c) promote homeownership, d) integrate Americans with disabilities into the workforce, e) expand transportation options and f) promote full access to community life (U. S. Department of Health & Human Services, 2003).

The second part of this national campaign is Healthy People 2010. Healthy People 2010 is a set of health objectives for the Nation to achieve over the first decade of the new century (U. S. Department of Health & Human Services, 2000). It builds on initiatives of the past two decades. The 1979 Surgeon General's Report, Healthy People laid the foundation for a national prevention agenda. The 1980 Promoting Health/Preventing Disease Objectives for the Nation, and Healthy People 2000: National Health Promotion and Disease Prevention Objectives established national health objectives and served as the basis for the development of State and community plans (U. S. Department of Health & Human Services, 2000). Healthy People 2010 has two basic goals: 1) to increase quality and years of healthy life; to help individuals of all ages increase life expectancy and improve their quality of life and 2) to eliminate health disparity; to eliminate health disparities among different segments of the sample (U. S. Department of Health & Human Services, 2000).

The Medical Home

The two previously mentioned national campaigns lead into the present idea of a medical home. A medical home is not a building, a house, or a hospital, but rather an approach to providing comprehensive primary care. A medical home is defined as primary care that is accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective (American Academy of Pediatrics, 2002). The American Academy of Pediatrics (AAP) first introduced the medical home concept in 1967, initially referring to a central location for archiving a child's medical record. In a 2002 policy statement, the AAP broadened the medical home concept to include the following characteristics: accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective care (American Academy of Pediatrics, 2002).

In a March 2007 statement, the American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), and the American Osteopathic Association (AOA) introduced the joint principles of the Patient-Centered-Medical Home (PC-MH). This is a comprehensive, primary care setting that facilitates relationships between and among individual patients, their personal physicians and the patient's family for children, youth and adults (American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, & American Osteopathic Association, 2007).

These are the joint principles of the PC-MH: a) personal physician – each patient has a continuous relationship with a personal physician trained to provide initial contact, continuous and comprehensive care, b) physician directed medical practice – the personal physician leads a team of individuals at the practice level who are collectively responsible for the ongoing care of patients, c) whole person orientation – the personal physician is responsible for providing for all the patient's health care needs, or for arranging care of other professionals, d) care is coordinated and/or integrated – across all elements of the complex health care system and the patient's community, e) quality and safety are trademarks of the medical home, f) enhanced access to all areas of health care, and g) appropriate payment arrangements (American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, & American Osteopathic Association, 2007).

Limitations of the Study

There are a number of limitations with this study. One limitation is the use of surveys to obtain information. A survey is not the best methodological tool to address this issue. The use of a survey limits the information gathered. It keeps the information in a specific format. In addition, the questions may not have been phrased correctly to gather the information that the researcher was seeking.

A second limitation is the use of a true/false format for the KCIC. This format was chosen for ease of survey completion and clarity of findings; however, it restricts the range of possible values. This survey might yield more data if it were adapted into a Likert-scale format, similar to the ACIC.

A third limitation is the statistics chosen for evaluation of the data and the sample size. A low sample size restricted the ability to detect significance, limiting the generalizability of the findings. Additionally, the correct statistic is necessary to evaluate the data. A modest or minimal rate can suggest that the findings needed to be interpreted cautiously, because those who chose to respond may differ in significant ways from those who chose not to respond.

A fourth limitation is the reliability of self-report measures. The surveys that were utilized require information solely from the participant and this is always entirely subjective and may be questionable.

Conclusions

In summary, this researcher has found that there is a distinct weakness in the training that school psychologists receive in order to work with children who have chronic health issues, as illustrated by the results examined on the KCIC and ACIC surveys. The emergence of the field of Pediatric psychology has had minimal impact on this sample of participants because this sample does not appear to have the medical knowledge necessary to be of adequate service to this sample. However, perhaps the wording of the statements on the ACIC and KCIC were not sufficiently adequate to tap into the level of knowledge that these respondents possess. Any type of negative attitude that a professional has can hinder his or her ability to help a specific population. A negative attitude regarding children with chronic health issues creates many different types of challenges on many different levels for many different samples. Perhaps knowledge and attitude are correlated; however, that is another study.

The results of this study can help in determining a more comprehensive school psychology training program that will address the specific sample of children with chronic health issues. Additionally, professional organizations can begin to incorporate this issue as an important training course for their members. Increased professional collaboration and training with all interested parties regarding the best methods to address a child’s needs is always beneficial. Further studies in this area would be beneficial.

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Appendix A

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Dear School Psychologist:

I am a doctoral student from the Philadelphia College of Osteopathic Medicine conducting research with Doctors Christina Esposito and Ray Christner. As part of my dissertation, I am working on a research study intended to survey the training that School Psychologists receive regarding children who are chronically ill. Information I obtain can help to service this group of children academically, socially, and emotionally. You have been selected to participate in our research study as a member of NASP. Your participation is voluntary and you can decide to discontinue your involvement in the study at any time.

It is estimated that as many as 1 in 4 children have a chronic health problem. Negative educational consequences may result and schools are often unprepared to handle them. I hope to quantify your understanding of this sample in order to improve training programs for all school psychologists. You will also be providing valuable information to enhance the lives of the children who suffer from chronic illnesses. The survey will take approximately 15 minutes of your time. Please answer each question as honestly as possible. Your responses will remain anonymous. The results will be reported in aggregate form. Please complete the demographic sheet and the two questionnaires. Return the forms in the envelope provided. At no point in this study will names be linked to questionnaires.

Completing the survey may produce some distressing thoughts, which you may find mildly disturbing. Although this is not expected, in the event this takes place and you want to contact a member of my committee, please contact my dissertation chair, Dr. Christina Esposito (215-871-6385).

If you have any questions or problems during the study, you can ask Dr. Esposito, who will be available during the entire study. If you want to know more about Dr. Esposito's background, or the rights of research subjects, you can call the PCOM Research Compliance Specialist at (215) 871-6782.

Your cooperation will help to make our research study a success. Thank you for your time and energy.

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Abby Baker, MS, Psy.D. Candidate

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Christina Esposito, Psy.D., Dissertation Chair

Appendix B

Professional Information:

The following questions ask about your educational and professional training. Please complete the following items by checking the circle that corresponds to your answer. Thank you for your participation.

1. Please indicate the highest degree you have completed.

   ○ Master's
   ○ Master's +30
   ○ Ed. S.
   ○ Doctorate
   ○ Other: ___________________

2. During your graduate school career, did you attend any classes that were specifically oriented towards learning about children with health issues?

   ○ Yes (Continue with question 3)
   ○ No (Skip to question 5)
   ○ Do not recall (Skip to question 5)

3. What were the topics of the classes? (Please check all that apply.)

   ○ Exceptional Learning of Children
   ○ Health Psychology
   ○ Pediatric Psychology
   ○ Social Basis of Behavior
   ○ Biological Basis of Behavior.
   ○ Professional/Multicultural Issues
   ○ Child Psychopathology
   ○ Child and Family Intervention
   ○ Child Development
   ○ Neuropharmacology
   ○ Prevention and Health Promotion
   ○ Other (specify)______________________________________

4. Did you take these classes while working towards your Master's, Master's +30, Ed. S., or Doctorate degree? (Please check all that apply.)

	YES	NO	DO NOT RECALL
Master's	○	○	○
Master's +30	○	○	○
Ed. S.	○	○	○
Doctorate	○	○	○

5 Date of school psychology certification: _________________________

6. Please indicate all the regional settings you have worked and length of time served (please check all that apply.).

	YES	NO	# OF YEARS
Urban	○	○	
Rural	○	○	
Suburban	○	○	

7. Please indicate all the employment settings you have worked and the length of time served (please check all the apply).

	YES	NO	# OF YEARS
Public	○	○	
Non-public	○	○	
Private	○	○	
Approved Private School	○	○	
Other, please describe	○	○	

8. How long have you practiced in a pre-school setting?

- ○ None
- ○ Less than 5 years
- ○ 5-10 years
- ○ 11-15 years
- ○ 16 or more years

9. Number of years practicing in an elementary school setting:

- ○ None
- ○ Less than 5 years
- ○ 5-10 years
- ○ 11-15 years
- ○ 16 or more years

10. Number of years practicing in a junior high/high school setting:

- ○ None
- ○ Less than 5 years
- ○ 5-10 years
- ○ 11-15 years
- ○ 16 or more years

11. Do you currently subscribe to any professional journals that deal with children with health issues?

○ Yes (Continue with question 12)
○ No (Skip to question 13)

12. Please provide the names of the journals to which you currently subscribe.

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13. Some state's require school psychologists to satisfy a certain number of continuing education units (CEU) for a particular academic year (i.e. September through June) while other states require these CEU's to be completed within a calendar year (i.e. January through December). Considering your state's requirements, how many professional conferences, workshops, lectures or formal classes have you attended specifically geared towards children with chronic health issues to maintain your certification?

	Number	Number of CEU's
Formal Classes		
Lectures		
Workshops		
Professional Conferences		

The following questions pertain to cases in which you have been involved when a child has had a chronic health issue.

14. In the last five years, how many times have you been involved in a case regarding a child with chronic health issues?

○ None (Please skip to question 17; **Personal Information** section)
○ Less than 5 cases
○ 5 to 10 cases
○ 10 to 15 cases
○ More than 15 cases

15. Please indicate other people who have participated in the child's case: (Please check all that apply.)

○ No one
○ Community Representative
○ School Nurse
○ Child Advocate
○ Clergy
○ Child's Pediatrician
○ Family Members
○ Teachers
○ Teacher's Aid(s)
○ School Administrative Staff
○ Guidance Counselor
○ School Counselor
○ Clergy
○ Other: Specify________________

16. If you work in partnership on a case, what forms of communication have been used? (Please check all that apply.)

  ○ Phone conferences
  ○ Written correspondence (e.g. memos, letters, emails)
  ○ Formal consultation (e.g. scheduled meeting with the specific purpose of discussing the case)
  ○ Informal Consultation (e.g. unscheduled meetings)
  ○ Other: specify_______________________________________

Personal Information:

Please provide the following information about yourself by checking the circle that corresponds to your answer.

17. What is your gender?

  ○ Male
  ○ Female

18. In what age bracket do you fall?

  ○ 21-30
  ○ 31-40
  ○ 41-50
  ○ 51-60
  ○ Over 61

19. What racial category best describes you?

  ○ Caucasian, White
  ○ African American, Black
  ○ Asian
  ○ Native American
  ○ Bi-racial, Multicultural
  ○ Other: ________________

20. Are you of Hispanic Decent?

  ○ Yes
  ○ No

21. What is your country of origin?

  Dominican
  ○ Mexican
  ○ Puerto Rico
  Cuban
  Columbian
  Other: __________________

INSTRUCTIONS:

The following questions relate to your experiences in working with children who suffer a chronic illness. For purposes of this study, a chronic illness will be defined as one that has a biological basis that lasts or is expected to last for at least 3-12 months and is accompanied by one or more consequences: 1) a need for services beyond routine medical care; 2) limitations on routine day-to-day functioning; and 3) reliance on compensatory modalities such as medications, special diets, and assistive devices (Stein et al., 1993). A chronic illness includes medical conditions such as diabetes, asthma, cancer and heart conditions. A sole diagnosis of ADHD **does not** qualify as a chronic illness for purposes of this study. Please rate the following items by circling true or false. Please answer each question as honestly and objectively as you can. **Your responses will remain anonymous.**

	True	***False***
1. Children with chronic health conditions are at a greater risk than their peers for psychosocial problems…..	**T**	**F**
2. Children with chronic illnesses are at a greater risk than their peers of developing academic problems............	**T**	**F**
3. Prolonged absences make it difficult for children with chronic illnesses to maintain friendships............……	**T**	**F**
4. I am well informed about childhood illnesses such as diabetes, cancer, epilepsy, and asthma...........................	**T**	**F**
5. I am prepared to handle medical emergencies of children with chronic illnesses..	**T**	**F**
6. Effects of chronic illness should be considered when administering assessment batteries...........................	**T**	**F**
7. Effects of chronic illness should be included in psychoeducational evaluations...	**T**	**F**
8. Socialization is an important goal of regular school attendance for children with chronic illness.......................	**T**	**F**
9. Children with chronic illness exhibit more behavior problems than other children..	**T**	**F**
10. It is better not to talk about the disease with a child who is chronically ill..	**T**	**F**
11. All children with chronic illnesses feel more comfortable if their same age peers know about the illness..	**T**	**F**
12. Children with chronic illnesses are almost always compliant with their medication and treatment schedules..	**T**	**F**

(turn over to complete)

	True	***False***
13. Collaboration between the school, physician, and family is imperative to school success for children with chronic illness…………………………………..…………	**T**	**F**
14. Peers are accepting of children with chronic health problems...	**T**	**F**
15. All teachers and support staff who interact with a child should be aware of his/her condition..................…..	**T**	**F**
16. Children with chronic illnesses are more likely to be classified as learning disabled...	**T**	**F**
17. Children with chronic illnesses experience more depression and anxiety than their peers..............................	**T**	**F**
18. All professionals who have contact with a child with special medical needs should be properly trained in how to handle an emergency	**T**	**F**
19. When a child with a chronic illness is absent from school it is probably because he/she is sick........................	**T**	**F**
20. Parents often keep children with chronic illnesses home out of fear that they will become sick at school........	**T**	**F**
21. Peers of children with chronic illnesses perceive them as "sick"..	**T**	**F**
22. Students with chronic illness often maintain a lifestyle which is significantly different from peers...........	**T**	**F**
23. My school district provides clear guidelines on who is responsible for programs provided to children with chronic medical conditions……………..........….....	**T**	**F**
24. Children with chronic illnesses have different educational needs than children with other disabilities.......	**T**	**F**
25. Children with chronic illnesses are "bullied" more often than their peers…………………………………......	**T**	**F**
26. Information packets need to be available at my school regarding chronic illnesses such as diabetes or asthma......	**T**	**F**
27. School-based health care centers would provide the most effective care for children with chronic illness.....	**T**	**F**
28. I am aware of the health care services provided in the communities surrounding my school............................	**T**	**F**
29. Pre-service and in-service training on chronic illness should be required by all school districts................	**T**	**F**

INSTRUCTIONS:

The following questions relate to your experiences in working with children who suffer a chronic illness. For purposes of this study, a chronic illness is defined as one that has a biological basis that lasts or is expected to last for at least 3-12 months and is accompanied by one or more consequences: 1) a need for services beyond routine medical care; 2) limitations on routine day-to-day functioning; and 3) reliance on compensatory modalities such as medications, special diets, and assistive devices (Stein et al., 1993). A chronic illness includes medical conditions such as diabetes, asthma, cancer and heart conditions. A sole diagnosis of ADHD **does not** qualify as a chronic illness for purposes of this study. Please rate the following items by circling the response that best describes the extent to which you agree or disagree with each statement. Please answer each question as honestly and objectively as you can. **Your responses will remain anonymous.**

	Strongly Disagree	***Disagree***	***Agree***	***Strongly Agree***
1. Children with chronic illnesses should be educated in a regular education classroom	**SD**	**D**	**A**	**SA**
2. Children who are chronically ill would be better served receiving homebound instruction	**SD**	**D**	**A**	**SA**
3. If a child is well enough to attend school, he/she should be able to handle the workload	**SD**	**D**	**A**	**SA**
4. Children with chronic illnesses frequently use their disease to get out of school work	**SD**	**D**	**A**	**SA**
5. If a child is well enough to attend school, he/she should be able to manage his condition without assistance	**SD**	**D**	**A**	**SA**
6. Children with chronic illnesses take time and energy away from the rest of the class	**SD**	**D**	**A**	**SA**
7. Children with chronic illness should be disciplined the same way any child is disciplined	**SD**	**D**	**A**	**SA**
8. With consent, I would contact a physician to discuss a child's health needs	**SD**	**D**	**A**	**SA**
9. I do not believe that children with a chronic illness are as sick as they say	**SD**	**D**	**A**	**SA**
10. A school psychologist is the most appropriate person to function as a liaison between the school, family, and medical community	**SD**	**D**	**A**	**SA**
11. If children with chronic illnesses are absent, missed work should be caught up at home	**SD**	**D**	**A**	**SA**

(turn over to complete)

	Strongly Disagree	***Disagree***	***Agree***	***Strongly Agree***
12. Children with chronic illnesses should have input as to whether they are able to participate in PE on any given day	**SD**	**D**	**A**	**SA**
13. If a child needs special assistance to attend field trips, he/she would be better off to stay home	**SD**	**D**	**A**	**SA**
14. I would rather learn about technical medical information from a physician than from a parent	**SD**	**D**	**A**	**SA**
15. Children in chronic pain require a lot of attention to get through the day	**SD**	**D**	**A**	**SA**
16. It is important for the school to provide learning environments that support healthy relationships between children with chronic illness and their peers	**SD**	**D**	**A**	**SA**
17. Accommodations should be made to include children with chronic illness in school-based extra curricular activities	**SD**	**D**	**A**	**SA**
18. Grading policies should be modified to accommodate children with chronic illnesses	**SD**	**D**	**A**	**SA**
19. Children with chronic illness are often too sick to worry about their academic performance	**SD**	**D**	**A**	**SA**
20. Children with chronic illnesses often exaggerate their symptoms to avoid attending school	**SD**	**D**	**A**	**SA**
21. Peers are accepting of children with chronic health problems	**SD**	**D**	**A**	**SA**
22. Children with chronic illness will be less successful in life than healthy children	**SD**	**D**	**A**	**SA**