

EARLY CHILDHOOD MENTAL HEALTH: A PUBLIC HEALTH APPROACH

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Undiagnosed and untreated child mental health problems create a public health emergency in the United States (US). In the US the human suffering, burden of disability, and economic costs associated with mental illness are immense. Mental illness is the second leading cause of disease burden, directly resulting in substantial lost productivity. Behavioral health and prevention research highlight the effectiveness of interventions that reduce risk factors and enhance protective factors associated with mental illness. This focus on prevention and resilience reflects the relatively recent *public health approach* to mental health. The emphasis on promotion, prevention, and early intervention in a public health approach is especially relevant for young children. Likewise, the social-ecological perspective often used in public health interventions mirrors the multi-tiered influences on young children's social and emotional wellbeing. Finally, child development research shows young children can recover from early detection and early intervention for a mental health problem. One in five children and youth is estimated to experience symptoms of psychiatric disorder each year. Many of the mental health problems diagnosed in school aged children and teenagers originate in early childhood, but there are long delays before diagnosis and treatment are received. Approximately 10% of children experience mental problems to the point of impairment, yet less than 20% of those in need receive treatment. This unmet need in the population most likely to benefit from prevention and early treatment creates a problem of public health significance. Currently, there is little research

linking public health approaches to mental health services for children birth to age five. This paper discusses the need for, and relevance of, a public health approach to young children's mental health, and makes recommendations for implementation of that approach.

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INTRODUCTION

Child mental health is an important yet often overlooked public health issue in the United States (US). Children's psychosocial problems are the most common chronic condition in childhood. One in five children and youth is estimated to experience symptoms of psychiatric disorder each year. Many of the mental health problems diagnosed in school aged children and teenagers originate in early childhood, but there are long delays before diagnosis and treatment are received (Kenny 2002; Hacker 2006; Substance Abuse and Mental Health Services Administration 2007). Approximately 10% of children and adolescents in the US experience serious emotional and mental disorders that significantly impair their daily home, school, and personal lives. While evidence has shown that prevention and treatment of these disorders are effective, only about 20% of children and youth with mental problems receive mental health services each year (Surgeon General 1999).

Undiagnosed and untreated child mental health problems create a public health emergency in the United States (American Psychological Association 2003). Mental health problems can have disastrous consequences on children, families, and communities. Research and history have proven untreated mental disorders may lead to adolescent and adult substance abuse, risky sexual behaviors, school drop-out, juvenile delinquency, incarceration, and suicide. The US Department of Education estimates that 50% of students experiencing mental problems at age 14 drop out of school. Sixty-five to 100% of juveniles in the justice system are believed to suffer from mental disorders, of which approximately 20% are considered to be serious disorders (2002). Suicide is the third leading cause of death among youth aged 10 to 24 years, and 90% of

individuals who commit suicide are estimated to have had a diagnosable mental disorder at the time of their deaths (DHHS 2006). Left untreated, childhood mental health disorders will usually persist into adulthood (Kenny 2002). Additionally, untreated mental illness in youth can develop into more debilitating and difficult-to-treat mental illnesses in adults, as well as co-occurring disorders like substance abuse or domestic violence, which may perpetuate the cycle of mental disorder and poor outcomes in the next generation (Substance Abuse and Mental Health Services Administration 2007).

Beyond the obvious human tragedy, mental illness imposes a huge economic burden on community, state, and national resources. A 2007 estimate puts the cost of treating mental illness in the US at \$85 billion per year (Substance Abuse and Mental Health Services Administration 2007). Children account for approximately 28% of the population, yet only 7% of our mental health resources are spent on them. A 1998 estimate put treatment expenditures for child and adolescent mental health services at \$11.68 billion (1998 dollars) (Kenny 2002). Of that, \$698 million was spent on children ages one to five. In that age group, approximately \$426 million went to outpatient services, \$209 million to inpatient care, \$42 million on medication, and \$20 million on other mental health services (Rand 2001).

In early childhood, defined in this paper as the period from birth to age five, mental health refers to social, emotional, and behavioral well-being of children and their families. The mental health of a young child is influenced by a combination of factors, including the individual constitution of the child, the quality of adult care-giving the child receives, the environments in which care is received, and the community in which the child and family lives. A young child develops her social-emotional well-being through building emotional regulation and expression,

exploring her environment, and experiencing consistent and secure relationships (Georgetown 2008).

A basic premise in the infant mental health field is that young children develop in the context of their primary emotional relationships, thus the quality of those relationships significantly influences and shapes the child's mental development and wellbeing or disorder (Zero To Three 2008). However, a young child is influenced by more than his or her immediate family. A complex interaction of factors influences a child's mental health and development. Research shows the number of risk factors to which a child is exposed increases the likelihood the child will develop a mental health problem (Substance Abuse and Mental Health Services Administration 2007). The American Academy of Child and Adolescent Psychiatry states that the number of children at very high risk for developing a mental disorder is growing in the United States (Committee on Prevention of Mental Disorders 1994). Mental illness diagnosis, treatment, and public perception have undergone significant changes and advances since the mid-twentieth century (Prior 1993). Brain research conducted during the past two decades has shown mental disorders have biological causes, which have successful treatments. This new information reframed how science and the public viewed mental illness.

The purpose of this paper is to examine the recent movement toward a 'public health approach' to mental health and apply this model to children aged birth to five, considering the unique issues involved in mental health services for this age group. The paper provides a contextual overview of major approaches to child mental health care in the United States since the mid-twentieth century. It conceptualizes and examines the rationale for a public health model; describes what this approach entails, including a new emphasis on prevention of mental illness; identifies forces for change in this direction; and discusses why the prevention-focused

approach is particularly useful for young children's mental health issues. Finally, the paper identifies the challenges facing mental health services for young children and recommends next steps.

1.1 DEFINITIONS

Many terms used in this paper are employed in other publications with varying definitions, or are misused interchangeably. Definitions for the following terms are used in this paper.

Mental health in children birth to age five includes social, emotional, and behavioral wellness and functioning. *Serious emotional disturbance* is defined as a mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified in the DSM-IV that results in functional impairment and substantially interferes with or limits one or more major life activities in an individual up to 18 years of age (Health 2003; Frank 2006). Because many professionals and parents are reluctant to apply mental illness labels or stigmas to children, the term *serious emotional disturbance*, rather than *mental illness*, is often used for children. The terms are used interchangeably in this paper. *Mental health problems* are mental health challenges that are distinguished from *disorders* or *disturbance* in that a child may experience impairment below the level qualified to be a disorder, but mental health problems may need active efforts in health promotion, prevention, and treatment. *Disorder*, according to the Institute of Medicine, is a pattern of behavior or psychology that results in disability or a significantly increased risk of disability, suffering, or death. *Mental illness* includes all diagnosable mental disorders or mental health conditions characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning (Substance

Abuse and Mental Health Services Administration 2007). *Psychopathology* is abnormal or maladaptive behavior or mental activity, as well as the study of the origin, development, and manifestations of mental or behavioral disorders (Washington State 2007).

Prevention in the field of mental health, as defined by the Surgeon General and the Institute of Medicine, is similar to the concept of primary prevention in the field public health. Prevention efforts may delay, reduce, or stop initial onset of a mental disorder. Prevention efforts may also occur later in the course of mental disorder to prevent relapse, disability, or harmful behaviors associated with mental disorders, such as substance abuse (Surgeon General 1999). The definition of prevention of mental disorder varies among agencies. The National Institute of Medicine (IOM) found the traditional classifications of primary, secondary, and tertiary prevention problematic when applied to mental health. It created a new classification system for prevention focused on mental illness intervention. The IOM included the following categories: prevention, treatment, and maintenance. Under this system, prevention refers only to interventions that precede onset. Treatment refers to interventions for identified cases.

Maintenance interventions aim to prevent or reduce relapse and recurrence, as well as to rehabilitate individuals with disorders. Maintenance is what the public health field refers to as some secondary and all tertiary preventions (Surgeon General 1999). It indicates a long-term intervention or strategy to ameliorate effects of the disorder, and or re-occurrence (Committee on Prevention of Mental Disorders 1994; Janis 2007). The World Health Organization (WHO) defines mental disorder prevention as attempts to reduce incidence, prevalence, time with symptoms, reoccurrences, and impact on every social-ecological level (Hosman C 2004; Janis 2007).

Promotion of mental health involves efforts designed to enhance an individual's social competence, self-esteem, and sense of well-being. *Recovery* is achieved when people with a history of mental disorder are able to live, work, learn and fully participate in their communities. Recovery may mean the ability to live a fulfilling and productive life with a disability, or for some individuals it may mean a full remission of symptoms (Presidents New Freedom Commission 2003). *Resilience* is the capacity to face, overcome, and be positively transformed by adversity (Substance Abuse and Mental Health Services Administration 2007). Resilience is a personal trait that can be supported by external influences. For example, a young child's resilience is supported by his family. Resilient children tend to have high levels of autonomy, self-esteem, personal agency, and inter-personal problem-solving skills (Bernard 1991). Communities can also foster resilience in their members by providing opportunities for meaningful participation, relationship-building, and personal development (Garmezy 1991; Presidents New Freedom Commission 2003).

Stigma refers to negative attitudes and beliefs that motivate the general population to fear, reject, avoid or discriminate against people with mental health problems (Health 2003).

The IOM identifies three types of preventative interventions: *universal*, *selected*, and *indicated*. *Universal interventions* are applied to a general population regardless of risk status. These are proactive, preventative interventions that may be more acceptable to participants or a community because participation does not indicate risk status or presence of a mental illness. *Selective interventions* are targeted to individuals or groups who have a higher risk of developing a mental illness than the average person. An *indicated intervention* is designed for people who already have some symptoms of mental health problems, yet may not be diagnosed.

Interventions may incorporate more than one of these types of prevention (Substance Abuse and Mental Health Services Administration 2007).

2.0 METHODOLOGY

This paper is based on a comprehensive literature review that involved three strategies. First, a search of the PubMed and PsycInfo databases was conducted through four searches using a combination of terms, subject headings, and search parameters: *children, infants, toddlers, mental health, disorder, mental illness, emotional problem, and psychopathology*. Two hundred twenty nine articles resulted and were reviewed for relevance by title and abstract. Most articles addressed children and adolescents up to age eighteen. Sixteen articles that focused on children birth to age five were relevant for this paper. References in these articles were also searched for additional sources. A PubMed search using the terms *protective factor* and/or *resilience* yielded five articles relevant for this paper.

Second, the author identified articles and books via the University of Pittsburgh Health Sciences Library System Resources Search webpage. Books and articles were searched using combinations of the terms and phrases *history of mental health, child mental health, mental health service, and mental health history*. The author also searched PittCat using the LC Subject Heading Browse feature and reviewed results of the following subject headings: Mental Illness Public Opinion, Mental Illness History, Mental Health, Mental Health Promotion Philosophy, Mental Health Social Aspects, Mental Health Policy United States, Mental Health Policy United States History, Mental Health Promotion, and Child Mental Health. These searches resulted in seven books used in writing this paper.

The third search strategy involved a review of major governmental reports published online from the US Department of Health and Human Services, the Substance Abuse and Mental Health Services Administration, the Office of the Surgeon General, the President's New Freedom Commission, the National Institutes of Mental Health, and the World Health Organization. The author also reviewed publications from early childhood-focused nonprofits, technical assistance agencies, research centers, and university centers. Twenty-four useful sources resulted from this search.

3.0 REVIEW OF THE LITERATURE

The review of the literature provides an overview of the major approaches to adult and child mental illness used in the United States since the mid-twentieth century as context for understanding the recent evolution of a public health approach to mental health care in the United States. This section conceptualizes mental health in children birth to age five and includes a discussion of risk and protective factors, while considering the unique challenges of diagnosing and addressing psychopathology in this age group. The characteristics of early childhood mental health interventions are discussed, as are barriers to access of mental health services for young children.

3.1 THE EVOLUTION OF MENTAL HEALTH CARE

The mental health system of today has evolved drastically since the early twentieth century due to a dramatic transformation in how mental illness is viewed and treated (Morrissey 1986). Mental illness is far more visible today than ever before. In the first half of the twentieth century, designated institutions housed the mentally ill. Today nearly all individuals with mental illness are never treated in inpatient settings. Today's treatments for serious mental illness may not always be effective, but they are humane. The overall quality of life for individuals with mental disorders has increased dramatically in the past few decades (Frank 2006). Mental health

services in the United States have evolved with changing beliefs about mental illness and the development of new treatments and services that reflect our changing socio-cultural beliefs and perceptions of mental health and illness.

Three major periods in public mental health care in the United States are referred to as the moral treatment, mental hygiene, and community mental health era. Each reform in mental health care brought a new approach to treatment and a new location for care (Morrissey 1986). The first phase, moral treatment, appeared in the early 19th century and is characterized by care in an institution or mental asylum. Not unlike other public buildings, the mental asylum represented society's social and cultural perceptions about the population for whose use the building was designed. Residential facilities were designed to represent a perceived boundary between sanity and insanity. Typically they were located in the country, symbolically separating the mentally ill from mainstream society and referred to as *colonies*. Often asylums utilized gates and walled grounds to segregate those within from those without. Asylums included discrete spaces in which services for residents were segregated based on gender and ability. This reflected the late 19th and early 20th century beliefs that patients needed isolation, and staff should reside in the same institution, although in specialized quarters. All needs were met through facilities and services located on site (Prior 1993).

As the moral treatment approach gave way to the mental hygiene era, the change in terminology from *asylum* reflecting a place of rest and seclusion from the mainstream, was changed to mental *hospital* as opinion shifted to the belief that mental illness could be controlled or cured through medicalization, rather than simple control of the patient. The differentiation between hospitals for physical ailments and mental ones was clear, as was the notion of a definite boundary between sanity and madness (Prior 1993). Treatment methods changed greatly

in the first half of the 20th century, and while many were ultimately not effective, their aim was cure rather than ongoing maintenance of past asylum-based therapies. Yet Prior's extensive review of case notes from this time period reveals little mention of the patient's mind or his social relationships. Most of the major advances in mental illness treatment at this time involved somatic therapies (Prior 1993).

The mid-twentieth century focused on the community mental health movement. By the 1950s hospital design and operations had reoriented as *therapeutic communities* in which the quality and stability of internal environment and relations were recognized as benefitting patient recovery. This paradigm change also reflected recognition of the complexity of patients' relationships and in-hospital culture, rather than the prior image of passive patients to whom a therapy was applied. From the 1950s onward, institutionalization itself came into question as the notion of mental disorder changed. The rebellion against *institutionalization* and public scrutiny of mistreatment in mental wards became prevalent in the late 1950s through the 1970s, and represented the shift in service models to a community-based approach (Morrissey 1986; Prior 1993).

In 1948 the International Statistical Classification of Diseases created a "Mental, psychoneurotic and personality disorders" category. In 1952, the American Psychiatric Association published the first edition of its Diagnostic and Statistical Manual, laying out disorders on four axes ranging from organic to behavioral. Subsequent revisions of the manual emphasized the manifestations of mental disorder, rather than their causes, reflecting a growing interest in the impact of a disorder on life and daily functioning (Prior 1993).

3.2 CHILD MENTAL HEALTH SERVICES

The inadequacy of the child mental health system in America has been repeatedly documented, and ranged from total disregard of mental health needs in children to today's disjointed and complex array of programs and funding streams. Mental health services and policies were largely focused on adults until 1969, when the Joint Commission on the Mental Health of Children formed in response to the unmet mental health needs of children (Huang 2005). The Commission studied the child mental health system and determined that children's services were grossly inadequate and only a small portion of children in need received services. This led to a child advocacy movement to coordinate child services and improve conditions in which children were treated. Although the Commission made a number of recommendations, few of them were ever realized. Legislation resulting from the recommendations that would have established a child unit in the Federal Department of Health, Education, and Welfare, was defeated in 1973 and 1974 (Morrissey 1986; Prior 1993; Levin 2004).

When President Carter established the President's Commission on Mental Health, children with serious emotional disturbances were officially recognized as an underserved population. The administration recommended a cross-systems approach to child services, which incorporated education, health, welfare and juvenile justice. A seminal publication, *Unclaimed Children* by Jane Knitzer, reviewed states' policies and services for children. The report concluded that no one system took responsibility for children. Rather, children were often shuffled between systems, with detrimental results. This research, with findings similar to the Commission's of years earlier, led to a new push for a comprehensive child mental health policy (Levin 2004).

Eventually these seminal reports led to the development of the Systems of Care approach. This model incorporates public health strategies and values the partnership of parents and professionals in the design and provision of a range of services that focus on the family's strengths and needs, and provide in an individualized, culturally competent, and community-based manner (Stroul 1986; Georgetown University 2008). Since the mid 1980s, Systems of Care has been the federal and state governments' primary approach to children's mental health services. Not a model, it represents current philosophies and values, as well as recent research in the field. Systems of Care shifted the emphasis from inpatient care or office-based outpatient services, to home-based services and supports, case management, day treatments, crisis services, specialized therapeutic foster homes, and other residential facilities. Systems of Care is an example of the evolution of service delivery resulting from a recognition of need for cross-systems collaboration that is necessary to reach all children in need, and provide them the full range of services from which they would likely benefit (Levin 2004). The federal Substance Abuse and Mental Health Services Administration simultaneously created a number of programs designed to coordinate child-focused services and integrate systems for better mental health care delivery (Georgetown University 2008).

The Systems of Care approach emphasizes aspects of a child's environment that were previously overlooked in mental health services. It redefined the role of parental involvement in child mental health services by moving away from the traditional view that parents caused a child's mental disorders and that parents should be excluded from the child's treatment. Rather, Systems of Care frames active parental participation as essential to help the child. Systems of Care attempted to address disparities in access to care for minority or 'disadvantaged groups' by

tailoring services to the needs and perspectives of diverse populations (Levin 2004; Huang 2005).

The success of support services and treatment under Systems of Care may depend on the flexibility of funding handed down from the federal government in block grants that can be used for any purpose. Discretionary funding may increase tailoring of supportive services, innovative treatments, and prevention efforts. While evaluation of the progress made by the systems of care approach is positive, improvements can be made. A review of state child mental health programs calls for increased integration in Systems of Care of child mental health services with other child-focused sectors, otherwise real progress will be limited. Additionally, the review emphasized a need for more attention to prevention and early intervention; that is, increased implementation of a population-based ‘public health approach’ to children’s mental health (Levin 2004).

Without enhancing efforts to reduce the number of children who experience serious mental illness or emotional disturbance no real progress can be made. The public health and the Systems of Care approaches can be used simultaneously and in a mutually reinforcing manner (Georgetown University 2008). Systems of Care will streamline service delivery for clients. A public health approach attempts to identify risk and protective factors for children’s mental health, develop risk reduction programs, and enhance protective factors for whole communities and populations. The public health approach also calls for regular tracking, determining policy effects on child mental health, increasing public awareness of the issues, and developing the knowledge base about effective preventative and intervention strategies (Friedman 2002; Levin 2004). The Institute of Medicine and the National Research Council note that in addition to focusing on family strengths, protective factors, and resilience, the field of child mental health

can learn from efforts made in the fields of family support, positive youth development, and community development, all of which are community based approaches (Levin 2004).

Changes in public policy have influenced child mental health service delivery dramatically in the last 50 years. Federal education policies since the 1970s have affected children's mental health services by promoting a deinstitutionalized, social inclusion-focused, community mental health approach (Surgeon General 1999). The 1975 Education for All Handicapped Children Act stated that all children were entitled to a free and appropriate public education. While this was landmark legislation for children with disabilities, it had serious unintended consequences. Few public schools could afford to provide educational and other services for their students with special needs. The result was a disincentive to diagnosis a child with a disorder. Schools were especially concerned about children with a serious emotional disturbance, since lengthy and costly therapies and medications might be necessary. Levin, Petrila, and Hennessy estimate this disincentive resulted in fewer diagnoses of children with serious emotional disorders – about 1% – than national prevalence rates (Levin 2004). The Education for All Handicapped Children Act became the Individuals with Disabilities Education Act in 1990, and was reauthorized in 1997. The changes made in these two revisions emphasized parental involvement and participation, and incorporating a child with special needs into “mainstream” educational settings. The limitation, however, was the federal government still did not provide adequate financial support for schools to act in the best interest of all children (Levin 2004).

4.0 MENTAL HEALTH IN CHILDREN BIRTH TO AGE FIVE

Recent research in the fields of neuroscience, child development, and infant psychiatry show that rapid brain development during the prenatal period and in the first five years forms the foundation for healthy emotional, social, and mental development throughout the lifespan (McEwan 2007). A child's cognitive ability, language acquisition, emotional regulation, and interpersonal skills are developed in the early childhood period through ongoing interplay of biology and experience (Shonkoff 2000). Human cognitive, social, and emotional ability and success throughout life depend significantly on experiences that occur by age three. Children who experience behavioral and emotional problems at a young age have a 50% chance of continuing to struggle with these problems throughout youth and adulthood (Cohen 2005).

From a developmental psycho-biological perspective, mental health disorders (or serious emotional disturbances) occur in young children due to the five major causes of brain and psychosocial development: biological risk, genetic risk, family relationship risks, experiential risks, and social environmental risks (Task Force 2003). *Serious emotional disturbance*, while not a diagnosis, is often the wording used in child mental health policy and programs (Levin 2004). In infants, these problems usually manifest themselves as inability to form close relationships with caregivers and inability to regulate emotions. In preschool- and school-aged children, psychosocial problems typically present as challenging or disruptive behavior in school or daycare (Rosaman 2005). Young children's mental health is considered in several ways.

Primarily, mental health in a young child is viewed as social-emotional control and behavior appropriate for his or her developmental age. Mental health is evaluated by whether or not the child meets expected socio-emotional developmental milestones. Secondly, mental health is considered within the relationships between the child and his or her primary caregivers and in the immediate environment (e.g. home and childcare). The final consideration is environmental factors outside the immediate environment that influence the child, such as community and extended family relationships (Cohen 2005).

Scientific evidence highlights the importance of prevention, early identification, and intervention for mental disorders in early childhood. The interplay between child development and contextual influences makes it clear that a social-ecological model is necessary to understanding and addressing risk factors for mental health problems and disorders in young children, as well as to identify and enhance the protective factors supporting a child and his or her family.

4.1 PREVALENCE

The prevalence of mental illness is typically calculated using one or more of the following three methods. The first is a measure of signs and symptoms of specific disorders. Second, impairments in function and ability due to mental distress may be measured. Third, the number of individuals receiving treatment for mental illness may be used. The type of assessment can significantly affect the reported prevalence of mental illness. Frank and Glied demonstrate how the prevalence rate of mental illness in the American adult population changes from 30% when measured by symptoms, to less than 10% when measured by treatment received. Although based

on the adult population, this example shows the difficulty in calculating mental illness in any population. Prevalence of mental disorder may even be 'overestimated' on the basis of symptoms, if individuals presenting with symptoms do not also experience impairment in their daily lives (Frank 2006).

Despite these limitations in measurement, an estimated one in five children has a diagnosable mental disorder and one in ten has a serious emotional disturbance. Yet 70% of these children do not receive treatment (Kenny 2002; Levin 2004). Prevalence estimates of mental health problems in children under age nine are few; however available research indicates the rate for young children is similar to that of adolescents. Some information on toddlers in the birth to five age range is available. For example, parental reports of social-emotional problems in two to three year olds range from 7% to 24%, with a majority between 10% and 15%. Ten percent of one to two year olds receiving screening were found to have emotional and/or behavioral problems (Carter 2004).

Early childhood is the critical time of onset for many emotional and behavioral problems (Rosaman 2005). Parents commonly see signs of mental disorder in their child before age four, yet unless a child has a severe and obvious impairment, diagnosis of mental health problems often does not occur before age ten (DHHS 2006). Median rates of psychopathology and behavioral problems in preschool-aged children have been reported at 8%, a rate similar to that found in older youth. The most commonly diagnosed psychopathologies were Attention Deficit/Hyperactivity Disorder (ADHD) (86%), disruptive behavioral disorder (61%), mood disorders (43%), and anxiety disorders (28%). Coexisting disorders are also common (American Psychological Association 2003; Levin 2004).

Although mental health problems affect individuals of every age, gender, race/ethnicity, and socio-economic status, serious disparities in prevalence, diagnosis, and treatment exist. Minority children, children with special needs, and children in low income families often experience behavior and emotional problems more frequently than children not in those populations (Tolan 2001; Carter 2004). Additionally, these children are less likely to receive mental health services, and typically receive lower quality services than children from high income families (Levin 2004). Reasons for higher prevalence among children living in poverty include increased stress in the family, lack of accessible services, lack of health insurance, misdiagnosis, and parental mental health issues (Kenny 2002). Additionally, few mental health specialists are adequately trained to deliver services that are culturally and linguistically specialized (Carter 2004). Children in rural areas often have difficulty finding and accessing appropriate services (Tolan 2001). Research has also indicated that individuals of color have a strong distrust of mental health services (Levin 2004).

4.2 DIAGNOSIS

The past decade, referred to in the field of child development as the Decade of the Brain, brought many advances in assessment methods for diagnosing psychopathology in young children (Shonkoff 2000). Changes in diagnostic tools reflect the growing research base that supports considering childhood psychopathology within the developmental and environmental contexts. Modern assessment processes recognize the need to identify and assess the conditions that led to and support the problems (Perez 2002). New tools include parent (and other caregiver) report questionnaires, diagnostic interviews, and various types of observational assessments. These

tools are often used in combination to achieve a multi-dimensional picture of the child. The following criteria are often used to assess a child in context: adaptations to developmentally appropriate demands or contexts, the acquisition of new developmental skills and abilities, interpersonal relations, and physical health (Carter 2004). Emerging methods of early childhood mental health assessment involve an ongoing collaborative process of systematic observation and analysis, conducted by a diverse group of assessors, and with family participation (Greenspan 1994; Perez 2002).

A greater appreciation for the challenges of diagnosing psychopathology in young children has emerged from recent work. Because early childhood is a time of rapid and dramatic developmental changes, diagnosis of any emotional or behavioral disorder during this time must be considered carefully and viewed within the context of age-appropriate milestones. This is complicated by the inability of young children to clearly express their thoughts, feelings, or needs. Secondly, signs and symptoms of mental disorder may look different in young children than in older children, and especially adults. Few practitioners are trained in infant-specific mental health assessments or intervention techniques (Zeanah 2005). Additionally, guidelines are limited on how to integrate the results of different assessment methods and diagnostic tools that do consider the family and cultural contexts in which a child lives (Carter 2004).

Zeanah et al. discuss the problem of assessing symptoms in young children due to naturally rapid development early in the first years of life. Behaviors that may be clearly viewed as symptoms of psychopathology in older individuals may in fact be characteristics of typical development at certain periods of early childhood (Zeanah 1997). A set of behaviors or symptoms is analyzed and compared over an age span to distinguish typical and significant patterns. Diagnosis is not made on isolated behaviors. Practitioners must consider the history of

the problem behaviors, including onset, offset, duration, frequency, context, and level of disturbance to the family (Zeanah 1997; Carter 2004). Typically, 'age bands' are used for comparison of behaviors exhibited in early childhood. The age bands are narrow early in life, usually one month intervals, but the bands widen as the child ages and developmental changes are less rapid (Carter 2004). Mild or moderate signs and symptoms of mental distress are more difficult to diagnosis than extreme signs and are not often supported by sufficient research. This makes early intervention at the first onset of a problem less likely. Few instruments exist to adequately assess psychopathology in young children, but recently developed assessment tools attempt to correct the delay in identification and diagnosis of disorders (Carter 2004).

Assessing early childhood mental health in context is another challenge. Child development professionals recognize that a baby cannot be considered apart from the caregiver and environment in which the baby lives because he is highly dependent on external supports (Winnicott 1965). A young child experiences a reciprocal relationship with his primary caregiver. Cognitive, social, and emotional functions should be analyzed and the level of a child's impairment determined within the context of the primary care giving relationships. Because of the importance of the primary relationships, it may be more effective to examine the child's symptoms together with the impact the child's condition has on his or her family, in order to determine level of impairment a family experiences (Carter 2004). In addition to family context, the child must also be considered within broader environmental influences such as extended family relations, community, and cultural influences (Winnicott 1965). Often, two models are used for this type of analysis: the ecological model of development posited by Bronfenbrenner (Barnes 2003), and the transactional framework developed by Sameroff and Chandler (Winnicott 1965; Barnes 2003).

Many practitioners resist diagnosing a young child with a mental health disorder, which presents another challenge to addressing mental health needs in early childhood. Labeling the child potentially subjects her to differential treatment and emphasizes treatment rather than addressing the risk factors within the family environment that may cause or prolong the problem. The early diagnosis may change or the problem may be addressed; however the diagnosis is often noted in medical and school records, and may influence insurance coverage for years to come. Despite these concerns, there is substantial evidence that some behaviors seen in young children persist and can be indicative of later mental health problems. When a diagnosis is given, there may be concern about its reliability due the rapid development of early childhood (Task Force 2003). Finally, many practitioners lack adequate cultural competence to distinguish signs of a mental disorder from culturally-determined emotions and behaviors that might be different from the practitioner's own (Carter 2004). While these barriers to diagnosis exist, many early intervention programs for children with special needs require a diagnosis to enroll the child (Huang 2005).

Diagnostic models have been used to assess various aspects of child development, but few are specifically designed for psychopathology (Carter 2004). The Diagnostic Manual of Mental Disorders 4th Edition (DSM-IV) is the classification system most often used to identify emotional and mental disorders in adults and youth. However, the system was not developed for young children, whose behaviors may be recognized signs of a disorder in an adolescent as well as a transient behavior within the scope of typical early childhood development. The DSM-IV does not consider family or environmental contexts, nor stage of child development. It is also inappropriate for young children because the tool does not allow for observation of the child in context over time (American Psychological Association 2003). For these reasons, the Diagnostic

and Statistical Manual for Primary Care (DSM-PC) Child and Adolescent version was developed for use in pediatric primary care settings. However, this tool may not be useful for diagnosis in the home and care-giving environments by individuals without a mental health background, making the DSM-PC less useful in some community-based mental health care settings (Task Force 2003).

In 1994, the national nonprofit organization Zero To Three developed the first developmentally-sensitive diagnostic system of classification for disorders in infants and young children, called Diagnostic Classification 0-3 (DC:0-3) (Greenspan 1994; Perez 2002; Carter 2004). DC:0-3 is based on empirical research and clinical practice. The tool is designed to help professionals recognize mental health and developmental problems in young children, understand how relationships and other environmental factors contribute to disorders, use diagnostic criteria effectively for classification and intervention, and work more effectively with parents and other professionals to develop effective treatment plans. The system uses the axis orientation of the DSM tool but uses factors specific to young children, such as the parent-child relationship. Its diagnostic categories reflect a multidisciplinary approach to early childhood development and mental health (Task Force 2003).

Currently, a revised version, the DC:0-3R is used. This version was created to address limitations of the first system, clarify diagnostic criteria, and build upon the growing knowledge of young children's mental health. This axial system allows a diagnostic team to consider factors contributing to the child's problem, his or her adaptive strengths, and additional areas of social and emotional functioning that may affect the child's behavior. The tool increases mental health and child development professionals' abilities to prevent, diagnose, and treat mental health

problems in young children by identifying and describing disorders that are not addressed in previous classification systems (Zero to Three 2008).

The DC:0-3R is a unique assessment tool also because it represents a shift in diagnostic thinking from a deficit-based approach to a strengths-based approach. The tool allows the assessor to consider the capacities, resources, and protective supports available to the child and family. This gives a more comprehensive understanding of the infant in context, as well as identifies assets that can be built upon to assist the child and family to thrive. Finally, a strengths-oriented approach often engages the family in the process of addressing the child's needs, and can improve outcomes for high-risk infants (Perez 2002). The DC:0-3R is supported by a number of reputable organizations, yet it is not widely used at this time. Only a few states will reimburse for a diagnosis obtained through this tool; many still require the DSM-IV (Huang 2005).

Child mental health practitioners and researchers face the challenge of integrating data on child mental health diagnoses that were obtained through different methods and tools. The various diagnostic tools that currently used vary with the type and amount of information they collect about the child and his family, the type of assessment methods used, and the time period over which behaviors are analyzed to determine existence of disorder. Parental reporting of a child's symptoms is common but subject to bias. Parents may over-report signs of distress to be eligible for services. They may under-report symptoms due to fear of stigma or the threat of child abuse or neglect accusations. To avoid these biases, clinicians may assess a child via non-parental caregivers' reports, such as reports from a child care provider or preschool teacher (Carter 2004).

5.0 RISK AND PROTECTIVE FACTORS

Research into risk and protective factors relating to childhood mental disorders and studies of individual and community resilience increased in recent years, yet research focused strengths-based approaches to mental health promotion and disorder prevention are few (Shapiro 2006). These topics are needed to develop interventions and engage families and communities in child mental health issues (Levin 2004). Successful child mental health promotion and problem prevention efforts must be based on correct identification of risk and protective factors with clear causal relationships to mental illness (Giesen 2007). Risk factors synergistically interact to increase the probability of mental problems. Webster-Stratton and Taylor have identified and diagrammed the interaction and accumulation of risk factors in young children (Figure 1). These factors, they state, lead to early onset of conduct and emotional problems that can develop into serious mental problems later in life (Webster-Stratton 2001). Webster-Stratton and Taylor assert the importance of identifying problems and intervening early with children before problems become more complex and entrenched in the child's life (Webster-Stratton 2001; Substance Abuse and Mental Health Services Administration 2007).

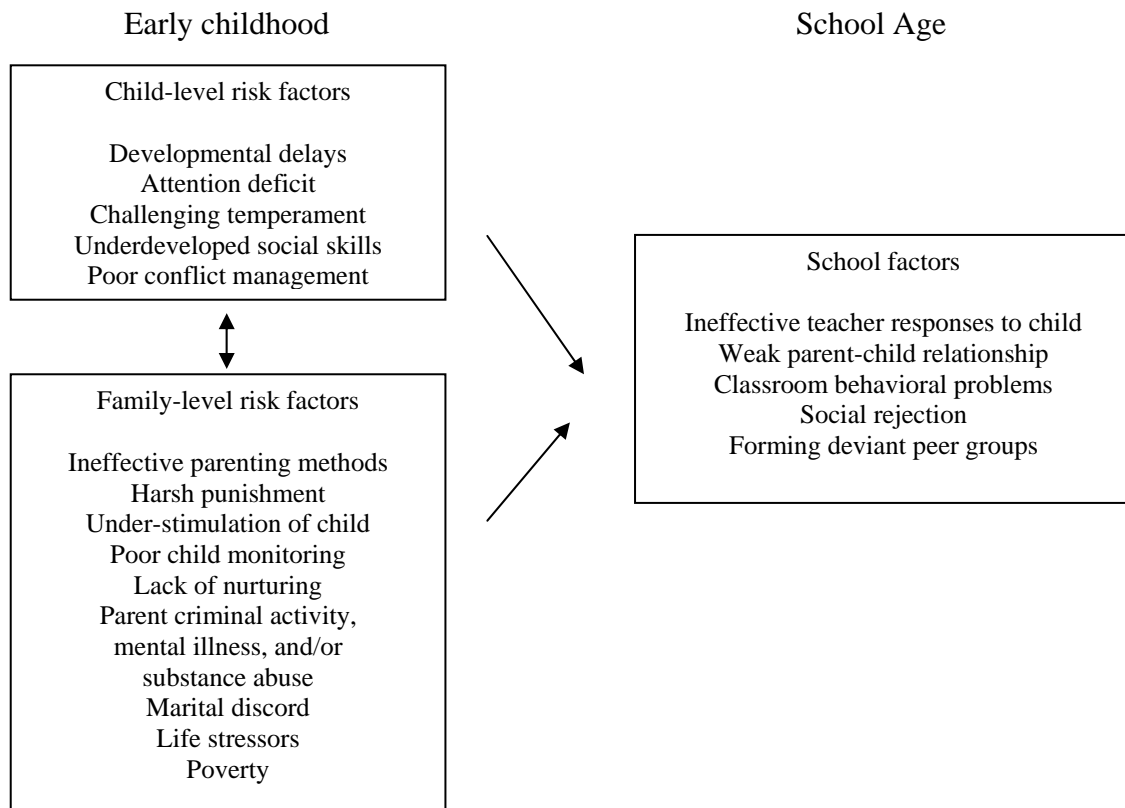


Figure 1: Risk Factors, Adapted from Webster-Stratton and Taylor

Infant mental health and wellbeing are reciprocally related to the primary care-giving relationships in a child’s life. Parents and other consistent caregivers significantly influence a young child’s emotional development and learned behavior. When a child exhibits challenging behavior and atypical emotional responses to his caregivers and their environment, parents may be confused or overwhelmed, negatively affecting their bonds with the child. Parental responses to challenging behaviors such as hyperactivity or a strong temper may unwittingly encourage the child’s unwanted behavior. Harsh punishments show the child a negative behavior model and fail to demonstrate pro-social behavior, which does not assist the child in learning good social or cognitive skills. Likewise, acquiescing to a child’s demands will reinforce the child’s demands (Substance Abuse and Mental Health Services Administration 2007). For these reasons, the

child-parent (or other primary caregiver) relationship is a necessary target for support or intervention (Tolan 2001).

Broad contextual factors beyond the immediate family relationship may support or hinder a child's functioning and development. Ecological risks have both unique and cumulative effects (Winnicott 1965). Risk factors for child mental health problems such as residing in a single-parent family, poverty, significant time spent in out-of-home child care are increasing, and the more risk factors a child encounters, the greater his chances of impairment. Caregivers' and families' abilities to cope with and manage difficult child behaviors often do not keep up with a child's needs. Caregivers may not recognize the potential for serious problems in children. Those who do may find it difficult to locate, access or afford appropriate care (Cohen 2005). As young children encounter more settings in which they spend significant amounts of time, the factors influencing his or her behavior become more numerous and more complex. A school or day care setting evokes new emotional responses and can reinforce unwanted behaviors if the teacher or child care professional has poor classroom management techniques or a poor understanding of the causes of the child's actions. Lack of communication and coordination between school and home may compound the child's difficulties and weaken bonds the child has formed at home, school or both. Children who struggle in school have been found to seek out similarly struggling children, which may lead adolescents to seek the company of other troubled youth, reinforcing undesirable behaviors. Early problems at school may start a cycle of synergistic events that reduces the child's ability to function effectively in the school environment (Substance Abuse and Mental Health Services Administration 2007). This is the basis of the rationale for early intervention with at-risk children.

Risk factors are influences that make individuals more susceptible to a negative outcome than people without those influences. Because a risk factor makes it more likely that a person will develop a disorder, exposure to the risk factor must precede the disorder onset. Some factors that may introduce risk, such as family, gender, and genes are fixed. Others, such as intense drug use in some vulnerable individuals, are causal. In designing interventions, public health officials must make sure they are targeting causal factors, rather than just associated risk factors, which will not prevent disorder onset (Hosman C 2004).

Some risk factors are not specific to one type of emotional or behavioral problem (Hosman C 2004; Janis 2007). The IOM and the Surgeon General have developed a list of common risk factors for numerous mental disorders. These are neurological-physiological deficits, difficult temperament, chronic physical illness, below average intelligence, severe marital discord, social disadvantage, overcrowding or large family size, paternal criminality, maternal mental disorder, admission into foster care, and residence in an area with social disorganization and poor schools (Hosman C 2004). The WHO includes academic failure and scholastic demoralization, child abuse and neglect, chronic pain, exposure to aggression/violence/trauma, family conflict or family disorganization, low birth weight, parental mental illness, sensory disabilities, and substance use during pregnancy (Hosman C 2004; Janis 2007). Exposure to one risk factor is not likely to result in a serious problem for the child; however, greater numbers of risk factors correlate to higher rates of mental health problems in young children. The same risk factors are found for mental health, substance abuse, and other high-risk behaviors in children (Webster-Stratton 2001; Substance Abuse and Mental Health Services Administration 2007). Common risk factors include genetic conditions, family

circumstances, socioeconomic conditions, cultural experiences, and poor early childhood development (Empson 2004).

Children may have protective factors in their lives that buffer or ameliorate the risks to which they are exposed and enhance their abilities to resist exposure to risk factors and disorder onset. As with risk factors, protective factors may appear at the individual, family, institutional, or community level. IOM lists protective factors for mental health in children as positive temperament, above-average intelligence, social competence, a close relationship with a responsive parent, and good schools. The WHO mentions protective factors such as adaptability, autonomy, early cognitive stimulation, exercise, feelings of mastery and control, literacy, positive attachment and early bonding, and social support of family and friends (Hosman C 2004).

These protective factors can be built upon to prevent or ameliorate the onset or escalation of mental health problems. Protective factors interact with risk factors in the development of a child's mental health. The factors that encourage positive social, emotional and behavioral development should be targeted in mental health promotion efforts and mental problem interventions (Webster-Stratton 2001). For a young child, a close relationship with a consistent and responsive caregiver is widely considered a primary protective factor (Substance Abuse and Mental Health Services Administration 2007). A child may have an individual constitution or characteristic, such as high self- esteem, that makes him or her less vulnerable to risk. The child may also have a strong extended support system beyond immediate caregivers (Empson 2004). Other protective factors that are more relevant for older children are positive social relationships with peers and constructive recreational activities (Mastan 1998). Mastan and Coatsworth present evidence from numerous studies, which shows that enhancing cognitive and social

competence in young children, as well as improving family interactions, can have cumulative protective effects (Mastan 1998).

Resilience is another term related to the prevention of onset, and amelioration of effects of mental health disorders. Resilience is understood as the ability of an individual to cope with, adapt, and more likely recover from adversity to function effectively in daily life (Mastan 1998; Empson 2004; Substance Abuse and Mental Health Services Administration 2007). Resilience in a child is typically identified through two criteria. One, the child experiences a significant threat to his wellbeing through exposure to risk factors, trauma or other serious adversity. Second, the quality of the child's development and adaption is good despite the exposure to adversity (Mastan 1998). Resilience is not a static trait. It may vary over time because resilience is the result of the interaction of a person's character and the environmental resources available. In children, social-emotional skills coincide with resilience to adversity. These skills, which can be learned and developed in a child, include emotion management, responsible decision-making, ability to form positive relationships with others, and coping skills (Substance Abuse and Mental Health Services Administration 2007). Understanding the process of resilience-building is useful to inform the design and efficacy of prevention programs.

The ability of a child with mental illness and her family to function is related to the family's capacity and strengths as well as the availability of supports in the community. A child is *disabled* to the extent that his environment constrains him. Just as a child in a wheelchair is less disabled when his environment begins to make physical modifications to accommodate him, a child's mental health will be improved not just through treatments, but when his community develops supports to improve his and his family's functioning (Levin 2004).

6.0 MENTAL HEALTH INTERVENTIONS IN EARLY CHILDHOOD

Brain development and socialization in early childhood determine many future social, emotional, and behavioral patterns. Thus, early identification and intervention for children with mental health problems are essential to link children with needed resources and services that will enable them to reach developmental milestones, achieve their fullest potentials, and prevent potentially devastating consequences of mental disorders later in life (Shonkoff 2000; Association 2003; Services 2006). Child development, mental health, and prevention research have shown that outcomes for children at risk of developing mental problems can be improved through prevention, early identification, and appropriate family-based support. Indeed the earlier the intervention, the better the prognosis (Webster-Stratton 2001; Cohen 2005).

Focusing efforts on prevention of mental disorders and promotion of good mental health in children and their parents (or other caregivers) increases the likelihood that a child's mental health problems will be identified, treated, and potentially resolved early in life, before they develop into more serious issues or lead to other consequences such as substance abuse or self-harm. Research points to greater benefits that accrue from early interventions with young children experiencing mental health problems. While long term evaluations are few, evidence shows prevention programs can generate positive social and economic returns over many years and through the transition into adulthood (Substance Abuse and Mental Health Services Administration 2007). Infant mental health interventions are unique because of the recognition of

the child-caregiver relationship as integral to the child's mental health. Thus, an effective approach focuses simultaneously on the needs of both parent and child. Although backed by brain and child development research, this relationship-based approach to mental health interventions is fairly new, and has not been well validated through evaluations at this time. It does, however, represent an evolution in thinking about mental illness in young children (Zeanah 2005).

Interventions to prevent, diagnose, and address mental illness in early childhood must use a multidisciplinary approach. This might include child development, mental health for both children and adults, and any of a number of therapies. Each of these fields has knowledge and practice to contribute to a comprehensive understanding of the risk and problem experiences of children and families. A shared understanding of the goals is important to achieving the optimal outcomes for the family (Barnes 2003).

Parent and infant have diverse needs that are met through several human service sectors offering different types and qualities of services. This results in marked variability between services available in different areas, although most programs have the same general goals of improving caregivers abilities to raise and support their child effectively, while assuring families receive services they overtly need. Because current infant mental health services vary widely on where the intervention takes place, the training of the service provider, and severity of the problem being addressed, Zeanah et al. recommend infant mental health services be delivered on a continuum (Zeanah 2005). Existing infant mental health programs that are considered successful have three common characteristics: they target the infant-caregiver relationship as the point of change; they have been used with families with a range of needs as well as in primary, secondary, and care tertiary settings; and they have demonstrated short or long term

improvements in the care-giving relationship. Zeanah has diagrammed the levels of mental health care for young children (see Figure 2) (Zeanah 2005).

Figure 2 provides examples of common types of universal, focused, and tertiary infant mental health interventions. Universal interventions are delivered to all children, regardless of risk exposure. They aim to prevent initial onset of mental problems. Focused, or targeted, interventions include children who are at risk for or are experiencing some mental health problems. Selective targeted interventions focus on those children at increased risk, while indicated targeted interventions address those with early signs and symptoms (Giesen 2007). The goal of these programs is earliest possible intervention to prevent problems from worsening, and they are typically more cost-effective than universal programs. Tertiary programs and services provide treatment to children and families experiencing mental disorders.

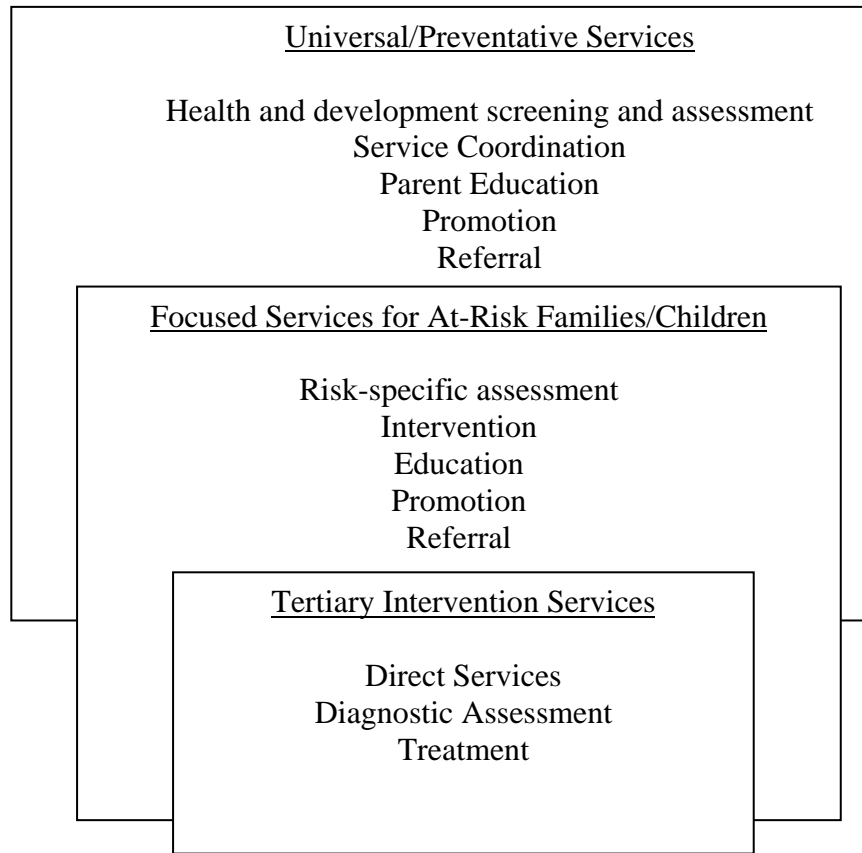


Figure 2: Early Childhood Mental Health Services, Adapted from Zeanah

Egeland and Bosquet provide a review of best practices in infant mental health interventions. Primarily, interventions are more effective when they target multiple levels of the social-ecological environment in which a child lives, for example, the child-caregiver relationship as well as issues directly facing parents, such as illness, unemployment, poverty or substance abuse. Parents' relationships with others are also significant and should be addressed in an intervention, especially when the primary caregiver is a mother (or father) with a non-parental partner. Interventions are more successful when they begin as early as possible. For example, a home visiting program for pregnant mothers develops a trusted relationship with service providers before the child is even born. Finally, to succeed, interventions must be of a

sufficient duration and intensity, be appropriately frequent, and include a course of relevant services (Zeanah 2005).

The effectiveness of the intervention varies with the family's needs. If confidentiality is a concern, a clinic-based intervention might be best. If the family lacks the resources or motivation to go to a clinical setting, home-based interventions might be effective. Some families might prefer working with a paraprofessional or lay home-worker who shares a similar background. Other families may feel a clinical professional is the only person qualified to provide services. A range of flexible, quality services is needed to cater to family preferences (Barnes 2003). Barnes identifies primary and secondary factors that are necessary, but not sufficient, to improve mental health outcomes in early childhood interventions (see Figure 3).

Primary Factors
Shared decision-making between parent and intervenor.
Quality of the parent-intervenor relationship.
Intervention is non-stigmatizing.
Intervention is culturally sensitive.
Flexible hours and settings appropriate for family.
Crisis help is provided before and during the intervention.
Secondary Factors
Theoretical model used.
Timing of intervention.
Location of intervention.
Type of intervenor (professional, lay person).

Figure 3: Factors of Successful Interventions, Adapted from Barnes

7.0 DISCUSSION

7.1 COMMUNITY SUPPORT ERA

Since about 1975, the *community support era* has framed mental illness as a social welfare problem. In this approach, individuals with mental health disorders could function as citizens of their community, if supported and provided with access to resources such as housing and job opportunities. It called for an end to neglecting chronic mental disorders and promoted acute treatment and prevention. Community support networks expanded with an emphasis on recovery, a concept introduced as consumers became more active in their own care and treatment, which eventually made its way into policy making (Surgeon General 1999). In 2001, President Bush reaffirmed the recent trend toward individualized treatment in his President's Commission on Excellence in Special Education. The No Child Left Behind Act of 2002 emphasized a need to coordinate and integrate local schools and mental health systems. The scope of school-based mental health services includes prevention, early intervention, and intensive interventions as needed (Levin 2004).

Contemporary research shows two important current issues in child mental health. One is the growing number of school-based mental health programs for school age children and youth. Schools are ideally situated to improve access to child mental health services and support child mental wellness (Stephan 2007). The emergence of school-based programs has transformed

mental health care for older children, but no parallel system exists for children under five. The second issue is the persistent stigma associated with mental illness, and especially mental illness in children. Pescosolido et al. have shown 45% of the population believes stigma results from receiving mental health treatment in childhood, and 43% feel that stigma would persist into adulthood. Additionally, 86% felt that children are overmedicated. Sixty-eight percent of surveyed Americans felt a child who took psychiatric medicine would have adverse developmental consequences and the medicine only serves to delay solving the underlying issue (Pescosolido 2007). These responses were based on a survey regarding school-aged children, but it is likely the same feelings and stigmas would only be felt more strongly regarding mental illness in children age five and younger. Stigma and mistrust of our current mental health system and its emphasis on medication are two important issues that are outside the scope of this paper. However, children rarely access mental health services without their family's direct influences. Thus family, community, and cultural stigma about child mental illness must be understood to effectively improve access to child mental health services (Pescosolido 2008).

The current mental health 'system' is complex because it has evolved through time under many influences. It continues to be shaped by diverse influences including health reform movements and their various ideologies, changing incentives based on who was obligated to pay for what services, and the progression and advancements in care and treatment technology. The system we use today serves diverse functions, is fragmented and complex, and tends to fail those who need it most; those who often have the fewest resources. Systemic problems are compounded by the lack of health insurance, underinsurance, and lack of mental health parity in many insurance plans. These and other barriers, such as cultural and linguistic differences, can be especially harmful to minority groups in need of mental health care. Discrimination and the

public stigma around mental illness persist. All of these factors hinder prevention and treatment in our modern mental health system (Surgeon General 1999).

7.2 BARRIERS

The field of public health must contend with several barriers in order to restructure the child mental health service delivery system. First, there is little consensus about the definition and diagnoses of child mental health disorders. Defining mental wellness and disorder in young children and identifying the causal pathways leading to disorder, are challenging. Currently, mental health treatment often first requires a diagnosis and then the type and quality of treatment may depends on what party pays for care. Additionally, mental health promotion and disorder prevention efforts are not often evaluated, so there is little consensus on what interventions are effective. Yet, evidence shows children who experience violence, maltreatment, and poverty are at greater risk for developing mental health problems, so public health must focus on preventing or ameliorating these situations, and promoting public awareness about them (Hacker 2006).

Recently, a number of governmental and nongovernmental agencies have backed the public health approach to children's mental health care. One reason for this support is that the family and youth movement uses the values and principles of Systems of Care, and focuses on community and family-driven, youth-guided programming and service delivery. Another influence is the recognition that our mental health system is dynamic and multi-faceted. Preventative supports and interventions are available at the clinical and community levels to prevent, reduce, and treat mental health problems. Third, a growing base of research on individual and community resilience shows clear protective and risk factors that influence child

mental health. There is a new push for evidence-based knowledge of indicators of positive mental health in children and families, and a review of programs and policies that are effective, or that hinder child mental health and development. Finally, evidence proves that promotion and prevention work. The focus of mental health delivery is shifting to proactive steps of prevention, rather than reactive treatments, based on the mounting evidence of success of public health campaigns for physical illness and injury prevention (Georgetown University 2008).

The current child mental health system is riddled with gaps in services and a lack of commitment to prevention and early intervention for child mental problems. A staggering 80% of children with identified mental health disorders do not receive care. The disparity between need and receipt of treatment is especially large among African American and Latino children (Ringel 2001; Levin 2004). Those receiving care, do not often see professionals with specific child mental health training. Additionally, many professionals are not informed about best practices and empirically-tested interventions, nor are clinicians aware of the importance of service coordination, which is imperative to address the developmental needs of young children experiencing mental health problems. Lack of knowledge specific to child mental health is pervasive from the clinic to policy-making levels. The importance of prevention and wellness promotion is often left out of treatment-focused mental health policy, while stigma about mental health problems in young children impedes access to needed services (Tolan 2001).

The National Technical Assistance Center for Children's Mental Health analyzed the final reports of 38 states and the Program Improvement Plans of 28 states for needs in their mental health care delivery systems. Findings show most states do not perform as well on mental health indicators as they do with others. The most common weaknesses listed were scarcity of mental health services for children and concern about the quality of available services (11 states),

inconsistent access to appropriate services for children and families (15 states), inconsistent parental and child involvement in case management or treatment planning (15 states), and scarcity of appropriate placement options for children with developmental disabilities or behavioral problems (9 states) (McCarthy 2004). Another notable finding is that mental health services for children in foster care were rated as a strength more often than for children living with their own families (77.3% vs. 64.3%) (McCarthy 2004). These findings indicate the child mental health system is designed to target high-risk children, rather than focus on universal prevention efforts.

The President's New Freedom Commission on Mental Health concluded that existing inadequacies in children's mental health service system lead to unnecessary school drop out, juvenile incarceration, and substance abuse. Research is not being translated into practice at the community level. Children's mental health services are delivered in many different systems, including schools, primary care clinics, child care centers, community mental health centers, juvenile justice systems, and the child welfare system. Services are fragmented and complex because child mental health programs are administered and funded by separate agencies at federal, state and local levels (DHSS 2006). Often child health care providers are unaware of the advances these fields have made (Cohen 2005). Many people in need do not have access to appropriate services, and the entire mental health system is not oriented toward recovery. The Commission recommends a fundamental transformation of the mental health system. Other obstacles that hinder access to mental health services in America are persistent stigma surrounding mental health issues and limits on mental health care imposed by private medical insurance companies (Presidents New Freedom Commission 2003).

7.3 RECOMMENDATIONS OF THE SURGEON GENERAL

To prevent morbidity, loss of productivity, and unnecessary expenses, the public health system must increase its investment in mental wellness promotion and mental illness prevention at early ages at the first sign of risk or at the earliest stage of onset. Despite evidence of the dire consequences of untreated mental health disorders and evidence of the success of preventative efforts, the United States does not have an accessible and comprehensive mental health system to prevent, identify, or treat mental illness. In 2000, the Surgeon General stated his intent to ensure that every child has a healthy start in life, noting this goal focused on both physical and mental health. The Surgeon General identified missed opportunities for prevention and early identification of mental health problems in American children. He called mental health an integral part of children's health and development, and stated that ensuring the social and emotional health of our children should be a national priority. Furthermore, promotion of mental wellness and prevention of mental illness must be public health priorities (Surgeon General 1999; American Psychological Association 2003). To achieve these goals, the Surgeon General's National Action Agenda for Children's Mental Health recommended four steps:

1. Promote the recognition of mental health as an essential part of child health;
2. Integrate family-, child-, and youth-centered mental health services into all systems that serve children and youth;
3. Engage families and incorporate the perspectives of children and youth in the development of all mental healthcare planning; and
4. Develop and enhance the public health infrastructure to support these efforts to the fullest extent possible (US Public Health Service 2000).

SAMHSA, DHHS, and child health and development experts at numerous nonprofit and academic agencies such as The National Technical Assistance Center for Child Mental Health support similar steps to promote mental health promotion and prevention disorders in young children (Georgetown University 2008). The steps outlined by the Surgeon General reflect a ‘public health approach’ to mental health, considered the latest evolution in mental health service.

8.0 THE PUBLIC HEALTH APPROACH

The public health approach promotes a focus on physical and mental health parity, mental wellness promotion, and prevention of disorders through universal and targeted interventions. It supports a commitment from community-based services up to national policy to improve overall population health and eliminate disparities in health. The approach shifts from an individual-focus to population-based practice, research, and policy. It expands partnerships and community involvement through enhancing the roles non-government actors, such as families, youth, faith-based organizations, education, academia, business, local communities and the media. The approach also provides education, guidance and support to policy-makers, practitioners, community leaders, health advocates, educators and journalists (Georgetown University 2008).

The public health model follows these steps to promote health and prevent illness:

1. Define the problem.
2. Identify risk and protective factors.
3. Develop, implement, and test interventions.
4. Ensure the widespread adoption of evidence-based practices (Substance Abuse and Mental Health Services Administration 2007).

Public health approaches tend to be population-focused and implemented at the community level. The field of public health is concerned with the connectedness of health and the multi-layered environment in which health exists, including physical and psycho-social. This

connection is often represented by the social-ecological model of health at individual, interpersonal, organizational, community, and societal levels, shown in Figure 4 (McLeroy 1988; National Technical Assistance Center 2008). Public health interventions at the individual level focus on behavior change and health education and promotion. Those at the interpersonal level focus on behavior or knowledge change in small groups such as families. Organizational level public health interventions attempt to change health-influencing factors situated in organized groups such as schools or workplaces. Change at the community level will affect members in that community, whether community is defined as a geographic location, a group of similar individuals, or by another means. Local policies are often targeted in community level changes. Finally, public health intervenes at the societal level when it influences or changes public policy, practice, or opinion on a larger scale than a community (Janis 2007). The social-ecological model supports the notion that change is more likely to occur – and more sustainable - at an individual level, if it is supported or reinforced by changes on the other levels as well (McLeroy 1988; Herman 2005).

Similar to Bronfenbrenner’s Ecologic Model of development, the Social-Ecological Model can illustrate the multi-tiered influences on social and emotional wellbeing in early childhood. At the individual level, a child may have natural resilience to adversity. A strong and caring relationship with his parents promotes mental health on the interpersonal level. The child is also well cared for and stimulated in a daycare setting and by resources provided in his community. Social service, tax, and employment policies that affect his life directly and indirectly also greatly influence his and his family’s mental health and wellbeing.

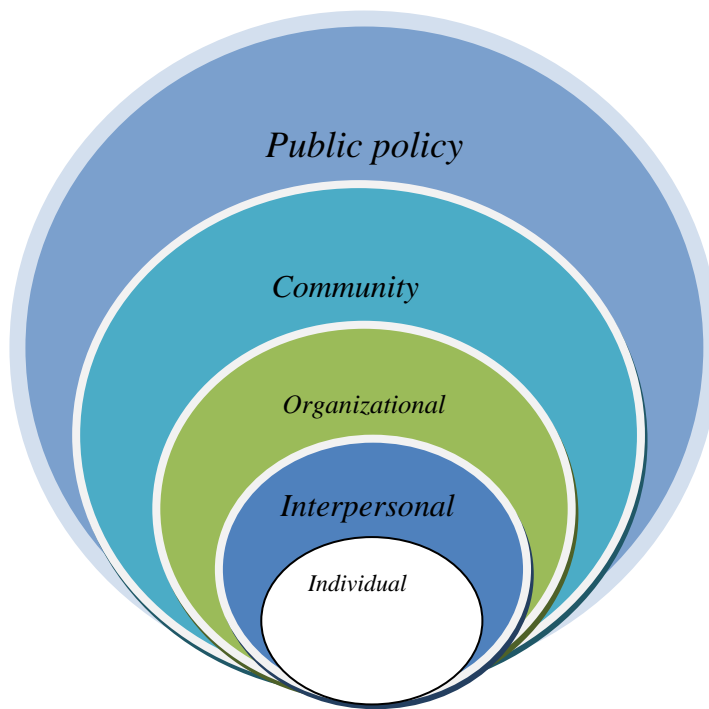


Figure 4: The Social-Ecological Model, Adapted from McLeroy, Bibeau, and Glanz

In mental health services, the public health system must identify risk factors for mental disorders and work to prevent occurrence of disorders as well as ameliorate their symptoms and consequences (Janis 2007). However, as the World Health Organization noted, health is more than the absence of impairment (Herman 2005). A public health approach to mental health must also attempt to promote mental wellness. This means identifying, reinforcing, and enhancing the protective factors in communities that determine and foster good mental health. Such promotion efforts are broad and often not obviously related to mental health. For example, a reduction in the unemployment rate in a community supports that population's mental health. Improved education is another method of nurturing mental wellness. The WHO has called mental health promotion the means by which people increase control over their health and improve it. By this definition, promotion of wellness works as mental disorder prevention, at least for socio-environmental risk (Herman 2005). Mental health promotion includes a range of opportunities

for individuals, families and communities to enhance their emotional and cognitive wellbeing (WHO 2002; Janis 2007).

The public health approach is not often connected with mental health; however, it is a logical fit for broad, population-focused promotion of mental health and prevention of risk factors for mental disorders. Public health methods are used in programs with explicit goals other than mental health, but have implications for mental health promotion as well. For example, the Nurse Family Partnership Program utilizes in-home visits to identify women, children, and families at risk for a range of problems including substance abuse and developmental delays in children. The goals of these public health approaches are to promote wellness, identify and intervene in the early stages of a problem, and prevent more serious problems or consequences from occurring (Janis 2007). Programs of this type are effective and financial and political support for them must continue. Several European countries use this type of program as universal prevention by making home visits to all mothers, not just women perceived to be at high risk. These countries report improvements on a number of indicators of maternal and child health and child development.

Research shows prevention efforts can be cost-effective ways to change lives (Substance Abuse and Mental Health Services Administration 2007). Promotion of mental wellness and prevention of mental health problems are the essential aspects of a public health approach to mental health. This approach focuses on preventing mental health disorders in a population, rather than treating the symptoms of mental disorders in individuals after onset. It also considers the way people interact and are influenced by their environments such as home, school, and place of work. The public health emphasis on mental health promotion and prevention of disorder has increased as the general population recognizes the necessity of good mental health

to physical health and overall wellbeing (Substance Abuse and Mental Health Services Administration 2007). Prevention research is based on the concept of risk reduction. Documenting the connections between risk and protective factors is the foundation of designing successful prevention programs. To reduce the likelihood of developing mental disorders, prevention programs focus on reducing risk factors, enhancing protective factors, or a combination of both. This model is commonly used to prevent physical health problems, but is not often employed for mental health issues (Committee on Prevention of Mental Disorders 1994).

8.1 USE IN EARLY CHILDHOOD MENTAL HEALTH

The public health approach is an ideal method to use in children's mental health promotion and disorder prevention for two reasons. First, the public health approach considers a child in his or her social-environmental context of family, home, child care setting and/or school, and community. The child-environment relationship is the recommended context in which to assess a young child's social and emotional development and mental health (Substance Abuse and Mental Health Services Administration 2007). As child development research has shown, in young children these environmental factors and relationships directly influence emotional and behavioral health. Second, mounting evidence shows childhood is the optimal time to influence determinants of social and emotional wellbeing. The preventive focus of the public health can be applied logically to young children at risk for or experiencing mental disorder. Early intervention is the surest way to improve outcomes for the child and family, and to prevent more difficult and costly treatments and services later in life when the severity of mental health problems may have

increased and the consequences of poor mental health may have led to other problems in the child's or family's lives (McEwan 2007). This approach contrasts to traditional mental health services for young children that have focused almost exclusively on obvious disturbances and intervened only at time of crisis (Cohen 2005).

The public health model tries to promote child well-being and anticipate and prevent problems before they occur, or before the outcomes are serious, rather than primarily responding to identified problems. To do this, a public health approach would conduct prevention and promotion programs for all children, as well as identify and engage children who are at risk for developing mental health problems. This approach also values families and other caregivers as an integral part of promoting mental wellness in children, and especially relies on the caregivers' input and participation for services to at-risk children (Cohen 2005). This approach strives to build upon the strengths of a child's family and support system, rather than focusing on problems and diagnoses. Families must also be full partners in all stages of mental health care for children. This model also recognizes that children deserve a safe and stable environment in which they can develop socially and emotionally. It is the public health system's goal to promote and preserve conditions that nurture young children's development. Finally, the public health model respects diversity and strives to provide early childhood mental health services in effective and respectful manners, something needed to close the gap of disparity in mental health services in the US (Cohen 2005).

The public health model emphasizes wellness promotion. While there is not a unifying theory or definition of promotion, Vandiver describes mental health promotion as an approach in which health and wellness are integrated goals at the clinical, community, and policy levels. Health promotion focuses on empowering an individual with mental problems to increase

personal control over their lives and social milieu. The health promotion approach uses the ecological systems theory, which posits individuals and their environments have dynamic and mutually-influential relationships. Individuals may interact physically, socially, psychologically, or educationally with an environment. The ecological system theory is useful for health promotion because it uses individuals' assets and strengths and helps to enhance protective factors in their lives. Important considerations of a client in context include: the condition, the client, the family, the community or environment, and the clinical or other health care setting (Vandiver 2009).

To reach these goals, mental health services should be viewed as collaborative, capacity-building interventions that combine the expertise of family and diverse professionals that can address a child's particular strengths and needs, which is the intent of the Systems of Care approach. Mental health services can focus on the child and family, a program in which the child participates, or both. Services should build on the strengths of the child, family, child care center staff, school, and programs in which the child is involved, so all stakeholders are informed and comfortable with the public health model and how to use their skills and roles to incorporate it for the best interest of the child. Common capacity-building strategies are teaching and training, clinical supervision, and counseling or therapy (Cohen 2005).

9.0 RECOMMENDATIONS

The American Psychological Association (APA) recommends a system-level change in children's mental health care that integrates health promotion, well care, problem prevention, early intervention, and coordinated services into a comprehensive, well-supported and sustainable system (Tolan 2001). Recognizing that mental wellness and physical health are connected, the APA advocates mental health care within the primary health care setting (Tolan 2001). APA envisions this type of system change will benefit children and the mental health delivery system in a number of ways. First, by placing mental health services within a primary care framework, disparities among racial/ethnic and economic groups may be addressed. Secondly, focus will shift to prevention and amelioration of problems through early recognition and intervention in mental health care models. Efforts should be made to "legitimize" and financially support mental well care services for children and families to promote good development and prevent onset or mitigate sub-clinical problems (Tolan 2001).

Our mental health system must shift focus from treating mental illness to preventing onset. Prevention is usually an unseen activity in that if prevention is successful, efforts often go unnoticed. It is usually only when a breakdown or crisis occurs that public attention is drawn to mental health disorders (Hacker 2006). This 'invisible' nature of prevention makes it difficult to garner public support for its importance, and gather the necessary funding to support prevention activities. Yet, these efforts are not only cost-effective, but can improve quality of life for many

Americans. For a public health model to be successful in children's mental health services, public health workers must strengthen or reinforce their connections to primary care and mental health workers, while forging ties to schools, child care centers, juvenile justice systems, and especially families.

The public health community must also determine where it can intervene in mental health service delivery to have the most impact. For example, epidemiologists can explore children's mental health prevalence and incidence, successful prevention efforts can be researched and publicized widely, access issues to services should be explored, public education about mental health promotion can be increased, and health policy advocates can work for legislation to support promotion and prevention efforts (Hacker 2006). Just as health interventions must address all social-ecological levels to be most effective and sustainable, systems change must occur at all levels to move from reactive mental health treatment to proactive promotion and prevention. The challenge in children's mental health is to develop appropriate treatments and supports not only for the child, but for the family and within the community where the child and family functions (Levin 2004).

The President's New Freedom Commission on Mental Health Care and other seminal works call for a number of improvements in the child mental health care system. They recommend further development of comprehensive home-based and community-based services and supports, developing and nurturing family partnerships and family support, increasing cultural competence and access to care, addressing disparities in access to service, further individualizing care, implementing evidence-based practices at the community level, enhancing service coordination and funding to reduce system fragmentation, increasing prevention and early intervention, and strengthening accountability and quality improvement (Huang 2005). To

fully incorporate public health strategies into early childhood mental health services, we need a national-level movement to improve health and renewed commitment to eliminate disparities in health. This includes a paradigm shift from an individual- to a population-based approach in practice, research, policy, and community engagement. We must build partnerships across all social-ecological levels that promote the role each of us has in creating a mentally and physically healthy population (National Technical Assistance Center 2008).

10.0 CONCLUSION

This paper frames early childhood mental illness as a serious yet often overlooked public health issue that causes immense human suffering and disability. Each year, approximately 10% of young children experience mental problems significant enough to impair their lives, yet less than 20% of those in need receive treatment. While mental health problems in early childhood are becoming more widely recognized, they receive less attention in research or practice than mental disorders in school-aged children, youth, or adults. This is due to a number of factors including stigma, lack of specialized knowledge of mental disorders in young children, the challenges of diagnosing a mental disorder within the context of rapid early childhood development, and the influence of familial and environmental contexts on the mental health of a young child.

While mental disorders affect children from all races/ethnic groups and socio-economic backgrounds, children exposed to certain risk factors are more likely to experience mental illness. Risk factors include lack of a supportive and nurturing environment, poverty, abuse and neglect, family history of mental disorder or substance abuse, low birth weight, and poor physical health of the child. Protective factors also influence mental health outcomes. Protective factors include strong, supportive family relationship, extended family or community social supports, and a strong constitution of the child. This paper discusses how an understanding of risk and protective factors is imperative in the design of universal and targeted mental health interventions for children. Evaluations show preventive interventions can be successful in

promoting wellness, reducing risk, delaying or preventing onset, and reducing impairment of mental disorders in young children. Successful interventions include education programs for children and parents and nurse home-visiting programs.

The mental health system in the United States has evolved dramatically since the mid-twentieth century. Our current mental health system for children takes a community-based, Systems of Care approach in which multiple social service sectors attempt to provide children's services in a comprehensive and organized way. Families are now recognized as integral partners in planning and implementing their child's care. Yet the system is still fragmented and complex, and allows many of the neediest children to slip through the cracks. Today, most mental health services for children are delivered in the school or primary care setting. Very young children often go undiagnosed, even when parents or other caregivers recognize signs of social, emotional, or behavioral problems. Recently, a public health approach has been recommended to promote wellness and prevent the occurrence of mental disorders in young children. The public health approach considers the multiple social-ecological layers of influence on the mental health of young children, while focusing on promoting mental wellness and preventing mental disorders at the population level.

To prevent morbidity, loss of productivity, and unnecessary expenses, the public health system must increase its investment in mental wellness promotion and mental illness prevention at early ages at the first sign of risk or at the earliest stage of onset. This paper explores the reasons a public health approach is useful in early childhood mental health. These include the emphasis in both fields on the importance of contextual influences on health, and because public health's focus on prevention and early intervention for at-risk children has the most potential to reduce the burden and consequences of mental illness. The findings of this paper are limited, as

some useful sources may have been missed using these search strategies. Because the focus of this paper intersects several disciplines and considers multiple aspects of early childhood mental health, it was impossible to conduct an exhaustive search for all relevant sources. Despite the limitations, this paper is based on a comprehensive review of journal articles and books from the fields of public health, mental health, and child development. It also reviews seminal governmental and nongovernmental studies and reports.

Future research in this area must expand our knowledge base about individual and community resilience, protective factors, and methods to improve early intervention services for children experiencing mental health problems. Data are lacking on effective intensity, duration, and timing of intervention, and the amount and type of provider knowledge and skills needed to work with children. Cost-effectiveness studies are needed to understand the choices among early childhood program strategies. We also need evaluations of family-centered, community-based coordination of programs to show evidence of the effectiveness of Systems of Care. There are a general lack of adequate resources and commitment to undertake rigorous program evaluations. Additionally, cultural competence and the ability to respond to the needs of specific subgroups are often lacking in mental health services. Future research should explore the influences of culture on treatment of early childhood mental illness. At the policy level, we would benefit from research on the policies that promote or hinder mental health in our schools, communities and States, and whether these laws reflect our current knowledge about social and emotional well-being. Finally, we need innovative programs and evaluations to determine if we are discovering and using new ways to promote child and family mental health and prevent mental illness.

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