
A Call for Integrating a Mental Health Perspective Into Systems of Care for Abused and Neglected Infants and Young Children

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A system of care for abused and neglected infants and young children should adopt a comprehensive perspective, with mental health considerations systematically incorporated into policies and decisions affecting children and their families. Children age birth to 5 years have disproportionately high rates of maltreatment, with long-term consequences for their mental and physical health. Research on normal development and developmental psychopathology has shown that early development unfolds in an ecology of transactional influences among biological, interpersonal, and environmental domains. Psychologists should collaborate with other early intervention disciplines to create systems of care based on an ecological-transactional model of development that includes early mental health principles in order to serve the needs of these young children. Didactic courses, practicums, and internships in infant and early childhood mental health should become integral components of undergraduate and graduate curricula in psychology in order to build capacity to achieve this goal. Recommendations are offered for systemic change by integrating infant and early childhood mental health principles into existing systems of care for young children and their families.

Keywords: abuse and neglect, system of care, infant and early childhood mental health

There is no excuse for our society's not putting scientific knowledge into practical use. . . . We must remember—the first few months of life are not a rehearsal. This is the real show.

—Irving B. Harris

Extensive research and clinical evidence document the importance of infancy and early childhood influences on long-term developmental trajectories toward mental health or psychopathology (Sameroff, 2000; Sroufe, Egeland, Carlson, & Collins, 2005). Children in the first five years of life are the most vulnerable to traumatic death and injury as the result of interpersonal violence, neglect, and accidents. Efforts to address the psychological sequelae of these experiences remain inadequate despite the increasing evidence that young children's social and emotional problems can be successfully addressed by psychological interventions that restore their normative developmental course (Lieberman, Ghosh Ippen, & Marans, 2009; Osofsky, 2004; Zeanah, 2009). The accumulation of research and clin-

ical knowledge points to the importance of including at-risk infants and young children in programs designed to provide services to children and adolescents with mental health problems. This article provides a theoretical framework for an infant mental health system of care, a description of necessary services, an overview of the obstacles that may interfere with its implementation, and recommendations for systemic changes that integrate infant and early childhood mental health principles into existing systems of care.

Infant mental health is defined as the developing capacity of the infant and young child to experience, express, and regulate emotions; form close and secure relationships; and explore the environment and learn, all in the context of cultural expectations (Parlakian & Seibel, 2002). As a field, infant mental health is a multidisciplinary area of investigation, practice, and public policy that encompasses the period between pregnancy and age five years and focuses simultaneously on promoting young children's social and emotional competence and relieving psychological suffering (Zeanah & Zeanah, 2009). A core premise is that babies' emotional, social, and cognitive competencies unfold in the context of their caregiving relationships, with the corollary that both the infant and the primary caregiver need support in order to optimize the child's functioning. For young children, the caregiver's emotional well-being and life circumstances profoundly affect the quality of infant-caregiver relationships. Public policy plays an integral role in the conceptualization of infant mental health interventions because society has a pivotal role in promoting consistent, protective, and nurturing parent-child relationships as an essential vehicle for raising developmentally competent children. This is particularly crucial in the case of abused and neglected young children and their parents in order to prevent repeated traumatization, enable parents to provide adequate caregiving, and support developmentally appropriate child-parent relationships.

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Interagency collaboration is essential to support and promote healthy development and to address psychological problems in childhood and adolescence. Recognizing this need, the National Institute of Mental Health launched, in 1984, the Child and Adolescent Service System Program with the goal of helping states build links among separate service systems in response to evidence that children with serious emotional problems were not receiving the integrated services they needed. A *system of care* was defined in this legislation as a coordinated network of community-based services designed to meet the challenges faced by youth with serious mental health needs and their families. The concept of systems of care represents a philosophy about how services should be delivered, with a cross-disciplinary approach that focuses on the family as the agent of change and emphasizes cultural responsiveness to the clients' ethnic and racial characteristics (Perry, Kaufmann, & Knitzer, 2007). Systems of care programs include five critical components: financing, policy, training, service delivery, and system collaboration. These programs are funded by the Substance Abuse and Mental Health Services Administration through the Child, Adolescent and Family Branch of the federal Center for Mental Health Services, although other sources of funding are also pursued by the agencies involved.

Unfortunately, services for infants and young children have not been fully incorporated into systems of care. Dishion and her colleagues (2008) made three persuasive arguments for the inclusion of very young children. First, deviant behaviors and developmental trajectories may be targeted before they become chronically entrenched. Second, parents of young children often are less discouraged by the chronicity of their children's problems and may have a greater sense of possibility and optimism about their

children's opportunities for healthy development. Finally, parents of younger children may be less "set in their parenting ways" and more receptive to learning about adaptive childrearing practices. Converging findings from neuroscience, child development, and economics indicate that earlier intervention yields greater returns on investment (Knudsen, Heckman, Cameron, & Shonkoff, 2006). This consensus notwithstanding, there is considerable variation in the conceptualization and implementation of cross-system initiatives to serve infants and young children. Mental health principles are seldom incorporated in a systematic and comprehensive fashion (Center on the Developing Child at Harvard University, 2007, 2008; U.S. Department of Health and Human Services, Administration for Children & Families, 2005).

In the following section, we provide a theoretical framework to guide implementation of early childhood systems of care programs, with a specific focus on abused and neglected infants and young children, because children in the birth to five year age range are at a much higher risk for maltreatment than any other developmental group (Chu & Lieberman, 2010; Harden, 2007; Lieberman, Ghosh Ippen, & Van Horn, 2006; Osofsky & Osofsky, 2010). Developmentally appropriate services are a key ingredient for all effective childhood programs. The following goals have been suggested for systems of care serving young children: (a) promoting age-appropriate social and emotional development, (b) preventing mental health problems in children and families, and (c) intervening with young children affected by mental health disorders (Georgetown University Center for Child and Human Development, 2008). Input from parents and caregivers is crucial to increase program responsiveness to family needs and enhance parental participation.

Theoretical Framework

It is now widely accepted that children's healthy development is shaped by complex transactional processes among a variety of risk and protective factors, with cumulative risk factors increasing the prediction of emotional and behavioral problems (Anda et al., 2007; Cicchetti & Sroufe, 2000; Dube, Felitti, Dong, Giles, & Anda, 2003; Rutter & Sroufe, 2000; Sameroff, 2000). Risk and protective factors include individual child characteristics such as genetic and constitutional propensities and cognitive strengths and vulnerabilities; parent characteristics such as mental health, education level, sense of efficacy, and resourcefulness; family factors such as quality of the parent-child relationship, emotional climate, and marital quality; community connectedness factors such as parental social support, social resources, and children's peer relationships; and neighborhood factors such as availability of resources, adequacy of housing, and levels of crime and violence (Sameroff & Fiese, 2000). The predictive value of these factors across many studies led to the development of transactional-bioecological models that attempt to conceptualize the relative contributions of proximal and distal risk and protective factors to children's developmental outcome (Bron-



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fenbrenner & Morris, 2006; Cicchetti & Lynch, 1993; Cicchetti, Toth, & Maughan, 2000).

Infants and young children are at disproportionate risk for bearing the brunt of risk factors in the absence of protective moderators of risk. The scope of abuse, neglect, and accidental injury in the first five years of life is staggering. Recent national statistics show that 79.8% of the children who died from child abuse and neglect were younger than four years old, and the first year of life is the single most dangerous period in a child's life, with an overall victimization rate of 21.6% per 1,000 children (U.S. Department of Health and Human Services, Administration for Children & Families, 2008, 2010). Children under five years old are more likely than older children to be present in households where domestic violence occurs (Fantuzzo & Fusco, 2007). In a randomly selected community sample of parents of three- to seven-year-old children in upstate New York, Slep and O'Leary (2005) found that 87% of the children experienced some form of physical aggression, which was severe enough in 13% of the cases to meet many definitions of physical abuse. Children from families in poverty, ethnic minorities, and single-parent and stepfamily homes have greater lifetime exposure than comparison groups to most forms of intentional victimization, including physical abuse, sexual abuse, and witnessing family violence (Turner, Finkelhor, & Ormrod, 2006).

These findings buttress the importance of adopting a comprehensive bioecological and relational approach to early intervention. The mental health needs of maltreated young children in the public sector are exacerbated by the associations between poverty and health problems across the life span. Poverty during early childhood is associated with increased adult health problems and shorter life spans, regardless of the socioeconomic status the person has

achieved in adulthood (Duncan, Ziol-Guest, & Kalil, 2010; Lawlor, Sterne, Tynelius, Davey Smith, & Rasmussen, 2006; Poulton et al., 2002). Poverty is also associated with higher activity of the brain centers associated with stress responses in both children and adults, as well as higher basal measures of blood pressure (Chen, Matthews, & Boyce, 2002; Evans & English, 2002). Moreover, children's stress hormone levels correlate with mother's socioeconomic status and psychological functioning, including depression (Lupien, King, Meaney, & McEwen, 2000), suggesting an intergenerational transmission of stress dysregulation from mothers to children in circumstances of dual environmental and psychological distress.

One in five children in poverty has a diagnosable mental health disorder (Masi & Cooper, 2006; Mills et al., 2006), and children in the child welfare system, most of whom also live in poverty, have a greater prevalence of mental health problems compared with those in the general population (Dore, 2005; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004). The overlap between poverty and health problems originates in early childhood and is mediated by the increased exposure of children in poverty to chronic risk factors in the forms of child abuse and neglect, severe maternal depression, parental substance abuse, harsher parenting, and family and community violence. These emotional risks are compounded by greater exposure to physical risks, including substandard housing, lack of access to resources, and environmental toxins (Anda et al., 2007; Evans, 2004; Repetti, Taylor, & Seeman, 2002).

Interventions designed to alleviate the impact of poverty and associated stressors on young children's development and parental functioning have shown considerable success, as illustrated by the Abecedarian Project (Masse & Barnett, 2002), Perry Preschool Project (Schweinhart et al., 2005), and the Nurse Family Partnership (Olds, 2007). Economic analyses to ascertain the cost effectiveness and social value of these programs document that the benefit-cost ratios range from 2:1 to 17:1, depending on the program (Karoly, Kilburn, & Cannon, 2005). However, programs designed for families in poverty have not addressed the exponential challenges posed by the overlap of poverty, exposure to violence and trauma, and parenting problems associated with depression, traumatic stress, and other emotional problems (Harris, Lieberman, & Marans, 2007; Harris, Putnam, & Fairbank, 2006; Osofsky, 2004). The consequences of early adversity and trauma constitute a major public health problem because children exposed to violence and other chronic stressors are more likely to suffer from traumatic stress, depression, anxiety, conduct disorder, learning problems, and substance abuse (Chu & Lieberman, 2010; Widom, 1989). This was forcefully illustrated by findings about the functioning of children and families in the Gulf South in the aftermath of Hurricane Katrina. Their levels of symptom severity were very high immediately after the hurricane and decreased only slightly in the years following the disaster (Kronenberg et al., 2010; Osofsky, Osofsky, & Harris, 2007).

Obstacles and Ports of Entry for the Integration of Infant Mental Health Into Systems of Care

An effective system of care for infants and young children must include a continuum of interventions that are deployed according to the child's and the family's needs and provided by a multidisciplinary cadre of professionals that include those in primary health care, mental health care, and dental care; occupational, physical, and speech therapy; home visitation; and child care. For children who are abused and neglected and in the child welfare system, additional partners must include those in the foster care system and the judicial system (including child welfare workers), foster parents, judges, lawyers and child advocates, and those in early intervention. Questions that must be addressed on a case-by-case basis include the following: (a) What issues brought the child into the service system? (b) What is the child's level of social and emotional development? (c) What strengths and vulnerabilities do the primary caregivers and key family members show in their social functioning and care of the child? (d) What does the child need and from whom in order to reduce the problem severity and promote healthy development?

There are significant barriers to implementing such a coordinated, mental-health-informed system of care for young children. One persistent barrier is the pervasive, but mistaken, impression that young children do not develop mental health problems and are immune to the effects of early adversity and trauma because they are inherently resilient and "grow out of" behavioral problems and emotional difficulties (Osofsky, 2004; Shonkoff & Phillips, 2000). This attitude is compounded by the relative paucity of curricula on infancy and early childhood in training programs for psychologists and other mental health professionals. As a rule, graduate students in psychology do not learn infant development and mental health unless they seek specialization in this area, leading to a dearth of services for infants and young children.

The lack of accessibility to services is aggravated by a scarcity of culturally competent intervention approaches and a shortage of psychologists who are knowledgeable about the language, cultural values, mores, and childrearing practices of minority populations. There is an urgent need to close the mental health service gaps afflicting minority children and their families and those living in poverty (see President's New Freedom Commission on Mental Health, 2003). Finally, there is systematic evidence of a significant lag time between initial identification of children's mental health or developmental impairment and the beginning of appropriate interventions. This unfortunate situation may derail the child's developmental trajectory because early dysfunction can trigger a cascade of maladaptive consequences that become progressively more entrenched and resistant to intervention (Duncan, Tildesley, Duncan, & Hops, 1995; Pynoos, Steinberg, & Piacentini, 1999).

A system of care for young children with mental health problems has several possible ports of entry or opportunities for psychological interventions through inter-

disciplinary collaborations that bring children in need to the attention of mental health professionals. One port of entry is the pediatric care system because primary health providers are the most frequent service providers for this age range. Although some primary care physicians provide good care for children of this age, the effectiveness of pediatricians in early identification and referral is hampered by the short duration of pediatric visits, lack of mental health training, reluctance to ask questions of parents, and lack of knowledge about appropriate referrals (Groves & Augustyn, 2004). Deploying psychologists in pediatric care clinics offers the opportunity to work collaboratively with pediatricians to enhance early identification and intervention (Ruddy & Schroeder, 2004).

A second port of entry is the mental health system, where psychologists play a key role as service providers in community mental health agencies, family resource centers, domestic violence programs, home visitation programs, and hospital-based clinics. Specialized training in the assessment and treatment of infants and young children would increase psychologists' skill at early identification and treatment of mental health problems. This training would also enable psychologists to provide early mental health consultation to service providers from other disciplines who also provide services in these settings.

A third port of entry involves the child-care system, which includes and is based on childcare providers who have extensive opportunities to observe children and identify mental health problems early. However, child-care providers' lack of specialized knowledge of early indicators of mental health problems may lead them to misinterpret and respond inappropriately to children's emotional and behavioral dysregulation. Further, their fear of jeopardizing the relationship with the parents may interfere with identification and referral (Groves, 2002). Psychologists can play a key role in child-care consultation leading to earlier identification and services (Johnston & Brinamen, 2006).

A fourth port of entry to early mental health services is the child welfare system, through which child protection workers respond when there is suspected child abuse. However, these providers' primary focus on physical safety can lead to premature and emotionally costly foster care placement decisions because they do not have systematic training in early development, trauma identification, and guidelines for referral (Larrieu & Zeanah, 2004). Psychologists with knowledge of assessment and treatment can provide important education for child welfare and child protection workers to increase their knowledge and understanding of the potential emotional costs and benefits of child welfare decisions affecting young children such as foster care placement, reunification, or adoption. Although juvenile courts are in a position to mandate and enforce appropriate referrals for interventions at all systems levels, most judges do not have the specialized training to understand when orders for services are needed (Lederman & Osofsky, 2008; Osofsky & Lederman, 2004).

Finally, the lack of systematic communication and coordination among these different systems means that children and families may not receive appropriate referrals across

systems or may not be followed up consistently to ensure that services are provided in a timely and effective manner. Psychologists can occupy liaison positions that enable them to function as coordinators of services as well as mental health service providers (Lieberman & Van Horn, 2008).

Parameters of Effective Early Mental Health Intervention

The common denominator in intervention and treatment programs designed to improve young children's mental health is a focus on the quality of the parent-child relationship. The relationship is strongly influenced by the individual emotional experience of the parent, the individual characteristics of the child, and the ways that the parent and the child perceive and relate to one another. These factors, in turn, are profoundly affected by the cultural and socioeconomic context of the family. The stresses impinging on the parents as a result of poverty, social marginalization, and other hardships need to be carefully assessed and incorporated into the treatment plan.

A Relationship-Based Clinical Model

The central unifying characteristic of infant mental health treatment models is their focus on the relationship between the child and the parent or primary attachment figure. The consensus in the field is that young children's emotional health and social competence are influenced most substantially by the quality of their environment. The primary caregivers are the center of the baby's emotional universe and have the role of mediators between the child and the sociological circumstances of the family (Bowlby, 1969). Macro influences such as cultural values, social conditions, neighborhood characteristics, and socioeconomic circumstances are filtered to the baby through the impact of these factors on the parents and on their ability to protect, nurture, and socialize the baby (Sroufe, 2005).

The emotional quality of the parent-child relationship is a natural focus for efforts to promote mental health in infancy and early childhood, because it has a well-documented impact on early development. Parenting-oriented interventions strive to bring about positive changes in the parents' commitment to the child and in their ability to understand and respond appropriately to the child's needs. Approaches that focus on joint parent-child intervention emphasize the interconnectedness of the child and the family members and actively search for ways of increasing feelings of intimacy, safety, and comfortable reciprocity among the child and the parents.

Early mental health intervention that includes the parent(s) as integral partners in the process is particularly important for multineed families in which the parents are beleaguered by their life circumstances (Lieberman & Van Horn, 2008). Parents whose internal resources are depleted by multiple sources of stress have difficulty giving emotional priority to their child or to their parenting role because of the competing pressure from other sources of need. Parents from marginalized cultural groups may be especially threatened by the emphasis that individual psy-

chotherapy places on self-disclosure by the child in the absence of the parent (Ghosh Ippen, 2009). Foster-care placement is a very real threat among impoverished minority groups who are overrepresented in the child protective system and who may perceive systems as sources of danger to family integrity rather than sources of help. These problems highlight the importance of enlisting parents as active partners in interventions designed to improve the young child's mental health.

In adverse circumstances, when the parents feel overwhelmed and may feel marginalized and alienated by the intervener's unwavering attention to "what is best for the baby," the intervener needs to move flexibly between the needs of the parent and those of the child. It is crucial that therapeutic attention be deployed to the issues that are most emotionally salient. Optimally, the target of the intervention is the web of meanings that are being constructed between the parent and the child and the behaviors through which these meanings are expressed. At the same time, interveners need to be judicious about the timing of parenting interventions in order to remain responsive to the parent's sense of what is needed.

Substantial progress has been made in developing the evidence base of relationship-based infant mental health treatment during the past decade. All empirically supported infant mental health treatment models share the goal of enhancing the child's healthy functioning by promoting parents' ability to provide the developmentally appropriate protection, nurturance, and socialization. With these commonalities, treatment models differ on many dimensions, including theoretical framework; target populations, which may have different configurations of severity and chronicity of problems in the parent, the child, and/or their relationship; manualization; choice of therapeutic strategies (e.g., didactic information, developmental guidance, insight-oriented interpretation); domain of parent and child functioning targeted for intervention (e.g., maternal depression, maternal punitive behavior, child maladaptive behaviors); and clinical setting (e.g., home visitation versus office visits). Many treatment models are versatile in advocating a flexible response to the specific circumstances presented by the child and the family (see Lieberman et al., 2009; Luby, 2006; Zeanah, 2009, for reviews and descriptions of specific treatment models).

Steps to Building an Effective System of Care for Maltreated Young Children

An effective system of care for abused and neglected infants and young children needs to include service systems along the continuum of severity in order to facilitate early identification, assessment, treatment, and legal involvement when appropriate. These service systems include the judicial, legal, child welfare, mental health, health care, child care, and early intervention systems, and family resource centers. Coordination among these systems can ensure that young children who come to the attention of the child welfare system due to maltreatment are referred in a

timely manner for mental health and health assessments and early intervention, with appropriate treatment resulting from these assessments.

Psychologists with training in both evaluation and clinical treatment are in a prime position to provide mental health evaluation and therapeutic interventions for the infant, the parent, and the infant–parent dyad. Referrals to early childhood education can ensure that the child receives developmentally appropriate stimulation in a safe learning environment that can provide respite and an opportunity to work and study for the parents. Parenting programs in family resource centers can offer psychoeducation in developmental principles and effective childrearing practices in order to support the parent–child relationship and optimize the child’s development.

A system of care for young abused and neglected children must endeavor to integrate these different interventions. The legal and judicial systems, which make the ultimate decisions about child placement and parent visitation, need information, knowledge, and training about the science of early childhood development and the emotional, social, and cognitive needs of young children, including the process of brain development. Training about the importance of the attachment relationship and the impact of trauma on the developing young child and family is also essential in helping court officers make developmentally informed decisions about reunification, long-term planning, and the child’s permanent placement.

To become full-fledged partners with the legal and judicial systems, psychologists must understand how the court system operates and should become familiar with the important laws guiding decision making, such as the Adoption and Safe Families Act (1997). Making this knowledge available to all the professionals who interact with the judicial and legal systems will lead to better integrated services and more timely decisions for the child and family (Lederman & Osofsky, 2008; Osofsky & Lederman, 2004).

ZERO TO THREE Court Teams for Maltreated Infants and Toddlers: An Example of an Integrated System of Care

The ZERO TO THREE Court Teams for Maltreated Infants and Toddlers (Gersh, 2009), currently operating in 11 jurisdictions around the country, provide an example of an integrated system of care for maltreated young children. The development of the ZERO TO THREE Court Teams was influenced by the collaborative established in Miami Dade County Juvenile Court among court, clinical, early intervention, and education services (Katz, Lederman, & Osofsky, in press). Although the specific components may vary across sites, all ZERO TO THREE Court Teams share this intersystem collaboration model by creating partnerships between the judicial and legal systems and other service systems, including child welfare, early intervention, mental health, health, and child care. Each ZERO TO THREE Court Team has a court team coordinator whose responsibility is to bring the different systems together and integrate their activities on behalf of the young child and caregivers. When a Court Team is organized, an important

first step involves educating all of the different individuals and agencies involved with the case plan about the effects of trauma on young children and expectable developmental responses at different ages. The training also includes information about the effects of trauma on brain development, principles used in applying the science of early childhood development in court settings, and evidence-based practice.

Psychologists participate in this system of care to provide psychoeducation and evidence-based treatment as well as intensive case management. The psychologist leads the clinical team, with a focus on the relationship between the child and the parent or primary caregiver. The intervention is designed to interrupt the intergenerational cycle of abuse and neglect and to help maltreated young children achieve safety and permanency in placement. The psychologist provides the court with reports on the progress of the therapeutic work that help the judge make better developmentally informed decisions. The treatment plan may also include referral for other mental health and rehabilitative services such as ongoing screening and services for substance abuse, domestic violence, and parent and/or child cognitive deficits that could interfere with the parent’s ability to adequately care for the child. Outreach services deployed in the course of case management have the goals of alleviating the impact of family adversities and facilitating the parent’s engagement and may include assistance with housing, child care, transportation, and communication between the parent and the child welfare agency. The information from the different systems is integrated by the team and used to guide ongoing services and treatment planning.

The ZERO TO THREE Court Team model allows for more frequent hearings on the cases, more effective sharing of information across the different child-serving systems, clearer discussions about how to proceed with each case and the resources that are available, and greater cross-disciplinary awareness of issues that affect young children in the child welfare system. The evaluation findings for 186 infant and toddler cases examined from the first three ZERO TO THREE Court Teams that were established have shown excellent results over the first two years of the program, with 99% of the young children protected from further maltreatment and 95% achieving permanency through reunification (46.5%), relative placement (30.6%), legal guardianship (4.5%), and adoption (13.6%; Gersh, 2009). The New Orleans Court Team, which is based on the Orleans Parish Infant Team and now incorporates the ZERO TO THREE Court Team model, has comparable data (Osofsky, Many, & Dickson, 2010). These outcomes are significant in improving the lives of the youngest, most vulnerable children. The parents’ lives have also improved, with more of their biopsychosocial needs being met.

Recommendations and Conclusions

Children from birth to five years of age experience disproportionately high rates of maltreatment that are associated with immediate and long-term impairments in their mental and physical health. The consequences for the child of

early maltreatment are routinely exacerbated by the lack of access to timely and effective evaluation and treatment. Outcomes are also affected by lack of training about the specific manifestations and sequelae of traumatic exposure in young children among mental health professionals and other service providers, by dysfunctional features of the child welfare system, and by the lack of coordination among the service systems charged with addressing the needs of maltreated children and their families. Major changes need to occur in order to fully integrate a developmental and mental health perspective into early childhood systems of care. These changes involve raising awareness of the prevalence and manifestations of traumatic exposure; providing in-service training in infant mental health principles to providers across the systems that serve young children and their families; creating capacity by including infant mental health in the standard curriculum of training programs in clinical, developmental, educational, and counseling psychology; and building systematic links to enhance early identification, referral, and treatment along the continuum of services for young children and their families, including pediatric care, child care, child welfare, and the judicial system.

A first step in changing systems is to expand the child and family mental health system so that it consistently includes services geared to children from birth to five years of age. At present, pediatric health providers and child-care providers seldom identify or refer children under five years old to mental health services. The stigma associated with mental health problems and the fear of labeling children at such a young age are powerful reasons for this situation, as is the lack of knowledge about the mental health needs of infants and young children. These obstacles can be addressed by providing more accessible consultation, assessment, and treatment services in ecologically acceptable settings, including homes, child-care centers, Head Start and Early Head Start Centers, schools, health clinics, family resource centers, and community centers.

The national scarcity of mental health programs for infants and young children is both a symptom and a consequence of the pervasive limitations in training in infant mental health in undergraduate and graduate programs in clinical, counseling, and educational psychology. The curricula of these graduate programs need to incorporate the science of early childhood development, including research findings about the impact of cumulative adversity and trauma on early development and adult outcomes. Training on principles of infant mental health also needs to be incorporated more broadly into the curricula for medical students and clinicians, especially pediatricians and family practitioners, nurses, dentists, occupational therapists, and physical therapists.

Incorporating this material in family law courses in law schools will also address the lack of knowledge about the impact of trauma and maltreatment on young children for professionals in legal and judicial systems who participate in decision making for young children. Law enforcement officials who intervene in cases of domestic violence, abuse, neglect, and other violence also need this education, as do service providers who work in domestic violence

shelters and batterers' programs. Psychologists can play a leading role by interacting with these different groups and providing training and consultation.

Psychologists are also in a prime position to provide in-service consultation and training to providers in child-care settings. A high percentage of infants, toddlers, and preschoolers spend substantial portions of their day in group child care, but it cannot be assumed that their caregivers are knowledgeable about the manifestations of trauma and maltreatment. Entrenched and intractable disruptive child behaviors—in the forms, for example, of difficulty with transitions, inconsolable crying, prolonged tantrums, refusal to nap, noncompliance, and aggression—are routinely interpreted only as a temperamental characteristic of the child rather than as a possible manifestation of traumatic stress. As a result, caregivers may respond in developmentally inappropriate or counterproductive ways. Children two to five years old are expelled from child care at much higher rates than are school-age children in kindergarten through Grade 12, with children of color and particularly African American boys disproportionately affected (Gilliam, 2008; Gilliam & Shahar, 2006). It is particularly noteworthy in this regard that expulsion rates for young children are significantly lower when teachers have access to infant mental health consultation, showing the importance of providing knowledge as a way of helping the teacher help the child. Such findings provide evidence for the need to educate teachers in child-care centers, Head Start, and Early Head Start on the social and emotional needs and the effects of trauma on infants and young children.

The role that psychologists can play in alleviating the plight of maltreated infants and young children in the child welfare and judicial systems is illustrated by the rapid proliferation and promising early findings of the ZERO TO THREE Court Teams. It is widely known that children in the first five years of life have the highest incidence of abuse and neglect. The importance of timely decisions about long-term placement in this vulnerable developmental period cannot be overstated, but young children often stay for long periods in temporary homes, have frequent foster care changes, are exposed to repeated failed attempts at reunification with their biological parents, and lack access to mental health services (Harden, 2007; Smariga, 2007). Psychologists can work in tandem with their colleagues in the child welfare, legal, and judicial systems to generate a sense of urgency that mobilizes concerted action to change practices to make the best interest of the child the paramount factor in judicial decisions.

Prevention is of the utmost importance. An early childhood system of care that incorporates infant mental health principles must focus on prevention and intervention as early as possible—during the prenatal period when risk is identified; in newborn nurseries with nurses and hospital visits; and through active, consistent home visiting programs. Many pediatric training programs and pediatricians recognize the need for education about trauma (Groves & Augustyn, 2004; Kempe, Silverman, Steele, Droegemuebler, & Silver, 1985; Zuckerman, Augustyn, Groves, & Parker, 1995). Psychologists with expertise in infant mental health can provide training to health professionals about

red flag behaviors related to trauma and information about psychological consultation and referral for evaluation and other services. By recognizing and shifting the focus to the needs of our most vulnerable citizens—the youngest children—we can prevent human tragedy, save the social and financial costs of physical and emotional health problems associated with early maltreatment, and support the health and productivity of future generations.

REFERENCES

- Adoption and Safe Families Act of 1997, 42 USC 1305 (note).
- Anda, R. F., Brown, D. W., Felitti, V. S., Bremner, J. D., Dube, S. R., & Giles, W. H. (2007). Adverse childhood experiences and prescribed psychotropic medications in adults. *American Journal of Preventive Medicine*, 32, 389–394. doi:10.1016/j.amepre.2007.01.005
- Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York, NY: Basic Books.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 793–828). New York, NY: Wiley.
- Center on the Developing Child at Harvard University. (2007). *The timing and quality of early experience combine to shape brain architecture* (Working Paper #5). Retrieved October 1, 2010, from http://developingchild.harvard.edu/index.php/library/reports_and_working_papers/working_papers/wp5/
- Center on the Developing Child at Harvard University. (2008). *Mental health problems in early childhood can impair learning and behavior for life* (Working Paper #6). Retrieved October 1, 2010, from http://developingchild.harvard.edu/index.php/library/reports_and_working_papers/working_papers/wp6/
- Chen, E., Matthews, K. A., & Boyce, W. T. (2002). Socioeconomic differences in children's health: How and why do these relationships change with age? *Psychological Bulletin*, 128, 295–329. doi:10.1037/0033-2909.128.2.295
- Chu, A. T., & Lieberman, A. F. (2010). Clinical implications of traumatic stress from birth to age five. *Annual Review of Clinical Psychology*, 6, 469–494. doi:10.1146/annurev.clinpsy.121208.131204
- Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: Consequences for children's development. *Psychiatry: Interpersonal and Biological Processes*, 56, 96–118.
- Cicchetti, D., & Sroufe, L. A. (2000). Editorial: The past as prologue to the future: The times, they've been a-changin'. *Development and Psychopathology*, 12, 255–264. doi:10.1017/S0954579400003011
- Cicchetti, D., Toth, S. L., & Maughan, A. (2000). An ecological-transactional model of child maltreatment. In A. J. Sameroff, M. Lewis, & S. M. Miller (Eds.), *Handbook of developmental psychopathology* (2nd ed., pp. 689–722). New York, NY: Kluwer Academic/ Plenum Press.
- Dishion, T. J., Shaw, D., Connell, A., Gardner, F., Weaver, C., & Wilson, M. (2008). The family check-up with high-risk indigent families: Preventing problem behavior by increasing parents' positive behavior support in early childhood. *Child Development*, 79, 1395–1414. doi:10.1111/j.1467-8624.2008.01195.x
- Dore, M. (2005). Child and adolescent mental health. In G. Malon & P. Hess (Eds.), *Child welfare for the twenty-first century: A handbook of practices, policies, and programs* (pp. 148–172). New York, NY: Columbia University Press.
- Dube, S. R., Felitti, V. J., Dong, M., Giles, W. H., & Anda, R. F. (2003). The impact of adverse childhood experiences on health problems: Evidence from four birth cohorts dating back to 1900. *Preventive Medicine*, 37, 268–277. doi:10.1016/S0091-7435(03)00123-3
- Duncan, G. J., Ziol-Guest, K. M., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, 81, 306–325. doi:10.1111/j.1467-8624.2009.01396.x
- Duncan, T. E., Tildesley, E., Duncan, S. C., & Hops, H. (1995). The consistency of family and peer influences on the development of substance use in adolescence. *Addiction*, 90, 1647–1660. doi:10.1111/j.1360-0443.1995.tb02835.x
- Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59, 77–92. doi:10.1037/0003-066X.59.2.77
- Evans, G. W., & English, K. (2002). The environment of poverty: Multiple stressor exposure, physiological stress, and socioemotional adjustment: Erratum. *Child Development*, 73, 1336.
- Fantuzzo, J., & Fusco, R. L. (2007). Children's direct sensory exposure to substantiated domestic violence crimes. *Violence and Victims*, 22, 158–171. doi:10.1891/088667007780477375
- Georgetown University Center for Child and Human Development. (2008). *Building systems of care: A primer for child welfare*. Retrieved from <http://gucchd.georgetown.edu/72382.html>
- Gersh, J. S. (2009). *Evaluation of the court teams for maltreated infants and toddlers: Final report*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Ghosh Ippen, C. M. (2009). The sociocultural context of infant mental health: Toward contextually congruent interventions. In C. H. Zeanah Jr. (Ed.), *Handbook of infant mental health* (3rd ed., pp. 104–119). New York, NY: Guilford Press.
- Gilliam, W. S. (2008). *Implementing policies to reduce the likelihood of preschool expulsion* (Foundation for Child Development Policy Brief Series, No. 7). Retrieved from http://medicine.yale.edu/childstudy/zigler/Images/PreKExpulsionBrief2_tcm350-34772.pdf
- Gilliam, W. S., & Shahar, G. (2006). Prekindergarten expulsion and suspension: Rates and predictors in one state. *Infants and Young Children*, 19, 228–245. doi:10.1097/00001163-200607000-00007
- Groves, B. M. (2002). *Children who see too much: Lessons from the Child Witness to Violence Project*. Boston, MA: Beacon Press.
- Groves, B. M., & Augustyn, M. (2004). Identification, assessment, and intervention for young traumatized children within a pediatric setting. In J. D. Osofsky (Ed.), *Young children and trauma: Intervention and treatment* (pp. 173–193). New York, NY: Guilford Press.
- Harden, B. J. (2007). *Infants in the child welfare system: A developmental framework for policy and practice*. Washington, DC: Zero to Three Press.
- Harris, W. W., Lieberman, A. F., & Marans, S. (2007). In the best interests of society. *Journal of Child Psychology and Psychiatry*, 48, 392–411. doi:10.1111/j.1469-7610.2007.01732.x
- Harris, W. W., Putnam, F. W., & Fairbank, J. A. (2006). Mobilizing trauma resources for children. In A. Lieberman & R. DeMartino (Eds.), *Interventions for children exposed to violence* (pp. 311–340). New Brunswick, NJ: Johnson & Johnson Pediatric Institute.
- Johnston, K., & Brinamen, C. (2006). *Mental health consultation in child care: Transforming relationships among directors, staff, and families*. Washington, DC: Zero to Three Press.
- Karoly, L. A., Kilburn, M. R., & Cannon, J. S. (2005). *Early childhood interventions: Proven results, future promise*. Santa Monica, CA: RAND Corporation.
- Katz, L. F., Lederman, C. S., & Osofsky, J. D. (in press). *Child-centered practices for the courtroom and community: A guide to working effectively with young children and their families in the child welfare system*. Baltimore, MD: Paul H. Brookes.
- Kempe, C. H., Silverman, F. N., Steele, B. F., Droegemueller, W., & Silver, H. K. (1985). The battered-child syndrome. *Child Abuse & Neglect*, 9, 143–154. doi:10.1016/0145-2134(85)90005-5
- Knudsen, E. I., Heckman, J. J., Cameron, J. L., & Shonkoff, J. P. (2006). Economic, neurobiological, and behavioral perspectives on building America's future workforce. *Proceedings of the National Academy of Sciences of the USA*, 103, 10155–10162. doi:10.1073/pnas.0600888103
- Kronenberg, M. E., Hansel, T. C., Brennan, A. M., Osofsky, H. J., Osofsky, J. D., & Lawrason, B. (2010). Children of Katrina: Lessons learned about postdisaster symptoms and recovery patterns. *Child Development*, 81, 1241–1259. doi:10.1111/j.1467-8624.2010.01465.x
- Larrieu, J. A., & Zeanah, C. H. (2004). Treating parent-infant relationships in the context of maltreatment: An integrated systems approach. In A. J. Sameroff, S. C. McDonough, & K. L. Rosenblum (Eds.), *Treating parent-infant relationship problems* (pp. 243–264). New York, NY: Guilford Press.
- Lawlor, D. A., Sterne, J. A. C., Tynelius, P., Davey Smith, G., & Rasmussen, F. (2006). Association of childhood socioeconomic position with cause-specific mortality in a prospective record linkage study of 1,839,384 individuals. *American Journal of Epidemiology*, 164, 907–915. doi:10.1093/aje/kwj319
- Lederman, C. S., & Osofsky, J. D. (2008). A judicial-mental health

- partnership to heal young children in juvenile court. *Infant Mental Health Journal*, 29, 36–47. doi:10.1002/imhj.20164
- Leslie, L. K., Hurlburt, M. S., Landsverk, J., Barth, R., & Slymen, D. J. (2004). Outpatient mental health services for children in foster care: A national perspective. *Child Abuse and Neglect*, 28, 699–714. doi: 10.1016/j.chiabu.2004.01.004
- Lieberman, A. F., Ghosh Ippen, C., & Marans, S. (2009). Psychodynamic therapy for child trauma. In E. B. Foa, T. M. Keane, M. J. Friedman, & J. A. Cohen (Eds.), *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (pp. 370–388). New York, NY: Guilford Press.
- Lieberman, A. F., Ghosh Ippen, C., & Van Horn, P. (2006). Child-parent psychotherapy: 6-month follow-up of a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 45, 913–918. doi:10.1097/01.chi.0000222784.03735.92
- Lieberman, A. F., & Van Horn, P. (2008). *Psychotherapy with infants and young children: Repairing the effects of stress and trauma on early attachment*. New York, NY: Guilford Press.
- Luby, J. L. (2006). *Handbook of preschool mental health: Development, disorders, and treatment*. New York, NY: Guilford Press.
- Lupien, S. J., King, S., Meaney, M. J., & McEwen, B. S. (2000). Child's stress hormone levels correlate with mother's socioeconomic status and depressive state. *Biological Psychiatry*, 48, 976–980. doi:10.1016/S0006-3223(00)00965-3
- Masi, R., & Cooper, J. L. (2006). *Children's mental health: Facts for policymakers*. New York, NY: Columbia University, Mailman School of Public Health, National Center for Children in Poverty.
- Masse, L. N., & Barnett, W. S. (2002). A benefit-cost analysis of the Abecedarian early childhood intervention. In H. M. Levin & P. J. McEwan (Eds.), *Cost-effectiveness and educational policy* (pp. 157–176). Larchmont, NY: Eye on Education.
- Mills, C., Stephan, S. H., Moore, E., Weist, M. D., Daly, B. P., & Edwards, M. (2006). The president's New Freedom Commission: Capitalizing on opportunities to advance school-based mental health services. *Clinical Child and Family Psychology Review*, 9, 149–161. doi:10.1007/s10567-006-0003-3
- Olds, D. L. (2007). Programs for parents of infants and toddlers: Recent evidence from randomized trials. *Journal of Child Psychology and Psychiatry*, 48, 355–391. doi:10.1111/j.1469-7610.2006.01702.x
- Osofsky, J. D. (Ed.). (2004). *Young children and trauma: Intervention and treatment*. New York, NY: Guilford Press.
- Osofsky, J. D., & Lederman, C. (2004). Healing the child in juvenile court. In J. D. Osofsky (Ed.), *Young children and trauma: Intervention and treatment* (pp. 221–241). New York, NY: Guilford Press.
- Osofsky, J. D., Many, M. M., & Dickson, A. (2010, June). *Court teams: Improving the lives of the youngest foster care children*. Symposium presented at the annual meeting of the American Professional Society on the Abuse of Children, New Orleans, LA.
- Osofsky, J. D., & Osofsky, H. J. (2010). Understanding and helping traumatized infants and families. In B. M. Lester & J. D. Sparrow (Eds.), *Nurturing children and families: Building on the legacy of T. Berry Brazelton* (pp. 254–263). New York, NY: Blackwell Scientific.
- Osofsky, J. D., Osofsky, H. J., & Harris, W. W. (2007). Katrina's children: Social policy considerations for children in disasters. *Social Policy Report*, 21, 3–18.
- Parlakian, R., & Seibel, N. L. (2002). *Building strong foundations: Practical guidance for promoting the social-emotional development of infants and toddlers*. Washington, DC: ZERO TO THREE.
- Perry, D. F., Kaufmann, R. K., & Knitzer, J. (2007). Building bridges: Linking services, strategies, and systems for young children and their families. In D. F. Perry, R. K. Kaufmann, & J. Knitzer (Eds.), *Social and emotional health in early childhood: Building bridges between services and systems* (pp. 3–11). Baltimore, MD: Paul H. Brookes.
- Poulton, R., Caspi, A., Milne, B. J., Thomson, W. M., Taylor, A., Sears, M. R., & Moffitt, T. E. (2002). Association between children's experience of socioeconomic disadvantage and adult health: A life-course study. *Lancet*, 360, 1640–1645. doi:10.1016/S0140-6736(02)11602-3
- President's New Freedom Commission on Mental Health. (2003). *Achieving the promise: Transforming mental health care in America*. Retrieved July 18, 2008, from <http://www.mentalhealthcommission.gov/reports/reports.htm>
- Pynoos, R. S., Steinberg, A. M., & Piacentini, J. C. (1999). A developmental psychopathology model of childhood traumatic stress and intersection with anxiety disorders. *Biological Psychiatry*, 46, 1542–1554. doi:10.1016/S0006-3223(99)00262-0
- Repetty, R. L., Taylor, S. E., & Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. *Psychological Bulletin*, 128, 330–366. doi:10.1037/0033-2909.128.2.330
- Ruddy, N. B., & Schroeder, C. S. (2004). Making it in the real world: Diverse models of collaboration in primary care. In R. G. Frank, S. H. McDaniel, J. H. Bray, & M. Heldring (Eds.), *Primary care psychology* (pp. 149–168). Washington, DC: American Psychological Association. doi:10.1037/10651-008
- Rutter, M., & Sroufe, L. A. (2000). Developmental psychopathology: Concepts and challenges. *Development and Psychopathology*, 12, 265–296. doi:10.1017/S0954579400003023
- Sameroff, A. (2000). Ecological perspectives on developmental risk. In J. D. Osofsky & H. E. Fitzgerald (Eds.), *WAIMH handbook of infant mental health: Vol. 4. Infant mental health in groups at high risk* (pp. 1–33). New York, NY: Wiley.
- Sameroff, A. J., & Fiese, B. H. (2000). Transactional regulation: The developmental ecology of early intervention. In J. P. Shonkoff & S. J. Meisels (Eds.), *Handbook of early childhood intervention* (pp. 135–159). New York, NY: Cambridge University Press.
- Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). *Lifetime effects: The High/Scope Perry Preschool study through age 40* (Monographs of the High/Scope Educational Research Foundation #14). Ypsilanti, MI: High/Scope Press.
- Shonkoff, J., & Philips, D. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academies Press.
- Slep, A. M., & O'Leary, S. (2005). Parent and partner violence in families with young children: Rates, patterns, and connections. *Journal of Consulting and Clinical Psychology*, 73, 435–444. doi:10.1037/0022-006X.73.3.435
- Smariga, M. (2007, July). *Visitation with infants and toddlers in foster care: What judges and attorneys need to know* (Practice and Policy Brief). Washington, DC: American Bar Association and ZERO TO THREE.
- Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, 7, 349–367. doi:10.1080/14616730500365928
- Sroufe, L. A., Egeland, B., Carlson, E., & Collins, W. A. (2005). *The development of the person: The Minnesota study of risk and adaptation from birth to adulthood*. New York, NY: Guilford Press.
- Turner, H. A., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science and Medicine*, 62, 13–27. doi:10.1016/j.socscimed.2005.05.030
- U.S. Department of Health and Human Services, Administration for Children & Families. (2005). *Child maltreatment 2003*. Washington, DC: U.S. Government Printing Office. Retrieved from http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can
- U.S. Department of Health and Human Services, Administration for Children & Families. (2008). *Child maltreatment 2006*. Washington, DC: U.S. Government Printing Office. Retrieved from http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can
- U.S. Department of Health and Human Services, Administration for Children & Families. (2010). *Child maltreatment 2008*. Retrieved from http://www.acf.hhs.gov/programs/cb/stats_research/index.htm#can
- Widom, C. S. (1989). Does violence beget violence? A critical examination of the literature. *Psychological Bulletin*, 106, 3–28. doi:10.1037/0033-2909.106.1.3
- Zeanah, C. (Ed.). (2009). *Handbook of infant mental health* (3rd ed.). New York, NY: Guilford Press.
- Zeanah, C. H., & Zeanah, P. D. (2009). The scope of infant mental health. In C. Zeanah (Ed.), *Handbook of infant mental health* (3rd ed., pp. 5–21). New York, NY: Guilford Press.
- Zuckerman, B., Augustyn, M., Groves, B. M., & Parker, S. (1995). Silent victims revisited: The special case of domestic violence. *Pediatrics*, 96, 511–513.