

Child Maltreatment: Effects on Development and Learning

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Abstract

The number of young children who have suffered from maltreatment has risen in recent years. This paper describes the negative neurological, psychological, and cognitive effects from this maltreatment. Interventions that can prevent abuse and neglect and promote resilience in the child victims are examined and discussed. The paper concludes that concerned citizens need to advocate for preventive efforts that promote resilience in the child victims.

The number of American children each year exposed to traumatic events is estimated as four million (Schwartz & Perry, 1994). Traumatic events include physical, sexual, and emotional abuse; neglect; accidents; severe injuries; and natural disasters such as floods and tornadoes. Post-traumatic stress disorders can develop in youngsters from these experiences and may cause a range of neuropsychiatric disorders such as phobias, conduct and behavioral difficulties, depressions, and anxieties. This paper focuses on the detrimental effects of maltreatment, including abuse and neglect, on young children. The possible neurological, psychological, and cognitive sequelae are discussed. Interventions that can promote resilience in the child victims are then described. As concerned professionals, families, and citizens, we need to advocate both for methods of prevention of child maltreatment and for interventions that will assist maltreated youngsters.

Neurological Effects of Abuse and Neglect

Recent research has provided more information about the neurology and development of the brain during the first years of life. At birth, the brain is the most immature organ in the human body and will continue to develop as a result of nature or genetics and through environmental experiences. These events can have positive or negative consequences for healthy development (Terr, 1991). Different areas of the brain are responsible for specific functions (Terr, 1991). Systems in the frontal content are responsible for abstract thought. Systems in the limbic area regulate emotion and the attachment process. Other systems in the brain stem regulate the heart rate, blood pressure, and states of arousal (Tauwer, 1989).

In these diverse areas, millions of nerve cells or neurons are connected to each other by synapses. The synapses are pathways that make up the wiring of the brain (Newberger, 1997). The wiring allows the various regions of the brain to communicate with each other. Brain development after birth consists of a continuous process of wiring the connections between neurons. New synapses form, and others not used are pruned or broken away. During the first year of life, a baby can have an amazing array of 1,000 trillion synapses in her brain. However, by the age of

10 years, the pruning or weeding process occurs more frequently than the formation of synapses (Nash, 1997). The child then has about 500 trillion synapses, approximately the same as an adult.

Neurodevelopment can be disrupted in the young child in two ways: the first is by a lack of sensory experiences during the critical process of brain development. Sensory experiences are necessary for the optimal organization of the brain (Stermer, 1997). The other way is through an abnormal activation of neuron patterns caused by extremely difficult experiences such as maltreatment and neglect (Perry, 1993). These atypical environmental events can result in the malfunctioning of the regions of the brain responsible for the regulation of affect, empathy, and emotions. Continual abuse and neglect also can cause a disruption in the attachment process of the infants with their caregivers and a lack of trust in their environments (Nash, 1997).

The neurological reasons for the malfunctioning of the brain can be traced to the initial responses to threat that human beings exhibit. This reaction is often called the fight or flight response, which prepares individuals to defend themselves against perceived threats. Under the stress of the fight or flight response, the individual exhibits increases in the heart rate and in the production of a steroid hormone called cortisol. High levels of cortisol cause the death of brain cells and a reduction in the number of synapses. Studies of adults who have experienced continuous abuse as children indicate that the prolonged stress of maltreatment results in a shrinkage of the regions of the brain that are responsible for memory, learning, and the regulations of affect and emotional expression (Newberger, 1997). Other investigations have shown that the brains of maltreated children can be 20% to 30% smaller when compared with their nonmaltreated peers (Perry, 1993).

Maltreated youngsters tend to develop brains that are attuned to dangers. At the slightest threat, the children will anxiously look for any signals that indicate further abusive attacks. These early experiences of stress form templates in the brains in which the fear responses become fixed. The brain becomes organized just for the purpose of survival. The results are that the child victims are constantly in states of high alert that could assist them to avoid further

maltreatment but are costly to their optimal development. The youngsters are at great risk for emotional, behavioral, learning, and physical difficulties (Herman, 1992; Terr, 1990). Other long-term effects could be the reduction in the opportunities to experience comfort, support, and nurturance, which are necessary for secure relationships.

Other ways of coping with fears of maltreatment are freezing and disassociative responses, behaviors that may be demonstrated by infants, toddlers, and preschoolers. Physical flight often is not possible for very young children. The freezing or lack of movement response occurs when the youngsters perceive they have no control over threatening events. The freezing response allows time to process the stress-producing experience. However, abusive caretakers often interpret this reaction as noncompliance and then further mistreat the children. If the maltreatment is of sufficient duration, the organization of the brain is again altered. The template of fear becomes fixed in the brain, and the youngsters consistently feel anxious and insecure even when experiences are nonthreatening. Behaviors that can result from these feelings are hypervigilance, hyperactivity, aggression, tantrums, irritability, and regression in development (James, 1994).

Disassociation is another response to maltreatment. It is a response in which individuals separate their painful experience from conscious awareness. The use of dislocation protects the children against overwhelming emotions and thoughts about the maltreatment. However, when carried to an extreme, this response can result in dysfunctions in memory, amnesia, and hallucinations (Terr, 1991; Herman, 1992). The youngsters may also exhibit disorders in self-identity.

Psychological Effects of Abuse and Neglect

Psychological effects of abuse and neglect include the deregulation of affect, the avoidance of intimate relationships, provocative behaviors, and disturbances in the attachment process.

Disregulation of Affect

Maltreated children often display problems in their regulation of affect and emotions. They frequently

have intrusive and upsetting emotional memories of their maltreatment, which they attempt to control by generating and avoiding displays of their feelings (James, 1994). Sometimes, the only way they can identify their emotions is through physiological responses such as increased heart rates and perspiration. The children appear to be able to describe other people's feelings but cannot describe their own feelings.

Avoidance of Intimacy

Child survivors of abuse and neglect tend to avoid intimacy in their relationships because the feeling of closeness increases their feelings of vulnerability and lack of control (James, 1994). Intimacy is not desired because it represents a threat rather than nurturance and love. To avoid intimacy, children may exhibit withdrawal, lack of eye contact, hyperactivity, aggression, and other inappropriate behaviors.

Provocative Behaviors

If maltreated children are unable to experience relief through numbing, they may exhibit more provocative behaviors in order to initiate the numbing process that can quiet their fears of more maltreatment. Some of the provocative behaviors include aggression and inflicting harm to others, inflicting harm to themselves such as mutilation and suicide, and behaving in antisocial ways that result in harsh punishments. The underlying purpose behind these provocative and emotional acts is to produce the numbing responses that can lessen their extreme fears.

Disturbances in the Attachment Process

Attachment is viewed by Hanson and Lynch (1995) as the bonds that young children form with their primary caregivers, usually their parents. Theories of the attachment process provide information about the role of early relationships in shaping the development of the child's personality and social-emotional adjustment (Thurman & Widerstrom, 1990). The attachment process is significant because it affects the child's ability to cope with stress, regulate emotions, benefit from social supports, and form nurturing relationships. All of these abilities become questionable for maltreated youngsters because their attachment processes are disrupted (Barnett, 1997). Under

typical circumstances, the caregiver and the young children form close emotional bonds and secure relationships. Attachments can be observed by the following behaviors of babies and their parents: (1) the youngsters demonstrate strong preferences for their primary caregivers and derive enjoyment and comfort from that closeness with them; (2) the parents demonstrate their attachments in their desire to comfort, protect, love, and enjoy their babies while demonstrating uneasiness and sadness when separated. Because the attachment process promotes feelings of security, trust, and self-esteem, it also fosters the infants' desire to explore and learn from their environments. Secure attachments help children in all areas of development but are essential in establishing their feelings of self-esteem and worth (Moroz, 1996).

The experiences of abuse and neglect can impede the attachment process and decrease the youngsters' feelings of security and trust in their caregivers. Because of the maltreatment, children feel unworthy, unloved, and view the world as a dangerous, unhappy place. When their caregivers are neglectful, uncaring, and abusive, the children become more vulnerable to the stressors of life and will have difficulties in forming close and positive relationships with others. The unmet needs of the child victims may result in anger and resentment of their caregivers, and these responses may then transfer to other relationships in their lives (Zeanah, 1993).

Effects on Cognition and Learning

Cognitive implications of child abuse include difficulties in learning and in school performance. Many studies have consistently stressed that abused, maltreated, or neglected children on the average score lower on cognitive measures and demonstrate lower school achievement when compared with their non-abused peers of similar socioeconomic backgrounds (Vondra, Barnett, & Cicchetti, 1990; Barnett, 1997).

Recent theories on child-caregiver attachment have suggested that negative interactions between the youngster and the caregiver may account for some of this poor school achievement (Vondra, Barnett, & Cicchetti, 1990; Barnett, Vondra, & Shonk, 1996). Youngsters with caring parents or caregivers learn to

view themselves as worthy, lovable, and successful in school-related and cognitive tasks. However, children of uncaring caregivers may see themselves as unworthy of love or caring and incompetent in school performance. The detrimental characteristics of abusive or neglectful parenting often lead to loss of self-esteem and a lack of motivation to succeed at school. At a very early age, maltreated children exhibit difficulties in self-esteem, behavior, and adaptation to their environments. Abused toddlers respond more negatively, in contrast with nonabused peers, to their mirror images and make fewer positive statements about themselves (Barnett, 1997).

It appears that by preschool age, there are specific behaviors associated with the different types of maltreatment. In a study by Erickson, Stroufe, and Pianta (1989), physically abused preschoolers demonstrated more angry and noncompliant behavior compared with their nonabused classmates of similar socioeconomic backgrounds. The maltreated children also were more impulsive, disorganized, and distractible, and they were less successful on preacademic tasks. They lacked the prerequisite social and work skills for age-appropriate adjustment in their preschool and kindergarten classes. Almost half of the physically abused youngsters were referred for special education or retention by the end of kindergarten. Similarly, psychologically abused young children displayed more disruptive, noncompliant behavior and a lack of persistence in their schoolwork compared with their nonabused classmates. Patterns of behavior that were characteristic of the sexually abused children in this study included extreme anxiety, inattentiveness, and problems in following directions. Their social behaviors ranged from withdrawal to extreme aggression with the consequence of rejection by their peers. Common characteristics of these children were their dependency on adults and strong need for the approval of their teachers. Their dependent behaviors seemed to reflect their roles as victims in their homes.

The neglected group of children appeared to display the most severe problems in a number of studies (Eckenrode, Laird, & Doris, 1993; Mash & Wolfe, 1991). They were the least successful on cognitive tasks in kindergarten compared with the other types of maltreated children. They also were more fearful,

inattentive, and apathetic, and they had difficulty in concentrating on cognitive tasks. Socially, they demonstrated inappropriate behaviors and were not accepted by their classmates. These youngsters rarely demonstrated positive affect, humor, or enjoyment. A majority of these neglected children were retained or referred for special education (learning disabilities, social-emotional, behavioral difficulties) at the end of kindergarten. A major reason for their poor performance could have been the lack of stimulation that the children received in their homes due to poor quality and erratic living conditions. The effects of their environments became more obvious at school because the children lacked opportunities to learn the necessary social and cognitive skills for school success.

At later school age, a number of studies demonstrated that all types of maltreated children demonstrated more cognitive difficulties and were considered more at risk for school failure and dropping out than their nonmaltreated classmates (Kurtz, Gaudin, Wodarski, & Howing, 1993; Reyome, 1993). The abused youngsters were rated by their teachers as more overactive, inattentive, impulsive, and disorganized than their nonabused classmates. They appeared less motivated to achieve at school and had difficulty learning. This common pattern of behavior for different types of child abuse may indicate that often the forms of abuse overlap. Children may suffer from more than one type of abuse such as a combination of emotional, sexual, and physical maltreatment, and neglect.

Two studies compared the characteristics of the physically abused, sexually abused, and neglected school-age children (Kurtz, Gaudin, Wodarski, & Howing, 1993; Eckenrode, Laird, & Doris, 1993). The physically abused pupils displayed significant school problems. Their performance was poor in all academic subjects but especially in mathematics and language. They appeared to be underachievers and were more likely to be retained than their nonmaltreated peers. In adolescence, they were at risk for dropping out of school. Both teachers and caretakers reported their children as having significantly more behavioral problems than their comparison nonabused classmates.

Neglect was associated with the poorest academic performance among the groups of maltreated students. Teachers reported that these pupils were performing below grade level and that their rate of school absenteeism was nearly five times that of the comparison nonneglected students. Neglect appears to have a greater long-term impact on academic achievement than other forms of maltreatment. However, the adaptive functioning of the neglected group was within normal limits. Perhaps these children learned the necessary survival skills out of necessity because of the lack of care in their homes. Sexually abused children, on the other hand, were similar to nonabused youngsters in academic performance. Although sexual abuse has negative social-emotional consequences, its effect on academic achievement was not evident in these studies. However, for all types of abuse and neglect, there is a compelling need for intervention by school personnel to try to prevent further maltreatment and to assist the child victims with their learning difficulties.

Interventions to Prevent Maltreatment and Promote Resilience

As can be seen from the above description, maltreated children are at high risk for psychological, neurological, and cognitive impairments. By the time the child victims are identified as maltreated, they may have already developed problems. Teachers need to pay greater attention to methods of prevention that promote resilience such as the availability of alternate caregivers, social support systems, interventions, and home visiting.

Availability of Appropriate Caregivers

When maltreatment by the primary caregivers occurs, it is essential for the children to have access to alternate caregivers who will love, nurture, and protect them. Those alternate caregivers may be grandparents, extended family members, foster and adoptive parents, teachers, and other interested community members. Alternate caregivers can provide children who have been traumatized by maltreatment the safety and nurturance they need to recover from their traumas.

Therapeutic caregiving does not allow the response patterns of fight or flight and dissociation to become

permanently fixed in the children's brains. Thus the youngsters can acquire a sense of trust and be open to positive emotional experiences and new learning. Therapeutic caregiving requires better-than-average caretaking skills. Some necessary attributes include the ability to empathize with the child's pain, the ability to recognize that some antisocial behaviors are reflections of hurtful past experiences, an understanding of the child's need to process these experiences, a desire to be a part of a treatment team, and a strong belief by the caregivers that their actions will eventually assist the youngster even if at present the benefits are not visible. The caregivers must support the needs of these child victims to help them develop positive self-images as worthwhile and loveable human beings (Moroz, 1993).

In order to promote their resilience, the children need warmth, love, empathy, security, and a sense of belonging. Nurturance is providing attentive, loving care. Empathy is the feeling that the caregivers understand and try to alleviate painful memories. Security is having the stability of predictable routines, and a sense of belonging are feelings of belonging and attachment (Moroz, 1996). All these qualities are necessary for alternate caregivers to foster children recovering from maltreatment and to promote their emotional healing.

Social Support Interventions

Social support is defined by Dunst, Trivette, and Deal (1988) as including "the emotional, physical, informational, instrumental, and material aid provided by others to maintain health and well-being, promote adoptions of life events, and foster development in an adaptive manner" (p. 28). Informal support includes family members, extended family, friends, neighbors, and social groups such as clubs, religious organizations, and peer support groups. Formal support consists of professionals, home-visiting programs, parenting classes, vocational assistance, and mental health services. Formal support systems are organized by professionals who provide help to clients in need of their services.

Informal Support Systems

Some parents and caregivers who abuse their children may have themselves suffered from mal-

treatment as children and may have been affected by spousal abuse, substance abuse, violence, poverty, and unemployment. Informal supports such as appropriate child care, respite care, employment opportunities, transportation, and financial aid provided by their families, friends, and community members are of great help. The use of informal sources of support often enables dysfunctional families to stop the cycle of child abuse and increase appropriate family functioning (Barnett, 1997).

Formal Support Systems

Successful formal support programs that reduce child maltreatment have been identified in the literature (Daro, 1993; Barnett, Manley, & Cicchetti, 1993). These programs offered dysfunctional families a combination of comprehensive community services, which improved their functioning and stopped child maltreatment. The services included providing for survival needs such as food, clothing, and shelter. The programs that taught basic parenting skills such as changing diapers or feeding babies also were effective with neglectful families. Providing family therapy was helpful because it offered these families opportunities to model and practice appropriate caretaking skills. The programs demonstrated improvements in other areas such as reductions in family stress and dysfunctioning (Barnett, Manley, & Cicchetti, 1993).

Intervention Programs for Child Victims

Intervention services for maltreated children have been increasing. Model programs have included high-quality child care and preschools that specialize in the treatment of neglected and abused young children. However, these programs have encountered many challenges in their efforts to help children who may have a combination of language, cognitive, and social-emotional delays because of their maltreatment (Barnett, 1997). The National Clinical Evaluation study examined the outcomes of 19 separate projects (Daro, 1993). The projects were especially designed for maltreated young children and employed teachers who were trained in therapeutic techniques. About 70% of the abused children, ages 18 months to 8 years, demonstrated improvements in their adaptive cognitive and social-emotional skills. Other therapeutic activities were described by Culp, Little, Letts, and Lawrence (1991). The programs provided

services such as play therapy, speech and language therapy, occupational and physical therapies, and home visits. The curriculum was designed to foster positive relationships of the children with adults and peers to increase their abilities to regulate emotions and to improve the children's self-esteem. Court-mandated services for the maltreating parents consisted of comprehensive group and individual therapies and home visits by professionals. Positive outcomes were observed for both the maltreated children and their parents (Barnett, 1997). The results of studies of these projects indicated that maltreated youngsters and their caretakers require individualized treatments for special problems. The timing of the treatment also had an effect on the outcomes. Maltreating parents in therapy for 18 months made more improvements in their interactions with the children compared with parents who were in treatment for shorter periods of time (Culp, Little, Letts, & Lawrence, 1991). Home visits appeared effective because they helped the parents to manage their stressors before their maltreatment of the youngster became fixed behaviors. Other preventive measures consisted of mental health services that enabled some parents to relieve emotional problems that interfered with their parenting skills.

Conclusion

This paper has concentrated on the negative effects of maltreatment on young children. The possible neurological, psychological, and cognitive difficulties from the maltreatment were described. More research and knowledge of additional preventive methods and interventions that assist the child victims are needed and should be advocated by concerned professionals, families, and community members.

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