Developmental Outcomes of Child Neglect

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Introduction

In 2005 in the United States, 62% of all confirmed victims of child maltreatment were victims of neglect (USDHHS, 2005). Neglected children are more likely to be younger, and the highest rate of victimization is in the 0–3 age group (USDHHS, 2005). The most devastating consequence of neglect is death, and in 2005 the majority of deaths due to maltreatment were due to neglect (USDHHS, 2005). Overall, the rate of child fatality due to neglect ranges from 32% (Delambre & Wood, 1997) to 42% (USDHHS, 2005; Wang & Daro, 1998) of all reported child death cases.

One aspect of neglect that separates it from physical abuse or sexual abuse is its tendency to be chronic rather than episodic. That is, neglect is often a lifestyle rather than an event. An impoverished parent-child relationship is at the core of the definition of *neglect*. Children aged 0–3 need a consistent and responsive caregiver to meet their physical, cognitive, and emotional needs. Infants have few outlets from which to receive nurture and care other than their caregiver(s). As a result, the consequences of neglect in young children span all areas of a child's development (Scannapieco & Connell-Carrick, 2005).

This argument of neglect may seem somewhat extreme given that the scope of neglectful behaviors is broad. Not all neglect is characterized by extreme deprivation; some neglect *may* be more benign, such as the case with incidents of neglectful supervision or merely a dirty house. The majority of children who live in dirty homes is well cared for. Some caregivers may be excellent caregivers but forgetful or preoccupied at times. A well-cared for child living in a dirty home would not show many or any developmental manifestations.

This discussion of neglect focuses on developmental consequences to the child when lack of care of an infant or toddler is central to the maltreatment. The article also centers on the impoverishment of care inherent in serious child neglect, which may be a devastating occurrence in a young child's life.

Some Characteristics of Child Neglect

Child neglect is experienced most by infants and toddlers 0–3 years of age. Seventy-three percent of maltreatment victims ages 0–3 were victims of neglect (USDHHS, 2005) as compared with 64.6% of those ages 4–7, 60.3% of those ages 8–11, 53.8% of youth ages 12–15, and 57.1% of those 16 and older. Neglect is characterized by lack of care regardless of income. As a result, separating cases of neglect from poverty requires an examination of the relationship between parent and child.

Although several different subtypes and definitions of *neglect* exist, neglect is primarily the result of an impoverished relationship between parent and child. Typically, the parent fails to meet the needs of an infant through lack of care and nurture, which results in developmental consequences (Scannapieco & Connell-Carrick, 2005) and even death (USDHHS, 2005) for the child. Children who experience neglect in the first 3 years of life usually experience problems with attachment, resulting in physical, behavioral, cognitive, and social developmental consequences through the lifespan. In the cycle of neglect, parental behavior affects attachment, which then affects child behavior, ultimately increasing the possibility of child neglect and putting children at continued risk of harm.

Child neglect affects all areas of human development not only at the time of the incident but also across the lifespan. Research shows approximately two thirds of maltreated children have insecure attachments, and most have disorganized-disoriented attachment patterns (Crittenden, 1988; Carlson, Cicchetti, Barnett, & Braunwald, 1989; Egeland & Sroufe, 1981; Main & Solomon, 1986).

Effects on the Brain

In the first 3 years of life, the brain is developing rapidly. Babies' brains grow and develop as they interact with their environment and learn to function within it (NCCAN, 2001). Chronic neglect in infancy and toddlerhood can have a devastating effect on the development of the child's brain. For appropriate neural pathways to develop, a child must have a stimulating environment. Pathways not stimulated decrease, whereas pathways stimulated flourish. When a child is ignored or without proper stimulation for growth, the brain may focus only on day-to-day survival and may fail to develop other important areas, such as cognitive and social growth (NCCAN, 2001). When neural pathways die, the child may not be able to achieve the expected developmental milestones, which is often seen among chronically neglected children (NCCAN, 2001).

Children must be provided the opportunity to develop their neural connections during infancy and toddlerhood. Babies who are not spoken to may not develop language at the same rate as other children. When a child's cries are not responded to or are met with hostility, the child learns early on that crying does not elicit a desired response and may fail to cry. Consequently, when a child is not offered attention or positive interaction, she or he may not then know how to deliver comfort and kindness to others. Such capacities often fail to develop because the child lacked the environmental, and thereby neural, stimulation necessary for such pathways to develop (NCCAN, 2001). In extreme cases of neglect in which the child experiences overall sensory deprivation, the brain may be smaller, fewer neural pathways may exist, and the child may be damaged intellectually forever (Greenough, Black, & Wallace, 1987; Perry & Pollard, 1998).

One of the most significant tasks of infancy is the development of attachment. The ability to form attachments may also be a function of early brain development. Lack of appropriate affective experiences in early life results in the inadequacy of attachment capabilities (Perry, 1999). Early neglect may result in lack of empathy because the part of one's brain that understands connectedness to others fails to develop. Lack of empathy or the lack of connectedness one feels to others may have tremendous consequences to the

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child as well as society. Perry (1999) maintained that the ability to feel empathy, remorse, and sympathy are experience-dependent capabilities. A child who experiences a lack of comfort and care may fail to develop such emotions.

In addition to affective difficulties seen in many neglected children, neglect has a profound influence on a child's cognitive capability. Cognitive stimulation allows the brain to develop critical neural pathways. Conversely, a lack of stimulation may result in brain size and capability differences. The cortex regulates the functioning of lower parts of the central nervous system. Its growth and ability to make synaptic connections is dependent upon the type, quality, and quantity of sensory experience (Chisholm, Carter, Ames, & Morison, 1995). When a child lacks sensory stimulation and cognitive experience, as is often the case with neglect, the cortex may be smaller in size and have fewer neural pathways, resulting in long-term negative consequences for the developing child (Perry, 1999).

Developmental Outcomes of Neglect

Elevated prevalence of maltreatment for infants and toddlers suggests that a significant number of such children will experience negative developmental outcomes. It is important to assess the attachment relationship of all victims of maltreatment, but it is paramount for infant and toddlers who are suspected of being victims of neglect. One reason for this distinction is that neglect is often difficult to identify because it requires the measure of an omission of behavior. In the first 3 years of life, a child experiences enormous growth in all the developmental domains. Therefore, it is important to know the following developmental consequences in order to identify delays, presuming the developmental delays are a possible consequence of neglect.

Cognitive-Behavioral Effects

A child who has been neglected may be delayed in cognitive development. One specific subclass of neglect, failure to thrive, has specific manifestations on an infant's cognitive development. Children with low weight who have been hospitalized for failure to thrive have been shown to have poorer cognitive functioning than normal weight children (Singer, 1986), although recent studies have shown this is confounded by psychosocial variables (Chatoor, et al., 2004). The cognitive deficits of nonorganic failure to thrive infants who have been given psychosocial intervention still persist at 3 years of age (Singer, 1986).

The cognitive deficits of neglected children seem to accumulate with time (Gowen, 1993). Infants and toddlers are generally interested in their surroundings and enjoy looking at human faces and hearing noises. By contrast, a neglected child may appear apathetic and disinterested in her environment. Children have beginning forms of mental representation even by 6 months of age, but this may be lacking in a neglected child who has failed to receive environmental stimulation. For example, if you make an "O" with your mouth to 5-month-old children, you should see them looking intently at your face and trying to imitate your facial expression. While they may not actually make the "O," they should begin moving their mouth in an attempt to mimic your expression.

Children at 3 months of age begin to anticipate events. If a 3-month-old child wakes from a nap, he may begin to cry. When his mother (caregiver) comes into his room, he will stop crying because he knows he is going to be picked up. However, neglected children may either fail to cry or cry indiscriminately to events. The child may not cry because he has learned crying elicits no response. Or, the child may cry without trying to convey a message to a caregiver. A child who has experienced neglect, even at 3 months, has already learned he cannot rely on others to meet his needs.

Between 6 and 12 months, infants begin to have goal-directed behaviors, and they can coordinate specific activities that are deliberate (e.g., thumb sucking). As children mature, they become increasingly interested in their environment, but this may not be apparent in neglected children (Scannapieco & Connell-Carrick, 2005). They may not have self-soothing intentional behaviors and may appear indifferent to their surroundings.

Children at 6 months also should be babbling, and there should be a progression from first words to phrases during the first 3 years. Severe neglect has been related to a number of language delays (Culp, et al., 1991). Neglected children show declines in both expressive and receptive language skills (Gowen, 1993). Maltreated toddlers develop and use language differently than nonmaltreated toddlers. They use language less frequently for social or affective exchanges than nonmaltreated toddlers (Cicchetti & Lynch, 1994). Neglected children will likely babble, but their language development afterward may fail to develop as expected. They may fail to use gestures to convey wants from 6 to 12 months, and they may not understand simple dialogue (e.g., "Where is your nose?"). One way the caregiver facilitates language development in a child is to attach a word to the gesture; neglected children may not have a caregiver who is responsive to their needs in this way, and language development may be delayed. From 12 to 24 months, and especially around 18 to 24 months, language development should be markedly apparent and increasingly rapid, which does not often occur for neglected children.

By the time children who are developing normally reach 24 months, they should have a vocabulary of approximately 200 words, but neglected children may already be behind in their language acquisition. At 24 months, neglected children may not use two-word sentences, and their conversational skills may be poor.

Further expected developmental indicators include changes in play. Toddlers from 12 to 18 months repeat actions with variation, provoking new effects; their approach to the world is exploratory. Children between 12 and 18 months who have been neglected may not exhibit an exploratory approach to the world with trial and error learning. They may appear indifferent and lethargic in a room full of toys. With the greater mental representation expected in children between 18 and 24 months, children are able to recall people, places, and events better, and neglected children may not be able to do this. For example, a child who is 30 months should be able to recall where you keep crayons in your office after a few visits if you allow her to use crayons every time she visits you; a neglected child may not do this. The neglected child, if accustomed to one-command statements, may have great difficulty understanding more complex sentences.

Socio-Emotional Effects

Broadly, maltreated children are more likely to have attachment problems than other children, which can range from mild interpersonal difficulties to the loss of capacity to form any meaningful relationship. While infants and toddlers who have been physically abused tend to develop insecure-avoidant attachment relationships, infants who have been neglected tend to develop insecure-resistant (Ainsworth, Blehar, Waters, & Wall, 1978) and anxious attachment patterns (Erickson & Egeland, 2002). Erickson and Egeland (2002) also found that by the age of 2, children who had experienced neglect displayed avoidant or unaffectionate behaviors toward their mothers. With increased age, both physically abused and neglected children are eventually likely to be classified as disorganized-disoriented because both groups have been found to display resistant and avoidant behaviors in the presence of their caregiver (Erickson & Egeland, 2002). Attachment should also be viewed in its cultural context since attachment behavior may vary depending upon the type of care-giving arrangement the family uses or the child's frequency of contact with strangers or separating from the caregiver.

Consequences of an impaired attachment. The consequences of an impaired attachment relationship in early childhood have both immediate and long-term effects. The cost to the individual ranges from the most severe loss of the capacity to form any meaningful relationships to mild interpersonal, social, or emotional problems. The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) indicates lack of adequate care can lead to reactive attachment disorder (RAD) of infancy or early childhood (American Psychiatric Association, 1994). It is important to note that the diagnosis of RAD is controversial. This is primarily because the diagnosis of such pathologies in children and the treatment for RAD lack empirical support (Werner-Wilson & Davenport, 2003). However, at this time RAD is still a diagnosable condition in the DSM-IV. At any rate, even with the provision of basic nourishment to an infant, the absence of tactile and cognitive stimulation will impede healthy child development, which is why focusing on the relationship between child and parent is so vital.

An impaired attachment relationship in infancy can have long-lasting consequences, primarily because of the relationship's influence on the child's internal working model. Children with secure attachments feel confident the world will meet their needs; they trust the world is a place for them to explore through physical and emotional means. However, children with insecure attachment do not have that same understanding of the world. Thus, a child with an insecure-avoidant attachment might interpret "neutral or even friendly behavior as hostile and show inappropriate aggressive behavior" (Widom, 2000, p. 351). Research has shown the experience of physical abuse in childhood may lead to aggressive behavior because the individual's internal working model includes a tendency to process information through deficient and hostile-influenced mechanisms (Dodge, Bates, & Pettit, 1990).

In the same way, children with insecure attachments cope with their environments less well than do children with secure attachments. They often behave more impulsively and lack problem-solving skills (Erickson & Egeland, 2002). Children, depending on their age, will use various coping behaviors to escape from a current abusive environment. Infant and toddler coping behaviors range from depression (Harrison, Hoffmann, & Edwald, 1989; Kazdin, Moser, Colbus, et al., 1985; Yamaguchi & Kandel, 1984) to self-soothing behaviors (Cavaiola & Schiff, 1988; Harrison, Hoffmann, & Edwall, 1989), such as head bumping and rocking oneself. Nonetheless, it is difficult to ascertain the actual causes of maladaptive coping and behavioral patterns since an impaired attachment affects all aspects of development.

While smiling is reflexive during the first few weeks of life, it eventually becomes socially constructed. By the sixth to tenth week, smiling is elicited by a human face; someone smiling at the infant, or the visual recognition of a caregiver. Neglected children are often not offered the stimulation to evoke a social smile, and the neglected child may fail to smile. Moreover, neglected infants may not laugh, which also requires active stimulation.

Nearly all infants experience stranger and separation anxiety, but many neglected infants fail to do so, especially around 7 to 10 months, respectively. If the neglected toddler does not have a real understanding of who is supposed to take care of him, he will respond indiscriminately to any stranger or being left with any person. The neglected child will not expect someone to meet his needs. The degree to which stranger and separation anxiety is seen is multiply determined, however, by culture, the child's temperament, past experiences with strangers, and the situation in which the infant meets the stranger. Neglected children are often not cared for consistently by a caregiver, and therefore, they do not experience anxiety when separating from their caregiver. Stranger and separation anxiety serves a self-preservation function for infants because this induces fear. Fear keeps children close to those who are supposed to protect them. Children should become more skilled at social referencing and looking to a known person for information on how to respond in an uncertain situation. Neglected children may not have a specific person to give them such information, and they may not have a social reference at all.

It is important, however, to assess attachment, separation, and stranger anxieties within a cultural context. The manner in which the infant is raised may affect the child's reaction to separation from a caregiver and interaction with strangers. For example, children who are taken to child care while their parent works may not demonstrate the same level of anxiety at their caregiver's departure and return. They may have become accustomed to the separation

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and reunion with their caregiver and seem to be unaffected by it. Similarly, children raised in a multiple caregiving format also run the risk of being mislabeled with regard to attachment. In the African American community (Jackson, 1993; Scannapieco, 1999), children traditionally become accustomed to multiple caregivers, who may be both blood and nonblood relatives. Therefore, the responses seen from such children at separation and reunion do not typically conform to Eurocentric and single-dual caregiver patterns of behavior.

Children who have been neglected may also show developmental delays between 24 and 36 months. Such children may lack the vocabulary to talk about emotions and lack the ability to regulate one's emotions in general. The behavioral expression of emotions is also expected and may not be evident in neglected children. They will not hang their heads when ashamed or hide their faces when embarrassed, or even have an understanding of such emotions.

Neglected children may have problems interacting and playing with others. They may fail to extend their knowledge of emotions to others, as is expected of children 24 to 36 months. Instead, they may become angry (Erickson & Egeland, 2002) and act aggressively, such as behaving forcefully toward a hurt and crying child on the playground, indicating a lack of empathic behavior. They may have general problems in relating and playing with peers and fail to demonstrate make-believe play. Neglected toddlers also tend to be easily frustrated, impulsive, and able to show little enthusiasm toward play (Erickson & Egeland, 2002).

Emotional abuse is often linked with neglect because neglect cannot occur in infancy and toddlerhood without some emotional consequence to the child, although the link between emotional abuse and maltreatment is equally relevant to any discussion of physical abuse and sexual abuse. Equally noteworthy is an infant or toddler witnessing the abuse of a parent, such as with domestic violence. Children understand language far earlier than they can speak it, and witnessing fights, whether physical or verbal, between one's caregiver and another can be traumatic to the infant and toddler. Children respond with more posttraumatic stress (PTSD) symptomatology when a caregiver is threatened, including fears, aggression symptoms, and hyperarousal (Scheeringa & Zeanah, 1995). While a caregiver may feel like he is protecting an infant during a domestic disturbance, often the child will fear harm from her caregiver and exhibit PTSD symptomology.

Physical Effects

The most disturbing physical consequence of neglect is death. In 2005, the highest percentage of deaths related to maltreatment, 42.2%, resulted from neglect (USDHHS, 2005). The clearest signs of development in infancy and toddlerhood occur with physical maturity, but neglected children are often smaller and weigh less than other children. Neglected children experience inadequate physical care (Gowen, 1993). Failure to thrive is one of the most devastating physical manifestations of neglect in infancy and toddlerhood. Nonorganic failure-to-thrive infants (NOFTT) are generally below the 5th percentile of relative growth for infants at a given age, and the diagnosis places children at significant risk of poor developmental outcomes (Casey, Bradley, & Wortham, 1984). While one would expect a child to increase in both height and weight, neglected children with NOFTT may decrease and fall down the growth curve. Neglected children often fail to get round and plump, as is normal for children until the age of 9 months. The more severe subclass of neglect, failure-to-thrive infants, often fails to gain weight at all and will continue to be smaller and weigh less even as it matures (Kristiansson & Fallstrom, 1987). The skin of children who have been neglected may also appear dull, and their hair may be thin.

Children who have been neglected may fail to develop their gross motor skills as well as other children do (Scannapieco & Connell-Carrick, 2002). The neglected infant may not be able to keep her head erect, as is expected at 6 weeks. Neglected infants may not elevate themselves by their arms, sit with support, or roll over or crawl as expected. Some neglected infants are placed for long periods in one position, and their body develops differently or abnormally. For example, a child who virtually lives in a car seat will have an extremely flat head; a child who is placed in a bouncing swing will develop only leg muscles and be unable to sit because of poorly developed back muscles. The neglected infant may not be walking on time, and the child may be behind in gross motor development with no medical explanation. The toddler who has chronically experienced neglect may not be running or jumping, as is expected when there is a progression from walking to more sophisticated gross motor behaviors. When children are neglected, fine motor skills, such as grabbing, reaching, and picking up objects may not be developed at the rate of nonmaltreated children. At 6 months, neglected children may be unable to hold an object, such as their bottle or rattle, or at 12 months, something larger, such as a book. Children between 12 and 23 months may be unable to hold a crayon, throw a ball, or pick up small objects. The child who is neglected may not be able to use a fork or dress oneself in the second year of life, as is expected and developmentally appropriate for a toddler.

Identifying and Responding to Infants and Toddlers Who Have Been Neglected

In the context of the previous discussion of the three main developmental domains affected by child neglect, the following appraisal suggestions (Table 1) assess a child's cognitive-behavioral, socioemotional, and physical behavior. As mentioned, child neglect is difficult to assess because it is indicated by the absence of behavior and therefore, a challenge to measure. Table 1 provides an assessment tool based on behavioral indicators within each developmental domain as a means of overcoming some of the hurdles in identifying child neglect in very young children. These indicators, in the overall context of the assessment, may provide support that the child is being neglected.

Table 1. Assessing Neglect in Children Ages 0–3

	Cognitive-Behavioral	Socio-Emotional	Physical
0–6 months	• Does the child imitate adult's facial expressions? • Does the child repeat chance behaviors that produce pleasure for the child? • Can the child recognize people and places? • Does attention become more flexible with age? • Does the child babble by the end of this period?	• Does the child show a range of emotions including happiness, sadness, and fear? • Does social smiling and laughing emerge? • Can the child imitate adult emotional expression during interactions? • Does the infant begin to distinguish self from others (the emergence of an "I")?	• Does the child have rapid height and weight gain? • Can the child hold her/his head up, roll over and reach for objects? • Can the child hear sounds, with increasing sensitivity to sounds of own speech with age? • Does the child begin to habituate toward fixed stimuli? • Is the child sensitive toward motion?
6–12 months	• Does the child have goal-directed and intentional behavior? • Can the child find hidden objects? • Can the child imitate adults' actions? • Can the child combine sensory and motor activities? • Does the child babble, including sounds in the child's spoken language? • Does the child show preverbal gestures, such as pointing?	• Does the child show stranger and separation anxiety? • Does the child use the caregiver as a secure base? • Can the child engage in social referencing? • Does the child show definite attachment to caregivers?	• Can the child sit alone, crawl, and walk? • Can the child organize stimuli into meaningful patterns?
12–18 months	• Does the child sort objects into catagories? • Can the child find hidden objects by looking in more than one place? • Does the child show trial and error learning in play? • Does the child have an improved attention span? • Can the child talk, at least saying the first words? • Does the child use overextension and underextension of the words she/he knows? • Can the child take turns when playing interactive games (peek-a-boo)? • Does the child experiment with different behaviors to see the result and find new ways to solve problems?	• Does the child recognize and image of oneself? • Does the child play with siblings and familiar adults? • Does the child show signs of empathy? • Does the child engage in turn-taking behaviors when playing? • Does the child understand simple directives?	• Does the child continue to grow, but less rapidly than during the first year? • Can the child walk better with more coordination? • Can the child stand alone in one place? • Can the child manipulate and play with small objects, improving coordination? • Can the child use a spoon or cup?
18–24 months	• Can the child find objects that are out of sight? • Does the child try to fully imitate adults' actions? • Does the child engage in make-believe play? • Does the child move objects into catagories during play?	• Does the child express self conscious emotions, such as shame and embarrassment? • Does the child have a vocabulary that includes emotional terms? • Does the child use vocabulary in order to emotionally regulate oneself?	• Can the child jump, run, and climb? • Can the child manipulate small objects with good coordination? • Is the child walking alone? • Is the child able to push or pull something while walking? • Can the child feed herself or himself?

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Table 1. Assessing Neglect in Children Ages 0–3 (cont'd)

	Cognitive-Behavioral	Socio-Emotional	Physical
18–24 months (cont'd)	• Does the child recall people, places or objects better than before? • Does the child use two-word phrases? • Can the child scribble with crayons and pencils? • Can the child point to and name body parts?	• Can the child increasingly tolerate the absence of a caregiver? • Does the child use own name as labeled image of oneself?	• Can the child partly undress herself or himself?
24–36 months	• Is make-believe play less self-centered and more complex? • Does the child have a well-developed memory recognition? • Does the child have a more developed vocabulary? • Can the child use sentences with increased usage of grammar? • Does the child display conversational skills? • Is the child able to follow simple directions? • Can the child tell simple stories? • Is the child able to answer questions?	• Can the child distinguish one's intention and unintentional actions? • Can the child understand causes and consequences of behaviors? • Does the child exhibit cooperative or agressive behaviors? • Is the child beginning to engage in parallel play?	• Can the child get dressed or undressed partly by oneself? • Can the child use a spoon or fork? • Can the child run, jump, hop, and throw objects? • Can the child pedal a tricycle/big wheel? • Does the child gain weight and height but less so than during the first 2 years?

Source: Scannapieco & Connell-Carrick (2005)

Assessment is a process in which information is gathered and analyzed to determine the origin and extent of critical risk-related problems, the strengths that will enhance the potential for change, and the barriers that will hinder this potential. The physical indicators are variables that are easier to act upon and, thus, are more clearly indicative of increased risk. These are the cases in which we most often do a good job in protecting children. The behavioral and relational variables are more difficult to act upon but are just as indicative of increased risk. Because they are often more difficult to recognize, however, they are likely to be overlooked or to be considered insufficient for protective action. It is important to consider the combinations of soft and hard indicators that are indicative of child neglect.

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Summary

Early childhood is a critical developmental stage for intervening with families. Children aged 0–3 are at the highest risk of experiencing devastating consequences of child neglect. Assessment measures need to focus on the interaction between the infant or toddler and the caregiver. During this stage of the child's development, the practitioner must rely heavily upon observations of the child's behavior and the interaction between the child and the caregiver.

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