LIPPINCOTT WILLIAMS & WILKINS

Journal of the American Academy of CHILD & ADOLESCENT PSYCHIATRY

Volume 38(10) October 1999 pp 1214-1222

Child and Adolescent Abuse and Neglect Research: A Review of the Past 10 Years. Part I: Physical and Emotional Abuse and Neglect

[Research Update Review]

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Accepted May 17, 1999.

The authors thank the Schott Foundation for its support of our family violence research efforts and Barbara Becker and Kristine Allen and for their assistance in the preparation of this manuscript.

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Outline

Graphics

ABSTRACT

Objective: To review the clinically relevant literature on the physical and emotional abuse and neglect of children and adolescents published during the past 10 years.

Method: Literature published between 1988 and 1998 was reviewed following a systematic search of *Medline, PsychInfo,* and the National Clearinghouse on Child Abuse and Neglect.

Results: During the last decade there has been substantial progress in understanding the symptomatology associated with maltreatment. However, prevention and intervention research studies are relatively rare and frequently have important methodological limitations.

Conclusions: Child maltreatment research in the next decade needs to focus on understanding factors leading to resilient outcomes and on assessing the effectiveness of psychotherapeutic and psychopharmacological treatment strategies. Increased resources are needed to support child maltreatment research studies and investigators.

The last decade has witnessed an increasing recognition by child mental health professionals that child physical and emotional maltreatment are major public health issues. As the field matures, research has informed clinical practice with a more sophisticated understanding of the correlates of abuse and neglect, including the potential impact of maltreatment on multiple domains of child functioning. This article reviews research pertinent to the mental health care of physically and emotionally maltreated children and adolescents published during the past decade (1988-1998) selected from *Medline, PsychInfo,* and the National Clearinghouse on Child Abuse and Neglect database. A subsequent article will cover sexual abuse.

DEFINITIONS OF MALTREATMENT

Although many definitions of maltreatment exist, physical abuse and neglect are generally referred to in this review as defined in the most recent National Incidence Study (NIS-3) (Sedlak and Broadhurst, 1996). The NIS-3 defines physical abuse as present when a child younger than age 18 years has experienced injury (harm standard) or risk of injury (endangerment standard) as a result of having been hit with a hand or other object or having been kicked, shaken, thrown, burned, stabbed, or choked by a parent or parent-substitute. Physical neglect refers to harm or endangerment as a result of inadequate nutrition, clothing, hygiene, and supervision. Emotional abuse includes verbal abuse, harsh nonphysical punishments (e.g., being tied up), or threats of maltreatment, while emotional neglect covers failure to provide adequate affection and emotional support or permitting a child to be exposed to domestic violence.

EPIDEMIOLOGY OF MALTREATMENT

There are 2 major sources of national epidemiological data on child maltreatment. The NIS-3 sampled child protective services (CPS), law enforcement, juvenile probation, public health, hospital, school, day-care, mental health, and social service agencies for a 3-month period during 1993. Using the harm standard, the incidence of physical abuse was estimated to be 5.7 per 1,000 children, an increase over the 2 previous incidence studies of 1986 and 1980 (Table 1). The incidence of physical neglect per 1,000 children increased at an even greater rate, while similar increases in emotional maltreatment were also seen.

Type of Maltreatment	NIS-3 (1993)	NIS-2 (1986)	NIS-1 (1980)
Abuse			
Physical	5.7 (381,700)	4.3 (269,700)	3.1 (199,100)
Emotional	3.0 (204,500)	2.5 (155,200)	2.1 (132,700)
Neglect			
Physical	5.0 (338,900)	2.7 (167,800)	1.6 (103,600)
Emotional	3.2 (212,800)	0.8 (49,200)	0.9 (56,900)

Note: Incidence of maltreatment per 1,000 children (total number of maltreated children in parentheses).

TABLE 1 National Incidence Study (NIS) Data: Estimated Incidence of Child Maltreatment Using the Harm Standard

Whether these statistics reflect actual increased incidence of maltreatment or an increased sophistication in detection and/or reporting has been debated. However, the significant increases in severity of injuries from child maltreatment between 1980 and 1993 for all levels except fatalities suggests an actual increase in the incidence of maltreatment (Sedlak and Broadhurst, 1996).

The second major source of child maltreatment information is represented by *Child Maltreatment 1996: Reports From the States to the National Child Abuse and Neglect Data System* (U.S. Department of Health and Human Services [DHHS], 1998). This report, as well as its earlier versions, presents data compiled from state CPS agencies of known maltreatment cases. In 1996, physical neglect was involved in 57.7% of maltreatment cases, while physical abuse involved 22.2% and emotional maltreatment was involved in 5.9% of cases. However, emotional maltreatment in both surveys is likely underreported because of most agencies' primary emphasis on the physical safety of children.

In 1996, reporters of child maltreatment to state CPS were most often educators and legal, social service, and medical professionals. The fewest reports came from anonymous reporters, relatives, victims, and friends/neighbors (DHHS, 1998).

Gender and age distributions indicate that unlike sexual abuse, there is little difference between boys and girls in the overall incidence of physical and emotional maltreatment. However, gender distributions may vary with the age of the victim, such as a greater representation of female victims of adolescent physical abuse (Powers et al., 1990). With regard to maltreatment incidence by age, the national surveys indicate that physical abuse peaks in the 4- to 8-year-old range. Emotional maltreatment has been reported to peak in the 6- to 8-year-old range and to remain at a similar level through adolescence.

To aid child protective agencies triage cases and determine the level of case supervision required, great emphasis has been placed on determining a child's risk for continued maltreatment. Risk factors found to predict recurrent abuse include the following: young age of victim, number of previous CPS referrals, and caretaker characteristics such as emotional impairment, substance abuse, lack of social support, presence of domestic violence, and history of childhood abuse (English et al., in press). Unfortunately, these risk factors are often not carefully assessed by CPS caseworkers.

In addition, although numerous models have been investigated, attempts to predict which children reported to CPS are at risk for severe or fatal maltreatment have been unsuccessful. What is known is that younger children are at the greatest risk, with more than 75% of maltreatment fatalities in 1996 involving children younger than age 3 years (DHHS, 1998). Uniform Crime Reports of child and adolescent homicide by parents between 1976 and 1985 indicate that male and female children were at equal risk during the first week of life, but that male children were victims in 55% of homicide cases from week 1 to age 15 years and 77% of cases between ages 16 and 19 years. Mothers almost always perpetrated homicides occurring during the first week of life, and either parent was equally likely to fatally injure his/her child from week 1 to 13 years. However, fathers committed 63% of parent-perpetrated homicides occurring in 13- to 15-year-olds and 80% of those occurring in 16- to 19-year-olds (Kunz and Bahr, 1996). The NIS-3 estimated that 1,500 children were fatally abused in the United States in 1993, but child homicides are often ruled as accidental deaths and the actual incidence of fatal abuse may be much greater.

PHYSICAL MALTREATMENT

The psychiatric and psychological problems associated with physical abuse and neglect are extremely varied. Overall, research studies have found that physical abuse and/or neglect is associated with a large number of interpersonal, cognitive, emotional, behavioral, and substance abuse problems and psychiatric disorders, and increased mental health services utilization has also been reported for maltreated children (Garland et al., 1996). It is important to note that child maltreatment research often fails to identify the exact type(s) of maltreatment experienced by subjects. This is due to limited information from state child protection agencies, unreliable subject self-reports, and the frequent co-occurrence of different forms of physical and emotional abuse and neglect. Furthermore, multiple risk factors for poor functioning (in addition to maltreatment) are frequently present in subjects' environments. These problems may limit studies' conclusions concerning the specificity of effects of various types of maltreatment.

Interpersonal Problems

Consistent deficits in the social functioning of abused children and adolescents have been found in analyses of information from multiple informants (parents, teachers, and peers) (i.e., Dodge et al., 1994). In the case of abused infants, these deficits can may be seen as insecure (particularly disorganized) patterns of attachment (Cicchetti and Barnett, 1992) which may set the stage for later peer rejection and for intimate relationships marked by revictimization or the victimizing of others. Physically abused children also have been found to be more disliked and less popular than their nonabused peers (Salzinger et al., 1993), and even with close friends they exhibit less intimacy, more conflict, and more negative affect than non-abused children do with friends (Parker and Herrera, 1996). The peer difficulties of abused children are present even with control for variables such as socioeconomic status and negative life events (Okun et al., 1994). Adolescents with abuse histories also report impaired styles of interpersonal attachment, engage in more aggression in their peer relationships, and exhibit more abusive or coercive behaviors in dating relationships (Wolfe et al., 1998).

Although studies have infrequently examined neglect, recent data suggest that physically neglected children also have deficits in social functioning, including greater conflict with friends and fewer reciprocated friendships (Bolger et al., 1998). There is evidence that the interpersonal problems of maltreated children are related to difficulty in understanding appropriate affective responses to interpersonal situations and to limited social problem-solving skills (Haskett, 1990; Rogosch et al., 1995).

Cognitive/Academic Impairment

Studies during the last decade have consistently documented impaired cognitive abilities and poor academic achievement in maltreated youth. Language skills have been most frequently scrutinized, with deficits reported for both receptive and expressive language (Coster et al., 1989; Fox et al., 1988; McFadyen and Kitson, 1996). There is some evidence that neglect results in greater deficits than abuse (Culp et al., 1991b). These findings are important because expressive language difficulties have been associated with risk for aggressive and conduct-disordered behavior, particularly in abused children (Burke et al., 1989). The academic performance of maltreated children reflects their cognitive impairments; both abuse and neglect have been associated with large deficits on both mathematics and language tests, with neglect having the strongest association with poor achievement (Eckenrode et al., 1993; Wodarski et al., 1990).

Aggression

Aggressive and delinquent behaviors are among the most frequent correlates of physical abuse. Lewis (1992) hypothesized that physical abuse exposure increases the risk for the expression of aggression by increasing levels of impulsivity and irritability, engendering hypervigilance and paranoia, and curtailing the recognition of pain in both self and others. Relative to peers, abused preschool children have been found to engage in frequent aggressive behavior (Klimes-Dougan and Kistner, 1990) and to more often attribute hostile intent to their peers' behaviors (Dodge et al., 1990). The increased aggression exhibited by physically abused school-age children is also associated with increased rejection by peers (Salzinger et al., 1993) and a greater likelihood that abuse victims will be "blamed" by others for being abused (Muller et al., 1993). As abuse victims develop, they are at risk for engaging in violent, criminal behavior in both adolescence (Herrenkohl et al., 1997) and adulthood (Widom, 1989).

Suicidal Behavior and Risk-Taking

An increasing number of studies have reported an association between physical abuse and risk for suicidal behavior, particularly in adolescents (Garnefski et al., 1992; Kaplan et al., 1997; Riggs et al., 1990). Risk-taking, often related to suicidal behavior, has also been investigated in abused populations. Physically abused youth are more likely than their nonabused counterparts to take part in behaviors endangering their health, including cigarette smoking, substance use, and sexual risk-taking (Riggs et al., 1990). Sexual risk-taking may explain why physical abuse and neglect have also been associated with teenage parenthood for both males and females (Herrenkohl et al., 1998).

Psychiatric Disorders

In light of the difficulties described above, it is not surprising that abuse victims are at increased risk for a variety of child and adolescent psychiatric diagnoses, including depressive disorders, anxiety disorders, conduct disorder, oppositional defiant disorder, attention-deficit/hyperactivity disorder, and substance abuse (Famularo et al., 1992; Flisher et al., 1997; Kaplan et al., 1998; Livingston et al., 1993). The reported rates of each disorder often vary with subjects' age, socioeconomic status, family characteristics, and severity of abuse. However, some of the most consistent findings are that approximately 8% of children and adolescents documented as physically abused have current diagnoses of major depressive disorder, approximately 40% have lifetime major depressive disorder diagnoses, and at least 30% have lifetime disruptive disorder diagnoses (oppositional defiant disorder or conduct disorder). These prevalence rates are several times higher than those found in community samples of children and adolescents (see Lewinsohn et al., 1993). Although posttraumatic stress disorder (PTSD) may be present in cases of extreme physical abuse, it does not appear to be commonly associated with mild physical maltreatment (Pelcovitz et al., 1994).

Unlike earlier research, recent studies of psychiatric disorders in abused children have more often

used non-referred samples and comparison groups, greatly improving the quality of research. However, cross-sectional research designs predominate, limiting causal inferences between abuse and disorders. For example, depressive disorders may be a direct or indirect consequence of abuse, depressed children may be more frequently targeted for abuse, or depression may be related to causal factors in abusive environments other than the abuse itself. Longitudinal studies are needed to further our understanding of the relationship between abuse and psychiatric symptomatology.

Additional resources are also needed to study parents with Munchausen syndrome by proxy (MSBP) who commit physical abuse in the course of intentionally fabricating illnesses in their children. The existing research, based on a small number of cases, suggests that victims of MSBP experience significant psychological and psychiatric symptomatology in both childhood and adulthood (Bools et al., 1993; Libow, 1995). Because most cases of MSBP go undetected, the actual incidence of this type of abuse is unknown. However, a prospective study surveying all consultant pediatricians in Great Britain and Ireland reported the incidence to be 2.8 per 100,000 for children younger than age 1 year (McClure et al., 1996). Due to the often extreme abuse inflicted by parents with MSBP (e.g., broken bones, poisoning), their children are at great risk for serious physical and psychiatric morbidity.

There is little research devoted to psychopathology in neglected children, and what does exist is often contradictory. For example, Wodarski and colleagues (1990) reported that according to parents and teachers, physical abuse was associated with behavior problems, but physical neglect was not. This contrasts with previous reports that neglect may be the most harmful type of maltreatment with regard to psychopathology (Erickson et al., 1989). Although the contradiction may be due to differences in sample characteristics or to the exact nature of the neglect, it is clear that additional research on physical neglect is needed.

Psychobiological Correlates

Studies of the biological correlates of abuse and neglect are still relatively rare, especially studies that include children or adolescents as subjects. Adults with PTSD related to severe childhood physical and/or sexual abuse have been found to exhibit decreased hippocampal size, which may help to explain memory impairment in victims of severe physical and sexual abuse (Bremner et al., 1995, 1997). In children, psychiatric inpatients with a history of physical and/or sexual abuse have been reported to exhibit frontotemporal and anterior brain electrophysiological abnormalities (Ito et al., 1993). More advanced quantitative EEG examination of severely maltreated children has also found altered brain development, indicative of decreased cortical differentiation (Ito et al., 1998).

Hormonal changes have also been associated with physical abuse, including changes in the hypothalamic-pituitary-adrenal axis (Hart et al., 1996). More specifically, Hart and colleagues reported elevated afternoon cortisol levels in maltreated children, as well as an unexpected pattern of increased afternoon cortisol levels in depressed maltreated children which was not found in depressed nonmaltreated children. Differences in growth hormone levels of physically maltreated and comparison children have also been documented, indicating that delayed growth is a possible correlate of maltreatment (Jensen et al., 1991).

In other areas, Glod and colleagues (1997) reported that physically abused children exhibited impaired sleep efficiency with increased activity during sleep and prolonged sleep latency, and Scarinci and colleagues (1994) investigated the relationships between child abuse and pain perception in adult female patients with gastrointestinal disorders. Subjects abused during childhood had significantly lower pain threshold levels in response to finger pressure than nonabused subjects, more frequently blamed themselves for their pain, and reported more maladaptive pain coping strategies.

EMOTIONAL MALTREATMENT

Research indicates that emotional maltreatment (also referred to as psychological maltreatment) occurs in an overwhelming majority of physical abuse cases but also occurs independently of other types of maltreatment (Claussen and Crittenden, 1991). As a result, emotional abuse and neglect are likely the most frequent forms of maltreatment experienced by children and adolescents. Unfortunately, emotional maltreatment has not been a focus of research until recently because it was often thought to be less damaging than physical maltreatment, and it can be more difficult to quantify compared with physical evidence of trauma. The existing research suggests that emotional maltreatment may actually have a stronger relationship to long-term psychological functioning than other forms of maltreatment. Regression analyses have indicated that emotional abuse is a stronger predictor than physical maltreatment of a wide array of problems, including internalizing and externalizing behaviors, social impairment, low self-esteem, suicidal behavior, as well as current and previous psychiatric diagnoses and hospitalizations (McGee et al., 1997; Mullen et al., 1996; Vissing et al., 1991). With regard to suicide, Mullen and colleagues reported that a history of physical abuse increased a subject's odds of attempting suicide by almost 5 times, while a history of emotional abuse increased the odds of a suicide attempt by more than 12 times. Emotional neglect has received less attention, but perceived emotional rejection by parents has been associated with poor adolescent and young adult outcomes in at least 2 areas: substance abuse (Campo and Rohner, 1992) and delinquency (Simons et al., 1989).

INTERVENTIONS FOR MALTREATED CHILDREN AND ADOLESCENTS

Psychotherapeutic Approaches

Until recently, most treatment studies focused on reducing maltreatment by providing abusive or neglectful parents with combinations of social support, anger control, and parent training focusing on appropriate child management strategies (Wolfe and Wekerle, 1993). High rates of depression, substance abuse, and antisocial behavior seen in abusive parents (Egami et al., 1996) will likely decrease the effectiveness of these types of interventions, highlighting the need for diagnosis and treatment of parental disorders.

However, preventing further abuse is only one aspect of treatment, and abuse-related problems in victims must also be addressed. Therapeutic day-care programs have most often been utilized in the treatment of young victims of physical abuse and neglect, providing safe, nurturing environments and abuse-specific interventions. This combination appears to have the potential to improve impaired social and cognitive skills and to in-crease self-esteem (Culp et al., 1991a).

The literature on psychotherapy for abused children is dominated by play therapy approaches, while the use of anger management, social skills training, and cognitive-behavioral techniques has also been described. Unfortunately, the effectiveness of these approaches has generally not been empirically evaluated. In a review of treatment research for physically abused children, Oates and Bross (1995) cite only 13 empirical studies between 1983 and 1992 meeting even minimal research standards. However, one recent study by Fantuzzo and colleagues (1996), using several methodological improvements, explored the use of peers to help socially withdrawn physically abused and/or neglected young children. Play sessions with socially adept peers resulted in increased interactive play and decreased solitary play in maltreated children.

Although most clinicians agree that abused children should be routinely assessed to determine treatment needs, the reality is that social service agencies and juvenile courts refer only a minority of victims for treatment (Chapman and Smith, 1987). As a result, the psychological and psychiatric problems commonly associated with maltreatment will likely go untreated unless access to appropriate mental

health services for victims is increased. The development of new psychotherapeutic interventions may benefit from a recent focus on identifying factors leading to adaptive outcomes in high-risk children. Some characteristics of maltreated children exhibiting resilient social and behavioral functioning have already been identified, including self-esteem, the ability to modulate impulses and feelings, and the ability to adapt behavior to meet environmental demands (Cicchetti et al., 1993). Longitudinal family studies examining a range of psychological and biological variables will further the understanding of resilience to maltreatment, enabling the development of enhanced treatment strategies.

Pharmacotherapy

Efficacy studies of psychopharmacological treatments for abuse-related trauma symptoms utilizing children as subjects are extremely rare. In one of the few studies examining psychotropic medication for the treatment of PTSD in children, Famularo et al. (1988), using a treatment reversal design, found that propranolol lessened hyperarousal and hypervigilance in victims of abuse. Terr (1991) has suggested the use of propranolol or other [beta]-blockers for traumatized children as an adjunct to behaviorally based treatments. Clonidine has also been reported to reduce symptoms of aggression, hyperarousal, and sleep problems exhibited by abused preschool children with severe PTSD (Harmon and Riggs, 1996). It is important to note that the results of both pharmacological studies cited here should be considered with caution. The authors of both studies considered the results as preliminary because of the extremely small subject samples and the utilization of open medication trials. In addition, neither study differentiated between physically and sexual abused subjects.

PREVENTION OF CHILD MALTREATMENT

Efforts at primary prevention of physical child abuse and neglect have focused on targeting at-risk parents, such as teenage parents (Britner and Reppucci, 1997), impoverished single parents (Wolfe et al., 1995), parents expecting their first child (Affleck et al., 1989), substance-abusing parents (Blau et al., 1994), or parents with cognitive limitations (Feldman et al., 1992). Most prevention programs use home visits to provide some basic social support and education concerning normal child development and parenting strategies. The latter may be particularly important because corporal punishment by a parent is associated with later physical abuse by that same parent (Giles-Sims et al., 1995), and corporal punishment has been linked to aggression in children. This increases the probability that physically disciplined children will eventually be aggressive toward their own children (Straus and Kantor, 1994), resulting in the intergenerational transmission of abuse.

The actual rate of transmission of physical abuse from one generation to the next is still debated. Early retrospective reports estimated a high transmission rate, usually between 75% and 100%. However, studies with prospective components find considerably lower transmission rates. Egeland and colleagues (1988) reported that approximately 38% of mothers who experienced severe maltreatment as children physically and/or emotionally maltreated their own children. However, these rates are underestimates to the extent that abuse in either generation goes undetected or unreported. If Egeland and colleagues had included cases of suspected maltreatment, their transmission rate would have been greater than 70%. Overall, the findings highlight the need for prevention efforts to focus on identifying targets of maltreatment and providing services to enhance their parenting skills even before they become parents.

Reviewing home-visitation prevention programs, Olds and Kitzman (1993) concluded that intensive and comprehensive programs are helpful in changing the behavior of parents at risk for perpetrating maltreatment, improving the home environment, and decreasing child behavioral difficulties. There is now some evidence that the benefits of home-visitation programs are durable. A long-term follow-

up of a relatively intense nurse visitation program reported that comparison mothers were almost twice as likely to be reported for child abuse/neglect over a 15-year period compared with high-risk mothers participating in the program (Olds et al., 1997).

A more limited number of studies have examined prevention efforts targeting children directly. These studies indicate that even preschool children can learn and retain concepts such as the definition of physical abuse and how to disclose abuse (Peraino, 1990). The extent to which these concepts generalize to actual abusive situations is generally unknown, although recent studies reported that both a school-based prevention program (Oldfield et al., 1996) and an intensive media program (Hoefnagels and Baartman, 1997) resulted in significantly more abuse disclosures.

An area in need of increased attention, particularly relevant to psychiatry, is the prevention of child emotional maltreatment by parents with psychiatric or substance abuse disorders. Numerous studies have reported that maternal affective or substance abuse disorders are related to parent-child interactions marked by verbal aggression directed toward children and decreased emotional nurturance (Field et al., 1990; Hawley et al., 1995; Radke-Yarrow et al., 1993; Zuravin, 1989). This increased risk for emotional maltreatment may explain the impaired attachment, disruptive behavioral disorders, and affective disorders exhibited by children of depressed mothers (e.g., Teti et al., 1995). Fortunately, interventions developed for mothers with affective disorders have been found to result in lasting improvement in appropriate parent-child emotional interactions (Beardslee et al., 1997) and greater rates of secure mother-child attachment (Lyons-Ruth et al., 1990).

THE FUTURE

Although research on maltreatment prevention for at-risk parents has increased greatly during the last decade, future research efforts will benefit from an increasingly comprehensive view of the etiology of maltreatment and resilience to maltreatment exposure. Ecological theories, which consider maltreatment as the end result of complex interactions among potential risk factors within the abuser (e.g., psychiatric disorder), his/her family (e.g., single-parent families), and their environment (e.g., stress, social isolation), continue to require attention in the designs of future intervention studies (Belsky, 1993).

Another challenge in the coming decade is the implementation of well-designed studies to understand current services utilization by maltreated children and the effectiveness of psychotherapeutic and psychopharmacological interventions according to type of maltreatment. Again, ecological theories that focus on interactions among a large number of risk and resilience factors present within the child, his/her parents, and their sociocultural environment will be important in understanding, preventing, and treating psychopathology in victims of maltreatment. Finally, the toll which child maltreatment inflicts on our society highlights the need for increased resources being made available to support child maltreatment research studies and investigators. Increased support is also needed for the training of child and adolescent psychiatrists and other child mental health professionals in child maltreatment prevention, intervention, and research.

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Key Words: physical abuse; physical neglect; emotional abuse; emotional neglect; research

Section Description

This series of 10-year updates in child and adolescent psychiatry began in July 1996. Topics are selected in consultation with the AACAP Committee on Recertification, both for the importance of new research and its clinical or developmental significance. The authors have been asked to place an asterisk before the 5 or 6 most seminal references.

M.K.D.
