

Social service professionals are more frequently identifying children who witness adult domestic violence as victims of that abuse. This article expands common definitions of how children witness adult domestic violence. A total of 31 research articles that met established quality criteria were included in this review. A variety of behavioral, emotional, and cognitive-functioning problems among children were found to be associated with exposure to domestic violence. Factors that appear to moderate the impact of witnessing violence—such as whether the child was also abused, child gender and age, and the time since last exposure to violence—were identified. Concerns about research methodology used in this area of research and the application of this knowledge also are raised.

Children's Witnessing of Adult Domestic Violence

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Many people have suggested that family violence—at least to the degree it is observed today—is a recent phenomenon. Yet, violence between intimates has long been a part of family life. It has been described repeatedly in religious and historical documents across many centuries, dating as far back as the Roman Empire (Davidson, 1977; Dobash & Dobash, 1979). Some also have argued that current levels of family violence reflect a breakdown in the moral structure of the family (see Levine, 1986). This, too, is unlikely. Rather, as Gordon (1988) suggests, the “ebb-and-flow pattern of concern about family violence . . . suggests that its incidence has not changed as much as its visibility” (p. 2).

Children who witness violence between adults in their homes are only the most recent victims to become visible. These children have been called the “silent,” “forgotten,” and “unintended” victims of adult-to-adult domestic violence (Elbow, 1982; Groves, Zukerman, Marans, & Cohen, 1993; Rosenbaum & O’Leary, 1981). Studies of archived case records from social service and governmental agencies provide ample evidence that violence has long occurred at levels similar to those measured today and that children are

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frequently present during violent incidents (Edleson, 1991; Gordon, 1988; Peterson, 1991; Pleck, 1987).

An understanding of the current literature on how children witness violence and what developmental problems are associated with witnessing violence is an important foundation for program design and policy development. This article focuses on understanding how witnessing violence is defined, what we know about its effects on children, and how such information may be used and misused.

HOW DO CHILDREN EXPERIENCE DOMESTIC VIOLENCE?

Witnessing a violent event is most commonly defined as being within visual range of the violence and seeing it occur. For example, witnesses are often portrayed as giving an "eyewitness account" of a crime. Pynoos and Eth's (1984) studies of children who witnessed the murder of a parent reinforce this definition. One example they offer is,

Julie, a 4-year-old girl, was the only witness to her divorced mother's fatal stabbing. Several months earlier, at the time of the divorce, Julie's father had publicly threatened to kill his ex-wife. . . . Although the father lacked an alibi for the night of the crime, there was no physical evidence linking him to the homicide. . . . In describing the event, she (Julie) consistently placed her father at the scene, described significant portions of the central action, and recounted her father's efforts to clean up prior to leaving. . . . Only after the district attorney saw Julie stabbing a pillow, crying "Daddy pushed mommy down," did he become convinced that the father indeed was the murderer. (p. 100)

A mother in a different study (Syers-McNairy, 1990) describes her daughter's involvement in a violent event this way:

As (my husband) came back in the house and went in the bedroom and got another bullet and loaded the gun again and started to raise the gun, I really think my daughter saved my life right then. . . . I was holding her behind me, and she came out in front of me and put her arms in the doorway like this (demonstrating with her arms outstretched), so as he raised the gun it came right past her. And I reached out and I took her hands down, and her hands were so strong against that doorway. It was unbelievable the strength that was in her arms. I got her arms down, and I turned and grabbed her in my arms and ran out the door. (pp. 105-106)

Pynoos and Eth (1984) suggest that,

At the core of the trauma for the child witness to homicide is a continued intrusion into the child's mind of the central action when lethal physical harm was inflicted: the final blow with a fist, the plunge of a knife, or the blast of a shotgun. (p. 91)

Most children do not witness murders of a parent. Beatings that are not fatal, but are nonetheless brutal, are the types of events that we most commonly think of when children witness adult domestic violence. Peled (1993) provides dramatic testimony of one child witnessing such violence:

I wouldn't say anything. I would just sit there. Watch it . . . I was just, felt like I was just sitting there, listening to a TV show or something. . . . It's like you just sit there to watch it, like a tapestry, you sit there. (p. 122)

Being an "eyewitness" to a violent event is not, however, the only way children describe their experiences. Many children describe very traumatic events that they have not visually observed but, rather, they have heard. One child described hearing fights this way:

I really thought somebody got hurt. It sounded like it. And I almost started to cry. It felt really, I was thinking of calling, calling the cops or something because it was really getting, really big banging and stuff like that. (Peled, 1993, p. 125)

In their national curriculum for child protection workers, Ganley and Schechter (1996) highlight several additional ways that children experience adult domestic violence. These include hitting or threatening a child while in his or her mother's arms, taking the child hostage to force the mother's return to the home, using a child as a physical weapon against the victim, forcing the child to watch assaults against the mother or to participate in the abuse, and using the child as a spy or interrogating him or her about the mother's activities. Children also are frequently told by abusive fathers that their families would be together were it not for their mother's behavior, thus attempting to put pressure on the mother through the children to return to him or driving a wedge between the mother and her children.

In addition to seeing, hearing, or being used in a direct event of violence, some mothers and their children describe the aftermath of a violent event as having a traumatic effect on them. The aftermath can include a mother who is injured and in need of help, a father who alternates between physical violence and loving care, police intervention to remove a father from the home, or moving to a shelter for battered women. One mother, in her account to Syers-McNairy (1990), stated,

It finally started to dawn on me that I was not the only person involved in it when I left on the ambulance. They were so scared. And I thought, they don't really have a dad. . . . And now they're not going to have a mom? (p. 118)

Any definition of witnessing violence must include all of these various ways in which children experience a violent event. Children may see the violence or be used as a part of it, but more often they may hear the violent event and experience its aftermath.

HOW OFTEN DO CHILDREN WITNESS DOMESTIC VIOLENCE?

Prevalence of Witnessing Violence

Estimates vary of the number of children or teenagers who witness one parent abusing another. The two most widely cited statistics are those developed by Carlson (1984) and Straus (1992). Carlson estimated that "at least 3.3 million children yearly are at risk of exposure to parental violence" (p. 160). Her estimate is derived from earlier studies that found approximately 3 million American households experience at least one incident of serious violence each year (Straus, Gelles, & Steinmetz, 1980). Carlson adjusted this finding for the estimated number of households with children (55%) and then multiplied by the average number of children per household (two). Carlson argues that her estimate is likely to be very low for several reasons. First, this number only includes exposure to serious violence, defined as violence likely to cause injury. Second, the Straus et al. study on which Carlson's estimates are based excluded families with children under 3 years of age and families in which the parents were separated or divorced but where violence still may be occurring. Finally, Carlson notes that violence may be somewhat higher in families with fewer economic resources, which also—on average—tend to be larger families.

Straus (1992) has estimated that there may be as many as 10 million teenagers exposed to parental violence each year. His estimates resulted from a survey (see Straus & Gelles, 1990) in which adults were asked "whether, during their teenage years, their father had hit their mother and how often" (p. 98) and vice versa for the mother. Straus found that about one in eight or 12.6% of the sample recalled such an incident, with 50% remembering their father hitting their mother, 19% recalling the reverse, and 31% recalling both hitting the other. Adults recalled an average of 8.9 such violent incidents, with a median of four events.

Straus (1992) goes on to estimate that "at least a third of American children have witnessed violence between their parents, and most have endured repeated instances" (p. 98). He bases this even larger estimate on the fact that in his and Gelles's (1990) national survey, 30% of parents who admitted the existence of adult domestic violence in their home reported that their children had witnessed at least one violent incident over the duration of the marriage.

These findings are supported by two other large studies. Fantuzzo, Boruch, Abdullahi, Atkins, and Marcus's (1997) secondary analysis of police arrest data from five U.S. cities found that children were directly involved in adult domestic violence incidents from 9% to 27% of the time (depending on the city studied) and that younger children were disproportionately represented in households where domestic assaults occurred. Even higher rates of exposure were recorded in Silvern et al.'s (1995) study of 550 college students, which found that 118 (41.1%) of the 287 women and 85 (32.3%) of the 263 men studied had witnessed abuse by one parent against the other.

A national survey directly focused on children's exposure to domestic violence is badly needed. In the meantime, regardless of the way these estimates of children's exposure are derived, it is clear that large numbers of children are exposed to violence between their parents. It is also likely that this exposure occurs more than once and may be present over the course of a child's development.

Discrepancies in Reports

One problem in accurately estimating prevalence or incidence is the dependence on reports of parents or other adults about children's witnessing of violence. There is a belief among some parents that their children are shielded from exposure to the violence. Jaffe, Wolfe, and Wilson (1990) report that many of the parents with whom they have worked believed their children did not "witness" an event, because they were sleeping or playing outside. For example, one mother was quoted as follows:

As far as Martin actually witnessing abuse toward me, a lot of the abuse toward me was either done when the kids were in bed or it was verbal abuse. . . . I tried to keep as much of it away from the kids. I tried to be the role model of the perfect wife and mother as long as they were awake. (Peled, 1993, p. 86)

Jaffe et al. (1990) found, however, that children often provide detailed recollections of the very events they were not supposed to have witnessed. Reports by children and by adults of their childhood experiences suggest that parents

may severely underestimate the degree to which their children are exposed to the violence. For example, O'Brien, John, Margolin, and Erel (1994) found that one in four of the children in a community-based sample reported seeing violence used by one parent against another. More than three fourths (78%) of these children reported seeing violence used by fathers against mothers when at least one parent reported that no violence occurred or that their children had not seen such events.

WITNESSING DOMESTIC VIOLENCE

There is a growing body of literature that has examined the child development problems associated with witnessing varied forms of violence, including relationship discord (Grych & Fincham, 1990; Wallerstein, 1991), community violence and war (Garbarino, Dubrow, Kostelny, & Pardo, 1992), and violence portrayed in the media (Paik & Comstock, 1994). This section, although recognizing these related areas of inquiry, focuses solely on the short- and long-term problems that appear to be associated with children's witnessing of adult-to-adult domestic violence. Adult-to-adult domestic violence is defined here as "an act carried out with the intention, or perceived intention, of causing physical pain or injury" (Straus, 1990, p. 76), in this case, to another adult in the household. Witnessing, as defined earlier, includes multiple ways in which a child is exposed to adult domestic violence, including directly viewing the violence, hearing it, being used as a tool of the perpetrator, and experiencing the aftermath of violence.

Eighty-four studies that report associations between witnessing domestic violence and child development problems were identified. Several authors have produced partial reviews of this literature (see Fantuzzo & Lindquist, 1989; Holtzworth-Munroe, Smutzler, & Sandin, 1997; Jaffe & Suderman, 1995; Kashani, Daniel, Dandoy, & Holcomb, 1992; Kolbo, Blakely, & Engleman, 1996; Margolin, 1998; Peled & Davis, 1995). The purpose of this and the concluding section is to expand on these earlier reviews with the goal of pointing to (a) some clear trends in the types of child development problems associated with exposure to adult domestic violence, (b) some of the significant weaknesses and gaps in current research, and (c) the ways in which such information may be used or misused.

Interpreting this literature raised several problems, based on the research methods applied. First, a significant problem is that many researchers have failed to differentiate abused children from those who are not themselves abused but who do witness domestic violence. Many studies appear to attribute child problems to the "effects of witnessing violence," when, in fact, they

may be more strongly associated with having been a direct victim of abuse. In an extreme example, Kolbo (1996) notes that, of the 60 child witnesses he studied at a nonshelter domestic violence program, all but two were also targets of violence, but the author focused on the effects of child witnessing of violence. As Silvern et al. (1995) have stated, "the relationship between reported partner and child abuse should warn that research could be flawed if it is assumed that shelter samples of children have been exposed solely to partner abuse" (p. 195).

A second issue is that most studies so far published draw on samples of children and their mothers who are located in shelters for battered women. Although this research generates very important information for shelter-based programs, residing in shelters may be a very stressful point in a child's life and not representative of his or her mental health in the long run. Not only have shelter-resident children most likely witnessed a recent violent event, they have also been removed from the familiar surroundings of their homes, neighborhoods, and often their schools.

Finally, almost all studies have relied exclusively on mothers' reports of their children's problems. Studies of reports in other forms of maltreatment reveal discrepancies between child, parent, clinician, and agency ratings of problems. Child witnesses, for example, have been found to differ from parents on the problems they report to researchers (Hughes, Parkinson, & Vargo, 1989; Sternberg, Lamb, & Dawud-Noursi, 1998).

Studies included in this review were evaluated as meeting four criteria that address some of the methodological problems just raised. First, studies must have clearly identified and measured physical conflict separate from other forms of marital conflict. All of the 84 studies were selected to meet this criterion. Second, to be included, a study must have clearly identified and separated physically abused children from those who "only" witnessed adult domestic violence or from those who neither witnessed abuse nor were abused themselves. A large number of well-designed studies—31 in all—were eliminated because they did not separate or control for direct victimization of the children studied. Third, the studies must have employed a research design that (a) compared groups of children who witnessed violence with others; (b) examined differences between children, based on such demographic characteristics as age, gender, or race; (c) statistically compared participants along a constructed continuum of violence exposure; or (d) applied accepted qualitative methods of study. Fourth, studies must have clearly described the sample studied and the measurement procedures employed. Another 22 studies were eliminated for not meeting these additional criteria.

Out of 84 studies originally identified, 31 studies met all of these criteria, with 18 studies being those that compared children who witnessed adult

domestic violence to other groups of children. Another 12 studies did not separate children into comparison groups but, rather, used multiple regression procedures to compare subjects along a continuum of violence exposure or by demographic characteristics. Finally, one applied rigorous qualitative research methodology and was included in the review. Table 1 presents an overview of the studies reviewed. The subsections below present a *selective* overview of the findings from these studies.

Children's Problems Associated with Witnessing Violence

Reviewed studies report a series of childhood problems statistically associated with a child's witnessing of domestic violence. These problems can be grouped into the two major categories examining problems associated with recent witnessing of domestic violence: (a) behavioral and emotional functioning and (b) cognitive functioning and attitudes. A third category of associated problems cuts across the other two and provides evidence of longer-term development issues for child witnesses. Each of these categories of problems is reviewed in more detail below.

Behavioral and emotional functioning. The area in which there is probably the greatest amount of information on problems associated with witnessing adult domestic violence is in the area of children's behavioral and emotional functioning. Generally, studies using the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) and similar measures have found that child witnesses of domestic violence exhibit more aggressive and antisocial (often called "externalized" behaviors) as well as fearful and inhibited behaviors ("internalized" behaviors) (Fantuzzo et al., 1991; Hughes, 1988; Hughes et al., 1989) and show lower social competence than other children (Adamson & Thompson, 1998; Fantuzzo et al., 1991). Children who witnessed violence also were found to show more anxiety, depression, trauma symptoms, and temperament problems than children who did not witness violence at home (Hughes, 1988; Maker, Kemmelmeier, & Peterson, 1998; Sternberg et al., 1993).

Overall, these studies indicate a consistent finding across various samples and differing methodologies that child witnesses of domestic violence exhibit a host of behavioral and emotional problems, when compared to other children. A few studies have reported finding no differences on some of these same measures (Mathias, Mertin, & Murray, 1995; Spaccarelli, Sandler, & Roosa, 1994). One problem in this domain of the research is the overreliance

(text continues on p. 860)

TABLE 1: Summary of Studies Reviewed, Grouped by Type of Study

<i>Comparison Group Studies</i>			
<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
Adamson & Thompson (1998)	112 children from 5.5 to 12 years of age; 40 who witnessed and 72 who did not. Abused children were screened out of study.	Children responded to four audiotaped vignettes that were later coded.	Child witnesses were less likely to use direct problem solving and more likely to use aggression to cope with conflict.
Carlson (1991)	101 children from 13 to 18 years old; 50 who had been witnesses and abused, 6 who had only been abused, 12 who had only witnessed, and 25 who had experienced neither.	Teens were interviewed about quality of peer relationships, depression, anxiety, self-esteem, and self-destructive tendencies. They were also presented with three brief scenarios to which they responded.	Combined effects of being abused and witnessing violence on a teen's well-being were greater than either abuse or witnessing only, and teens who were either abused or witnessed violence showed greater problems compared to those who were not exposed to violence.
Fantuzzo et al. (1991)	107 children from 3.5 to 6.4 years old in four groups: exposed to verbal/physical abuse and living at home, exposed to verbal/physical abuse and living in shelters, exposed to verbal abuse only and living at home, living at home and not exposed to either form of abuse.	Mothers completed a family information form, the CTS, and the CBCL. Children completed the Pictorial Scale of Perceived Competence and Social Acceptance for young children.	Found that different levels of exposure and place of residence were associated with several child problems. Most affected were those who were exposed to verbal conflict and battering and were living in a shelter at time of study.

(continued)

TABLE 1 Continued

Comparison Group Studies

<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
Mathias, Mertin, & Murray (1995)	Two-phased sample in Australia: (a) 79 children aged 6 to 12 years of 52 mothers who had recently resided in battered women's shelters (45 children both witnessed and were abused, 18 only witnessed, 11 were abused but not witnesses, and 5 neither witnessed nor were abused) and (b) 22 of these children matched with control group of 22 children who had not witnessed domestic violence.	Mothers and children completed a battery of measures that included the CBCL, Vineland Adaptive Behavior Scales, Neale Analysis of Reading Ability, Revised Children's Manifest Anxiety Scale, Children's Action Tendency Scale, Adapted CTS, and a Background Questionnaire.	Child witnesses were not shown to differ from nonwitnesses in the group of children who had resided in a shelter. Children who were involved in the violence did show statistically higher levels of problems. In phase two, children witnessing violence were significantly different in terms of behavior problems, social competence, and the tendency to choose aggressive response when compared to children from nonviolent families. No differences were found in anxiety levels.
McCloskey, Figueredo, & Koss (1995)	166 abused women and one of their children between the ages of 6 and 12 years. A community comparison group of 199 women and their children. (Authors noted high level of physical aggression among controls.)	Mothers and target children participated in 2- to 3-hour interviews that included CBCL, Child Assessment Schedule, Brief Symptom Inventory, Parent Perception Inventory, Parental Authority Questionnaire, Graham-Berman's Brother Sister Questionnaire, and the CTS.	Violence appeared to directly influence children's mental health, as reported by the mothers. Families in which mothers were abused were less supportive and when support occurred it appeared to fail to buffer the child.

Miller, Handal, Gilner, & Cross (1991)	Of 254 Black adolescent high school students ranging in age from 14 to 19 years, 108 reported witnessing violence, 12 reported sexual abuse, 8 reported physical abuse, and 4 reported physical and sexual abuse, whereas 214 reported no history of any of these events.	Child Abuse Potential Inventory and demographic questions administered to the students.	Adolescents with a history of both abuse and witnessing violence showed significantly higher scores on the CAP when compared to either the witnessing-only group or those who neither witnessed nor were abused. Adolescents who witnessed violence scored significantly higher on the CAP than those who had neither witnessed nor been abused.
Moore & Pepler (1998)	113 children of mothers residing in shelters for battered women compared to 100 children from two-parent, nonviolent households. Forty percent of the children who witnessed violence also reported being physically abused. Child ages ranged from 6 to 12 years.	Individual and conjoint interviews with the mother and children eliciting demographic data and in which CTS, General Health Questionnaire, CBCL, Wide Range Achievement Test, Digit Span (WISC-R), Children's Locus of Control Scale were completed.	No interaction effects were found between witness-only and witness-abused groups. Mothers' behaviors and mental health played a key role in their children's adjustment. Mothers' reports of using verbal aggression in conflict with their children accounted for the most variance in the prediction of children's adjustment problems. Some mothers, despite horrific abuse, maintained positive parenting strategies with their children and these children were likely to be the best adjusted in the sample of at-risk families. Father-child relationships were not measured.

TABLE 1 Continued

<i>Comparison Group Studies</i>			
<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
O'Keefe (1995)	184 children from 120 families living in shelters for battered women; 64 of whom were identified as having both witnessed adult domestic violence and themselves been abused compared to 120 identified as having only witnessed adult violence.	Mothers and children completed a variety of measures, including the CBCL, CTS, an item on the quality of the parent-child relationship, Marital Adjustment Test, questions concerning alcohol and drug use, and the Emotionality Activity Sociability Temperament Survey. Data on family size, socioeconomic status, and formal and informal supports to the family were also collected.	Children who witnessed abuse and were themselves reported to be abused showed highest levels of problems, scoring significantly higher than children who only witnessed violence. Children only exposed to violence also exhibited elevated scores for internalizing and externalizing behavioral problems. No significant gender effects were found.
Rossman (1998)	400 children, aged 4 to 13 years, from families representing a range of marital discord from mild verbal arguing to severe and repeated marital violence divided into four groups of children coming from (a) nonabusive, nonviolent homes; (b) homes with "low-level" parental violence; (c) shelters and who had witnessed abuse; and (d) shelters and who had witnessed and been abused.	Children and mostly mother reports on the CAP Inventory, Conflict Tactics Scales, demographic questions, the Life Events Questionnaire, CBCL, Peabody Picture Vocabulary Test. Child abuse reports filed with local child protection were also collected.	Data supported greater risk for children both exposed to adult domestic violence and also victims when compared to children only exposed to domestic violence. In general, exposed children exhibited higher levels of PTSD symptoms and somewhat poorer cognitive functioning (observed mainly in the younger children). PTSD symptoms appeared to be a moderator of behavior problems and cognitive functioning contributing to social and school performance.

Spaccarelli, Coatsworth, & Bow- den (1995)	213 male adolescents divided into four groups: "violent offenders," "undetected violent offenders," "deniers," and "control delinquents."	Self-administered interview included self-reports of delinquent behaviors and arrest records, a history of violent acts using the CTS, reports of self-competency and completion of the Attitudes Toward Aggression Scale, and the Children's Coping Strategies Checklist.	Results indicated that physical abuse and inter-adult weapons use at home were independently and together able to predict a youth's level of risk for committing acts of serious violence. Serious violent offenders were much more likely to report exposure to serious physical violence and interadult weapons use. Delinquents exposed to serious violence were found less competent than nonexposed youth in peer relationships, self-control, and autonomy.
Sternberg et al. (1993)	110 Israeli children aged 8 to 12 years and their parents. Sample was divide into four groups: (a) 33 abused children, (b) 16 children who only witnessed adult domestic violence, (c) 30 children who were both abused and had witnessed violence, and (d) a comparison group of 31 children who had neither witnessed nor been abused.	Children completed the Childhood Depression Inventory and Youth Self-Report measures. Parents completed the CBCL.	Abused children and those who were abused and witnessed violence were more likely than children in the comparison group to report depressive symptoms as well as be reported by parents to exhibit internalizing and externalizing behavior problems. Results suggested that the physically abused children were most at risk for clinical depression. Children who witnessed did not report as many adjustment problems as abused or abused-witness children.

TABLE 1 Continued

<i>Comparison Group Studies Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
Sternberg et al. (1994)	Same sample as Sternberg et al. (1993) (see above).	Children completed the Family Relations Test.	Abused and abused-witness groups had more negative perceptions of their abusive fathers. Children in the three violence-exposure groups assigned more negative items to their abusive mothers than children in the comparison group. When fathers were sole perpetrators the discrepancy between number of negative items assigned to fathers and nonperpetrating mothers was much greater than the discrepancies in the comparison group.
Wolfe, Zak, Wilson, & Jaffe (1986)	63 children ages 4 to 13 years and their mothers into three groups: (a) 23 children witnessed violence 6 months or more prior to study, (b) 17 children witnessed violence within 6 weeks prior, and (c) 23 children were never exposed to violence.	Mothers completed CBCL, General Health Questionnaire, Life Experiences Survey, CTS, and provided socioeconomic information.	Time since violent event seemed important in predicting the degree to which children exhibited behavior problems. Children recently exposed to violence showed significantly more behavior problems than others.

Correlation Studies

<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
Jouriles & Norwood (1995)	48 families experiencing marital violence and families with at least two children (one son and one daughter between the ages of 4 and 14 years).	Mothers completed CTS, Parent-Child CTS, and CBCL. Children older than 8 years completed Parent-Child CTS. Indexes of parental physical aggression toward children were included in analyses.	Results indicate that aggression toward children correlated positively with both boys' and girls' externalizing behavior problems. Boys exhibited greater levels of externalizing behavior problems.
O'Keefe (1994a)	121 battered women and 185 of their children residing in battered women's shelters. Children were ages 7 to 13 years. (Likely same data set as O'Keefe, 1994b, c, and 1995, despite discrepancies in number of families/women.)	Mothers completed the CTS, Index A of the Parent-Child CTS, Short Marital Adjustment Test, Family Adaptability and Cohesion Evaluation Scales, CBCL, and self-reported for alcohol/drug abuse, formal and informal social support and SES. Self-Perception Profile for Children also was completed.	Thirty-five percent of the children were reported to have been abused during the year prior to the study. Children experienced significant internalizing and externalizing behavior problems when compared to normative populations. African American children scored significantly higher on the social competence scales than the White or Hispanic children.

(continued)

TABLE 1 Continued

<i>Correlation Studies</i>			
<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
O'Keefe (1994b)	121 battered women and 185 of their children residing in battered women's shelters. Children were ages 7 to 13 years.	Children and mothers participated in interviews. EAS Temperament Survey, Self-Perception Profile, CBCL, School Scale of the Social Competence Scale, CTS, CTS Parent-Child version, Hudson Parent-Child Relationship Scale, Short MAT, FACES III, a social support measure, and information on family size, alcohol/drug abuse, SES, and school performance were gathered.	No significant differences found between racial and ethnic groups on externalizing or internalizing behavior, but levels were escalated compared to normative samples. Domestic violence, alcohol and drug use, and child abuse were all unrelated to racial and ethnic identity.
O'Keefe (1994c)	120 families with 185 children who were residing in shelters for battered women. (Likely same data set as O'Keefe, 1994a, b, and 1995, despite discrepancies in number of families/women.)	Children and mothers participated in interviews. EAS Temperament Survey, Self-Perception Profile, CBCL Social Competence scale, School Scale of the Social Competence Scale, CTS, CTS Parent-Child version, Hudson Parent-Child Relationship Scale, Short MAT, FACES III, Life Event Scale and information on family size, alcohol/drug abuse, SES, and school performance were gathered.	More than 21% had externalized problems of such severity that they fell within the 98th percentile of severe disturbance. Fully 31% scored in the 98th percentile on internalized problems. Boys and girls displayed elevated scores on both externalizing and internalizing behavior problems. For boys, the amount of violence witnessed was a better predictor for behavior problems than parent-child aggression. For girls, the amount of mother-child aggression as well as amount of violence witnessed predicted externalizing but not internalizing behavior problems.

O'Keefe (1996)	935 high school students ages 14 to 20 years.	Students completed Youth Self-Report Summary, Modified CTS and CTS Parent-Child measures, and provided SES information.	The impact of parent-child violence and of witnessing violence on a child's adjustment were inversely related. As parent-child violence increased, the effect of witnessing violence became negligible. As parent-child violence decreased, the effect of witnessing violence increased.
O'Keefe & Sela-Amit (in press)	899 high school students ages 14 to 19 years from diverse backgrounds. Twenty-five percent of all respondents reported they had been kicked, bit, or hit with a fist by a parent and approximately 15% reported that a parent had beaten them up. Over half reported witnessing some form of inter-parental violence. (Same sample as O'Keefe, 1996, despite discrepancies.)	Students completed a Modified CTS-Parent-Child and CTS questions adapted to measure witnessing of adult domestic, school, and community violence, and an SES measure.	Negligible differences were found between racial/ethnic groups on exposure to violence, although overall students showed much higher exposure to violence when compared to national surveys.
Silvern et al. (1995)	550 undergraduate students with 287 women and 263 men.	Students completed a demographic questionnaire, an adapted 17-item CTS focused on witnessing parents' behavior and CTS Parent-Child form, Finkelhor's Child Sexual Abuse Survey, a single item on parental alcohol abuse, BDI, Trauma Symptom Checklist (TSC), Coopersmith Self-Esteem Inventory.	Witnessing violence appeared to be significantly associated to several adult problems among both men and women. However, when controlling for abuse as a child, the effects of witnessing approached but did not reach significance for both men and women.

TABLE 1 Continued

<i>Correlation Studies</i>			
<i>Author/Year</i>	<i>Sample</i>	<i>Measures</i>	<i>Results</i>
Singer, Anglin, Song, & Lunghofer (1995)	At total of 3,735 high school students ranging in age from 14 to 19 years. The sample was 52% female and 48% male.	Students provided demographic information and completed a recent violent behavior survey (had the student engaged in six different violent behaviors in the past year), a recent and past exposure to violence survey, sexual abuse/assault questions, and the TSC.	Having been a recent witness or victim of home violence was strongly associated with total TSC scores and with four subscale scores: anxiety, dissociation, stress, and depression. Exposure to violence at home was consistently greater for females than males.
Singer, Miller, Guo, Slovak, & Frierson (1998)	A total of 2,245 third- to eighth graders, ages 7 to 15 years from somewhat diverse backgrounds (33% African American, 57% White, 5% Hispanic).	Singer's Life Experiences Survey, which measures children's (a) exposure to violence in the home, school and neighborhood settings; (b) incidence of self-reported violent behaviors; (c) effect of violence; (d) exposure to violence & aggressive predatory behaviors; (e) parental monitoring related to violence exposure; and (f) TV viewing and aggressive behaviors.	Violence exposure was strongly related to symptoms of psychological distress. Children who were highly monitored tended to be exposed less to violence and commit fewer acts of violence. Recent victim or witness of violence at home was a significant factor in predicting use of violent behaviors.
Song, Singer, & Anglin (1998)	A total of 3,735 high school students ranging in age from 14 to 19 years. The sample was 52% female and 48% male. (Same sample as Singer et al., 1995.)	Students provided demographic information and completed a recent violent behavior survey (had the student engaged in six different violent behaviors in the past year), a recent and past exposure to violence survey, sexual abuse/assault questions, and the Trauma Symptom Checklist for Children.	For girls, exposure to a knife attack, being a victim or witness of home violence, and being a victim of violence at school were significantly associated with use of violent behaviors. Being a victim or witness of violence at home was not a predictor of violent behavior for boys.

Spaccarelli, Sandler, & Roosa (1994)	303 fourth- to sixth-grade children and their mothers.	Mothers reported on history of physical violence against themselves, various demographic variables, Diagnostic Interview Schedule, and Short MAST. Children self-reported on the CDI, Youth Hostility Scale of the DBCL, and the Self-Perception Profile for Children. Parental reports on the CBCL also obtained for each child.	Child abuse investigations were not associated with the presence of violence against women in this sample. Violence against the mother was only found to be significantly associated with girls' self-reported conduct problems. Violence against the mother accounted for only limited variance in adjustment among children.
Stagg, Wills, & Howell (1989)	26 children between 4 and 6 years old and their mothers.	Mothers provided child intake information upon entrance to a shelter for battered women and completed the CBCL.	Only three children were reported to have been physically abused and witnesses of domestic violence. These children's scores were 1.5 standard deviations above nonabused witnesses in the sample.

Qualitative Studies

Peled (1993, 1998)	14 preadolescent children of 12 battered mothers.	Three to 6 semi-structured interviews with each child with an average of 4 1-hour interviews per child. Mothers were interviewed one time.	Children moved through five phases in their experience of adult domestic violence: (a) living with ordinary fights, (b) witnessing violent events, (c) challenged by mother's public confrontation of the violence, (d) adjusting to new realities in the long-term aftermath of violence, and (e) when violence becomes history.
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NOTE: BDI = Beck Depression Inventory; CAP = Child Abuse Potential Inventory; CBI = Child Behavior Inventory; CBCL = Child Behavior Checklist; CDI = Childhood Depression Inventory; CTS = Conflict Tactics Scale; FACES = Family Adaptability and Cohesion Evaluation Scales; MAT = Marital Adjustment Test; PTSD = Post Traumatic Stress Disorder.

on the Child Behavior Checklist. This measure is a rough gauge of general functioning but was not developed to tap the unique impacts of witnessing violence. Development and use of more sensitive measures of exposure and its impact are badly needed.

A common question asked is whether children exposed to domestic violence go on to commit more violence when compared to other children. Social learning theory would suggest that children who witness violence also might learn to use it. Several researchers have attempted to look at this link between exposure to domestic violence and subsequent use of it. Some support for this hypothesis has been found. For example, Singer, Miller, Guo, Slovak, and Frierson (1998) studied 2,245 children and teenagers and found that recent exposure to violence in the home was a significant factor in predicting a child's violent behavior.

Cognitive functioning and attitudes. A number of studies have measured the association between cognitive development problems and witnessing domestic violence. Although academic abilities were not found to differ between witnesses and other children (Mathias et al., 1995), another study found increased violence exposure associated with lower cognitive functioning (Rossman, 1998).

One consequence of witnessing violence may be the attitudes a child develops concerning the use of violence and conflict resolution. Jaffe, Wilson, and Wolfe (1986) suggest that children's exposure to adult domestic violence may generate attitudes justifying their own use of violence. Spaccarell, Coatworth, and Bowden's (1995) findings support this association by showing that, among a sample of 213 adolescent boys incarcerated for violent crimes, those who had been exposed to family violence believed more than others that "acting aggressively enhances one's reputation or self-image" (p. 173). Believing that aggression would enhance self-image significantly predicted violent offending in this study. It also appears that boys and girls differ in what they learn from these experiences. Carlson (1991) found that, in a sample of 101 adolescents, boys who witnessed domestic violence were significantly more likely to approve of violence than were girls who also had witnessed it.

Long-term developmental problems. Most studies reviewed to this point have examined child problems associated with *recent* witnessing of domestic violence. A number of studies have mentioned much longer-term problems reported retrospectively by adults or indicated in archival records. For example, Silvern et al.'s (1995) study of 550 undergraduate students found that witnessing violence as a child was associated with adult reports of depres-

sion, trauma-related symptoms, and low self-esteem among women and trauma-related symptoms alone among men. Witnessing violence appeared to be independent of the variance accounted for by the existence of parental alcohol abuse and divorce. In the same vein, Henning, Leitenberg, Coffey, Turner, and Bennett (1996) found that, among 123 adult women who had witnessed domestic violence as a child, greater distress and lower social adjustment existed when compared to 494 nonwitnesses. These findings persisted even after accounting for the effects of witnessing parental verbal conflict, being abused as a child, and level of reported parental caring.

There is also some support for the hypothesis that children from violent families of origin carry violent and violence-tolerant roles to their adult intimate relationships (Widom, 1989). For example, Rosenbaum and O'Leary (1981) reported that the male batterers in their study were much more likely than others to have grown up in homes where adult domestic violence was occurring. Most of these men (82%) also were reported to have been physically abused, thus clouding the unique contribution of witnessing domestic violence.

Finally, several authors have reported strong associations between childhood victimization and later adult violent and criminal behavior (Rivera & Widom, 1990; Widom, 1989). Although no adult studies point to such links among child witnesses, violent adolescents were shown to have been seriously physically abused by a parent and to have witnessed weapons violations between adults in their homes significantly more often than were others (Spaccarelli et al., 1995). Witnessing adult violence and being abused, independently and in combination, were significantly associated with adolescents' use of violence.

Factors Moderating the Degree of Problems Associated With Witnessing Violence

Several factors appear to moderate the degree to which a child is affected by witnessing violence. As will be seen below, a number of these factors also seem to interact with each other, creating unique outcomes for different children.

Abused and witnessing children. The selection of only studies that separated or controlled for abused children among their samples highlighted the "double whammy," as it has been called by Hughes et al. (1989), that children witnessing abuse and also being abused experience. Their study compared children who were abused and had witnessed violence to children who had

only witnessed violence and to others who had neither witnessed nor been abused. They found that children who were abused and witnesses exhibited the most problem behaviors, the witness-only group showed moderate problem symptoms, and the comparison group the least. This same pattern appears in a series of other comparison group and correlational studies (e.g., Carlson, 1991; Hughes, 1988; O'Keefe, 1994b; Sternberg et al., 1993). Children seem to agree; for example, in one study children indicated that the experience of being abused or both abused and a witness is more negative from their perspective than witnessing adult domestic violence alone (McClosky, Figueredo, & Koss, 1995). Interestingly, O'Keefe (1996) found that as the level of parent-to-child violence increased, the impact of witnessing violence on a child's adjustment decreased. As parent-to-child violence decreased, the impact of witnessing violence increased.

On the basis of the above review, the combination of being abused and witnessing violence appears to be associated with more serious problems for children than witnessing violence alone. Silvern et al. (1995) found, however, that after accounting for the statistical effects of being abused, adult reports of their childhood witnessing of adult domestic violence still accounted for a significant degree of their problems as children. Silvern and her colleagues suggest that witnessing domestic violence may result in traumatic effects on children that are distinct from the effects of child abuse. O'Keefe's (1996) findings indicate that multiple exposures to violence and victimization appear to interact and alter the degree to which witnessing violence affects children.

Child characteristics. Some findings point to different factors for boys and girls that are associated with witnessing violence. In general, boys have been shown to exhibit more frequent problems and ones that are categorized as externalized, such as hostility and aggression, whereas girls generally show evidence of more internalized problems, such as depression and somatic complaints (Carlson, 1991; Stagg, Wills, & Howell, 1989). There are also findings that dissent from this general trend by showing that girls, especially as they get older, also exhibit more aggressive behaviors (e.g., Spaccarelli et al., 1994). Related to this finding, girls', but not boys', violent behavior was found by Song, Singer, and Anglin (1998) to be predicted by exposure to violence at home.

Children of different ages also appear to exhibit differing responses associated with witnessing violence. Children in preschool were reported by mothers to exhibit more problems than other age groups (Hughes, 1988).

Few studies have found differences based on race and ethnicity. O'Keefe's (1994c) study of White, Latino, and African American families of battered women found that all the children were viewed by their mothers as having serious emotional and behavioral problems. The only difference found between the groups was on social competence; African American mothers rated their children more competent when compared to other mothers' ratings of their own children.

Time since violent event. Consistent with the marital discord literature, children appear to exhibit fewer problems the longer the period of time since their last exposure to a violent event. For example, Wolfe, Zak, Wilson, and Jaffe (1986) found more social problems among children residing in shelters than among children who had at one time in the past been resident in a shelter. The immediate turmoil of recent violence may temporarily escalate child problems observed in a shelter setting.

Parent-child relationship factors. A number of authors have discussed a child's relationship to adult males in the home as a key factor. Peled (1998) suggests that children's relationships with their battering fathers are confusing, with children expressing affection for their fathers and resentment, pain, and disappointment over his violent behavior.

Children's relationships to their mothers also have been identified as a key factor in how children are affected by witnessing domestic violence. Some have conjectured that a mother's mental health would negatively affect a child's experience of violence, but the data are conflicting. McClosky et al. (1995) found, however, that mothers' mental health did not affect a child's response to violence in the home. One apparent problem in the few studies that have examined parent-child relationship factors is an overreliance on measures of the mother-child relationship. Little data exists about father-child relationships in families in which the father or another adult male is violent. Because mothers and children are often more available for study, it is easier to collect data on these relationships, but this unfortunately leads to findings that focus on mothers' problems, rather than the factors that created them. A more careful analysis of the impact of father-child relationships is needed in these families.

Coping Strategies and Child Resilience

To this point, little has been said about how children cope with exposure to domestic violence. A number of authors have pointed to the mechanisms that

children use to cope with violence exposure. For example, O'Brien et al. (1994) found that boys who witnessed physical aggression between parents were less able to deal with simulated family interactions, more likely to report that they would actively intervene in family conflicts, more aroused by simulated conflicts, and less likely to criticize people in the simulated conflicts than were boys from families in which no violence was reported. Spaccarelli et al. (1995) also reported that adolescent boys who had experienced serious physical violence and been exposed to interadult weapons use at home were significantly more likely than others to use aggressive control as a coping strategy.

On the other hand, Jaffe et al. (1990) point out that there are children in their studies who show few negative symptoms, and some even show higher social competence than comparison children. Indeed, several authors have suggested that specific coping strategies may lessen the effects of violence on children. Sternberg et al. (1993) conclude that "perhaps the experience of observing spouse abuse affects children by a less direct route than physical abuse, with cognitive mechanisms playing a greater role in shaping the effects of observing violence" (p. 50).

What are these coping strategies that some children develop to help them better survive exposure to domestic violence? Peled (1993) suggests that child witnesses of domestic violence use what Folkman and Lazarus (1980) call "emotion-focused" and "problem-focused" coping strategies. Emotion-focused strategies are those that a child uses to control his or her own emotional response to events. Peled (1993) found that the children mostly applied this type of strategy, including "wishing the violence away at the time of a fight, reframing and minimizing the violence, forgiving father, and refusing to talk about the violence" (p. 220). Problem-focused strategies that children commonly used were characterized by actions aimed at changing events and were used less often by children in Peled's study. These included children physically distancing themselves from, or inserting themselves into, the violent event.

Holtzworth-Munroe et al.'s (1997) review of the literature also suggests that child problems associated with witnessing domestic violence may be reframed as active coping mechanisms. In their view, children's problems are ways to express negative emotions, receive reassurances, and divert attention from marital problems in the home. There is, however, very little specific research to date that focuses on how child witnesses to adult domestic violence successfully cope with their home environments and what, if anything, can be done to establish and enhance such strategies.

CONCLUSION

Children experience adult domestic violence in many ways. This article has attempted to expand common definitions of how children witness adult domestic violence by showing how children not only see violence but also hear it occurring, are used as part of it, and experience its aftermath. The article also has attempted to convey a sense of the estimated number of American children who witness adult domestic violence. As stated earlier, more inclusive definitions of children's exposure are needed, as are national survey data that result from the direct measurement of the prevalence and incidence of children's exposure to these events.

Primary attention has been given to reviewing findings concerning the complex influences on children's development that are associated with exposure to adult domestic violence. The complexity involves not just problems associated with exposure to violence but also various moderating factors and coping strategies that children use. The current literature offers only glimpses of children's resilience and the factors in their environments that lessen or heighten the impact of the violent events swirling around them. It is these protective factors—about which we know little—that may lead us to design more effective interventions to minimize the impact of violence on children.

Caution must be used when drawing conclusions from the studies reviewed here. These studies all show *associations* between variables, not *cause-effect* relationships. As Holtzworth-Munroe et al. (1997) point out, these studies only show associations between being a witness and some other variable, such as a behavior problem. We generally speak of the "effects" of witnessing violence on children's development. In reality, however, these studies reveal an association between the variables without predicting that one variable caused the other to occur or vice versa.

The complexity of this issue is also emphasized by the multiple related forms of exposure to conflict and violence that children experience, specifically exposure to marital discord, community violence, and media violence. The fragmentation of research studies on these issues leaves us with little knowledge of the combined impact on children of multiple forms of witnessing violence and conflict. We can only hypothesize that the cumulative effects may be devastating for some children.

Another related issue of great concern is how increased awareness of children's exposure and associated problems is being used. Concerned about the risk adult domestic violence poses for children, some child protection agencies in the United States appear to be defining exposure to adult domestic violence as a form of child maltreatment. This assumes children who are

exposed to domestic violence are at risk for harm. The result is that battered women involved with a child protection agency may be fearful of disclosing their own victimization for fear of being separated from their children.

Defining witnessing as maltreatment is a mistake. Doing so ignores the fact that large numbers of children in these studies showed no negative development problems and some showed evidence of strong coping abilities. Automatically defining witnessing as maltreatment also may ignore battered mothers' efforts to develop safe environments for their children and themselves. A careful assessment of the risks and protective factors in every family is necessary before drawing conclusions about the risks and harm to children.

Finally, this review points to the many areas in which we know little about how exposure to adult domestic violence affects children's lives. The overdependence on adult reports, on reports of children in immediate crisis, and on standardized measures that may miss many important factors in a child's life leave many questions unanswered. Although a growing number of excellent studies have been reported, a great deal of work lies ahead in the development of a more sophisticated understanding of how children are affected by their exposure to adult domestic violence.

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