ORIGINAL ARTICLE



Edleson Revisited: Reviewing Children's Witnessing of Domestic Violence 15 Years Later

Ericka Kimball¹

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Abstract A systematic review of literature was conducted using the criteria identified in Edleson's (Journal of Interpersonal Violence, 14(8), 839-870, 1999) article titled "Children's witnessing of domestic violence." Based on the recommendations in Edleson's (Journal of Interpersonal Violence, 14(8), 839-870, 1999) article, four themes were examined in the current research 1) the impact of exposure to domestic violence, 2) the cumulative effects of exposure to multiple forms of violence, 3) potential protective factors that highlight children's resilience, and 4) the father-child relationship. Using similar methods identified in Edleson's (Journal of Interpersonal Violence, 14(8), 839-870, 1999) article, the literature was searched and 46 articles reviewed during the Fall of 2014. The results highlight areas of great success in expanding the understanding of children's exposure to domestic violence to increase identification and prevalence. However, the results found that after nearly 15 years, there has been little advancement in the research literature on emphasizing children's voices in their experiences of domestic violence.

Keywords Children's exposure to domestic violence · Domestic violence · Perceptions of domestic violence

A systematic review of literature was conducted using the criteria identified in Edleson's article titled "Children's witnessing of domestic violence," published in the *Journal of Interpersonal Violence* in 1999. Since its publication, the

Ericka Kimball ekimball@pdx.edu article has been cited over 650 times in various journals. The purpose of this article is to review the current state of research since publication, to explore and critique the advancement in research and knowledge over the past 15 years, and make recommendations for future research.

Summary of Edleson 1999

In his 1999 article, Edleson summarized and synthesized how children witness domestic violence, the effects on children, and the potential benefits and challenges of this information. While it was difficult to assess the prevalence of children's exposure to domestic violence because of the dependence on adult reports of children's experiences, Edleson (1999) noted estimates of 3.3 to 10 million children or teenagers witnessed parental violence a year. Edleson (1999) provided a clear and succinct definition of the way children experience domestic violence that includes not only the direct eye witnessing of adult-to-adult physical violence, but also includes hearing the events and seeing the aftermath. This addition would later be described as *indirect exposure* which refers to "a child's observation of adult domestic violence between others and its aftermath" (Mbilinyi et al. 2007, p. 331).

With a clear definition, Edleson (1999) called for additional research that focused specifically on children's exposure to domestic violence. More specifically, this research should include children's reports of exposure since much of the research to that point had focused on mothers or other adult reports of children's experiences (Edleson 1999).

Effects of Exposure to Domestic Violence

One of the main contributions Edleson (1999) made is the identification and description of the problems associated with

¹ Portland State University, PO Box 751, Mailbox Code: SSW, Portland, OR 97206, USA

exposure to adult-to-adult domestic violence, which is defined in the article as "an act carried out with the intention, or perceived intention, of causing physical pain or injury" (Straus 1979, p. 76 as cited in Edleson 1999, p. 844). The negative effects of child exposure to domestic violence were classified as 1) behavioral and emotional functioning and 2) cognitive functioning and attitudes. Edleson's (1999) review consistently found that children who were exposed to domestic violence demonstrated more externalized (e.g., aggressive) and internalized (e.g., fear, inhibition) behaviors than children who were not exposed to domestic violence. However, Edleson (1999) noted that much of the research conducted depended on the use of the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983 as cited in Edleson 1999), which was not specifically designed to measure the impact of child exposure to domestic violence, but rather measure children's behavioral and emotional problems.

Another finding from Edleson's (1999) review was that exposure to domestic violence may influence children's attitudes toward the use of violence. Specifically, Edleson (1999) noted research that showed boys who were exposed to family violence had more positive attitudes towards violence versus girls who were exposed and boys who were not exposed. Interestingly, Edleson (1999) did not find any research support for differences in academic abilities between exposed and non-exposed but did cite one study (Rossman, 1998 as cited in Edleson 1999) that found an association between exposure and lower cognitive functioning. Longer-term studies reviewed by Edleson (1999) found that children who were exposed to domestic violence continued to show negative effects, including low self-esteem, depression, and increased tolerance for violence.

Moderating Factors

In addition to identifying and describing the negative effects of child exposure to domestic violence, Edleson (1999) also synthesized the potential internal types of moderating factors. One significant contribution to the field is this understanding of the moderating effect of child abuse in relation to exposure to domestic violence. The review noted that children who were victims of child abuse, in addition to exposed to domestic violence, showed more negative behavior than just exposure to domestic violence. Gender also appeared to play a moderating role in the effects of exposure to domestic violence. Edleson (1999) noted that boys generally show more externalizing behaviors, whereas girls demonstrate more internalized behaviors. Furthermore, Edleson (1999) cited research (Song et al. 1998) that found girls who did demonstrate externalizing (i.e., aggressive) behaviors tended to also have been exposed to domestic violence. Finally, Edleson's (1999) review reported mothers of children exposed to domestic violence reported more problems among preschool aged children than children in any other age group. While gender and age appear to have a moderating influence on the negative effects of domestic violence, there were few differences found based on race (Edleson 1999).

Two external types of moderating factors in the effects of domestic violence were also identified. One was the length of time since exposure to the violence—the more recent the violence, the more social problems among children (Edleson 1999). The other moderating factor was the child(ren)'s relationship with their mothers and the adult male batterer. However, Edleson (1999) noted a dearth of information that examined the parent–child relationship. The information that did exist was mostly focused on mother-child dyads, while the examination of father-child relationships was virtually nonexistent.

Coping Strategies

A better understanding of these moderating factors lends some understanding to the coping strategies and resilience among children exposed to domestic violence. For example, boys who were exposed to domestic violence and the use of weapons at home were more likely to engage in aggressive control to cope (Edleson 1999). Furthermore, Peled (1993 as cited in Edleson 1999) found that children exposed to domestic violence often used "emotion-focused" coping strategies, which included minimizing or refusing to talk about the violence, versus "problem-focused" solutions, which included inserting or distancing themselves from the violence. However, in Edleson's (1999) review, very little research had been conducted on understanding the extent to which coping strategies were used to help children endure their exposure to domestic violence.

Moving Forward

Throughout the review and in the conclusion, Edleson (1999) provided some recommendations on future research to advance the understanding of children's exposure to domestic violence. First, Edleson (1999) recommended additional research on the impact of exposure to domestic violence on children. Second, a better understanding of the cumulative effects of violence exposure including community violence, media violence, and marital discord was recommended. Third, additional research of potential protective factors that highlight children's resilience to inform the development of programs that enhance children success to reduce the negative

impacts of domestic violence exposure (Edleson 1999). Finally, Edleson (1999) identified the need for research on the father-child relationship. In conjunction with this, Edleson urged researchers to expand beyond adult reports of children's experiences and children in crisis (or shelter).

With these clear recommendations, and the extensive references to Edleson's (1999) article in the research literature, it made sense to review the current state of knowledge related in this area. The purpose of this review is to assess and critique the literature over the past 15 years and to urge practitioners and scholars to move beyond repetition of current knowledge on the harmful effects of domestic violence towards broadening the understanding of children's experiences of domestic violence. Additionally, this review summarizes the current knowledgebase on children's exposure to domestic violence. Using similar methods identified in Edleson's (1999) article, the literature was searched and reviewed during the Fall of 2014. The results highlight areas of great success in expanding the identification of children exposed to domestic violence and to understand the prevalence of the problem. However, there has been little advancement over the last 15 years on gaining the perceptions of children exposed to domestic violence, understanding father-child relationships, or moving the realm of service provision outside of crisis (i.e., criminal justice or DV shelter) situations.

Method

The inclusion criterion for this literature review is a close replication of the quality criteria from Edleson (1999). To be included in this review, the research article must have been published in a peer reviewed journal, identified and measured physical violence separately from other forms of domestic violence, separated child exposure to domestic violence from child maltreatment, presented a research design that provided a comparison group, and clearly described the sample population and method for sampling. Edleson (1999) also included "acceptable qualitative" methods but did not provide a definition of acceptable methods. Therefore, qualitative research was excluded. Because this review consists of research after 1999, the final inclusion criterion was that the research must have been published after 1999.

A search of Social Service Abstracts, Web of Science, and Google Scholar electronic databases was conducted in June 2013 and again in September 2014 using the following key phrases: "children exposed to domestic violence," "child exposure to domestic violence," and "child witness to domestic violence." A total of 148 different articles were retrieved with these key phrases. Of the 148 articles, 46 appeared to fit the inclusion criteria based on a review of the abstract. After reading the 46 articles, 32 (see Appendix A for a table of the included studies) were identified to fit within the scope of this review. Fourteen of the articles were removed from the review for not fitting the inclusion criteria: qualitative methods (n=2), conceptual paper (n=1), community violence only (n=1), no comparison group (n=3), did not clearly define domestic violence (n=4), and both no comparison and no clear definition of domestic violence (n=3).

Findings

Four themes were examined, assessed, and critiqued based on Edleson's (1999) further research recommendations: 1) the impact of exposure to domestic violence, 2) the cumulative effects of exposure to multiple forms of violence, 3) potential protective factors that highlight children's resilience, and 4) the father-child relationship to assess and critique the advancement of knowledge in these areas. A fifth recommendation made by Edleson (1999) related to the development of measures of children exposure to domestic violence to enhance identification were presented in a 2007 compendium (Edleson et al. 2007); thus, they were not reviewed in this article.

Impact of Exposure to Domestic Violence

Since the publication of Edleson's article, the negative or harmful impact of exposure to domestic violence has been well established in the literature (e.g., see Carpenter and Stacks 2009; Holt et al. 2008; Kitzmann et al. 2003 for full review of the literature). Researchers have clearly identified the harmful psychological impact of domestic violence in childhood. Children who are exposed are at an increased risk for depression, anxiety, and attachment disorders (Cox et al. 2003; Spilsbury et al. 2007; Ybarra et al. 2007). They often demonstrate more behavioral issues including aggression, non-compliance, delinquency, (Cox et al. 2003; Ybarra et al. 2007; English et al. 2009) and symptoms related to posttraumatic stress disorder (Levendosky et al. 2002; Luthra et al. 2009). Children who observed domestic violence more than once also showed to be at greater risk for dissociation than children who only observed one violent event (Spilsbury et al. 2007).

While not as clear as the harmful psychological effects of domestic violence exposure, researchers have examined the notion of intergenerational transmission of violence. Ehrensaft et al. conducted a three-generation, prospective longitudinal study of children (Generation 2, G2), their parents (Generation 1, G1), and generation 2's offspring (Generation 3, G3) testing the relationship between exposure to family violence and risk for developing psychopathology (Ehrensaft and Cohen 2012; Ehrensaft et al. 2003). At 20-years, Ehrensaft et al. (2003) found that exposure to domestic violence tripled the odds of perpetrating violence towards a partner. Their article, published in 2012, found the exposure to G1's domestic violence, G2's history of being physically abused in childhood, and G2's childhood conduct disorders each predicted externalizing behaviors among G3 (Ehrensaft and Cohen 2012).

Additionally, Skuja and Halford (2004) studied 60 Australian couples to assess the association of negative conflict management behavior. Couples were recruited into two categories-30 men who reported being exposed to violence as a child (exposed couples) and 30 men who did not identify as being exposed to violence (unexposed couples; Skuja and Halford 2004). Using the Adapted Conflict Tactics Scale-Dating, this study found 19 of the 30 (63.3 %) exposed couples reported male violence in the last year, and 18 out of 30 (60 %) exposed couples reported female violence in the last year (Skuja and Halford 2004). The unexposed group (6 out of 20 men (20 %) and 9 out of 30 (30 %) women) reported violence in the past year. Furthermore, the exposed couples were more dominating (both male and female), less validating, and showed more negative non-verbal behaviors than the nonexposed couples (the definition of non-verbal behaviors was not provided; Skuja and Halford 2004).

Newer research has started to move beyond the psychological impacts of domestic violence towards the physiological impact of exposure. Rigterink et al. (2010) conducted a study on the relationship between exposure to domestic violence and children's regulatory functioning from a physiological perspective. The researchers found that children exposed to domestic violence had smaller changes in their Vagal tones (VT), which reflect activation of the parasympathetic nervous system over time in comparison to non-exposed children (Rigterink et al. 2010). This finding showed the longer-term impacts of domestic violence exposure on the ability to regulate emotions (Rigterink et al. 2010). In addition, Rigterink et al. (2010) found no differences in the trajectory of baseline VT between genders. While this study had a small, homogenous sample, the findings suggested that additional research is needed on the physiological impact of exposure to domestic violence.

Cumulative Effects of Exposure Multiple Forms of Violence

The co-occurrence of domestic violence and child abuse has also been well established in the literature (Appel and Holden

1998: Cox et al. 2003: Finkelhor et al. 2009: Hamby et al. 2010). The experiences of both domestic violence and child maltreatment are sometimes referred to as the "double whammy" (Hughes et al. 1989 as cited in Silverman and Gelles 2001). The understanding of the cumulative effects of exposure to domestic violence and child maltreatment remain unclear due to varying degrees in research methods, as well as sample population. In 2001, Silverman and Gelles revisited the double whammy by examining data form the Second National Family Violence Study. This study found that children who were exposed to domestic violence were more likely to have behavioral problems when compared to children who were not exposed (X2=12.00, df=1, p<0.001; Silverman and Gelles 2001). Additionally, children who experienced domestic violence and child maltreatment had more behavior problems than those children who experienced either child maltreatment or domestic violence and children who experienced neither (Silverman and Gelles 2001). However, those differences were not significantly different between children who were termed "doubly abused" versus those children who were either abused or exposed to domestic violence except among girls over the age of 7 (Silverman and Gelles 2001). Essentially, they found very little support for double whammy effects.

Yet, a study of community-based children did support the idea that children who experienced both forms of violence had higher scores of externalizing behaviors as reported on the Child Behavior Checklist (Cyr et al. 2006). Additionally, a study by Murrell et al. (2007), examined the difference among 1066 male batterers who as children were exposed to domestic violence (n=84), experienced physical child abuse (n=300), were both exposed to domestic violence and physically abused (n=198), and neither exposed nor abused (n=516). Men who experienced both types of violence perpetrated intimate partner violence more frequently and more severely (Murrell et al. 2007). Non-intimate violence increased with level of violence exposure and those who experienced physical abuse and exposure to domestic violence committed more severe violence (Murrell et al. 2007).

Similar to the results found by Murrell et al. (2007), research by Moylan et al. (2010) and Sousa et al. (2011) found support for the "double whammy." Experiencing direct child abuse and domestic violence were significantly associated with depression and delinquency (Moylan et al. 2010). Both studies examined data from the Lehigh Longitudinal Study to identify the risks among children exposed to domestic violence, children who experienced child abuse, youth exposed to both domestic violence and child abuse, and no exposure to either types of violence (Moylan et al. 2010; Sousa et al. 2011). Being exposed to violence (i.e., child abuse, domestic violence, or both) was predictive of at least one of the risk outcomes (e.g., somatic complaints, anxiety, aggressive behavior, delinquency, depression, etc.) when compared to the youth not exposed to any form of violence (Moylan et al. 2010). Sousa et al. (2011) found a modest significant difference between youth who experience both forms of violence; youth who experienced abuse, youth who were exposed to domestic violence, and youth that did not have any experiences and engaged in felony assault. Experiences of both types of violence increased the odds of violence and delinquency when gender and SES are controlled (Sousa et al. 2011).

A gap remains in the research on the effects of other forms of violence, including media and community. Malik (2008) studied the association between child function and exposure to community and domestic violence in 117 families. The results of Malik's (2008) study found a signification relationship between ethnicity and exposure to community violence. Black children reported significantly more exposure to community violence than Anglo and Hispanic children (Malik 2008). The results of their study found that children with higher levels of reported exposure to community and domestic violence had parents who reported more externalizing behaviors in their children (Malik 2008). Furthermore, teachers reported more aggressive behaviors among children who were exposed to both forms of violence (Malik 2008). There was no association between both forms of violence and internalizing behaviors or depressive symptoms (Malik 2008).

Factors that Highlight Children's Resilience

The research on understanding protective factors that highlight children's resiliency is as elusive as the evidence about the cumulative effects of exposure to multiple forms of violence. The literature suggests ways to minimize and treat exposure to domestic violence, but few focus on identifying and fostering resiliency. Mental health, social support, positive parenting skills, good self-esteem, ability to regulate emotions, and treatment of trauma symptoms have been found to have a positive impact on children exposed to domestic violence (Graham-Bermann et al. 2009, 2011; Martinez-Torteya et al. 2009; Owen et al. 2009), but understanding the role of these in terms of promoting resilience is less clear.

A study by Bogat et al. (2006) found that mothers' symptoms of trauma and severity of violence exposure had a relationship on whether infants who were exposed to violence demonstrated trauma symptoms. However, mothers' reports of depressive symptoms had no relationship with infant response to exposure to violence (Bogat et al. 2006). Interestingly, infant temperament was not predictive of infant trauma symptoms (Bogat et al. 2006). Martinez-Torteya et al. (2009) reinforced the notion of a mother's positive influence on adaptation. Their study found that maternal depression and child temperament were significant predictors for internal and external behaviors among children exposed to domestic violence (Martinez-Torteya et al. 2009). Moreover, research by Johnson and Lieberman (2007) found that mothers who were attuned to their child's anger and sadness were able to prevent the onset of externalizing behavior. Both of these studies reinforce the protective nature of maternal mental health and engagement in children's response to exposure to domestic violence.

Graham-Bermann et al. (2009) examined outcome differences about children who were exposed to domestic violence not living in a shelter and identified variables that might predict adjustment. The 214 children were grouped as those with severe problems (24 %), struggling (45 %), depressed (11 %), and resilient (20 %). There were no statistically significant differences in the amount of violence exposure between the resilient and other clusters (Graham-Bermann et al. 2009). The resilient cluster reported better maternal mental health and parenting skills than the severe and struggling clusters (Graham-Bermann et al. 2009). Additionally, the resilient cluster had higher scores of self-worth and self-competence and lower scores of depression than other clusters (Graham-Bermann et al. 2009). Another important difference between the four groups was that the mothers of children in the resilient group were less likely to have had an abusive partner in the past (Graham-Bermann et al. 2009). This study provides a glimpse into understanding the influence of internal and external factors on children.

In addition to these internal and external protective factors, clinical intervention such as child-parent psychotherapy (CPP), have been found to be effective in improving behaviors among children exposed to domestic violence as well as those who have exposure to multiple forms of violence (Ghosh Ippen et al. 2011). CPP is a manualized treatment developed and available through the National Child Traumatic Stress Network. Children who received CPP showed significant reductions in depression and PTSD symptoms, as well as fewer behavioral problems in comparison to the nontreatment group (Ghosh Ippen et al. 2011).

Father-Child Relationship

Finally, there is a dearth of information on that examines the father-child dyad. Of the two articles reviewed, only one had men as their participants (Dick 2005). This retrospective research study compared the relationship with fathers between men who were exposed to domestic violence and those who were not (Dick 2005). There were significant differences between the two groups. Men who were exposed to domestic violence reported their fathers as less accessible and less involved (Dick 2005). Men who were not exposed to domestic violence also reported their fathers to be more emotionally responsive and engaged in comparison to exposed men (Dick 2005). In addition, the men who were exposed reported that they were more likely to be hit or witness a sibling being hit by their father than men who were not exposed to domestic violence (Dick 2005). Finally, the men in the exposed group were also significantly more likely to use abusive tactics in their interpersonal relationships then men in the non-exposed group (Dick 2005).

The only other study to address fathers, which examined parental representation in play among preschool aged children, was conducted by Smith Stover et al. (2006). Their sample consisted of 40 motherchild dyads. The authors found a significant interaction between gender and number of visits with father in parental representation (Smith Stover et al. 2006). During play, boys who had fewer visits with their father presented their mothers more negatively (Smith Stover et al. 2006). Interestingly, the severity of violence did not have any relationship with parental representation (Smith Stover et al. 2006).

Discussion

Over the past 15 years, it appears the research literature has done well to clearly establish the harmful effects of domestic violence on children, as well as the link between child maltreatment and domestic violence. While there has been some identification of effective treatment programs for some children, there has been little advancement in understanding protective factors, resilience, and the father-child dyad. There are probably many reasons for the continued advancement in some areas and less progress in others. Based on this review, it is surmised that the context in which data were collected on children's experiences of domestic violence likely plays an important role in knowledge development.

There are four recommendations to improve the context of data collection and advance the state of knowledge to the next level. First, improvements can be made by broadening data collection to capture children's experiences of domestic violence rather than focusing solely on their negative behaviors. As recommended by Edleson (1999), many of the research articles reviewed included data collected from children (Edleson et al. 2008; Graham-Bermann et al. 2009; Lam et al. 2009; Luthra et al. 2009; Malik 2008; Moylan et al. 2010; Owen et al. 2009; Rigterink et al. 2010; Smith Stover et al. 2006; Sousa et al. 2011; Spilsbury et al. 2007). However, much of the data collected was behavior-based and not about their experiences of domestic violence. The focus on behavior may help to increase identification of children exposed to domestic violence, but it does little to capture the experience of domestic violence exposure in order to inform policy and programs to better serve this population. In a similar way that the Domestic Abuse Intervention Project (DAIP) used women's experiences to create the "Power and Control Wheel," which helps describe the variations and complexities of domestic violence, allowing children (and adults) to discuss their experience of domestic violence exposure would assist in creating a better understanding of the nuances of domestic violence exposure. This could lead to improved understanding and identifying longand short-term needs of people exposed to domestic violence. Specifically, development of programs and services that identify and foster protective factors in a broader sense to a wider population-not just those with immediate social service connections- would be beneficial.

Second, expanding beyond adult reports of children's experience and the impact of exposure is also important. Despite the wide array of tools available to measure children's experiences through their point of view (see CPICS, CEDV-Scale, TISH, etc.), there is still a dependence on adult reports to classify and identify children exposed to domestic violence. In the 32 articles reviewed there were 54 different measures used, 41 % of them (n=13) used the Child Behavior Checklist. Additionally, 47 % (n=15) used the Conflict Tactic Scale (n=7) or Revised Conflict Tactic Scale (n=8). Both of these measures rely on adult reports of child behavior and exposure to domestic violence. Two measures that were created to capture children's perspectives of violence-Things I've Heard and Seen (TISH; Richters and Martinez 1990) and Children's Perceptions of Interparental Conflict Scale (CPICS; Grych et al. 1992)-were only used by three different studies. Furthermore, the Child Exposure to Domestic Violence Scale (Edleson et al. 2008) was not used in any of the studies reviewed. Again, using adults to capture and report children's exposure to domestic violence fails to capture the variety of ways children experience and are exposed to domestic violence.

Third, it would be helpful to develop measures that can capture the nuances of exposure to domestic violence. Parallel to the overreliance on adults is the use of the same measures that Edleson (1999) noted may not be sophisticated enough to capture the nuanced experiences of children exposed to domestic violence. Many of these measures focus on children's negative behaviors and do not capture any coping strategies or resilience factors. By using measures that focus only on the negative behaviors, researchers restrict understanding to negative behaviors and limit the ability to identify and promote potential protective and resilience.

Ironically, measures that aim to capture children's exposure to domestic violence from a child's perspective focus mostly on concrete events rather than experiences of exposure. For example, Richters and Martinez's (1990) TISH focus on concrete events a child may have witnessed (e.g., stabbing, hitting, etc.). While Edleson et al.'s CEDV Scale does attempt to focus on both events and behaviors (e.g., calling for help, worrying, etc.), it is was not used in any of the research studies in this review. It is also limited by the over reliance on witnessing of physical events, rather than on the more nuanced experiences of living in a home where adult-toadult domestic violence occurs. Grych et al.'s (1992) CPICS seems to have the most questions aimed at capturing an array of children's experiences of domestic violence, including both concrete physical events and potential emotional feelings. However, the feelings portion-like behavior measures-addresses negative feelings focused specifically on blame and guilt children might have. Providing children (and adults) who have been exposed to domestic violence an opportunity to share their experiences using focus groups or interviews could provide valuable information, leading to richer measures.

Finally, the dependence on children in crisis limits the availability of comparative data of children not exposed to domestic violence or children who never received services. All of these issues limit the full understanding of the short- and long-term impact of exposure to domestic violence in childhood. In many of these studies, the sample was obtained through domestic violence service providers, police reports, or other social service agencies. As argued in Edleson (1999), this limits the ability to capture the breadth and depth of children's experiences because women and children who often access these sources have limited resources. Another less discussed concern around this sampling method is that women and children are often enrolled in services as a result of an acute physical battering incident. Of the 32 articles reviewed, 66 % (n=21) defined domestic violence only within a physical context, 25 % (n=8) separated physical violence from other forms of violence (e.g., psychological, verbal), and 9 % (n=3) clearly included physical violence and other forms of violence but did not clearly describe the other forms of violence. While part of the inclusion criteria for this review required a distinction between physical violence and other forms of violence, this criterion did not preclude other forms of violence. As a result, this means that women and children who experience other forms of domestic violence (e.g., psychological, emotional, or financial abuse) are not always captured in the research; which means their voices and experiences are missing from the knowledgebase. Thus, much of the experiences of children's exposure are focused around acute battering incidents, and this fails to grasp the lived experiences of children growing up in homes where the ranges of battering behaviors occur.

Based on this review of literature and the gaps in the current state of knowledge, there is a need for more research in the area of understanding children's experiences of domestic violence and living with a batterer in order to advance the knowledgebase. This includes collecting data from children directly. Furthermore, research should be expanded that adheres more closely to the generally accepted definition of domestic violence. Generally, the definition of domestic violence includes a pattern of abusive behaviors to maintain power and control over an intimate partner (Pence and Paymar 1993), which implies a recurrent way of behaving. Yet research tends to focus on a specific event of violence-mostly physical abuse-as demonstrated by the data collection methods (i.e., measures and population). While there may be arguments about whether to broaden the definition of children's exposure to be more inclusive of domestic violence that includes sexual, psychological, emotional, and economic abuse because of the unintended consequences and implications of a broader definition, a comprehensive approach provides an opportunity to capture the full effects of children's exposure. Using the full definition of domestic violence provides the opportunity to collect data from children about their day-to-day life in order to capture both the negative effects of exposure to domestic violence, as well as identifying key protective factors that promote resilience. This does not need to dilute the experiences of those who are exposed to acute battering incidents, but rather it will help to focus and expand data collection efforts beyond children in crisis to a larger sampling frame. Finally, using this inclusive definition may enhance development of sophisticated measures that fully capture the nuances of children's experiences as recommended 15-years ago by Edleson.

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Appendix

Table 1		Summary information of articles included in review			
Year	Author	Design	Sample Size/Data Source	Measures	Findings
2001	Silverman, A., & Gelles, R.J.	Silverman, A., & Gelles, Secondary data analysis of Second R.J. National Family Violence Survey 1985	3362 adults, living as a couple, and had one child 17years of younger	Conflict Tactics Scale (CTS), caregiver reports of child behavior problems	Found no significant difference between child exposure to domestic violence (CEDV), child abuse (CA), and CEDV & CA, however when age and sex were factored in a complex relationship was found, a "double whammy" effect was found for girls, boy who experience abuse were reported to engage in more aggression than the other 3 groups, girls with CEDV & CA had more reported difficulty with adults
2002	Levendosky, A.A., Huth-Bock, A.C., Semel, M.A., & Sharpiro, D.L.	Face to face interviews with mothers	62 preschool children and their mothers recruited through Head Start, apartments, bus stops, and retail shops	Severity of Violence Against Women Scales, Child Behavior Checklist (CBCL), PTSD- PAC	Mothers reported domestic violence (DV) in the last year, 63% reported their children had witnessing the event, 92% of children had re-experiencing symptom, 47% had a least 1 avoidance symptom, only 1 child met DSM-IV criteria for PTSD using PTSD- PAC, 24% met diagnostic criteria using CBCL, as a whole group all scored higher on externalizing behaviors in comparison to "normal" population, no significant differences between children reported exposed and those who lived in homes where violence occurred
2003	Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, P., Chen, H., & Johnson, J. G.	Secondary data analysis of Children in the Community Study- prospective longitudinal study, data collected in person and telephone based on Wave and location	CIC cohort is randomly selected sample of two New York counties in 1975 (91% Caucasian)	Retrospective self reports of child abuse, Diagnostic Interview Schedule for Children, Structured Clinical Interview for DSM-IV Axis 1 disorders, adapted Disorganized Poverty Interview and other child-rearing behavior, CBCL, Negative Mood Regulation, Berkeley Expressivity Questionnaire, Early Adolescent Temnerment Onsektionnaire	Childhood violence was a predictor for violence in adulthood, conduct disorder was not a significant predictor of violence in adulthood
2004	Skuja, K. & Halford, K.	Quantitative self-report of retrospective experiences and current relationship	60 Couples between the ages of 18–22 with 30 couples with men who reported at least one incidence of father-to-mother violence	Parental Conflict Tactics Scale (adapted version of the Adapted Conflict Tactics Scale), Adapted Conflict Tactics Scale – Dating, Parent-child Behavior Scale, Abbreviated Dyadic Adjustment Scale, Khavari Alcohol Test, Relationship Status Inventory	19 of the 30 (63.3%) exposed couples reported male violence in the last year, and 18 out of 30 (60%) exposed couples reported female violence in the last year
2005	Dick, G.	Retrospective, questionnaire,	104 males aged 19–61 from parenting meetings a Montessori school and BIP	CTS II and Fatherhood Scale	Men who witnessed physical DV were more likely to use abusive tactics, have less nurturing fathers, report more emotional and psychological abuse, and report being victims of child abuse
2006	Bogat, A.G., DeJonghe, E., Levendosky, A.A., Davidson, W.S., & von Eye, A.	Quantitative questionnaire, administered by graduate students	48 mother-infant dyads recruited during a longitudinal study of DV on mother-infant relationships	Toddler Temperament Scale, Severity of Violence Against Women Scale, Beck Depression Inventory, PTSD Scale for Battered Women, Infant Traumatic Stress Questionnaire	44% of infants exposed to DV had at least one trauma symptom, relationship between maternal and infant trauma symptoms, and a relationship between severe and less severe trauma symptoms in
2006	Cyr, M., Fortin, A. & Lachance, L.	3 groups: comparison, CEDV, and CEDV/CA		CTS II, Parent-child Conflict Tactic Scales, CBCL, Revised Children's Manifest	3 groups were significantly different from each other on the CBCL. CEDV/CA group

T ADIA T	r (common)				
Year	Author	Design	Sample Size/Data Source	Measures	Findings
			79 Mother-child (6–12years) dyads from community, mothers needed to have re- ported physical abuse	Anxiety Scale, Short Children's Depression Inventory	had higher mean scores in somatic complaints, socialization, attention problems, and aggression; children's reports found that CEDV only had higher mean scores of depression. The results found little agreement between informants.
2006	Smith Stover, C.S., Van Hom, P., & Lieberman, A.F.	Questionnaire and observation	40 preschool children aged 36–71months and their mothers	CTS-II, Parent-infant relationship global assessment scale, MacArthur story stem battery	Boys with fewer visits with their fathers had more negative maternal representations, girls had more overall positive presentations of both mothers and fathers, severity of violence did not play a predict negative representations of father, severity of violence did not factor into any of the representation variables.
2007a, b	Fantuzzo, J. & Fusco, R.	Secondary data analysis of data collected on all substantiated DVEs in a 1-year period using the Domestic Violence Protocol- Child Enhanced. Population based study	1517 substantiated DV cases	Domestic Violence Events Protocol-Child Enhanced	Children were present for 43% of DV events, 95% of the children were children of the victim, 81% were determined to have experience sensory exposure, 58% heard and saw the DV event
2007a, b	Fantuzzo, J. & Fusco, R.	Se	All domestic violence events (DVEs) 1560 total substantiated	Domestic Violence Event Protocol-Child Enhancement	44% of all substantiated events children were present, 92% were children of the victim, average of approx. 2 children present, 58% younger than óyears old, 81% of the children experienced direct sensory exposure, child exposure was high for substance abuse 48%, major injuries with weapons 49%, and mutual assault 46%
2007	Johnson, V. K. & Liebernan, A.F.	Semi-structured interviews with video taped unstructured play sessions	30 mother-child dyads. Children aged 3– 5years of age	CBCL, CTS-II-Physical Aggression subscale, Parent-Infant Global Assessment Scale, Meta-Emotion Interview, Clinician Administered PTSD scale	No significant differences in reports of internalizing behaviors between boys and girls, no significant difference in frequency or intensity of conflict based on having a son or daughter, children with more adaptive mother-child relationships and mothers were more attuned to sadness and anger reported fewer externalizing behaviors, mothers who reported more frequent and intense physical abuse described more externalizing behaviors, martial violence was not linked to quality of mother-child relationships
2007	Murrell, A., Christoff, K., & Henning, J.	Quantitative study, questionnaire as part of intake forms, completed forms in a group, with a follow up 45min interview, assigned to 4 groups: DV & CA, CA, DV, or None	1099 male batterers (85% African American) arrested for battering and court ordered for assessment at a DV service provider	Police reports, Child Abuse Potential Inventory, CTS, Millon Personality test	Significant differences found between groups. Those would exposed and were abused had participate in more non-intimate violence than others, those who have not experience dv exposure or child abuse had lower scores on CAP, level of psychopathology increased with exposures to violence increase, study found significant difference in 3 of the 5 personality disorders assessed.
2007	Spilsbury, J.C., Belliston, L., Drotar, D., Drinkard, A., Kretschmar, J., Creeden, R.,	Quantitative study with intake done by mental health specialists during family visits	687 children aged 5–17years old in the Children Who Witness Violence Program	Caregiver provided demographic data, Revised Behavior Problem Checklist, Children completed modified Dimensions of Stressful Events, Trauma Symptom Checklist for Children	84% of children saw or heard event, ~9% were also victims, ~8% did not see or hear but witnessed after effects, 55% were exposed to dv more than once, chronicity of events and child fear were significantly

Table 1 (continued)

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Malk NM Parens filled on a questionnaire in a 117 familis finom unten population laboratory CTS-II, CR.L, Things I Have Seem and hormony Puestion instances Fisco, R.A. & Fantzzo, I.W. Secondary analysis of data collected fantzzo, I.W. In a collected from poince reports 19 Fisco, R.A. & Fantzzo, I.W. Secondary analysis of data collected fantzzo, I.W. Domesic Volence Event Protocol-Child for poince reports 43 Fisco, R.A. & Fantzzo, I.W. Secondary analysis of data collected for poince reports 19 Domesic Volence Event Protocol-Child for completed by molders and kill, & Girz, L. 43 Graham-Bernann, S.A. Quantitative questionnaires (includes) 219 molter-child dyads in Michigan, Mostly CBCL, Child Depression Inventory, Harter Fantive Volence State for completed by molders and kill, & Girz, L. Child Depression Inventory, Harter Childer, CIS, Family Fast, and Wortes States, Mohaser Family Assessment Device Child Depression Inventory, Harter Childer, CIS, Family Fast, and Wortes States, Mohaser Family Assessment Device Child Depression Inventory, Harter Childer, States, Mohaser Family Assessment Childer, States, Mohaser Family Assessment Device Child Bepression Inventory, Harter Childer, States, Mohaser Family Assessment Device, Mohaser Family Assessment Device Child Bepression Inventory, Harter Childer, Mohaser Family Assessment Device, Mohaser Family Assessment Bevola, J. Childer, Affective Disorders and Records, J. States, Bebrahle for Affective Disorders and Bevola, J.	2009	English, D.J., Graham, G., Newton, R.R., Lewis, T.L., Thompson, R., Kotch, J.B., and Weisbart, C.	Longitudinal study of child abuse and neglect (LONGSCAN),	Data collected every 2years from child 4– 18years old. Sample is 554 of female caregivers	CTS, CBCL, review of CPS records	Younger caregivers report more IPV, females report perpetrating more IPV, verbal aggression was reported more often, "bilateral" IPV was more frequent, children in homes with bilateral IPV hade worse outcomes
Fusco, R.A. & Faurzzo, J.W. Scondary analysis of data collected from police croots Data collected from police croots 43 Faurzzo, J.W. Franczi, Videore Event after from police croots Enhanced, incluss officer's suraritive of event after interviewing the children completed by mothers and K.H., & Girz, L. Data fraction fraction fraction fraction fraction completed by mothers and from community and not in a shelter preserved fraction fraction fraction completed by mothers and K.H., & Girz, L. 219 mother-child dyads in Michigan. Mostly fraction fraction completed by mothers and from community and not in a shelter preserved fraction completed by mothers and fraction fraction fraction completed by mothers and k.H., & Girz, L. 19 Grathan-Bernam, S.A. Quantitative questionmaines completed by mothers and fraction fraction completed by mothers and k.H., & Girz, L. 219 Grathan-Bernam, S.A. Quantitative questionmaines completed by mothers and fraction community and not in a shelter fraction fraction fraction fraction fraction fraction fraction fraction fractin fractin fraction fractin fraction fractin fractin fraction frac	2008	Malik, N.M	Parents filled out a questionnaire in a laboratory	117 families from an urban population recruited from 2nd to 6th grade elementary school must be two parent family	CTS-II, CBCL, Things I Have Seen and Heard (read to the children), Children Depression Inventory	Parents and teachers reported higher externalizing behaviors with children exposed to both community and domestic violence, higher levels of internalizing behavior only with exposure to community violence, children reported had higher scores on CD1 with community violence but not domestic violence
Graham-Bernam, S.A., Quantiative questionnaires 219 mother-child dyads in Michigan. Mostly CBCL, Child Depression Inventory, Harter Ch Gruber, G., Howell, completed by mothers and from community and not in a shelter Precreated Self-Competence Self-Self-Self-Competence Self-Competence Self-Competence Self-Competence Self-Self-Self-Competence Self-Competence Self-Self-Self-Self-Self-Self-Self-Self-	2009	Fusco, R.A. & Fantuzzo, J.W.	Secondary analysis of data collected from police reports		Domestic Violence Event Protocol–Child Enhanced, includes officer's narrative of event after interviewing the children	43% of all DV events had children in the household, 22% of the children heard the event, 4% saw the violence (watched from a distance, 60% heard and saw the violence, 3% were physically injured, 94% of the victims were the child's mother, if the perpetrator and victim were co- parenting the children was nearly 3× more likely to be directly exposed
Luthra, R., Abramovitz, 157 children aged 8–17years old in NYC Kiddie Schedule for Affective Disorders and 88' R., Greenberg, R., Schoor, A., & Schoor, A., & Newcom, J.	2009	Graham-Bermann, S.A., Gruber, G., Howell, K.H., & Girz, L.	б́	219 mother-child dyads in Michigan. Mostly from community and not in a shelter	CBCL, Child Depression Inventory, Harter Perceived Self-Competence Scales for Children, CTS, Family Fears and Worries Scales, Beck Depression Inventory, Anxiety and Parental Childrearing Styles Scales, McMaster Family Assessment Device	Children with the most "severe" problems also scored higher in internalizing, externalizing, and depressor scores, but had moderate levels of Social competence and self worth. "Struggling" children did not have significant internalizing, externalizing, or depression problems, but had low scores on the Global Self Worth and Social competence measure. "Depressed" children had highest depression scores, lowest internalizing and externalizing acores, lowest internalizing and externalizing actores, lowest internalizing and externalizing and rooterate levels of social competence. "Resilient" children higher levels of self worth and social competence, lower levels of depression, and second lowest scores on internalizing and externalizing acores. Children in the severe category were exposed to more violence and mothers with poorer mental health and parenting.
	2009	Luthra, R., Abramovitz, R., Greenberg, R., Schoor, A., & Newcom, J.		157 children aged 8–17years old in NYC metro area	Kiddie Schedule for Affective Disorders and Schizophrenia	88% reported exposure to at least one traumatic event, type of exposure was related to PTSD symptoms, CEDV was significantly related to the number of

Year	Author	Design	Sample Size/Data Source	Measures	Findings
2009	Owen, A.E., Thompson, M.P., Shaffer, A., Jackson, E.B., & Kaslow, N.J.	2-3 h administration of a measure. All given verbally	139 African-American mother-child dyads, recruited from medical clinks, battered women shelters, and community based rehab scepters, children 8–12yeans old, 77 male and 62 female children and their mothers	Mini-Mental, Rapid Assessment of Adult Literacy in Medicine, Peabody Picture Vocabulary Test-3rd Edition, Index of Spouse Abuse, Childen's Perception of Interparental Conflict Scale, CBCL, Youth Self Report, Symptom Checklist-90, Family Adaptability and Cohesion Evaluation Scales, Relatedness Duestionnaire	PTSD symptoms, CEDV was significantly related to diagnosis of PTSD Family adaptability did not mediate association between IPV and children's psychological adjustment, children's perceptions of family to cohesion did mediate some part of children's perceptions of interparental conflict, it did not mediate the role of inteparental conflict and adjustments
2009	Martinez-Torteya, C., Bogat, A., von Eye, A., & Levendosky, A.A.	Longitudinal study from pregnancy to 4years old	190 children and their mothers who were part of a larger study	14-tiem verbal and physical aggression scales of the CTS, Severity of Violence Against Women Scales, CBCL, Parent Behavior Checklist, Carey Temperament Scales, Peabody Picture Vocabulary, Beck Depression Inventory, Life Experiences Survey	Longer exposure did not significantly increase the likelihood of negative adaptation, positive adaptation is common, dv increases internalizing and externalizing behaviors, mixed results of frequency, duration, and trajectories as predictors of adaptation
2010	Hamby, S., Finkelhor, D., Turner, H., & Ormrod, R.	random digit dial in United States	4549 children aged 0–17, caregiver interviewed for children under 10 and children 10–17 were interviewed	Juvenile Victimization Questionnaire	Witnessing partner violence overlaps with child maltreatment, identifies clusters of victimization
2010	Moylan, C.A., Herrenkohl, T.I., Sousa, C., Tajima, E.A., & Herrenkohl, R.C.	Longitudinal study of children receiving services, head start, day care, nursery schools,	3 waves of interviews in childhood/ adolescence and 1 as adult, 457 children from 297 families	official records, parent reports, and retrospective reports of violence, Achenbach Youth Self Report, Beck Depression Inventory, Delinquent Inventory	gender significantly predicted outcomes except for BDI, females more externalizing, males more externalizing, DV exposure significantly related to withdrawn scores, BDI, and delinquency, also anxious, and internalizing, dual exposure was significantly predictive of somatic complaints, more risk for internalizing and externalizing among dual exposed
2010	Rigterink, T., Fainsilber Katz, L., & Hessler, D.M.	longitudinal study of children at age 5 and age 9,	130 families through MD offices, schools, and advertising	Eyberg Child Behavior Inventory to include, Parents completed questionnaire at home: CTS, Locke-Wallace Marrial Adjustment Test, in lab measure interbeat interval using EKG	changes in vagal tone over time were found between dv and non-dv exposed children suggesting that dv possibly affects the development of children's internal regulatory abilities which affects the emotional regulation
2011	Ghosh Ippen, C., Harris, W.W., Van Horn, P., & Lieberman, A.F.	Randomly assigned to CPP or comparison group which received case management	Dyads of 39 girls and 35 boys aged 3–5years old and mothers who reported exposure based on Conflict Tactic Scales 2	Screening survey of Children's Exposure to Community violence–Parent Report, Semi structured interview for diagnostic criteria 0–3, Clinician Administered PTSD Scale, Symptoms Checklist-90 Revised, CBCL	41% 3 TSE, 46% 4+TSE, those with 4+ TSE had more PTSD and depression symptoms, more behavior problems, CPP was found to significantly reduce symptons of PTSD, depression, and co-occurring diagnoses, some effects on behavior among those 4+ TSE, those with fewer than 4 had no significant treatment effects when compared to the non-treatment group
2011	Graham-Bermann, S.A., Howell, K.H., Lilly, M., & DeVoe, E.	Quantitative, random assignment	Mothers of 180 children who participated in Kids Clun and Moms Parenting Empowerment groups in Michigan	CTS, CBCL Beck Depression Inventory, Anxiety and Parental Childrearing styles, and Posttraumatic Stress Scale for Families	The number of sessions attended predicted better child adjustment. No changes in parenting skills found. Change in mother's mental health was not significant in improving child adjustment.
2011	Sousa, C., Herrenkohl, T.I., Moylan, C.A., Tajima, E.A., Klika,	Data from Lehigh Longitudinal Study	Began in 1976 with children 18months to 6yeans, first wave N =457 from child welfare programs, Head Start centers, and	Official records of substantiated abuse, mother's reports of discipline, and retrospective reports of discipline,	Differences found between exposed group and non-exposed group, but risk of outcomes with dual exposure not clear

Table 1 (continued)

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Year	Author	Design	Sample Size/Data Source	Measures	Findings
	J.B., Herrenkohl, R.C. & Russo, M.J		child care programs, second wave was 4years later $n=416$ of the original children	dichotomous dv exposure—physical violence, threats of physical harm, and breaking things, Armsden and Greenberg's IPPA self remort of antisocial hehavior	different with single exposure-nearly the same risk outcomes.
2012	Ehrensaft, M.K. & Cohen, P.	Secondary data analysis of Children in the Community Study– prospective longitudinal study, data collected in person and telephone based on Wave and location	CIC cohort is randomly selected sample of two New York counties in 1975 (91% Caucasian)	Retrospective self reports of child abuse, Diagnostic Interview Schedule for Children, Structured Clinical Interview for DSM-IV Axis I disordens, adapted Disorganized Poverty Interview and other child-rearing behavior, CBCL, Negative Mood Regulation, Berkeley Expressivity Questionnaire, Early Adolescent	There is a significant association between family violence and its influence on antisocial behaviors across generations, parenting was a not a significant moderator of IPV on children's externalizing behaviors, parenting practices were significantly related to IPV in terms of parental satisfaction (i.e., lower satisfaction
2014	Petering, R., Rice, E., Rhoades, H., & Winetrobe, H.	Computerized survey with audio assistance	406 homeless youth (13-25 years) from two homeless youth drop in centers	l emperament Questionnaire Adapted Youth Behavioral Risk Study	among uose reporting IPV) Childhood trauma was related to females' number of friends, those who has witnessed family violence had more friend but those who experience sexual abuse had fewer, IPV not related to males' friends, but age did-older males had fewer friends

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