A Critical Review of Quantitative Analyses of Children Exposed to Domestic Violence: Lessons for Practice and Research

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Increased recognition of the unique needs of children exposed to domestic violence (CEDV) is evidenced by the evolving knowledge base on this issue. The breadth of quantitative research that exists has laid a foundation upon which to build effective time-limited intervention strategies. Still, intervention research in this area has yet to move toward advanced practice models. Definitional and methodological limitations have also impeded knowledge advancement. This paper uses a novel approach to critically review 5 quantitative meta- and mega-analyses on the effects of childhood exposure to domestic violence. Research and practice implications derived from these quantitative analyses that may assist child welfare professionals, domestic violence advocates, and researchers interested in providing effective intervention and services to CEDV are discussed.

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KEY WORDS: children, domestic violence, child abuse, maltreatment, critical review.

Children exposed to domestic violence (CEDV) are increasingly a subject of interest to practitioners and researchers (Holden, 2003; Jaffe, Crooks, & Wolfe, 2003; Saathoff & Stoffel, 1999). Heightened recognition of the unique needs of this population is evidenced by the evolving knowledge base and the exponential increase in the amount of research on the topic of how domestic violence exposure affects children (Grych, Fincham, Jouriles, & McDonald, 2000; Holden, 2003). Four meta-analyses, for example, of the effects of childhood exposure to domestic violence were conducted between 2003 and 2005. Two are dissertations (Davies, 2005; Jacobus, 2005) and two are published in peer-reviewed journals (Kitzmann, Gaylord, Holt, & Kenny, 2003; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Even more recently, Sternberg, Baradaran, Abbott, Lamb, and Guterman (2006) conducted a “mega-analysis” (e.g., combining raw data from 15 studies to increase power) on the topic. The breadth of substantial quantitative research that exists has laid a foundation upon which to build effective intervention strategies. Still, intervention research in this area has yet to move toward more advanced models of treatment, services, and program evaluation. Definitional and methodological limitations have
also impeded advancements in knowledge and intervention.

In an effort to move the current state of knowledge forward, this paper critically reviews prominent recent quantitative analyses on CEDV. An overview is presented of the five quantitative analyses conducted since 2003 (e.g., four meta-analyses and one “mega-analysis”) reviewing the effects of childhood exposure to domestic violence (Davies, 2005; Jacobus, 2005; Kitzmann et al., 2003; Sternberg et al., 2006; Wolfe et al., 2003), noting similarities and differences in methods and results. Future directions are discussed for research and lessons for direct practice derived from these quantitative analyses that may assist child welfare professionals, domestic violence advocates, and researchers interested in providing effective services for this population.

Finding Common “Practice” Ground: Domestic Violence and Child Welfare

In the early years of the battered women’s movement, advocates began to recognize that meeting the needs of women also required serving their children (Saathoff & Stoffel, 1999). According to Edleson (2001), data from several states indicate that children make up the majority of shelter residents. The needs of these children have gradually become more prominent in their own right among service providers focused on domestic violence (Saathoff & Stoffel, 1999).

At the same time, awareness of co-occurring child maltreatment and domestic violence has grown among both practitioners and researchers (Appel & Holden, 1998; Edleson, 2001). Some state child welfare agencies have developed special protocols for handling cases of co-occurring maltreatment and domestic violence, and the state of Massachusetts has had a special unit devoted to domestic violence for many years (Family Violence Prevention Fund, 2002). The ruling in favor of the plaintiff in the Nicholson v. Scoppetta lawsuit against New York City’s Administration for Children’s Services, which held that the agency was violating the rights of mothers when they removed children because the mother was a domestic violence victim, has prompted policy changes in New York and elsewhere (Family Violence Prevention Fund, 2002). There continues to be debate about the concept of a mother’s “failure to protect” her children in domestic violence cases.

Recognition has also increased among practitioners that families experiencing domestic violence and child maltreatment encounter fragmented service delivery systems whose goals are sometimes at odds, and whose staff members may view the other systems unfavorably (Cowan & Schwartz, 2004; Radford & Hester, 2006; Schecter & Edleson, 1995). Calls for more community coordination among systems serving these families have subsequently increased. Promising initiatives such as the “Greenbook” recommendations, published by the National Council of Juvenile and Family Court Judges, have emerged with preliminary evaluation underway (Greenbook National Evaluation Team, 2004; Schecter & Edleson, 1999; Sullivan & Allen, 2001).

In the research literature, definition and measurement of childhood exposure to domestic violence vary widely, with both narrow and broad definitions for the meaning of key terms, such as “exposure,” and “violence” (Jouriles, McDonald, Norwood, & Ezell, 2001). Earlier research, for example, has referred to child “witnesses” of domestic violence, and terms such as “marital violence” and “intimate partner violence” are also used in this literature but are operationalized differently across studies. These definitional and measurement variations lead to a large range in the estimated incidence of children’s exposure to domestic violence, from 3.3 million to 10 million children annually (Edleson, 1999; Jouriles et al., 2001).
**Theoretical Perspectives on the Effects of Childhood Exposure to Domestic Violence**

Several theories have been mentioned as useful in conceptualizing how exposure to domestic violence might affect children. Critics have noted, however, that a sound theoretical base is lacking overall in the research literature on CEDV (Holden, 2003; Kitzmann et al., 2003; Prinz & Feerick, 2003; Sternberg et al., 2006; Wolfe et al., 2003).

Social learning theory, which highlights the importance of observational learning in development, provides one framework for understanding family violence and CEDV effects (Appel & Holden, 1998; Jacobus, 2005). A child’s observation of aggressive behavior in the home, for example, may contribute to externalizing behavior exhibited by the child. Developmental psychopathology and trauma theory are considered useful frameworks (Sternberg et al., 2006; Wolfe et al., 2003) including in terms of their explanation of moderators and potential risk and protective factors. For example, the developmental stage at which a child is exposed to domestic violence has been explored within these frameworks as a potential moderator of effects. Neurological trauma effects have also been studied in CEDV, who have been found to have higher levels of salivary cortisol and elevated heart rates in comparison to children not exposed to domestic violence (Saltzman, Holden, & Holahan, 2005). Levendosky and Graham-Bermann (2001) have proposed and tested an integrated model combining an ecological framework with trauma theory to understand how domestic violence influences child adjustment. Specifically, their model including environmental factors (e.g., social support, maternal history of child abuse, negative life events) predicted 40% of the variance in children’s adjustment.

Several analysts who have reviewed the empirical studies of the effects of domestic violence exposure in particular cite the utility of cognitive-contextual model of Grych and Fincham (1990) (Kitzmann et al., 2003; Sternberg et al., 2006; Wolfe et al., 2003). In the cognitive-contextual model, the child’s appraisal of the conflict she/he is exposed to is considered a mediator of the relationship between the exposure and the child’s adjustment, particularly in regard to internalizing problems such as anxiety and depression (Grych & Fincham, 1990; Grych, Fincham, et al., 2000). Relevant appraisals include the child’s perception of the level of threat, level of self-blame, and her/his ability to cope with the conflict.

**Overview of Effects of Childhood Exposure to Domestic Violence**

Empirical research has been conducted to determine whether exposure to domestic violence impacts the behavioral, emotional, academic, and social adjustment of children. Research has indicated that childhood exposure to domestic violence is generally associated with internalizing and externalizing behavior problems, posttraumatic stress symptoms, and other possible negative outcomes such as lower social competence and lower academic achievement (Davies, 2005; Jacobus, 2005; Kitzmann et al., 2003; Sternberg et al., 2006; Wolfe et al., 2003). For some outcomes, such as posttraumatic stress disorder (PTSD), the number of methodologically sound studies is still too small to offer definitive conclusions. It is also important to note that some children do not suffer clinically significant negative effects, whereas others do (Grych, Jouriles, Swank, McDonald, & Norwood, 2000; Hughes, Graham-Bermann, & Gruber, 2001). Prospective and retrospective studies indicate that childhood exposure to domestic violence can have negative long-term effects, particularly in terms of intimate relationships (Ehrensaft et al., 2003; Groves, 1999).
Research results on the topic have been inconsistent in regard to potential moderators of the relationship between exposure and negative outcomes. Many studies, for example, do not find gender differences in child adjustment, whereas some studies do. Other proposed mediators may indirectly influence child adjustment, such as maternal stress, although the direction of effects is uncertain (Graham-Bermann & Hughes, 2003). To date, researchers have not yet consistently identified specific risk and protective factors that may explain different outcomes for different children.

Differences in definitions and operationalization also present challenges for developing a clear understanding of how children are affected by domestic violence. Holden (2003) proposed a taxonomy of types of exposure, identifying 10 distinct types appearing in the literature (e.g., eyewitness, experiences the aftermath, victimized, ostensibly unaware). The relationship between frequency of violence exposure and outcomes has also begun to receive attention, with indications that greater frequency is associated with greater levels of maladjustment. One study of 228 children (ages 8–14) residing in a shelter found that frequency of exposure to father’s aggression in domestic violence situations contributed to the severity of negative effects for children in a “dose-effect model,” especially in terms of internalizing behaviors (Grych, Jouriles, et al., 2000, p. 91).

This paper examines the effects on children of exposure to domestic violence and key moderators of these effects across the five quantitative analyses conducted from the large body of research on CEDV, highlighting similarities and differences in these analyses. It is important to note that each of these quantitative studies contributes valuable information independently; hence, the purpose of a meta-analysis is to quantitatively summarize a body of empirical research on a particular topic. Yet, the varying effect sizes of these analyses present a challenge for “true” quantitative comparison. A critical review of these meta-analyses (conducted over a relatively short period of time and all within a 3-year time span) deconstructs their breadth and increases understanding of the sometimes inconsistent literature in this area and its impact on practice.

**Methodology**

The fact that two meta-analyses with varying results on the topic of effects of childhood exposure to domestic violence were recently published in the same year (Kitzmann et al., 2003; Wolfe et al., 2003) was the impetus for this critical review. A comparison of these results with subsequent quantitative reviews was conducted. To identify additional meta-analyses for inclusion in this review, a systematic search was done in Spring 2006 to determine if additional meta-analytic reviews had been completed on the topic since 2003. Keyword searches of electronic databases were conducted, including PsycARTICLES, Psychology and Behavioral Sciences Collection, PsycEXTRA, and PsycINFO. These databases include peer-reviewed journals and the latter two include unpublished sources such as government reports, dissertations, technical reports, book chapters, and reviews.

All searches included the keywords “children” and “meta-analysis,” together with one of the following terms: domestic violence, intimate partner violence, family violence, interparental violence, battered women, or marital violence. The search identified 10 discrete bibliographic references. Abstracts were reviewed to determine if the references identified met the following inclusion criteria the authors had established: (a) it was an original meta-analytic review focusing on the effects of exposure to domestic violence on children and (b) it was dated 2003, or was more recent.
than 2003. Publication status was not part of the inclusion/exclusion criteria in efforts to avoid publication biases (Petrosino, Boruch, Rounding, McDonald, & Chalmers, 2000), and based on research supporting the rigor of dissertation methodology for inclusion in reviews (McLeod & Weisz, 2004). Based on review of the 10 abstracts, six of the references were excluded because they did not meet the predetermined inclusion criteria. (See Appendix A for a list of the six identified bibliographic references that were excluded.)

Four meta-analyses were identified for inclusion in this review (Davies, 2005; Jacobus, 2005; Kitzmann et al., 2003; Wolfe et al., 2003). Two were published in peer-reviewed journals (Kitzmann et al., 2003; Wolfe et al., 2003) and two were dissertations (Davies, 2005; Jacobus, 2005). At this point in the search, an expert in research on children and domestic violence was consulted to ensure that the search for recent meta-analyses had been comprehensive. He identified a different type of quantitative analysis, a mega-analysis, that had recently been published on the same topic (Sternberg et al., 2006). The mega-analysis was reviewed by the authors, who determined that its inclusion would augment comparison of the four meta-analytic reviews. A second search was then conducted using the same keywords described above, but replacing the term “meta-analysis” with “mega-analysis.” No additional mega-analyses on the same topic were identified.

The five quantitative analyses that had been identified were then reviewed (Davies, 2005; Jacobus, 2005; Kitzmann et al., 2003; Sternberg et al., 2006; Wolfe et al., 2003). The complete dissertations were obtained online via ProQuest Dissertations and Theses. An effort was made, described below, to determine the level of independence and overlap of the five analyses in terms of the studies included in the underlying data sets. The review of the five analyses then entailed examination of inclusion and exclusion criteria for studies in the underlying data sets, examination of similarities and differences in their overall findings, and similarities and differences in their specific findings related to potential moderating variables.

Results

Two dissertations were located that were completed on the same topic even more recently (Davies, 2005; Jacobus, 2005) than the two published meta-analyses (Kitzmann et al., 2003; Wolfe et al., 2003). The number of studies included in the data sets for each of the four meta-analyses ranged from 36 (Jacobus, 2005) to 118 (Kitzmann et al., 2003). A meta-analysis is a method of quantitatively summarizing empirical research on a topic by first selecting all previously conducted studies that meet predetermined inclusion criteria and then calculating the strength of the relationship between the independent variable (e.g., exposure to domestic violence) and the dependent variable (e.g., child adjustment) across all studies (Rubin & Babbie, 2005). The meta-analysis yields a mean “effect size” to describe the strength of the relationship between the variables being studied and is considered a useful way to quantitatively summarize a body of empirical research. Effect sizes may be described as small, moderate, or large.

Included in this paper’s review of these quantitative analyses, Sternberg et al. (2006) conducted a “mega-analysis.” According to Cialdini and Fultz (1990), mega-analysis methodology was developed by Carlson and Miller in 1987 as a method of reviewing existing research. The mega-analysis of Sternberg et al. examined the role of three variables in predicting behavior problems: type of family violence, age, and gender. Their mega-analysis methodology entailed contacting many researchers
who had studied the topic using the same outcome measure, Achenbach’s Child Behavior Checklist (Achenbach, 1991, as cited in Sternberg et al., 2006). Upon request, the original, raw data from 15 studies were forwarded to Sternberg et al. by researchers around the country (out of 24 potential studies approached for inclusion). The resulting large sample of individual subjects ($N = 1,870$) increased their power to detect effects of these three variables on internalizing and externalizing behavior: age, gender, and the type of violence the child experienced or was exposed to in the family. Similar to the meta-analyses, they also examined interaction effects among these variables and the role of variables related to research methodology. Hierarchical logistical regressions were used to ascertain which variables were associated with an increased probability of a child falling into the clinical or nonclinical range of externalizing and internalizing behaviors.

As noted previously, steps were taken to gauge the independence of the five analyses in terms of overlapping studies in the underlying data sets. Each meta-analysis lists citations for studies included that were manually compared across the four meta-analyses. There are 77 citations that each only occurred once across all four meta-analyses; 55 of these were in the study of Kitzmann et al. (2003). Six citations were common across all four meta-analyses. The meta-analysis of Wolfe et al. (2003) was the only study that did not have any unique citations, with shared citations across all three other meta-analyses, including 33 in common with that of Kitzmann et al. Davies (2005) listed 14 unique citations, and Jacobus (2005) listed 8 unique citations. Although it was not possible to compare the mega-analysis citations in the same way because of how the raw study data were pooled and cited, it is apparent that many of the names of the 13 researchers acknowledged by Sternberg et al. (2006) for providing data also appear among the citations included in several of the meta-analyses. This comparison of similarity of citations across meta-analyses provides only a rough gauge of crossover among the underlying data sets because it is not possible to discern from looking at citations across studies whether the same study data may be reported from a different article or source.

The four meta-analyses used similar search strategies, with minor differences, to identify articles to evaluate for inclusion in their reviews (Davies, 2005; Jacobus, 2005; Kitzmann et al., 2003; Wolfe et al., 2003). All provide details on their searches that combined use of electronic databases, extensive manual searches of article and chapter reference lists. Jacobus (2005) also searched conference proceedings. The dissertations utilized more electronic databases, with Davies (2005) searching nine and Jacobus (2005) searching eight. Each of the published meta-analyses only reported two electronic databases used, with Kitzmann et al. searching in PsycINFO and Dissertation Abstracts, and Wolfe et al searching in PsychINFO and the National Clearinghouse on Child Abuse and Neglect databases. Manual and electronic searches were done for unpublished studies by all except Wolfe et al., the only meta-analysts reviewed here to exclude unpublished studies from their review (Table 1). Each author details the use of multiple keyword combinations in their electronic searches to account for the variety of terms and definitions used in this literature. For example, Wolfe et al., who are most explicit in describing the combination of keywords used, report these search terms: “[(domestic or interparental or marital) AND (exposure or witness*) AND (violence or conflict or abuse or battered) AND (child or children or youth)]” (p. 173).

Wolfe et al. (2003) contrast their approach to meta-analysis with the approach of Kitzmann et al. (2003), framing their own meta-analysis
<table>
<thead>
<tr>
<th>Author</th>
<th>Inclusion criteria reported by authors</th>
<th>Exclusion criteria reported by authors</th>
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<tbody>
<tr>
<td>Kitzmann et al. (2003)</td>
<td>Published and unpublished studies in English</td>
<td>Studies that looked at types of family aggression other than physical aggression (verbal, parent–sibling, community violence)</td>
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<tr>
<td></td>
<td>Focused on DV exposure, but included studies with simulated physical aggression</td>
<td>Studies with majority of participants older than 19</td>
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<td></td>
<td>Reports of psychosocial outcomes (emotional, behavioral, self-esteem, social competence, academic)</td>
<td>Studies reporting physical health outcomes</td>
</tr>
<tr>
<td></td>
<td>Empirical data from correlational designs, multiple regression analyses, and group comparison designs</td>
<td>Not reported: Whether type or quality of outcome measure was considered in inclusion/exclusion of articles</td>
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<td></td>
<td>with groups formed based on DV exposure rather than other characteristics (e.g., groups formed by delinquency status)</td>
<td>Not reported: Decisions related to multiple sources reporting the same study, and exclusion of any multiple reports of the same data set</td>
</tr>
<tr>
<td>Wolfe et al. (2003)</td>
<td>Published in peer-reviewed journals</td>
<td>Unpublished (dissertations, theses, book chapters)</td>
</tr>
<tr>
<td></td>
<td>Focused on children exposed to DV</td>
<td>Studies of children exposed to simulated conflicts</td>
</tr>
<tr>
<td></td>
<td>Standardized measures reporting emotional, behavioral, PTSD outcomes</td>
<td>Retrospective studies</td>
</tr>
<tr>
<td></td>
<td>Empirical data with mean and standard deviation for at least two groups (experimental/comparison) or correlations within a target group</td>
<td>Studies focusing on conflict rather than violence</td>
</tr>
<tr>
<td></td>
<td>From 2000 or earlier</td>
<td>Overlapping populations (studies where children in comparison group also were exposed to DV to some degree)</td>
</tr>
<tr>
<td>Davies (2005)</td>
<td>Published and unpublished studies in English</td>
<td>Studies using measure’s normative sample as comparison group</td>
</tr>
<tr>
<td></td>
<td>Focused on children 18 and younger exposed to DV</td>
<td>Multiple reports of same study</td>
</tr>
<tr>
<td></td>
<td>Empirical data sufficient for effect size calculation, reporting internalizing and externalizing behavior outcomes with standardized measures 1990–2003 only</td>
<td>Studies that looked at types of family aggression other than physical aggression (verbal, parent–sibling, community violence)</td>
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in terms of Campbell Collaboration standards, which advocate for inclusion of only methodologically sound studies. Jacobus (2005) also contrasts her inclusion criteria with that of Kitzmann et al., noting that her exclusion of studies that were not deemed to be methodologically rigorous was influenced by the review of Kitzmann et al. There are variations among all four meta-analyses in terms of inclusion/exclusion criteria and moderator variables studied (Table 1). Davies (2005), for example, only included studies completed after 1990 in an attempt to control for methodological problems, reasoning that the most flawed studies were conducted prior to 1990.

Each of the four meta-analyses used multiple coders to determine if studies met inclusion criteria. The dissertations each had a second coder (Davies, 2005; Jacobus, 2005). Wolfe et al. (2003) report that a second coder was always used, and sometimes a third. Kitzmann et al. (2003) note that a coding manual was developed for the 179 variables considered in the review, and half of the studies were coded by two raters and half were coded by one, with mean inter-rater reliability of 96% (ranging from 92% to 100%). With the exception of Kitzmann et al., each author details how they handled instances in which multiple sources meeting inclusion criteria reported data from the same study. Davies and Wolfe et al. both report using the source that provided the most comprehensive data for the calculation of effect sizes. In cases where a study was available in published or dissertation form, Davies used the published article. Jacobus notes contacting authors directly in cases of uncertainty whether or not the data were an original study, and using the most recent published study in cases of multiple sources.

<table>
<thead>
<tr>
<th>Author</th>
<th>Inclusion criteria reported by authors</th>
<th>Exclusion criteria reported by authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacobus (2005)</td>
<td>Published and unpublished studies in English</td>
<td>Participants older than 18</td>
</tr>
<tr>
<td></td>
<td>Focused on children ages 4–18 exposed to DV</td>
<td>Overlapping populations (studies where children in comparison group also were exposed to DV to some degree)</td>
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<tr>
<td></td>
<td>Standardized measures for one or more of these outcomes: internalizing, externalizing, social competence, intellectual performance, PTSD</td>
<td>Studies using measure’s normative sample as comparison group</td>
</tr>
<tr>
<td></td>
<td>Empirical data, between subjects design with mean and standard deviation for two well-matched groups (experimental/comparison)</td>
<td>Multiple reports of same study</td>
</tr>
<tr>
<td>Sternberg et al. (2006)</td>
<td>Raw data from 15 studies (N = 1,870) that reported Child Behavior Checklist outcomes and these individual child characteristics: type of family violence experienced, age, gender</td>
<td>Nine researchers approached did not provide their data for various reasons</td>
</tr>
</tbody>
</table>
The mega-analysis conducted by Sternberg et al. (2006) compiled raw data from 13 researchers who each agreed to share data sets they had which reported child characteristics (age, gender, type of family violence experienced) and outcomes using Achenbach’s Child Behavior Checklist (Achenbach, 1991). Sternberg et al. began their data collection by identifying 24 studies with similar data sets. Details on how these 24 were identified, and their prior publication status, are not provided. Nine researchers who were approached did not share their data for varied reasons: five declined, two no longer had it, and two did not respond to the request.

**Specific Outcomes for CEDV**

In general, research findings indicate that children who have been exposed to domestic violence show more negative behavioral and emotional outcomes than children who have not been exposed to domestic violence. Outcomes that can be grouped into externalizing and internalizing behaviors seem to have been most broadly studied, with limited research in the area of cognitive effects of exposure to domestic violence. Externalizing behaviors include, for example, aggression and disruptive behavior; internalizing problems include anxiety and depression. Effect sizes for the overall relationship between CEDV and emotional/behavioral outcomes were small to moderate and similar in the two published meta-analyses ($d = .29$ to $.42$ for internalizing behaviors, $d = .35$ to $.43$ for externalizing behaviors), and in the two dissertation meta-analyses ($d = .41$ to $.48$ for internalizing behaviors, $d = .41$ to $.46$ for externalizing behaviors). Methodology varied for each analysis, as well as results for moderator variables.

Numerous potential moderating and mediating variables have been studied in efforts to determine whether they have significant individual or interaction effects on child outcomes as a result of domestic violence exposure (Kitzmann et al., 2003; Sternberg et al., 2006; Wolfe et al., 2003). Gender and age are typically included as potential moderating variables. In some cases, factors related to research design have accounted for more variance in outcomes than variables related to the children and their experiences. As Wolfe et al. point out, combining data with differences in definitions and designs may create an underlying statistical instability that affects findings. Similar to the distinguished group of experts convened by several U.S. federal agencies to formulate research recommendations for the study of CEDV (Feerick & Prinz, 2003), the authors of all five quantitative analyses reviewed here note these challenges and call for more definitional consistency, descriptive information on demographic variables, attention to confounding variables, and greater methodological soundness overall to improve the knowledge base on CEDV. Confounding variables and areas that are inconsistently defined (or even undefined in some studies) include whether or not the child is also a direct victim of child abuse, the extent to which the child is aware of or exposed to domestic violence, and the features of that violence (Appel & Holden, 1998; Holden, 2003).

**Variables Included in Each Analysis.** Table 2 provides an overview of variables included in each of the five quantitative analyses.

All of the presented studies focused on outcomes related to externalizing and internalizing behavior problems. Three focused exclusively on these outcomes (Davies, 2005; Sternberg et al., 2006; Wolfe et al., 2003), whereas the other two also examined PTSD, social competence and academic/cognitive outcomes (Jacobus, 2005; Kitzmann et al., 2003). Wolfe et al. reported an initial interest in exploring PTSD and cognitive outcomes but determined that not enough sound data were available in
these areas. In Jacobus’ reporting of the results for these outcome variables, she also noted the small number of studies that had contributed data for those particular outcomes. Authors of all five analyses were interested in determining whether age and gender were influential moderators in the relationship between CEDV and poor outcomes. With the exception of Davies, each analysis also considered the child abuse status of subjects. Still, the number of studies in the existing literature that adequately made this distinction was quite small, and in each analysis the child abuse status variable was handled somewhat differently. They may have varied in their determination of whether a study had adequately defined and distinguished the population as part of the inclusion/exclusion decision, and then they each created categories for their own analysis somewhat differently. Wolfe et al. noted that their observation of trends related to co-occurring child abuse was based on only four studies.

Each of the four meta-analyses included variables related to research methodology. Many researchers have hypothesized that study participants recruited from shelters are quite different from those recruited from the community. With the exception of Wolfe et al. (2003), all the authors statistically explored the role played by the recruitment setting, though Wolfe et al. included descriptive information on recruitment setting, conceptualized dichotomously in

<table>
<thead>
<tr>
<th>Author</th>
<th>Potential moderators included</th>
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<tbody>
<tr>
<td>Kitzmann et al. (2003)</td>
<td>Type of outcome: externalizing, internalizing, PTSD, social competence, academic achievement</td>
</tr>
<tr>
<td></td>
<td>Gender, age, child abuse status</td>
</tr>
<tr>
<td></td>
<td>Research design variables: correlation versus group-comparison studies, Conflict Tactics Scale (Straus, 1979) versus other DV exposure assessment method, whether DV was assessed in comparison group, extent to which study used exclusion criteria/matching/statistical controls, reporter</td>
</tr>
<tr>
<td></td>
<td>“Individual stress” based on recruitment setting in four groups—shelter, clinical, community/school, “at risk due to other stressors”</td>
</tr>
<tr>
<td>Wolfe et al. (2003)</td>
<td>Type of outcome: externalizing, internalizing</td>
</tr>
<tr>
<td></td>
<td>Gender, age, child abuse status</td>
</tr>
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<td></td>
<td>Research design variables (included for descriptive purposes only): recruitment setting in two groups—shelter, nonshelter; reporter—mother, mother and child, mother and teacher</td>
</tr>
<tr>
<td>Davies (2005)</td>
<td>Type of outcome: externalizing, internalizing</td>
</tr>
<tr>
<td></td>
<td>Gender, age</td>
</tr>
<tr>
<td></td>
<td>Research design variables: recruitment setting in three groups—shelter, clinical, community/school</td>
</tr>
<tr>
<td>Jacobus (2005)</td>
<td>Type of outcome: externalizing, internalizing, social competence, PTSD, academic achievement</td>
</tr>
<tr>
<td></td>
<td>Gender, age, child abuse status, ethnicity</td>
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<tr>
<td></td>
<td>Research design variables: Recruitment setting in two groups—shelter, nonshelter; reporter—mother, mother and child, mother and teacher; published versus nonpublished</td>
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<tr>
<td>Sternberg et al. (2006)</td>
<td>Type of outcome: externalizing, internalizing</td>
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<td></td>
<td>Type of family violence</td>
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<td>Gender, age</td>
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### TABLE 3. Selected Results: Internalizing Behaviors.

<table>
<thead>
<tr>
<th>Author</th>
<th>Overall effects: DV exposure and internalizing behavior</th>
<th>Gender</th>
<th>Age at data collection</th>
<th>Recruitment setting</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitzmann et al. (2003)</td>
<td>$d = .29$ in correlational studies $d = .40$ in group-comparison studies</td>
<td>ns effect size difference</td>
<td>ns effect size difference</td>
<td>Effected outcomes in correlational studies only (categorized in four groups)</td>
<td>Reporter status affected outcomes Type of study affected outcomes</td>
</tr>
<tr>
<td>Wolfe et al. (2003)</td>
<td>$d = .42$</td>
<td>ns effect size difference</td>
<td>ns effect size difference</td>
<td>n/a</td>
<td>Research variables (reporter, recruitment setting) produce larger effect size differences than age, gender, outcome type</td>
</tr>
<tr>
<td>Davies (2005)</td>
<td>$d = .48$</td>
<td>ns effect size difference</td>
<td>ns effect size difference</td>
<td>ns effect size difference (categorized in three groups)</td>
<td>ns effect size difference for research variables: publication status, reporter</td>
</tr>
<tr>
<td>Jacobus (2005)</td>
<td>$d = .41$</td>
<td>ns effect size difference</td>
<td>ns effect size difference</td>
<td>ns effect size difference (categorized in two groups)</td>
<td>n/a</td>
</tr>
<tr>
<td>Sternberg et al. (2006)</td>
<td>Children exposed to DV were 2.03 times more likely to show internalizing problems than children in no-violence comparison group ($p &lt; .001$)</td>
<td>ns predictor</td>
<td>Significant predictor, compared to ages 4–6: ages 10–14 were 1.65 times more likely to have internalizing problems in clinical range</td>
<td>n/a</td>
<td>For all groups, more children were in the nonclinical than clinical range</td>
</tr>
</tbody>
</table>

$ns = $ non-significant
<table>
<thead>
<tr>
<th>Author</th>
<th>Overall effects: DV exposure and externalizing behavior</th>
<th>Gender</th>
<th>Age at data collection</th>
<th>Recruitment setting</th>
<th>Other</th>
</tr>
</thead>
</table>
| Kitzmann et al. (2003) | $d = .35$ (not including aggression; correlational and group-comparison studies)  
$d = .14$ (aggression alone; correlational and group-comparison studies) | ns effect size difference    | ns effect size difference | Effected outcomes in correlational studies only  
(combined)  
(Larger and more consistent effects were found in studies using Conflict Tactics Scale to measure exposure) | Reporter status affected outcomes  
(n/a)  
(standardized) |
| Wolfe et al. (2003) | $d = .43$                                           | ns effect size difference | ns effect size difference | n/a | Wolfe et al. (2003) stated that children exposed to DV were 1.5 times more likely to show externalizing problems than children in no-violence comparison group ($p < .001$) |
| Davies (2005)    | $d = .46$                                           | ns effect size difference    | ns effect size difference | ns effect size difference (categorized in three groups) | Wolfe et al. (2003) stated that children exposed to DV were 1.5 times more likely to show externalizing problems than children in no-violence comparison group ($p < .001$) |
| Jacobus (2005)   | $d = .41$                                           | ns effect size difference    | ns effect size difference | ns effect size difference (categorized in two groups) | Wolfe et al. (2003) stated that children exposed to DV were 1.5 times more likely to show externalizing problems than children in no-violence comparison group ($p < .001$) |
| Sternberg et al. (2006) | Children exposed to DV were 2.4 times more likely to show externalizing problems than children in no-violence comparison group ($p < .001$) | ns predictor | Significant predictor, compared to ages 4–6: ages 7–9 were .67 times less likely to have externalizing problems in clinical range, ages 10–14 were .69 times less likely | n/a | Wolfe et al. (2003) stated that children exposed to DV were 1.5 times more likely to show externalizing problems than children in no-violence comparison group ($p < .001$) |
terms of shelter samples and nonshelter samples, and discussed its potential relevance. Davies (2005) created three recruitment setting groups for comparison: shelter, clinical, and community/school. Jacobus (2005) coded recruitment setting dichotomously: shelter and nonshelter. In contrast to the two other analyses including recruitment setting also, Kitzmann et al. (2003) did not consider recruitment setting a research design variable. Instead it was conceptualized as an indicator of individual stress and coded in four groups: shelter, clinical, community/school, and “community or school samples that could be considered at risk because of exposure to some stressor other than domestic violence (e.g. poverty, parental divorce, community violence)” (p. 342).

Three analyses examined the role of the reporter to determine whether significant differences were found when the mother was the sole reporter of outcomes versus the mother and another individual such as the child or a teacher. Jacobus (2005) explored whether the publication status of a study was influential in results. Kitzmann et al. (2003) studied the role of several additional research-related variables that were relevant to their meta-analysis but not the other analyses because of the different, broader inclusion criteria of Kitmann et al. For example, correlational studies were compared with group-comparison studies.

**Results of the Five Quantitative Reviews**

**Overall CEDV Effects.** Tables 3 and 4 provide overviews of results each analysis reported for internalizing and externalizing behavior problems, respectively. Both tables also provide results each analysis reported for several of the moderators studied.

As noted above, overall results from all four meta-analyses indicated similar, significant, small to medium effects on both internalizing behavior problems (ranging from \( d = .29 \) to \( d = .48 \)) and externalizing behavior problems (ranging from \( d = .35 \) to \( d = .46 \)). For both outcomes, Kitzmann et al. (2003) reported the smallest effect sizes, whereas Davies (2005) reported the largest. Kitzmann et al. calculated effect sizes for aggression alone (\( d = -.14 \)) separate from the effect size for other externalizing behaviors (\( d = -.35 \)). Kitzmann et al. also reported different effect sizes based on type of study, with a small effect size (\( d = -.29 \)) found in correlational studies, and a small to moderate effect size (\( d = -.40 \)) in group-comparison designs that compared CEDV with children who had not been exposed. The mega-analysis of Sternberg et al. (2006) also found significant differences between children who had been exposed to domestic violence and children who had not been exposed. The former group was more likely than the latter to exhibit internalizing problems (2.03 times more likely) and externalizing behavior problems (2.4 times more likely).

**Potential Moderators and/or Mediators.** All five of the quantitative reviews examined these potential moderators: gender, age, and research design variables (Tables 3 and 4). Results for gender are the most definitive. Three of the meta-analyses, and the mega-analysis of Sternberg et al. (2006), found no significant differences for girls and boys for internalizing and externalizing outcomes. Davies’ (2005) meta-analysis yielded different results for gender. Her results indicated that boys showed a stronger relationship between exposure to domestic violence and externalizing behavior (\( d = .46 \) for boys, \( d = .23 \) for girls, \( p < .05 \)). For the outcome of social competence, described further below, Kitzmann et al. (2003) found stronger negative effects for preschool girls. With externalizing and internalizing domains so prominent in the study of CEDV effects, this finding serves as a reminder of subtle differences that may yet be found with further exploration of various outcomes, including possible gender differences.
The age of the child was not a significant moderator in the four meta-analyses. Age did contribute to the effects of exposure to domestic violence in the “mega-analysis” (Sternberg et al., 2006). The sample was divided into three age groups for comparison: 4–6, 7–9, and 10–14. The youngest age group, 4–6, was used as the comparison group. For internalizing problems, they found that the two older groups had greater odds of scoring in the clinical range (7- to 9-year olds had 1.16 times the odds, \( p = .21 \), and 10- to 14-year olds had 1.38 times the odds, \( p < .05 \)) than the youngest (4–6) age group. For externalizing problems, they found that the two older groups had lesser odds of scoring in the clinical range (7- to 9-year olds had .67 times the odds, \( p < .01 \), and 10- to 14-year olds had .69 times the odds, \( p < .01 \)) than the youngest (4–6) age group.

Three meta-analyses examined whether the reporter of child outcomes played a significant role in outcomes found (Jacobus, 2005; Kitzmann et al., 2003; Wolfe et al., 2003). The child’s mother is typically the reporter of outcomes, and in some cases the child and another adult, such as a teacher, also complete outcome measures. The dissertation that reviewed possible reporter effects found that there was no association between who the reporter was and outcomes (Jacobus, 2005). In contrast, the two published meta-analyses found that reporter status was associated with the outcomes (Kitzmann et al., 2003; Wolfe et al., 2003). Of the three analyses considering recruitment setting, the two dissertations (Davies, 2005; Jacobus, 2005) found that it did not have significant influence on outcomes (Davies, 2005; Jacobus, 2005), whereas Kitzmann et al. found that it was influential in internalizing behavior outcomes among correlational studies only.

The mega-analysis of Sternberg et al. (2006), as well as three of the meta-analyses, considered the role of child abuse status in outcomes (Jacobus, 2005; Kitzmann et al., 2003; Wolfe et al., 2003). Results related to child abuse status are difficult to summarize. The literature on CEDV includes studies that have defined family violence, exposure, and abuse poorly, or not at all (Holden, 2003). This is clearly a problem, as children experience different types of exposure, with differing severity and frequency, and indeed may also be direct victims of physical violence (Appel & Holden, 1998). Study samples may include CEDV together with children who have been direct victims of physical abuse in addition to the exposure to domestic violence, without distinguishing between these groups. In studies that do distinguish between these groups, definitions and methods vary. The meta- and mega-analysts then also varied in how they created categories of this variable, resulting in challenges for comparison across the review studies. Overall, most authors interpreted their findings to show support for an additive negative effect of co-occurring child abuse and exposure to domestic violence, with some discrepancy in results across studies.

The data set of Wolfe et al. (2003) included four studies that made the distinction between CEDV and children who were direct victims of physical abuse in addition to being exposed to domestic violence. Original results of these four were presented separately from the meta-analysis results, and an overall effect size was not calculated for the small group of studies. Wolfe and colleagues interpreted these studies as providing preliminary, but not conclusive, indication of a small additive effect for the direct experience of physical abuse, in addition to the existing effects of exposure to domestic violence, with the trend slightly stronger for externalizing behavior problems. Jacobus’ (2005) results and discussion are similar, reporting partial support for an added negative effect of direct victimization. She notes low power to discern possible moderator effects of child abuse status, with only 15 of the studies...
included in her data set classifying children on this variable. No statistically significant relationship was found between child abuse status and internalizing and externalizing behavior problems. Post hoc analyses indicated, however, a medium effect size (.48, \( p = .09 \)) for increased externalizing behavior among children who were both direct victims of abuse and exposed to domestic violence, in comparison to her finding a small effect size (.28) for children who were exposed but not directly abused. Kitzmann et al. (2003) also reported inconclusive results, finding no direct support for an additive negative effect of direct victimization, but reporting indications that a host of multiple stressors may have a cumulative negative effect on adjustment.

The mega-analysis (Sternberg et al., 2006) classified children into four “type of violence” groups for comparison: (a) no violence exposure, (b) “victims” (direct victim of physical abuse), (c) “witnesses” (parents of child are violent with each other), and (d) “abused witnesses” (both direct victims of physical abuse, and have parents who are violent with each another) (p. 95). They found interactions among their three predictor variables (type of violence, age, and gender) in terms of predicting internalizing and externalizing scores. In terms of differences between witnesses and abused witnesses, they found that abused witnesses were at greater risk than witnesses for clinical-range internalizing problems (1.21 times greater, \( p = .17 \)) and externalizing problems (1.27 times greater, \( p = .09 \)) but the finding was not statistically significant. Abused witnesses were more likely than direct victims to show clinical-range internalizing problems (1.85 times, \( p < .01 \)) and externalizing problems (1.49 times, \( p < .05 \)).

Jacobus (2005) and Kitzmann et al. (2003) examined the effects of domestic violence exposure on social competence, PTSD, and academic/cognitive outcomes (Table 5). Jacobus reported a small to moderate effect size for PTSD \( (d = .45) \), which is similar to the result of Kitzmann et al. \( (d = .51) \). For social competence outcomes, Jacobus calculated a small effect size \( (d = .26) \), again similar to Kitzmann et al. \( (d = .23) \). Expanding on this finding, Kitzmann et al. reported an interaction effect of gender and age in the social competence outcomes, with preschool girls showing poorer outcomes than preschool boys. In contrast, findings for academic achievement/cognitive outcomes differed between the two studies. Jacobus did not find any significant effects, whereas Kitzmann et al. reported a significant, small to medium effect size \( (d = .43) \).

Low power to detect relationships could explain the differences in results related to moderator variables. When the sample size for a study or analysis is small, the power to detect a relationship is decreased, and the risk of a
Type II error is increased (Rubin & Babbie, 2005). In a Type II error, results are interpreted to indicate that there is not a statistically significant relationship between variables, when in fact there is. The studies included in each of the meta-analyses differed in their reporting of demographic variables. The potential problem of low power is most apparent in regard to adolescents, where data are especially lacking. Even the mega-analysis of Sternberg et al. (2006), with a sample of 1,870 children, included only 17 participants over age 12. This makes their significant findings regarding increased odds for internalizing behaviors among 10- to 14-year olds somewhat suspect. Jacobus (2005), who thoroughly describes the limitations of the empirical CEDV literature, sees the problem of low power for many of the variables. She notes that a “handful” of studies report adolescent data, which is corroborated less explicitly by others. Finally, when interpreting results about age, it is important to note that the age under consideration is usually the age at time of data collection and not necessarily the age at time of exposure. As noted previously, characteristics of exposure, including timing, are also poorly defined. Overall, future practice and research can benefit from a critical review of these meta- and mega-analyses to determine how to proceed toward more comprehensive and effective interventions for this population.

Specific Meta-Analytic Design Issues

Meta-analyses that only use published results are vulnerable to problems caused by the possibility that studies with significant and/or large effect sizes are more likely to be published and therefore misrepresent the universe of findings that actually exist (McLeod & Weisz, 2004; Petrosino et al., 2000). It is interesting to note, however, that this problem does not seem apparent in the four meta-analyses reviewed here. With the exception of Wolfe et al. (2003), all included unpublished studies, and overall they produced similar results. Jacobus (2005) examined publication status as a potential moderator and found no significant effects.

Similarly, the degree to which fixed and random effects across the four meta-analyses could potentially influence their differences is important. Wolfe et al. (2003) indicated the use of random effects methods whereby both sample size and “common elements in . . . findings and theoretically relevant variables” (p. 173) were accounted for in the studies included in their meta-analysis. Studies that examined other constructs outside of the model of Wolfe et al. for inclusion, or had too large of a sample size in comparison to other studies, were excluded. Jacobus’ (2004) dissertation work also used random effects methods to include studies in her meta-analysis that matched basic socio-demographic characteristics, including race/ethnicity, income, and education. The Davies (2005) and Kitzmann et al. (2003) studies both use relatively broad inclusion criteria for the studies eligible for their meta-analyses, and factors that might contribute to sampling error did not appear to receive direct attention. Furthermore, the meta-analysis of Kitzmann et al. included 118 studies that generated 2,261 effect sizes. Both Wolfe et al. and Jacobus (2005) point to issues in the analysis of Kitzmann et al. related to liberal inclusion criteria without preestablished criteria for methodological rigor, which can impede appropriate construction of moderator variables and ultimately skew results (Lipsey & Wilson, 2000). In terms of the mega-analysis, the inclusion of data primarily depended upon researchers of the original studies agreeing to submit their raw data. Sternberg et al. (2006) did neither provide details about how the researchers were identified nor provide sampling procedures for the original studies. Nine researchers who were asked to provide their raw data did not. A
concern for all five quantitative analyses would be whether the variables related to study methodology account for more variance than the key moderators under study.

One study (Grych, Fincham et al., 2000) with a relatively large sample size \( N = 464 \) was included in all four meta-analyses. This would typically be another point of caution to determine potential weighted differences in the meta-analyses. Because all four accounted for this same study, however, differences in weight are not likely to result from this. Another study (Jaffee, Moffitt, Caspi, Taylor, & Arsenault, 2002) based on its disproportionately large sample size \( N = 2,206 \) of twin pairs was deliberately excluded from the study of Wolfe et al. (2003) and was not cited in the other quantitative analyses as well.

**Discussion**

Although consensus has been established in the literature about the overall negative emotional and behavioral outcomes associated with CEDV, the mechanism through which exposure influences outcomes is not yet clear. Promising, but not entirely conclusive, results about variables that may be influential in the relationship have been presented. Why do results about potential moderators differ? One explanation may be the fact that each author used different inclusion and exclusion criteria when deciding which studies would become part of their data set. This process can be quite subjective (Jacobus, 2005; McLeod & Weisz, 2004). Two of the meta-analysts used stringent criteria (Jacobus, 2005; Wolfe et al., 2003), one used liberal criteria (Kitzmann et al., 2003), and the fourth does not clearly fall on either end of the continuum (Davies, 2005). Another explanation may involve the fact that meta-analytic procedures are mostly used to measure the intervention effects of randomized controlled trials where there is typically less heterogeneity with respect to predictors and outcomes. A way to address inconsistencies in the quality between meta-analyses is to involve a moderating group like the Cochrane Collaboration or Campbell Collaboration to enforce standards related to search specification, inclusion criteria, reliability of raters, and statistical techniques employed. Findings of difference in meta-analytic quality and methodology are, in essence, an argument for the inclusion of observational studies in the Cochrane and Campbell review groups in order to standardize such useful information. The need for random effects models also exists due to the wide degree and variation of methods in research on CEDV.

It was beyond the scope of this review to fully determine the independence of the meta-analyses and mega-analysis in terms of crossover in the study data they included. Citations for the articles, dissertations, or chapters were compared, providing a rough sense of the level of crossover in citations. There was indeed some crossover, with six citations occurring in all four meta-analysis; however, there were also a number of unique citations or instances where a citation was present in two studies but not others. It is not possible, however, to discern from looking at bibliographic citations used by the analyses’ authors whether they are reporting same study data from different sources (e.g., dissertation, article, or chapter).

**Research Implications**

Although research has grown on CEDV, several issues currently impede the progress toward effective interventions. First, the research is not grounded in a strong theoretical base. Theoretical perspectives that accurately conceptualize the effects of childhood exposure to domestic violence will inform more comprehensive research designs.

Second, the independent variable of interest, “exposure to domestic violence,” is not
consistently defined across studies. The frequency, type, and severity of the violence, the relationship of the child to the perpetrator and victim, the child’s proximity to the violence, and level of awareness of the violence are all considered important aspects of exposure to domestic violence. Because different researchers have defined the independent variable differently, and because there is significant variability in children’s experiences, clarity in the definition of terms regarding types of violence and types of exposure is warranted.

Third, attention to research methodology, including measurement and sample recruitment, and the use of advanced statistical techniques to determine relationships among variables beyond simple correlations and associations is needed (Appel & Holden, 1998; Holden, 2003; Jacobus, 2005; Kitzmann et al., 2003; Wolfe et al., 2003). Research must progress from examining associations and correlations to determining the mechanism through which exposure to domestic violence tends to negatively influence child development and behavior. Accurate definitions, strong theories, and advanced designs and statistical techniques make it possible to study how, and through what processes, domestic violence influences the adjustment of children.

The fourth issue involves study of the co-occurrence of domestic violence exposure and child abuse, which is of urgent importance for the growth of this literature (Feerick & Prinz, 2003; Holden, 2003; Jouriles et al., 2001). The analyses reviewed here indicated that being a direct victim of abuse in addition to being exposed to domestic violence may increase the risk for externalizing behavior problems above and beyond abuse or exposure alone, but results were not conclusive. Additional studies classifying children on this variable will increase power to detect and confirm a possible relationship, and advanced research models are needed to further investigate the possible additive effects of these co-occurring problems, sometimes referred to as the “double whammy” (Hughes, Parkinson, & Vargo, 1989). Clearly delineating the confounding factors related to how a child is affected by exposure to domestic violence, in the absence or presence of being a direct victim of child abuse, will be beneficial in shaping effective interventions. Attention to the mechanisms of the relationship between CEDV and poor outcomes will contribute to greater understanding of risk and protective factors for this population, and potentially more effective, empirically informed interventions. Overall, these research implications are evident in the CEDV literature but are emphasized here due to the compounded impact in this review of these key quantitative analyses.

Practice Implications

Because intervention research on the topic of CEDV is at an early stage of development, practitioners and program administrators seeking to implement empirically supported, effective interventions have a limited literature on which to draw (Graham-Bermann, 2001; Graham-Bermann & Hughes, 2003). This also pertains to the need for interventions with children in domestic violence shelters, as a particularly underserved subpopulation where the family is in immediate crisis. In these cases, the child is removed from familiar surroundings, peers, and school, and the family turns to a shelter for refuge due to limited resources and poverty (Stephens, McDonald, & Jouriles, 2000). They may also return to the home with the batterer in a matter of days. As Stephens et al. (2000) note, commonly used practice modalities may be contraindicated for children in shelters and caution is urged; in considering age appropriateness of concepts, younger children may be exposed to in the communal environment of a shelter, for example. For child welfare
professionals, underlying domestic violence may be a secondary or hidden issue in comparison with the primary reason for child referral. The quantitative analyses reviewed here provided preliminary, but inconclusive, support for an additive negative effect experienced by children with co-occurring domestic violence and child abuse in their lives. These results highlight further the pressing need to evaluate effective interventions and service coordination strategies for this population. In the absence of these, we attempt to draw some broad lessons for practice from the critical review, particularly for the areas of assessment and a trauma-informed perspective on practice.

**Issues in Assessment.** Practitioners must be aware of the heterogeneity of children in this population, as well as the diverse manifestations of negative effects of domestic violence exposure. Individualized assessment and treatment is an essential guide for appropriate practice. Systematic screening for the presence of domestic violence by child welfare professionals and systematic screening of child abuse by domestic violence service providers are both challenging because of the clinical trust issues and parent–child dynamics involved. Mothers and children may both underreport for similar reasons, related to concerns about being separated from each other. Mothers may fear losing custody of their children, whereas children may worry about getting their parents in trouble and often see their mother as their greatest support (McGee, 2000). A practitioner who is not able to systematically assess for co-occurrence should at minimum be aware of the type of externalizing, internalizing, and trauma symptoms that may be present in this population and assess for the presence of these symptoms. Details on a trauma-informed perspective are described in the next section.

Practitioners must also be aware of the potential resilience of children in this population. The mega-analysis (Sternberg et al., 2006) results indicated that for all groups studied, fewer children had internalizing and externalizing scores in the clinical range than in the nonclinical range, which is consistent with other reports (Grych, Jouriles et al., 2000; Hughes et al., 2001). As noted above, knowledge is lacking on specific risk and protective factors for CEDV, but in the future promising approaches may be developed drawing from literature on resilience with at-risk children in general.

The results described by Sternberg et al. (2006), particularly related to age, are useful for practitioners to take into consideration in assessing the well-being of their clients. One of the striking gaps revealed in the examination of these five quantitative analyses is the small number of studies with adolescent samples. Given this, there are potentially valuable practice implications in the finding of Sternberg et al. that children in the 10–14 age group are 1.65 times more likely to have clinical-range internalizing problems than younger children (ages 4–6), yet .69 times less likely to have clinical-range externalizing problems. Again, practitioners must be aware of the range of individual responses. Practitioners must be alert to the possible presence of internalizing behavior at all ages, but especially among older children. A professional with limited time and a large caseload must maintain awareness that, without proper screening, internalizing concerns such as withdrawal and depression are not as obvious to detect as externalizing behaviors like aggression. The theoretical guidance provided by the cognitive-contextual model (Grych & Fincham, 1990) is also useful to remember in connection with internalizing behavior. The model holds that, especially in relation to internalizing problems, the child’s appraisal of the conflict mediates the relationship between exposure and adjustment. These appraisals include the child’s perception of the
level of threat, level of self-blame, and her/his ability to cope with the conflict.

At the programmatic level, domestic violence service providers and child welfare administrators are encouraged to incorporate screening procedures, protocols, and memoranda of understanding between organizations that take the unique needs of this population into account. The “Greenbook” recommendations provide valuable guidelines that can assist community agencies to move in the direction of providing services that address the intersystemic challenges that impede service delivery and concern clients (Greenbook National Evaluation Team, 2004).

A Trauma-Informed Perspective. Whereas the quantitative analyses discussed in this critical review primarily focus on results related to externalizing and internalizing behaviors, research on trauma symptomatology in this population is growing. Wolfe et al. (2003) initially intended to include PTSD outcomes in their meta-analysis. They determined that the number of studies that reported PTSD outcomes and met their inclusion criteria, which was the most stringent of the four meta-analyses, was too small. The two meta-analyses that included PTSD studies found slightly larger effect sizes for the effects of domestic violence exposure and PTSD than they had for internalizing and externalizing outcomes, of $d = -0.51$ (Kitzmann et al., 2003) and $d = 0.45$ (Jacobus, 2005). The interest in PTSD outcomes and growth in studies related to CEDV and PTSD is consistent with theories that have been proposed to guide understanding in this area, both trauma theory itself (Sternberg et al., 2006; Wilson, 1989; Wolfe et al., 2003) and the integrated model proposed by Levendosky and Graham-Bermann (2001), which combines an ecological framework with trauma theory to understand how domestic violence influences child adjustment. Given the need for greater understanding of CEDV and their behavioral, psychological, and relational outcomes, appropriate, reliable assessment is critical. Inasmuch internalizing and externalizing behaviors conceptualize outcomes for CEDV in the literature, a perspective on trauma and traumatic victimization is also useful to accurately assess the outcomes for this client population. Such a perspective offers practitioners and clients a framework for contextualizing traumatic experiences and resulting outcomes. This is particularly important for service provision and treatment of CEDV, a population who developmentally may not be the primary source of information. The biases and perspectives of others who report on the child’s behavior can influence assessment protocol, as well as the tone and direction of treatment and services.

Assessing the impact of trauma generally involves the identification of core environmental and situational dimensions related to the traumatic experience. Some of these dimensions are as follows: (a) degree of life threat, (b) imminence or the rate of onset and the offset of the stressors, (c) the duration and severity of the stressors, (d) the level of displacement and dislodging of persons from their community, (e) the exposure to death, dying, injury, destruction, and social chaos, (f) the degree of moral conflict inherent in the situation, and (g) the complexity of the stressor (Wilson, 1989). Attention to these core dimensions allows clinicians to highlight the objective factors related to the trauma and individuals’ posttraumatic adaptation. Still, assessing trauma in the lives of individuals is complex. It is further complicated by the interrelationship between objective factors, as indicated by the environmental and situational dimensions mentioned above, and various subjective factors, including personality traits, perceived social support, and coping resources. Recognizing and addressing the subjective factors that affect individuals’ perceptions and responses to their trauma, despite assessment challenges, is
equally important to evaluating the objective dimensions.

Summary

Existing literature on the effects of domestic violence on children indicates that there is a small to moderate overall effect of exposure on negative outcomes. Studies have also indicated that many children do not score in the clinical range on measures of negative effects such as externalizing behavior problems (Grych, Jouriles et al., 2000; Hughes et al., 2001). Although there is general consensus among researchers about the overall relationship between exposure and effects, there are many methodological flaws in the body of literature and areas with inconclusive results (connected to both the heterogeneity and complexity of the population, as well as research definitional and design flaws). There are indications that measurement of the independent and dependent variables under study are affected by definitional issues, by the reporter of the data, and by the recruitment setting of the sample. Efforts are being made to more clearly define and measure the independent variable, exposure to domestic violence, recognizing that there is a wide continuum of exposure among children (Holden, 2003). Some children are resilient and, to date, there is no clear picture of the risk and protective factors that moderate outcomes.

Key factors have been identified and studied, such as externalizing and internalizing behavior outcomes, whereas others have been identified but are only beginning to be studied with rigorous designs, including trauma symptomatology outcomes. Treatment from a trauma-informed perspective may be promising, provided these early results. There is continued need for rigorous research designs to address confounding variables, such as co-occurring child abuse and domestic violence exposure.

Given the findings in these quantitative reviews, forthcoming research should focus more specifically on clearly defined exposures, risks, and resiliencies.

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Appendix A. Bibliographic References

Excluded From Review


References


Jacobs, L. L. (2005). The effects of exposure to domestic violence on child outcomes: A meta-


