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Youth Exposed to Violence: Stability, Co-occurrence, and Context

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Abstract

With considerable literature establishing how separate types of violence disrupt the lives of children, there is emerging interest in examining violence across multiple interpersonal domains. This paper examines four commonly occurring and frequently researched domains of violence exposure: marital physical aggression, mother-to-youth aggression, father-to-youth aggression, and community violence. A community-based sample of 103 parents and youth provided three waves of data at annual intervals beginning when the youth were aged 9–10. We explored stability of exposure, co-occurrence across different types of violence exposure, and associations with co-occurring risk factors. Approximately 30–45% of youth reported intermittent exposure over the 3 years. In addition to overlap among types of violence exposure within the family, we found overlap between parent-to-youth aggression and community violence, an association that was exacerbated in families where fathers reported high levels of global distress symptoms. Mother-to-youth, father-to-youth, and community violence related to youth behavior problems beyond the contextual risk factors of low income, stressful life events, and parents' global distress symptoms. These results highlight the importance of examining violence longitudinally, across multiple types, and with attention to contextual factors.

Keywords

youth violence exposure; marital aggression; community violence; parent-to-child aggression; measurement of violence

Information about children's exposure to violence has expanded dramatically over the past two decades with youth violence exposure currently recognized as a significant public health problem (Carmona, 2007; Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Although originally viewed primarily as a risk factor for aggression, delinquency, and involvement with the criminal justice system (e.g., Herrera & McCloskey, 2003; Song, Singer & Anglin, 1998), violence exposure has been implicated in a broad array of problems spanning depression, anxiety, and post-traumatic stress disorders, as well as compromised educational outcomes, social relations, and health status (Bair-Merritt, Blackstone, & Feudtner, 2006; Delaney-Black, et al., 2002; Kitzmann, Gaylord, Holt, & Kenny, 2003; Lynch, 2003; Margolin & Gordis, 2000; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003; Wright, et al., 2004). Youth's exposure to violence is linked not only to adjustment problems during childhood but also to later problems during adolescence and adulthood.

Scientific investigation of violence-exposed youth has yielded considerable knowledge but has also revealed the complexities inherent in conceptualizing and measuring violence exposure. How we conceptualize violence determines how we measure violence, and how we measure violence informs our theories and practices. Despite considerable effort to examine violence empirically, we have paid insufficient attention to important properties of violence that bear significance in real-world contexts. The boundaries of what falls into the continuum of violence exposure are not clear and often depend upon the sample being studied. For example, in identified samples, violence exposure is frequently defined through official documented reports of illegal behaviors on the part of caregivers against youth who then become involved in child protective services. In community samples, assessments often expand the definition of violence exposure to a wider range of aggressive behaviors to include power-assertive parenting behaviors that involve elements of physical or psychological pain but, at least in the parents' eyes, are on the continuum of normative discipline (Chaffin, 2006).

In developing metrics by which to measure violence exposure, the field has adopted the convention of counting individual violent behaviors or violent events. The common practice of summing violence exposure within the past year brings some consistency and manageability to the study of violence; however, we do not have a clear basis upon which to assume that time frame is necessarily meaningful or representative. The process of assigning youth a violence score or an overall status as victimized or not victimized based on previous year exposure produces a static assessment. Yet, little is known about the stability of violence exposure over time. It is reasonable to assume that for some youth, developmental changes or changes in life circumstances are accompanied by changes in frequency, severity and nature of the violence exposure. An alternative method is estimating exposure to violence over the child's entire lifetime—again a static measure that does not inform us about fluctuations in violence exposure over time.

Although our field has produced separate literatures on child abuse, marital aggression, and community violence, there is increasing awareness of the interconnectedness of different types of violence in real life. It is generally understood, though seldom quantified, that the occurrence of violence in one context affects the likelihood of violence in other contexts. Moreover, because of the presumed additive effects across multiple forms of exposure, it is important to identify the conditions that might intensify the co-occurrence of violence across multiple contexts.

In this article, we examine dynamic dimensions of violence that have implications for how we frame our research questions and that inform our understanding of what needs to be addressed in clinical work. We examine the following dimensions of violence: stability over time, co-occurrence of different violence types, and impact of other co-occurring stressors. Our data address the following questions: Is there continuity across time in whether or not a child has been exposed to violence? Are youth who experience violence exposure in one domain at risk for violence exposure in another domain? Is the risk for violence in multiple domains exacerbated by other stresses in the family? Does violence exposure contribute to adjustment problems of youth beyond problems related to other life stresses?

Key Dimensions of Violence Exposure

Stability

The measurement of children's violence exposure has not provided information about the stability of violence exposure from one time period to the next, the likelihood of cessation of exposure, or the likelihood of the onset of violence after a period of no exposure. From a measurement perspective, it is important to know whether the one-year time frame is a valid measurement of violence exposure. From a risk perspective, the continuation of violence over

longer intervals in a child's life might be expected to have greater negative effects; likewise, discontinuation of violence exposure could potentially be linked to improved functioning.

Most of the data on persistence of violent experiences come from investigations with adult victims' intimate partner violence. Frias and Angel (2007) found that only 46% of women who reported abuse from a partner during one year also reported it again after a second year. Others similarly found that approximately half of the husbands who had a history of intimate partner violence later desisted (Aldarondo, 1996; Gordis, Margolin, & Vickerman, 2005). One-time assessments would have disguised the dynamic nature of these women's experiences with violence. The effect of violence persistence on children exposed to intimate partner violence is not as well understood. Evidence suggests that intimate partner violence in the home is related to increased healthcare utilization for children, an effect that lingers beyond the period of abuse and is only partially reduced even if the violence desists before child's birth (Rivara, et al., 2007).

With respect to persistence of child's victimization more generally, Finkelhor and colleagues (Finkelhor, Ormrod, & Turner, 2007a) reported that risk ratios for re-victimization from one year to the next range from 2.2 for physical assault and for peer or sibling victimization to 6.9 for sexual victimization. Moreover, several studies indicate that continuity of abuse contributes to worse psychological outcomes (English, Graham, Litrownik, Everson, & Bangdiwala, 2005; Manly, Kim, Rogisch, & Cicchetti, 2001; Thornberry, Ireland, & Smith, 2001). Although community violence is often examined in terms of acute events (e.g., Denson, Marshall, Schell, & Jaycox, 2007), some studies examine chronic community violence as a unique phenomenon that occurs in extremely impoverished neighborhoods and is associated with post-traumatic stress symptoms in youth (Jones, 2007; Osofsky, Wewers, Hann & Fick, 1993).

Co-occurring Violence

Our understanding of the impact of violence exposure has been limited by the compartmentalization of research into separate literatures on child abuse, exposure to marital aggression, and community violence. There is increasing evidence that youth are exposed to more than one type of violence, but the degree of co-occurrence can be quite variable. Appel and Holden's (1998) literature review reported a median co-occurrence of 40% in clinical samples (i.e., battered women and court-referred children), but a base rate of only 6% co-occurrence in community samples. In a more recent review by Jouriles and colleagues (Jouriles, McDonald, Slep, Heyman, & Garrido, 2008), rates of co-occurring child abuse ranged from 18% to 67% in families identified for domestic violence. Variation in those rates of child abuse was not related to racial and ethnic diversity or income, but was related to the frequency and severity of domestic violence as well as different definitions of child abuse. Slep and O'Leary's (2005) study of co-occurrence rates in a community-based sample with young children illustrated the impact of expanded definitions of violence; 45% of families reported co-occurring partner aggression and parent-to-child physical aggression when both mild and severe acts were combined, compared to merely 5% when only severe acts were considered.

Data also exist supporting overlap of family and community violence, although less is known about this form of co-occurrence. Physical abuse is reported in twice as many children who describe high (28.7%), compared to low (12.5%), levels of violence in their neighborhoods (Lynch & Cicchetti, 1998). Finkelhor and colleagues' work on polyvictimization assesses 34 specific victimization types that span the categories of sexual victimization; maltreatment; property victimization; witnessing or indirect victimization; physical assault; and peer or sibling victimization (Boney-McCoy & Finkelhor, 1995; Finkelhor, Ormrod, Turner, Hamby, 2005). Polyvictimization largely eliminated the observed relationship between individual types of victimization and outcomes, and increased the risk of persisting victimization (Finkelhor, et al., 2007a, 2007b). Based on an assessment of polyvictimization within one year, 70% of

youth experienced at least one type of victimization and, of those, 69% experienced another type of victimization (Finkelhor, et al., 2007b). Moreover, when identified as isolated variables, exposure to domestic violence or child maltreatment showed an increased risk of polyvictimization during the following year (Finkelhor, et al., 2007a).

Other Risk Factors

It is frequently noted that violence exposure is embedded in family and social environments that pose a variety of potentially stressful and adverse influences, such as parents problems with substance abuse and psychopathology, economic stress or unemployment, and chaotic living environments (Garbarino, Dubrow, Kostelny, & Pardo, 1992; Leventhal & Brooks-Gunn, 2000; Moore, 2005; Repetti, Taylor, & Seeman, 2002). These other life stresses have been associated with similar cognitive and social emotional outcomes as violence exposure (Kebanov, Brooks-Gunn, McCarton, & McCormick, 1998). Several studies investigated the assumption that the overall number or amount of adverse circumstances has a greater impact than does any one specific adverse event (e.g., Flaherty, Thompson, Litrownik, et al., 2006). The Adverse Childhood Experiences Study, for example, showed that the combination of multiple risks, that is, child emotional abuse, child physical abuse, sexual abuse, domestic violence, along with exposure to substance abuse, mental illness, parental separation and divorce and a household member's incarceration increases the overall likelihood of negative outcomes (Anda, Croft, Felitti, et al., 1999; Dube, Anda, Felitti, Chapman Williamson, & Giles, 2001).

With respect to specific adverse circumstances, poverty is overrepresented among physically abused families (Chaffin, 2006) and poverty accounts for some of the links between violent victimization and youth's own violent behavior (Molnar, Brown, Cerda, & Buka, 2005). Parents' psychopathology is associated with violence exposure and, in some cases, violence augments the effects of parents' psychopathology (Johnson, Cohen, Kasen, Smailes & Brook, 2001; Silverstein, Augustyn, Cabral, & Zukerman, 2006). Negative life events are associated with similar outcomes as violence exposure (Simantov, Schoen, & Klein, 2000) and can have additive, but sometimes indistinguishable, effects with violence exposure.

Despite general agreement that other risk factors are important in our understanding of violence exposure, there is not consensus on how to handle these variables. Some studies seek to isolate the effects of violence exposure and show, for example, that maltreatment or violence exposure impact child outcomes after controlling for confounding risks such as socioeconomic status, family stress, and so on (Denson et al., 2007; Lansford, Dodge, Pettit, Bates, Crozier, Kaplan, 2002). An alternative argument is that isolating the confounding variables is "scientifically logical but possibly misleading for public policy" (Weiss, 2000, "The Social Environment as a Dimension of Risk", paragraph 4). That is, because these variables co-occur in real-life, untangling them through statistical control may not help us fully understand the relative impact of violence exposure or how combinations of risks affect children's development (Moore, 2005).

Present Study

This study seeks to add clarity to our understanding of violence with respect to stability, co-occurrence, and contextualization with other risk factors. We examine violence exposure over three annual assessments for four types of violence exposure: marital physical aggression, mother-to-youth aggression, father-to-youth aggression, and community violence. We study violence exposure in a community-based sample that has not been identified or recruited for violence or for any clinical concerns. As a result, we assess the more commonly occurring and ordinary rather than acute types of violent events. To examine stability, we present conditional probabilities for different trajectories of exposure versus non-exposure over the three

assessments. We frame our co-occurrence question in terms of whether increasing years of one violence type relates to the occurrence of other violence types. In light of the overall range of previous co-occurrence rates particularly in community samples, we also examine to what degree other family stress factors (low income, negative life events, mothers' and fathers' psychopathology) augment the likelihood of co-occurrence across different violence types. Finally, in addition to examining bi-variate associations between violence exposure and other family stress variables, we explore to what extent violence contributes to youth behavior problems beyond these stress factors.

Methods

Participants

Participants came from a prospective, longitudinal study evaluating the effects of multiple forms of violence on youths' adjustment. Wave 1 assessments involved 119 families who were recruited through flyers, advertisements in newspapers and local magazines, and word-of-mouth. Included families met the following criteria: (a) each family unit consisted of a child aged 9–10 years and two parents; (b) both parents and the child resided in the same home; (c) parents were the child's biological parents or resided with the child for at least the past three years; and (d) all family members were able to complete the research protocol in English. The data presented here include the 103 families who participated in the Wave 3 assessment; 98 of those families participated in all three assessments, and the remaining 5 families participated in only the first and third assessments. Returning and non-returning families did not differ significantly on violence exposure or demographic variables with one exception: non-returning families had more children on average [3.5 vs. 2.7 children, $t(117) = 2.0, p < .05$]. Mean substitution based on data from Waves 1 and 3 data was employed to handle missing data for the 5 families who did not return for the Wave 2 assessment. On measures other than violence exposure, mean item substitution was used when single items were skipped.

Of the participating youth, 41% were female and at Wave 1 ages ranged from 9–10 years ($M = 10.0, SD = .6$). The mean youth age at Wave 2 was 11.1 years ($SD = .7$) and 12.4 years ($SD = .8$) at Wave 3. The sample was ethnically and racially diverse. Thirty-eight percent of the youth were Hispanic/Latino. Racial distribution of youths was: 1.0% American Indian; 7.8% Asian; 18.4% Black/African American; 34% Caucasian, 29.1% more than one race, and 9.7% unknown.

Mothers' mean age at Wave 1 was 38.7 years ($SD = 6.0$) and fathers' mean age was 40.8 years ($SD = 6.7$). Parents' years of education ranged from 7 to 20 years; mothers' mean years of education was 14.4 years ($SD = 2.5$) and fathers' mean education was 14.3 years ($SD = 2.4$). Families reported a mean annual income averaged across Waves 1–3 of \$75,427 ($SD = \$36,551$; range = \$6630–\$173,333); 14.6% of the families reported an annual income under \$25,000 for at least one of the three years.

Procedures

The data presented are from Waves 1–3 of the overall project. At each wave, youth with their parents came for a family-based assessment in our university laboratory offices. The assessments took 3–4 hours and typically were scheduled on weekends to accommodate parents' work and youths' school schedules. During these visits, parents and youth individually completed questionnaires and interview protocols administered by graduate student experimenters and, for Waves 2 and 3, family members engaged in a videotaped discussion. The Wave 2 assessment was conducted approximately one year ($M = 1.1$ years; $SD = 0.3$) after Wave 1, and the Wave 3 assessment was conducted at approximately a one-year ($M = 1.3$ years; $SD = 0.3$) interval following Wave 2. Consent procedures at each assessment were conducted

jointly with all three family members. Both parents gave consent for their own and the youth's participation, and the youth gave assent. The University of Southern California IRB approved the procedures for each assessment wave. Families were compensated \$100, \$125, and \$150, at Waves 1, 2, and 3, respectively.

Measures

Assessment of Violence Exposure—Paper-and-pencil measures were used to assess violence exposure within the 12 months prior to the visit. Measures were identical across assessment waves and were obtained from all three family members. Parent and youth versions were written to be as close in content as possible and generally included matching items. Labels on the response scale differed with some respect to complexity. In addition, the assessment of marital aggression included more items in the adult version than the youth version due to concern about the age appropriateness of having youth, at age 9–10, read certain items, particularly if they had no experience with those types of behaviors. The literature strongly endorses the importance of obtaining multiple reporters, largely because there is only modest agreement across family members on the occurrence and nonoccurrence of specific violent events (Augustyn, Frank, Posner, & Zuckerman, 2002; McCabe, Lucchini, Hough, Yeh, & Hazen, 2005; O'Brien, John, Margolin & Erel, 1994). We resolved discrepancies between reporters by using the maximum reported score for each question based on the assumption that people are more likely to underreport rather than over-report violence (Langhinrichen-Rohling & Vivian, 1994; Osofsky, 1995).

Table 1 contains the intercorrelations of the violence measures at each wave of assessment. All intercorrelations among the same type of violence exposure (shaded cells) are significant, whereas 35% of intercorrelations across violence types are significant.

Marital Physical Aggression: Exposure to marital physical aggression was assessed through parents' reports on the Domestic Conflict Inventory (DCI; Margolin, John, & Foo, 1998) and youths' reports on the Conflict Tactics Scale–Child Version (CTS; Straus, 1979). The DCI is a 61-item questionnaire that assesses conflict and aggression between adult partners. This study uses 15 physical abuse items, 11 of which are incorporated from the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), a well-validated measure of physical aggression in community samples. Parents reported on their own aggression and then responded to parallel items for their partner for the past year. Test-retest reliabilities for the DCI range from .63–.70 (Margolin John, & Foo, 1998). Examples of the items used included “pushed, grabbed, shoved”, “slapped”, and “kicked, bit, or hit with fist”. Each item receives a 0–5 score based on the following frequency ranges: (0) *none*, (1) *once per year*, (2) *2–5 times per year*, (3) *6–12 times per year*, (4) *2–4 per month*, and (5) *more than once per week*. On the CTS-Child version, the youth reported for five physical aggression items how often [(0) *never*, (1) *once*, (2) *a few times*, or (3) *a lot*] she/he had observed her /his mother or father display the behavior during a marital conflict within the previous year. The marital physical aggression items reported by the youth included the following behaviors: (a) pushed, grabbed, shoved, (b) slapped, (c) thrown an object at, (d) kicked, bit, or hit with fist, and (e) hit or tried to hit with something. Both adult and youth participants reported on how many times an item had occurred during the same 12-month time period. Yearly marital physical aggression scores were calculated by summing the maximum response across any of the three reporters on each of the 15 physical abuse items (5 items included the youths' report) for each wave of assessment. A total marital aggression score was also computed by taking the sum across yearly scores for Waves 1–3. For this sample, total marital aggression scores summed across Waves 1–3 ranged from 0 to 47 ($M = 5.95$, $SD = 9.68$).

Mother-to-Youth and Father-to-Youth Aggression: Exposure to aggressive parenting was assessed using youths' and parents' reports on a subset of items from the Conflict Tactics Scale–Parent/Child (CTS-P/C; Straus, Hamby, Finkelhor, Moore, & Runyan, 1998; Straus & Hamby, 1997). This study includes three items per parent, with two items representing physical aggression and one representing psychological aggression: parent slapped child on the hand, arm or leg; parent shook child; and parent threatened to send child away or kick out of the house. Each item received a score of 0–6 based on the following response scale: (0) *never*, (1) *once*, (2) *twice*, (3) *3–5 times*, (4) *6–10 times*, (5) *11–20 times*, or (6) *20+ times*. Parents reported on their own behaviors within the previous year and youth reported on each parent separately. Yearly scores were calculated separately for mother-to-youth aggression and father-to-youth aggression by summing the maximum report per item across parents' and youths' responses at each wave. Total scores summing across Waves 1–3 were also computed for mother-to-youth and father-to-youth aggression. In this sample, total scores summed across Waves 1–3 ranged from 0 to 30 ($M = 6.40$, $SD = 6.53$) for mother-to-youth aggression and 0 to 27 ($M = 5.03$, $SD = 5.85$) for father-to-youth aggression.

When calculating our scores, we excluded items from the original scale that: (a) were endorsed by almost everyone in the sample or (b) had an ambiguous meaning, e.g., pinching. We chose not to assess severe physical aggression items that automatically would require us to make a child abuse report or to conduct an additional interview to determine if such a report were needed; we did not want research participation, as a voluntary act, to automatically trigger consequences such as child protection inquiries (Margolin et al., 2005; Melton, 1990). Our assumption was that participants would provide more valid data overall if their answers to questions in the protocol would not reach the threshold for child abuse reporting. We also carefully informed participants of our child abuse reporting responsibilities if they were to go outside the protocol and tell us about a youth at risk. This approach, we believe, gives parents and youth the choice about whether to disclose reportable abuse if they want some type of assistance.

Community Violence: Youths' exposure to community violence was assessed through parents' and youth's reports on a modified version of the Survey of Children's Exposure to Community Violence (Richters & Saltzman, 1990). This questionnaire assesses the extent to which youth have witnessed or experienced specific violent events in their neighborhoods, communities, or schools, and instructs them not to include events seen on television. The original scale has adequate test-retest reliability (.81; Richters & Martinez, 1993). This study uses 13 items, 8 of which assessed youths' direct victimization and 5 assessed youths' observed violence. Respondents indicated the number of times the youth had experienced events within the previous year: (0) *never*, (1) *once*, (2) *twice*, or (3) *more than twice*. Yearly scores were calculated summing the maximum report per item across parents' and youths' responses at each assessment. Total community violence scores were also calculated by summing across scores for Waves 1–3. Total community violence scores summed across Waves 1–3 for this sample ranged from 0 to 28.50 ($M = 2.33$, $SD = 4.34$).

Contextual Risk Factors and Youth Outcome

Negative Life Events: Stressful life events were reported by parents on the Life Experiences Survey, an instrument that lists 43 events and that is demonstrated to have adequate validity and test-retest reliability (LES; Sarason, Johnson, & Siegel, 1979). Respondents first indicated whether the event occurred and then, for each item endorsed, rated the impact of the event on a 7-point scale ranging from –3 (*extremely negative*) to +3 (*extremely positive*). Because these events affect the entire family system rather than only one individual, we calculated a negative life events score per family by comparing each negatively-rated item in the mother's and the father's questionnaire and taking the maximally negative score per item across parents. We

calculated total negative life stress per family per year, by summing negative impact items and taking the absolute value for interpretability of the score. Negative life events scores for this sample, averaged across Waves 1–3, ranged from 1.00 to 33.67 ($M = 9.39$, $SD = 6.41$).

Mothers' and Fathers' Global Distress: Parents' general distress symptoms were assessed through the Symptom Checklist-90 Revised (SCL-90-R; Derogatis, 1977), a 90-item self-report symptom checklist designed to measure somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The SCL-90-R has demonstrated adequate internal consistency (.77–.90) and test-retest reliability (.78–.90; Derogatis, 1977). Respondents indicated on a 5-point scale the extent to which each item caused them discomfort during the past week: (0) *not at all*, (1) *a little bit*, (2) *moderately*, (3) *quite a bit*, or (4) *extremely*. We use the Global Severity Index (GSI) of the SCL-90-R, which is the average rating across all 90 items. GSI scores, averaged across Waves 1–3, were .39 ($SD = .31$) for mothers and .26 ($SD = .24$) for fathers.

Youth Total Behavior Problems: Youth problem behaviors at Wave 3 were assessed through mother, father and youth reports on the Child Behavior Checklist (CBCL; Achenbach, 1991a). The parent questionnaire comprises 113 items, each scored on a 3-point scale [(0) *not true*, (1) *somewhat or sometimes true*, (2) *very true or often true*]. Youth completed the Youth Self-Report form of the Child Behavior Checklist (YSR; Achenbach 1991b), a parallel version of the parent questionnaire. Psychometric properties as reported by Achenbach (1991a, 1991b) indicate interparental agreement ranged from .69–.82 and one-week test-retest reliabilities ranged from .92–.94 for the parent form and .78–.91 for the youth form. In this study we calculated a parent-reported Total Problem *T*-score by taking the maximum report for each item across mothers and fathers. The final Total Problem *T*-score was computed by taking the maximum reported *T*-score across the parents and youth. The mean Wave 3 Total Problems was 63.18 ($SD = 8.99$).

Results

Intercorrelations between Total Violence Exposure, Contextual Risk Factors, and Youth Total Problems

Table 2 presents bi-variate correlations for total scores across the three waves on the four types of violence, average yearly scores for the family risk variables, and Wave 3 child behavior problems. Three types of violence exposure (mother-to-youth aggression, father-to-youth aggression and community violence) all correlate with mothers' global distress, and with child behavior problems, whereas marital physical aggression correlates with fathers' global distress. Only community violence correlates with family income, and none of the violence exposure variables correlates with negative life events. Negative life events and mothers' global distress correlate with youth total problems.

Stability of Violence Exposure

Data from 98 families who participated in all three years of the study were used to examine continuity of each type of violence across all three assessments. At each time point, the youth was classified as either exposed ("yes") or not exposed ("no") to each of category of violence. Figure 1 presents "tree structures" for each category of violence exposure in which each node represents the number of families with a given exposure status at that time point, contingent upon their previous status. Presented in the left half of each node is a fraction consisting of the number of actual families who took that path, over the total number of families in the previous node. These figures are paired with contingent probabilities (percentages) reflecting the likelihood of having that status given the family's prior classification. Presented on the right side of each node is the percentage of families with the given trajectory at that time point out

of the whole sample. This percentage is also represented by an accompanying pie chart and can be interpreted as the probability of any family in the study having a given trajectory.

As shown in Figure 1a on exposure to marital physical aggression, 38% of youth experienced inconsistent patterns comprising at least one year with exposure and one year without exposure. Overall, 59.2% reported exposure at some point during the three years of the study, with approximately 20% exposed consistently across the three waves; these proportions are similar to Frias and Angel's (2007) finding that 64% of women had experienced intimate partner violence at some point in their lives, whereas 22–26% reported partner violence when past-year exposure was assessed. In general, there were more youth who cycled out of exposure to marital aggression compared to those who experienced start-ups of exposure to marital aggression. Of the 52% of families who reported marital physical aggression at Wave 1, 58.8% (30 out of 51) reported no aggression at Wave 2 or 3. Of the 48% of youth not exposed at Wave 1, the probability of reporting marital physical aggression at Wave 2 or 3 was only 14.9% (7 out of 47).

Figures 1b and 1c present data on mother-to-youth and father-to-youth aggression. Aggression by close to half of parents (42% of mothers and 44% of fathers) showed inconsistent (some combination of “yes” and “no”) classifications over the 3 years. Forty-one percent of youth were consistently exposed to mother-to-youth aggression and 29% were consistently exposed to father-to-youth aggression. Overall, children in this study were more likely to experience aggression from their mothers, as compared to their fathers, a difference that reached statistical significance at Wave 2 ($\chi^2=5.22, p = .02$). Over 27% of fathers and 17% of mothers were not aggressive to the youth at any point during the study. More than three-quarters of families reported parent-to-youth aggression if we simultaneously examine mothers' and fathers' aggression as a single category of parent-to-youth aggression; approximately 55% reported it at every wave, and 85.7% reported it at some point during the three assessment waves.

Figure 1d shows that approximately 40% reported inconsistent patterns of community violence. Ten percent of youth reported community violence at all three assessment waves whereas 50% never reported community violence. Of the 66.3% of families who reported no exposure to community violence at Wave 1, 24.6% (16) reported exposure at Wave 2 or 3. Alternatively, of those reporting community violence in Wave 1, 69.7% (23 out of 33) reported no violence at a later wave.

Co-occurrence of Violence Types

Table 3 presents proportions of the number of violence types (0–4; marital physical aggression, mother-to-youth aggression, father to youth aggression and/or community violence) youth were exposed to in Wave 1, 2 and 3. In addition, the number of types of violence youth were exposed to any time over the three waves is presented in the final column. The majority of youth experienced multiple types of violence exposure. In Wave 1, 70% reported experiencing multiple types of violence exposure and, in Waves 2 and 3, just over 50% reported two to four types of violence exposure. In each wave, 10–20% of youth were not exposed to any of the violence types. Across all three waves, only 5% of youth were not exposed to any violence. Within each wave, 18–27% of youth experienced a single type of violence exposure.

Table 4 presents co-occurrence data between individual types of violence exposure. The table presents chi-squares examining whether youth exposed to more years of one type of violence have a greater likelihood of experiencing a second type of violence any time during the study. These numbers examine the question of whether experiencing more violence in one domain (here measured by stability of exposure) is associated with experiencing violence in other domains. Mother-to-youth aggression and father-to-youth aggression are related in these analyses, with each increasing the likelihood of the other. Overall, most youth experiencing

aggressive parenting from one parent also experienced aggressive parenting from the other parent; just over two-thirds of youth experienced aggressive parenting from both parents. Of the total sample, 14.6% (15) of youth experienced mother-to-youth aggression, but not father-to-youth aggression. Only 2.9% (3) of youth experienced father-to-youth aggression, but not mother-to-youth aggression, and 13.6% (14) did not experience any parent-to-youth aggression.

In addition, with increasing number of years of mother-to-youth aggression, a higher proportion of youth were exposed to marital physical aggression. Increasing number of years of father-to-youth aggression increased the likelihood of community violence. Youth exposed to a greater number of years of community violence had an increased likelihood of also being exposed to mother-to-youth and father-to-youth aggression. Increased number of years of marital physical aggression did not yield higher rates of any of the other three types of exposure.

Contextual Risk Factors

Since many investigations examine different types of violence exposure independently, little is known about factors that may increase the likelihood of youth being exposed to multiple types of violence. Understanding risk factors for co-occurrence may provide important information for identifying and intervening with violence exposed youth. To address this question, we split participants into low and high groups on four contextual risk factors: family income, negative life events, mother's global distress, and father's global distress. For income, if families reported a household income below \$25,000 at any of the three time points, the family was included in the high stress group ($n=15$). For negative life events, families who were one *SD* above the mean on average parent reported negative life events in Waves 1–3 were included in the high negative event stress group (criterion score = 15.8; $n=16$). For mother's and father's global distress, parents with mean Wave 1–3 self-reported global distress greater than or equal to a *T*-score of 60 based on a non-clinical sample (Derogatis, 1977) were included in the high global distress group (for mothers, $T \geq 60 = .58$; $n=20$, and for fathers, $T \geq 60 = .46$; $n=16$). We examined correlations among violence types in the families falling below and above these cutoffs. In these analyses, we calculated a sum for each type of violence exposure across the three waves of the study. Because of the non-normal distributions of the violence variables, Spearman's Rho correlations were computed.

Table 5 presents correlations between violence exposure types for families below and above these contextual risk factor cutoffs. We used Fisher's *R* to *Z* transformations to test whether pairs of correlations for high and low risk groups were significantly different from one another. In general, we anticipated higher likelihood of co-occurring violence exposure in families experiencing other types of stress. For families where fathers report high, compared to low global distress, there are significantly higher correlations between community violence and mother-to-youth aggression ($z = 2.18, p < .05$) and between community violence and father-to-youth aggression ($z = 1.97, p < .05$). In other words, when fathers' global distress scores are high, there is a stronger relationship between community violence exposure levels and both parents' aggression towards the youth. For families with high mother global distress, compared to families where mothers do not meet the distress cutoff, there was a non-significant trend towards a greater correlation between marital physical aggression and father-to-youth aggression ($z = 1.90, p < .06$).

The small number of families in the high-risk groupings makes it difficult to interpret the co-occurrence correlations for that group. We found significant correlations of .63 and .51 between community violence and father-to-youth aggression for families with high financial stress, and for families with high negative life events. Overall, 13 of the 20 correlations for the high-risk groupings were .45 or higher, although only six correlations reached statistical significance. In the low risk groupings with the larger samples, ten of the 20 correlations were statistically

significant; the highest correlation was .34. Further research with larger sample sizes may show that families experiencing high stress may be particularly vulnerable to co-occurring violence types. It is important to note, however, that these analyses do not speak to directionality between stress and violence or between types of violence exposure.

In light of the connection between violence exposure and other risk factors, we also were interested in determining the contribution of violence exposure over and above our four contextual risk factors. For each risk factor, we calculated the mean across the three years to derive one score for the three-year time frame. We conducted four regression analyses, one for each type of violence exposure (marital physical aggression, mother-to-youth aggression, father-to-youth aggression, and community violence), and, as in the previous analyses, summed each violence exposure variable into one score across the 3-year time frame. For each regression equation, we first entered the risk factors as a block to determine their contribution to youth adjustment as measured by the Total Problem Score on the Child Behavior Checklist and then at step 2 we entered the specific type of violence exposure. Results appear in Table 6. We present step 1 only one time as this step is the same in each equation. Separate results are presented for each of the violence exposure types at Step 2 for each equation.

Three of the four violence types contributed variance over and above the contextual risk factors to youth behavior problems. Mother-to-youth aggression, father-to-youth aggression and community violence all significantly contributed to youth behavior problems over and above the contextual risk factors, significantly increasing the percent of variance accounted for from 4% to 20%. The pattern was the same for all three equations, with mothers' global distress contributing a significant amount of variance along with each of the three types of violence exposure. In these analyses, family income, negative life events, and father's global distress did not emerge as significant predictors of youth behavior problems. Marital physical aggression did not account for a significant amount of variance over and above the other risk factors. The only significant predictor of behavior problems was mother's global distress, with the contextual risk factors accounting for 15% of the variance. In sum, youth exposure to mother-to-youth, father-to-youth, and community violence is related to youth problems over and above other prevalent contextual risk factors. This demonstrates that there is something unique about violence exposure that disturbs youth adjustment—something beyond other negative context factors in the youth's life.

Discussion

This article illustrates the dynamic and interrelated nature of commonly occurring types of violence experienced by youth. Depending upon the type of violence examined, between 30–45% of youth reported changes from occurrence to non-occurrence or vice versa over the three yearly assessments. In each wave of data collection, over half of the youth experienced multiple types of violence exposure. As anticipated by previous literature, we found overlap among types of violence exposure within the family. We additionally found overlap between parent-to-youth aggression and community violence, an association that is exacerbated in families where fathers experience high global distress. Although violence often is embedded in a context involving other family stressors, mother-to-youth aggression, father-to-youth aggression and community violence contributed unique variance to youth problem behaviors beyond other contextual factors in youth's lives that are known to be harmful.

Stability data in this study have implications for researchers and clinicians. Youth exposed across all three data collection waves comprised 21% of the sample for marital physical aggression, 41% for mother-to-youth aggression, 29% for father-to-youth aggression, and 10% for community violence. However, youth who report violence exposure at least once during the three years of data collection comprised 59% of the sample for marital physical aggression,

82% for mother-to-youth aggression, 72% for father-to-youth aggression, and 50% for community violence. Thus, the number of youth who are consistently exposed to violence is less than half of those who are exposed to violence at least once over three years. These data illustrate the changeable topography of violence exposure—a quality that is obscured when relying only on the typically examined one-year time-frame. Although recent, as contrasted with distal, violent exposure tends to be salient when predicting youth outcomes (Finkelhor, et al., 2007b), these data on stability challenge notions about the adequacy of assessing violence only within the past year.

The substantial percentage of youth exposed to sporadic violence suggests that the exploration of subgroups of violence exposed youth—chronically versus variably exposed—is warranted. Based on comparisons between children with chronic versus episodic exposure to maltreatment, English and colleagues (2005) posit that episodic maltreatment may allow children to recover during the periods without maltreatment. Chronic versus episodic violence exposure may have different etiologies and may call for different types of interventions. Youth with chronic exposure may require more intensive intervention, but youth who cycle in and out of violence perhaps could benefit from preventive efforts to minimize the impact of future experiences with violence.

The stability data also tend to show violence exposure decreasing over the three year-long assessment periods, e.g., wave 1 versus wave 2 endorsements are 52% and 37% for marital physical aggression, and 64% and 42% for father-to-youth aggression. These declines may reflect a general trajectory in violence as youth get older, though data do not actually support assumptions about declining rates and children's age (American Medical Association Council Scientific Affairs, 1993). Marital violence tends to decrease across the adult life span (Bookwala, Sobin, & Zdaniuk, 2005; Sutor, Pillemer, & Straus, 1990). This phenomenon has not been fully considered in light of the child's age although there is some cross-sectional evidence of particularly high rates of intimate partner violence in families with children aged birth to five years (Fantuzzo, Boruch, Beriama, Atkins, & Marcus, 1997). Declines in percent endorsement also may be related to participating in a study where, year after year, family members are asked to report on violence. Possible reactance effects of participating in longitudinal studies, whether indicative of actual reductions in aggressive behaviors or of social desirability in reporting, warrant further exploration.

Co-occurrence is another important dimension in understanding and defining the nature of the risk associated with violence exposure. As with the Finkelhor et al. findings (2007a), youth exposed to multiple types of violence outnumbered those exposed to a single type of violence. In investigations that address only one type of violence, findings attributed to that violence type might actually represent more generalized exposure. Importantly, when youth experience aggression and violence in multiple domains, resources that may serve as protective factors to increase youth's resilience to the impact of exposure are less available. The impact of exposure to neighborhood violence, for example, might be buffered by a safe home environment, alternatively, might be exacerbated by an aggressive home environment.

Connections between different forms of aggression in the home are to be anticipated in light of the interdependencies across different family members, and the spread of negativity from one family dyad to another (Margolin, Gordis, & Oliver, 2004). In the literature based on family conflict and aggression, various mechanisms for the spread of negative emotionality have been proposed, including the aggressive propensities of one family member across multiple family relationships, the contagion of negative affect from one relationship to another, the stress associated with victimization in one relationship translating into aggression in another relationship, and the normalization of aggression in family relations (Appel & Holden, 1998; Erel & Burman, 1995; Jouriles, et al., 2008; Katz & Gottman, 1996; Margolin, Christensen, &

John, 1996). Some explanations propose directional influences, e.g., marital aggression spilling over to parent-to-youth aggression, but others portray families overall becoming multidirectional aggressive, coercive systems (Patterson, 1982).

Our data do not speak to directionality between types of violence exposure, but possible explanations about violence co-occurrence, particularly between community violence and parent-to-youth violence, bear further consideration. Do parents living in violent neighborhoods exert a high level of harsh control and discipline to decrease opportunities for the youth to get hurt or into trouble? Are aggressive parenting styles more normalized in communities with high levels of violence? Do aggressive youth seek out or create dangerous situations in the community, and do the parents of these youth feel that they need to use more aggressive parenting techniques to discipline those children?

Related considerations for the co-occurrence of violence across multiple domains comes from role strain and general stress explanations (Burr, 1973; Margolin & Gordis, 2003) in that stressful circumstances, either internal or external to the family, render multiple family systems vulnerable to high levels of conflict and aggression. As shown here, contextual factors had modest bi-variate associations with the violence exposure variables and, in the case of fathers' global distress, only correlated significantly with total marital physical aggression. Nonetheless, fathers' global distress influences the overlap between community violence with mother-to-youth aggression as well as with father-to-youth aggression. As predicted by family systems theory (Minuchin, 1985), one family member's distress not only directly impacts the developing child but also indirectly impacts the child through other family subsystems that may exclude the distressed individual. Moreover, in families with low family income and high negative life events, there is a strong association between community violence and family-to-youth aggression, although not statistically higher than that for the low risk families. Although the sample size in the high-risk groupings limits what we can say about the impact of family risk factors, even the small number of significant findings suggests that youth in families beleaguered with life stresses have a higher likelihood of multiple forms of violence exposure.

It is important to note, however, that violence exposure has a distinct relationship with youth total problems and is not just one of a variety of adverse life circumstances. Separate analyses for mother-to-youth aggression, father-to-youth aggression and community violence show that each of violence exposure types is associated with youth behavior problems beyond what is accounted for by the other adverse environmental factors. This finding underlines the importance of examining violence exposure in addition to other contextual factors when thinking about public policy and prioritizing resources to benefit youth.

Although we did not find marital physical aggression to be a predictor of youth behavior problems, this was not completely unexpected. The literature on the relation between marital physical aggression and children's behavior problems is mixed (Margolin & Gordis, 2000), with several studies not finding a connection between marital violence and children's conduct disorders and externalizing problems (e.g., McCabe, et al., 2005). It can be argued that marital aggression is a less direct form of victimization for the youth, as contrasted with parent-to-child aggression and some forms of community violence. That is, the threat of physical harm to the youth may not be as salient a factor with marital aggression although sometimes it does occur, particularly when the youth intervene in efforts to stop the marital aggression. Moreover, despite the lack of a significant direct relationship between marital physical aggression and youth total behavior problems, there is the possibility of an indirect effect via the link between marital physical aggression and parent-to-youth aggression (Jouriles et al., 2008).

The primary limitation of this study is the relatively small sample size. Because the study was designed to examine behavioral observations of family processes associated with violence

exposure and required repeated and extensive in-lab participation as well as follow-up daily assessments for two weeks, we could accommodate only a limited number of participating families. The time demands of the study also probably influenced which families agreed to participate, and perhaps precluded participation from some families who experience very high levels of family stresses. The requirement for biological parents, or for a parenting figure who has been present for at least three years also limits the sample to families with long-standing couple and parent-child relationships. Despite these sampling concerns, the participating families included a relatively wide range of income levels, ethnic and racial diversity representative of the surrounding community, and reported considerable violence exposure. Although we assessed a broad array of items in our violence exposure measures—items that typically are used in other violence exposure studies—we found that we needed to eliminate certain items from our analyses, due primarily to the frequency of endorsement. If we included all the community violence items or all the parent-to-youth items that we assessed, nearly all of the youth would report violence exposure at each assessment. We continue to puzzle over the potential for ambiguity in some typically used violence exposure items, and view meaningful assessment of violence exposure as an ongoing challenge.

Despite limitations, this study illustrates that there are interrelated and synergistic effects among the different types of violence, and in combination with other risk factors. Co-occurring violence types and clusters of other associated variables must be addressed in research designs and targeted in comprehensive assessments and interventions. When parents or professionals who work with children become aware that a child has been exposed to violence, the focus typically is on a single type of exposure; however, the full extent of violence across different types and across time should be evaluated. As a further challenge, the continuities and discontinuities of violence exposure must be considered with respect to the child's developmental stage and the ever-changing family context. Attention to the interconnections among violence types and the variables that exacerbate those connections can inform practice and policy about how to disrupt the interplay of variables that elicit and maintain violence.

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1a. Marital Physical Aggression

1b. Mother-to-Youth Aggression

1c. Father-to-Youth Aggression

1d. Community Violence

Figure 1.
Stability in Reports of Violence Exposure over Three Waves

Table 1
Violence Exposure by Type and Wave: Spearman Correlations

Violence Exposure by Wave	Correlations											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Marital Wave 1	--											
2. Marital Wave 2	.59**	--										
3. Marital Wave 3	.63**	.55**	--									
4. Mother-to-Youth Wave 1	.24*	.19	.11	--								
5. Mother-to-Youth Wave 2	.25*	.16	.04	.70**	--							
6. Mother-to-Youth Wave 3	.14	.19	.11	.48**	.47**	--						
7. Father-to-Youth Wave 1	.17	-.06	-.00	.44**	.30**	.33**	--					
8. Father-to-Youth Wave 2	.13	-.03	.13	.29**	.35**	.39**	.69**	--				
9. Father-to-Youth Wave 3	.11	.06	.23*	.25*	.14	.40**	.51**	.54**	--			
10. Community Wave 1	.29**	.15	.22*	.27**	.15	.16	.29**	.18	.17	--		
11. Community Wave 2	.16	.21*	.18	.12	.09	.19	.19	.24*	.19	.39**	--	
12. Community Wave 3	.13	.02	.17	.15	.03	.19	.22*	.33**	.34**	.35**	.39**	--

*
p < .05

**
p < .01

Table 2
Spearman Correlations for Violence Exposure Variables, Contextual Risk Factors, and Youth Total Behavior Problems

	Correlations								
	1	2	3	4	5	6	7	8	9
1. Total Marital Physical Aggression	--								
2. Total Mother-to-Youth Aggression	.26**	--							
3. Total Father-to-Youth Aggression	.17	.47**	--						
4. Total Community Violence	.24*	.26**	.34**	--					
5. Family Income	-.10	-.11	-.11	-.35**	--				
6. Negative Life Events	.16	.14	.05	.06	-.11	--			
7. Mothers' Global Distress	.17	.29**	.23*	.34**	-.07	.44**	--		
8. Fathers' Global Distress	.21*	.07	.09	.01	-.10	.29**	.23*	--	
9. Youth Total Behavior Problems	.19	.25*	.44**	.57**	-.12	.30**	.41**	.14	--

* p<.05

** p<.01

Table 3

Number of Types of Violence Exposure Experienced at Each Wave and Across Three Waves

Number of Types of Violence Exposure ^a	% (n) of Youth Exposed			
	Wave 1	Wave 2	Wave 3	Across 3 Waves
No Violence	11.7 (12)	18.4 (18)	21.4 (22)	4.9 (5)
1 type	18.4 (19)	27.6 (27)	27.2 (28)	14.6 (15)
2 types	25.2 (26)	30.6 (30)	27.2 (28)	20.4 (21)
3 types	28.2 (29)	15.3 (15)	16.5 (17)	31.1 (32)
4 types	16.5 (17)	8.2 (8)	7.8 (8)	29.1 (30)
Total	100.0 (103)	100.0 (98)	100.0 (103)	100.0 (103)

^aTypes of violence exposure: marital physical aggression, mother-to-youth aggression, father-to-youth aggression, and community violence.

Table 4
Co-occurrence of Exposure as a Function of Number of Years of Each Violence Type

% (n) Reporting Additional Types of Exposure at Any Wave					
Number of Years of Exposure	Number of Youth	Marital Physical Aggression	Mother-to-Youth Aggression	Father-to-Youth Aggression	Community Violence
Marital Physical Aggression					
0	42	---	78.6 (33)	66.7 (28)	40.5 (17)
1 year	19	---	89.5 (17)	84.2 (16)	52.6 (10)
2–3 years	42	---	85.7 (36)	71.4 (30)	59.5 (25)
χ^2 (2, N=103) =		---	1.38	2.00	3.09
Mother-to-Youth Aggression					
0	17	47.1 (8)	---	17.6 (3)	23.5 (4)
1 year	22	36.4 (8)	---	68.2 (15)	54.5 (12)
2–3 years	64	70.3 (45)	---	87.5 (56)	56.3 (36)
χ^2 (2, N=103) =		9.06*	---	32.59***	5.94
Father-to-Youth Aggression					
0	29	51.7 (15)	51.7 (15)	---	27.6 (8)
1 year	18	55.6 (10)	94.4 (17)	---	44.4 (8)
2–3 years	56	64.3 (36)	96.4 (54)	---	64.3 (36)
χ^2 (2, N=103) =		1.37	29.61***	---	10.61**
Community Violence					
0	51	51.0 (26)	74.5 (38)	58.8 (30)	---
1 year	29	58.6 (17)	86.2 (25)	79.3 (23)	---
2–3 years	23	78.3 (18)	100.0 (23)	91.3 (21)	---
χ^2 (2, N=103) =		4.89	7.69*	9.38**	---

Note. Values relevant to significant chi-squares are bolded.

* $p < .05$

 $p < .01$
**

Table 5
Correlations Among Violence Exposure Types for Families at Low and High Levels of Contextual Risks

Risk Variable	Low Risk	High Risk
Annual Family Income	(<i>n</i> =88)	(<i>n</i> =15)
Marital Physical Aggression & Community Violence	.20 ^b	.41
Marital Physical Aggression & Mother-to-Youth Aggression	.23 [*]	.45 ^a
Marital Physical Aggression & Father-to-Youth Aggression	.17	.17
Community Violence & Mother-to-Youth Aggression	.25 [*]	.44
Community Violence & Father-to-Youth Aggression	.29 ^{**}	.63 [*]
Negative Life Events	(<i>n</i> =87)	(<i>n</i> =16)
Marital Physical Aggression & Community Violence	.19 ^b	.21
Marital Physical Aggression & Mother-to-Youth Aggression	.24 [*]	.13
Marital Physical Aggression & Father-to-Youth Aggression	.12	.09
Community Violence & Mother-to-Youth Aggression	.25 [*]	.46 ^a
Community Violence & Father-to-Youth Aggression	.31 ^{**}	.51 [*]
Mother Global Distress	(<i>n</i> =83)	(<i>n</i> =20)
Marital Physical Aggression & Community Violence	.13	.41 ^a
Marital Physical Aggression & Mother-to-Youth Aggression	.24 [*]	.09
Marital Physical Aggression & Father-to-Youth Aggression	.07	.52 [*]
Community Violence & Mother-to-Youth Aggression	.16	.48 [*]
Community Violence & Father-to-Youth Aggression	.34 ^{**}	.22
Father Global Distress	(<i>n</i> =87)	(<i>n</i> =16)
Marital Physical Aggression & Community Violence	.14	.44 ^a
Marital Physical Aggression & Mother-to-Youth Aggression	.24 [*]	.18
Marital Physical Aggression & Father-to-Youth Aggression	.05	.49 ^b
Community Violence & Mother-to-Youth Aggression	.16	.67 ^{**}
Community Violence & Father-to-Youth Aggression	.22 [*]	.67 ^{**}

Notes. High risk was defined as: family income ≤ \$25,000; Negative Life Events ≥ 1 *SD* above the mean (15.80 or greater); Global Distress of *T* ≥ 60 (58 or greater for mothers and .46 or greater for fathers).

* *p* < .05

** *p* < .01

^a *p* < .10

^b
 $p < .06$

Table 6
Regression Analyses of Risk Factors, Violence Exposure, and Total Behavior Problems

Total Behavior Problems				
	β	T	F	Adj R ²
<i>STEP 1: Contextual Risk Factors^a</i>				
Step 1			5.61	.15
Family Annual Income	-.14	-1.54		
Negative Life Events	.04	.38		
Mother's Global Distress	.32	2.94**		
Father's Global Distress	.08	.78		
<i>STEP 2: Marital Physical Aggression</i>				
Step 2			4.58	.15
Family Annual Income	-.15	-1.59		
Negative Life Events	.02	.19		
Mother's Global Distress	.33	2.95**		
Father's Global Distress	.07	.66		
Marital Physical Aggression	.07	.74		
				.00
<i>STEP 2: Mother-to-Youth Aggression</i>				
Step 2			5.51***	.18
Family Annual Income	-.13	-1.44		
Negative Life Events	.03	.30		
Mother's Global Distress	.30	2.72**		
Father's Global Distress	.09	.91		
Mother-to-Youth Aggression	.19	2.08*		
				.04*
<i>STEP 2: Father-to-Youth Aggression</i>				

Total Behavior Problems					
	β	T	F	Adj R ²	ΔR^2
Step 2			9.31***	.29	.14*
Family Annual Income	-.15	-1.54			
Negative Life Events	.07	.69			
Mother's Global Distress	.25	2.41*			
Father's Global Distress	.03	.36			
Father-to-Youth Aggression	.38	4.45***			
<i>STEP 2: Community Violence</i>					
Step 2			11.87***	.35	.20**
Family Annual Income	.03	.29			
Negative Life Events	.09	.87			
Mother's Global Distress	.25	2.55**			
Father's Global Distress	.10	1.17			
Community Violence	.48	5.50***			

* $p < .05$

** $p < .01$

*** $p < .001$

^a Step 1 is the same for each regression equation for each type of violence exposure.