Couple Violence and the Development of Emotional Difficulties in Offspring Over Time: Results from a High Risk Sample

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Abstract

Couple Violence and the Development of Emotional Difficulties in Offspring Over Time: Results from a High Risk Sample

Erin Goldberg

Couple violence is one important aspect of family dysfunction that has been repeatedly identified in the intergenerational transfer of risk for mental health and behavioral problems. The present study examined the associations between parent's history of childhood aggression, subsequent couple violence in adulthood, and offspring's childhood depression and internalizing problems, using a prospective design across a 30-year period.

Data was collected through the Concordia Longitudinal Risk Project (Schwartzman et al., 1986), an ongoing initiative that began 1976 with the recruitment and screening of over 4000 inner-city Canadian children on behavioral dimensions, including aggression. The current sub-sample included 94 participants from the original sample and their currently school-aged children. Data was collected at three time points: when the children were in early childhood, middle childhood, and pre-adolescence stages of development.

Results indicated that childhood aggression in one generation might be indirectly linked to self-reported childhood depression in the next generation through couple violence. In addition, hierarchical linear modeling revealed that mother-reported child internalizing problems were stable over time, and that children whose mothers were themselves depressed and in a violent partnership were reported to experience more internalizing problems at all time points than other children. The discussion focused on the validity of parent reports of children's feelings of depression, as well as the related issue of single-rater bias. The effect of maternal psychopathology on child psychopathology was discussed, as were the implications of the stability of children's internalizing problems across this broad developmental span.

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The topic of couple violence has been widely researched, most recently as it relates to the development of offspring. Research indicates that children are more likely to develop emotional problems, including depression, anxiety, psychosomatic complaints and social withdrawal, if they are regularly exposed to displays of aggression between their parents (Cummings & Davies, 1994, 2002; Grych & Fincham, 2001). However, most of the research regarding this issue utilizes relatively low risk community-based samples and cross-sectional methods. The purpose of the current study is to illustrate the longitudinal and intergenerational relationship between couple violence and childhood depression and internalizing problems in offspring within a high risk sample of families in Canada. In addition, the effects of maternal depression are considered in the association between couple violence and child emotional problems. By investigating this issue using a prospective design across a 30-year period, more information can be acquired regarding the perpetuating and protective factors of childhood emotional disorders throughout the lifespan and across generations.

Childhood Depression

Childhood depression is a mood disorder that can impact children's thoughts, feelings, and behaviour, as well as their physical well-being. It is similar to depression in adults: adult and child depression are described using the same criteria in the DSM-IV-TR. However, childhood depression was only relatively recently recognized by mental health practitioners as a disorder, perhaps partially due to the fact that depression can manifest itself differently in children than in adults. For example, children with depression may develop phobias, separation anxiety, behaviour problems, and may complain of physical problems such as stomachaches and headaches, resulting in frequent

absences from school. While prevalence estimates vary widely from study to study, clinical depression is said to exist in approximately 0.1-8% of children in the general population (Waslick et al., 2003). However, depression in children can be difficult to diagnose. This is due to the fact that children are not always equipped to describe their own feelings of depression, and parents and other caregivers may not recognize physical symptoms and behaviour problems as signs of depression in their children. Because of the difficulties in recognizing childhood depression, it has been difficult to carry out studies on the origins of this problem.

It is recognized that there are multiple causes of childhood depression. Notably, recent research has focused on the interaction between environmental stressors and individual vulnerability in its development. Factors such as genetics, physiology, the parent-child relationship, parental psychopathology, and socioeconomic status have all been shown to contribute in various ways to the development of depression in children. In addition, children who experience loss or who have learning disorders are at a higher risk for developing this disorder (Rice et al., 2002).

Couple Violence and Child Adjustment

According to some research, couple violence might also play a role in the development of children's emotional difficulties. Studies have long demonstrated that experiencing violence between their parents is detrimental to children. Indeed, children who witness verbal, emotional, or physical abuse between caregivers are more likely to develop adjustment difficulties including major depressive disorder, substance abuse, and behaviour problems (Jouriles et al., 1996; Turner & Kopiec, 2006). Since research demonstrates that young children are exposed to couple violence to a greater degree than

are adolescents (Fantuzzo et al., 1997), it is important to take into account the detrimental effects of couple violence on young children's mental health.

Many studies have considered possible mediating factors between couple violence and children's emotional difficulties. One such mediating factor may be stress; witnessing aggression between caregivers is undoubtedly an anxiety-provoking event, and if repeated over time, may develop into a chronic stressor that influences negative mental health outcomes (Cummings & Davies, 1994; Turner & Kopiec, 2006). Social learning theory provides second possibility, in that couple violence indirectly teaches children how to conduct their own present and future relationships; children develop negative peer relations and dysfunctional romantic relationships based on a model their caregivers illustrated, resulting in affective problems as well as a second generation of couple violence (Ehrensaft et al., 2003; Turner & Kopiec, 2006). Another mediator of partner aggression and child affective difficulties is the parent-child relationship. Research demonstrates that interparental conflict may occur in conjunction with parent-child conflict and harsh punishment techniques (Buehler & Gerard, 2002; Grych & Fincham, 1990; Low & Stocker, 2005) as well as child neglect, diminished support, parental emotional unavailability, and disrupted emotional security (Amato & Sobolewski, 2001; Cummings & Davies, 1994; Davies & Cummings, 1998; Fauber et al., 1990; Sturge-Apple, Davies, & Cummings, 2006; Turner & Kopiec, 2006).

There are few studies that focus specifically on childhood depression as a possible outcome of exposure to violence within the family. Two notable exceptions are Sternberg et al. (1993 and 2006) who found that children in Israel who had witnessed spousal abuse and were themselves abused by a parent were more likely than comparison children to

report experiencing feelings of depression. Nevertheless, childhood depression as an outcome of couple violence requires more investigation, notably with different populations who live in varying social and economic contexts.

While few studies focus on childhood depression as a specific outcome of witnessing couple violence, some research exists on the relation between children's internalizing problems and couple violence. Internalizing problems include difficulties related to anxiety, depression, fear, low self-esteem, and shyness (Ollendick & King, 1994), and they are more common in children than clinical depressive disorders. Some researchers have found links between children's internalizing problems and couple violence in their caregivers. Low & Stocker (2005) found that in a community sample, there was a significant relation between marital hostility and children's internalizing problems that was mediated by parent-child hostility. Similarly, El-Sheikh & Elmore-Staton (2004) demonstrated that parent-child conflict and attachment to parents both mediated the relation between partner conflict and childhood internalizing problems. Moreover, some studies show that children's perceptions of interparental aggression and their own coping abilities directly and indirectly affect internalizing behaviours (Cummings et al., 1989; Cummings & Cummings, 1988; Cummings, Davies & Simpson, 1994; Gerard et al., 2005; Grych & Fincham, 1993; Harold et al., 1997; Kerig, 1998). The frequency and type of violent behaviour (e.g., physical assault, violence towards objects, insults or threats) between caregivers have also been shown to affect childhood internalizing tendencies (Jouriles et al., 1996). It is clear from the literature that couple violence is linked to childhood internalizing problems through a variety of mediators.

However, most of the research regarding this issue utilizes relatively low risk community-based samples and cross-sectional methods.

Maternal Depression

Marital conflict and couple violence have consistently been demonstrated to co-occur with parental depression (for review, see Whisman, 2001). In addition, parental depression is linked to children's adjustment difficulties, both through the creation of a stressful family environment (Downey & Coyne, 1990; Gelfand & Teti, 1990; Hammen, Shih, & Brennan, 2004) and indirectly through problems in the parent-child relationship (Brennan et al., 2003; for reviews, see Gelfand & Teti, 1990; Goodman & Gotlib, 2002). It follows that parental psychopathology should play a role in the relation between marital conflict and childhood psychopathology. Indeed, some studies suggest that mothers' affective problems influence those of their children both directly and indirectly through parental conflict (Cummings & Davies, 1994, 1999; Spence et al., 2002). Low & Stocker (2005) found that in both mothers and fathers, depressed mood is significantly correlated with marital hostility, which is related to parent-child hostility, which is subsequently correlated with children's emotional difficulties. While genetic factors may predispose children of depressed parents to childhood depression (Rice et al., 2005), it appears as if couple violence may be an indirect mechanism through which parents' depression is related to children's adjustment difficulties.

Intergenerational Transfer of Risk

In the intergenerational model of risk transmission (Caspi & Elder, 1988), problematic behaviour patterns manifested during childhood persist into adulthood, creating family dysfunction. Later, family dysfunction links the parents' childhood

history of problem behaviours to the subsequent problems of their offspring, establishing an intergenerational cycle. The uniqueness of this approach lies in the "developmental intersection of two or more generations and their ongoing interaction, affecting the future growth trajectories of all members of the family" (Serbin & Karp, 2004, p. 337). According to some researchers, children who display aggressive, antisocial, or withdrawn tendencies are likely to demonstrate continuity in their behaviours throughout adolescence and young adulthood. Therefore, problematic behaviours as a child may result in negative birth and parenting circumstances for the next generation, including physical, psychosocial, and behavioural problems.

Research demonstrates that poverty itself can be transferred across generations; children who are raised in difficult environmental conditions are likely to later have children who grow up in disadvantaged circumstances and who are likely to experience physical and psychosocial problems. In fact, these children who grow up in low income, inner city families can be considered to be high risk, or in other words, more likely to experience negative outcomes than the general population (Lipman & Offord, 1997; McLoyd, 1998). There is now overwhelming evidence that children from lower-SES families are at a greater risk for a host of problems including physical, cognitive, emotional, academic, and behavioural difficulties.

According to many researchers, couple violence and maternal depression are more probable in socially and economically disadvantaged families (Fergusson & Horwood, 1998; Gelles & Cornell, 1990; Vest et al., 2002). Therefore, it is imperative to consider the social and economic contexts in which children experience potentially negative life events and experiences, such as divorce, family stress, couple violence, and parental

psychopathology. Conger et al. (2002) found that economic pressure in families was associated with caregiver distress and relationship difficulties, which in turn predicted disrupted parenting and finally child adjustment difficulties. Contextual factors are required to fully comprehend the consequences of couple violence on young children, as well as intergenerational continuities of violent behaviour.

The intergenerational transfer of risk, due to its transactional and progressive nature, is perhaps most appropriately studied using longitudinal research methods. Repeatedly exploring the lives of individuals and families over time allows us to determine the continuities and discontinuities of risk, as well as potential mediators, moderators, and protective factors of psychological difficulties in children. To this end, the current research utilizes data from the Concordia Longitudinal Risk Project (Schwartzman et al., 1985), an initiative that examines the continuity and discontinuity of risk throughout multiple generations of individuals. It began in 1976 with French Canadian students enrolled at elementary schools in inner-city areas of Montreal. Researchers followed up with 1,770 students, half of whom were above the 75th percentile of aggression and/or social withdrawal, and the remaining half who were a normal comparison group. Currently, the initiative continues to examine these high risk individuals as adults, as well as their own children. Using this longitudinal and intergenerational method, researchers can uncover patterns of interactions that continue over time and across generations, as well as discontinuities of behaviours and the factors that protect children from replicating the high risk lives of their parents.

Stability and Measurement of Childhood Depression

In the present investigation, data collected from the Concordia Longitudinal Risk Project was employed to examine issues of measurement and stability regarding childhood emotional problems within this intergenerational sample. Akin to many psychological constructs, child emotional problems can be conceptualized in various ways. Some individuals refer to childhood depression, described above, as a specific clinical disorder with a set number of symptoms. This disorder is differentiated from other clinical disorders such as anxiety problems, and is often measured using the Children's Depression Inventory (CDI; Kovacs, 1981). On the other hand, some conceptualize emotional problems in children as a wide spectrum of emotional disorders from nonexistent on one side to clinical depression on the other side, and every child falls somewhere along the spectrum. This viewpoint is often taken by researchers who are interested in making comparisons and finding associations between variables. The psychometric tool of choice for this purpose is often the Child Behavior Checklist (CBCL; Achenbach, 1991a), as it considers children's emotional disorders in a more generalized fashion.

For those who take the general emotional disorders viewpoint, the term 'childhood internalizing problems' is used to describe a more general type of adjustment disorder than childhood depression. Children with internalizing problems appear somewhere on the aforementioned emotional disorders spectrum; they may experience subclinical levels of depression, and their cognitive, social, and physical development are all affected by the negative affect they experience on a daily basis. Therefore, internalizing problems differ from depression in that they represent various levels of emotional disorder.

Another important difference between child clinical depression and internalizing problems is the way in which they are often reported. While the CDI allows children ages 7 and above to report their own feelings of depression, the CBCL is primarily a parent report when used with preadolescent children; mothers, fathers, and teachers are asked to describe children's feelings of sadness, anxiety, and fear. Internalizing problems, due to their very nature, are internal, and may be difficult for parents and teachers to identify. Self report forms of the CBCL (Youth Self Report, Achenbach, 1991b) cannot be used with children under age 11. This creates a potential problem with validity, for it is possible that adults are not able to detect internalizing problems in children.

Indeed, research has demonstrated that parent and teacher reports of children's internalizing tendencies and children's reports of their own emotional problems are not highly associated (Seiffge-Krenke & Kollmar, 1998; Stanger & Lewis, 1993; Steinhausen & Metzke, 1998; Sternberg et al., 1993; Verhulst & van der Ende, 1992)). For example, when Berg-Nielsen et al. (2003) compared adolescents' self reports to their mothers' reports on the CBCL, they discovered significant discrepancies between the two reports on both internalizing and externalizing problems. According to this study, mothers with higher levels of depression reported more internalizing problems in their children than non-depressed mothers. While these types of discrepancies can be interesting in and of themselves, the fact remains that parents might not be able to accurately identify their children's emotional problems (De Los Reyes & Kazdin, 2004). These findings have implications for younger children who do not complete self reports, and must rely on their parents and teachers to provide an accurate picture of their internalizing problems. Due to these issues of CBCL validity, in addition to other problems (e.g., the difficulty of

obtaining father reports in a high risk sample in which single parenthood is common), the CBCL must be administered and interpreted with some caution, or supplemented with another tool that measures childhood internalizing problems.

A second controversy regarding both childhood depression and internalizing problems involves stability of the disorders. While some believe that feelings of depression will recede over time, others maintain that children who experience depression are more likely to experience depression as adolescents and adults (Rice et al., 2002). Moreover, it is possible that not only do emotional disorders remain over the course of time, but also they increase in severity without adequate treatment. Finally, there is a question of onset: does childhood depression begin after a certain number of years of exposure to environmental stressors and intensify with ongoing exposure, or is it typically present and stable, relative to population norms, from early childhood? Although some studies have addressed these questions (e.g., Sternberg et al., 2006), further research is required to untangle these issues concerning the stability of childhood depression.

Current Study

The present research expands upon the literature related to couple violence and childhood depression and internalizing problems. The study begins by examining the intergenerational transfer of risk; specifically, it investigates associations between parents' history of childhood aggression, subsequent couple violence in adulthood, and offspring's childhood depression, using a prospective design across a 30-year period. In order to examine broad child emotional disorders, as well as to investigate the measurement and stability of these problems, the study also concerns the relation

between couple violence and children's internalizing problems over three time points: in early childhood, in middle childhood, and in pre-adolescence. Maternal depression and annual family income are examined throughout the study to determine their respective roles in the relation between couple violence and children's emotional difficulties.

Hypotheses. In examining couple violence and childhood depression and internalizing problems in the context of the intergenerational transfer of risk, various associations were anticipated. The first hypothesis was that childhood aggression would be related to later couple violence. Second, it was hypothesized that couple violence in one generation would be related to the development of depression in offspring, and that it would mediate the relation between childhood aggression in one generation and child depression in the next generation. Third, it was hypothesized that a measure of childhood depression would be associated with a measure of child internalizing problems. The fourth hypothesis stated that mother-reported child internalizing problems would be stable over the course of time. Fifth, it was hypothesized that there would be an association between couple violence and child internalizing problems, and that this association would persist over time. The sixth and final hypothesis for this study held that the relations between couple violence and childhood depression and internalizing problems would remain statistically significant after controlling for the effects of maternal depression and family income.

Method

Participants

Identification of the original sample. The Concordia Longitudinal Risk Project (Schwartzman et al., 1985) began in 1976 when researchers administered the Pupil

Evaluation Inventory (PEI; Pekarik et al., 1976) to 4,109 francophone students in grades 1, 4 and 7 enrolled at schools in inner-city areas of Montreal, Québec, Canada. Students were instructed to rate their classroom peers on dimensions of aggression, withdrawal, and likeability. Involvement in the peer-nomination process was voluntary, with a participation rate of over 95%. Subsequently, researchers followed up the 1,770 students who were at or above the 75th percentile of aggression and below the 75th percentile of withdrawal for their sex according to their peers, as well as some students who were in the average range on both aggression and withdrawal. The number of girls and boys in the sample was approximately equal (n = 909 girls, n = 861 boys). For a more extensive description of the original methodology, see Schwartzman, Ledingham & Serbin (1985). Each of the participants in the study provided a range of information on demographic, psychosocial, health, and environmental factors in 1976. These individuals are labeled G2, and their parents are G1, or the first generation of individuals under consideration in the larger longitudinal study. Data collection continued with all four groups of G2 children into their adulthood and parenthood, and further data was gathered from their offspring (G3).

Description of the participating sample. The participants in the current study were 94 individuals (G2) from the original Concordia sample, as well as 94 of their children (G3). These individuals were chosen based on the availability of information about their childhood aggressive tendencies, as well as the availability of couple violence, maternal depression, child depression, child internalizing, and social demographics information. The adult participants from G2 in this subsample included 30 men (32%) and 64 women (68%). The mothers ranged in age from 32 to 42 years (M = 37.2, SD =

2.57) at the time of last testing. The fathers ranged in age from 33 to 42 years (M = 38.9, SD = 2.25) at the time of last testing. The G3 children of these participants included 39 boys (42%) and 55 girls (58%), and were chosen based on their ages; the children ranged in age from 9.3 to 13.2 years (M = 10.81, SD = 0.94) at the time of last testing.

Family income in this sample ranged from $5,226 to $145,600 per year (M = 77,348, SD = 50,372). The highest level of education achieved by fathers ranged from 10 to 17 years (M = 12.26, SD = 1.63), and the highest level of education achieved by mothers ranged from 7 to 17 years (M = 12.24, SD = 2.60). Six male participants (22.2% of males) and 21 female participants (33.9% of females) reported being on welfare. Forty-one individuals (46.1%) reported being married, and 32 individuals (36.0%) reported cohabitating with a partner. In addition, 4 participants (4.5%) reported being separated, 6 participants (6.7%) reported being divorced, and 6 participants (6.7%) reported being single. Adult participants had between 1 and 7 children (M = 2.54, SD = 1.08), and reported an average family size of 4.25 individuals (SD = 1.27).

The current sample of 94 participants who completed the couple violence questionnaire did not differ from the larger sample of 175 individuals who completed behaviour questionnaires about their children at Time 1 in terms of childhood aggression. Mothers in the current and larger samples had mean childhood aggression scores of .34 and .32, respectively ($t_{115} = .07$, p = N.S.), while fathers in the current and larger samples had mean childhood aggression scores of .13 and .30, respectively ($t_{60} = -.74$, p = N.S.). The current sample of 94 participants differed significantly from the larger sample of 175 individuals who completed behaviour questionnaires about their children at Time 1 in terms of annual family income. Mothers in the current and larger samples had mean

incomes of $75,675 and $53,111, respectively ($t_{76} = 2.75$, $p < .01$), while fathers in the current and larger samples had mean incomes of $80,912 and $54,659, respectively ($t_{31} = 2.27$, $p < .05$).

Measures

Couple violence. G2 Mothers and fathers in the sample completed the Conflict Tactics Scale (Straus, 1979), a self-report measure of intimate partner and child maltreatment. Scales measure sexual, psychological, and physical attacks, however, for the purposes of this study, only questions involving couple violence in general were considered in the analyses. Nine items were included in the current data analyses, and each item inquired about respondent violence in the past 12 months (e.g., How often have you slapped your spouse?), and mate violence in the past 12 months (e.g., How often has your spouse slapped you?). Items also inquired about lifetime occurrences of these actions. This measure has good reliability, indicated by alpha scores of .83 and .82 for husband-to-wife violence and wife-to-husband violence respectively, as well as an alpha score of .88 for couple violence. Concurrent and construct validity are reported to be adequate (Straus, 1979).

Maternal depression. The Symptom Checklist-90—Revised (SCL-90—R; Derogatis, 1983) is a self-report scale that assesses maternal psychopathology using 90 items. Psychiatric symptoms are rated on a 5-point scale ranging from 0, or *not at all distressing,* to 4, or *extremely distressing*. In the present study, the Depression subscale was employed to ascertain level of maternal feelings of depression. Split-half reliability for this test was found to be 0.94, and this measure demonstrates adequate discriminate and convergent validity in an outpatient clinic population (Brophy et al., 1988).

Child depression. The Children's Depression Inventory (Kovacs, 1981) is a 27-item self-report measure of psychopathology in children and adolescents between the ages of 7 and 17 years. It was used to assess the severity and extent of childhood depression in this sample. It takes approximately 15 minutes to complete, and it inquires about children's emotional state during the past two weeks. For each question, the child respondent indicates which of three answers best represent his or her circumstances; for example, children choose between *I am sometimes sad, I am often sad, I am always sad.* A score of 0 indicates an absence of the depressive symptom, a score of 1 indicates a mild presence of the symptom, and a score of 2 indicates the clear presence of the symptom. This measure has been found to have good internal consistency, with alpha values ranging from .80 to .94, and its test-retest reliability is .87 in an emotionally disturbed sample (Saylor et al., 1984).

Child Internalizing. The Child Behavior Checklist (CBCL; Achenbach, 1991a) is a 118-item questionnaire that describes specific behavioral and emotional problems in children between the ages of 6 and 18 years. The respondent assigns a score between 0 and 2 for each question; a score of 0 indicates an absence of the behaviour, a score of 1 indicates that the child performs the behaviour sometimes, and a score of 2 indicates that the child often performs the behaviour. Examples of items include *My child has trouble sleeping, My child hears voices, My child cannot sit still.* T-scores from the broad-band *Internalizing Disorder* scale were used in this study. This scale of the CBCL reportedly demonstrates adequate internal consistency, test-retest reliability, and concurrent validity with measures of child problems (Achenbach, 1991a).

Procedure for Current Data Collection

G2 Participants' childhood aggression scores were obtained as described above through the Concordia Longitudinal Risk Project data collection activities in 1976. Subsequently, between 2002 and 2006, these same participants completed a battery that they received in the mail that included, among other things, measures of couple violence and maternal depression. During the same period of time, their children (G3) were mailed a number of questionnaires, including one measuring childhood depression. In addition to the CTS and SCL-90, the CBCL was completed by mothers, fathers, and teachers of children in the sample. They completed the measures at three time points: when their children were in early childhood (T1; ages 3 to 5), in middle childhood (T2; ages 7 to 9), and in pre-adolescence (T3; ages 10 to 12).

All questionnaires were translated into French to accommodate this Francophone sample; they were subsequently back translated into English to make certain of the equivalence of the original and translated measures. Participants were compensated $50 upon receipt of the questionnaires.

Results

Childhood Aggression and Couple Violence

The first hypothesis was that there is a relation between childhood aggression and later couple violence. Specifically, it was predicted that individuals' childhood aggression scores, measured by the PEI, would be correlated with their couple violence[1] scores in adulthood, measured by the CTS. To examine this hypothesis, correlation analyses were carried out, and results demonstrated a significant relation between G2 childhood aggression and later couple violence, $r = .27$, $p < .01$ (see Table 1).

Insert Table 1 here

In addition, it was anticipated that childhood aggression would continue to predict later couple violence in a regression analysis after controlling for basic demographics, including socio-economic status and participant's gender. In a regression model with couple violence as the dependent variable, childhood aggression and parent's gender were entered as the first step of the equation, and annual family income was entered as the second step (see Table 2). While both of the steps showed a trend towards statistical significance in predicting couple violence, $F_{Step1}(2, 69) = 2.66$, $p < .10$; $F_{Step2}(3, 68) = 2.22$, $p < .10$, none of the variables showed statistical significance in predicting couple violence in the last step of the regression analysis. Childhood aggression trended towards significance in predicting couple violence in the first step of the analysis ($\beta = .21$, $p < .10$) but not in the second step ($\beta = .19$, N.S.). The change in the F value for the equation was 1.33 (1 68; N.S.), and all of the variables together accounted for 8.9% of the variance in predicting couple violence.

Insert Table 2 here

Therefore, although G2 childhood aggression and later couple violence were found to be significantly associated with each other, aggression was not found to predict couple violence when controlling for effects of annual family income and gender, indicating that the first hypothesis was only partially supported.

Couple Violence and Childhood Depression

The second hypothesis stated that couple violence in one generation would be related to the development of childhood depression in the next generation. Specifically, it

was predicted that couple violence scores would be correlated with child depression scores in offspring, measured by the CDI. Results indicated a trend towards statistical significance for the relation between couple violence and depression in the child generation, $r = .20$, $p < .10$ (see Table 1).

It was also predicted, based on the second hypothesis, that couple violence would predict childhood depression when controlling for annual family income and maternal depression, as measured by the SCL-90. Regression analysis was used to address this prediction. In the main regression model, parent's gender and childhood aggression were entered as the first step, family income was entered as the second step, and maternal depression and couple violence were entered as the third and fourth steps, respectively, to predict child depression (see Table 3).

Insert Table 3 here

While none of the steps significantly predicted child depression, $F_{Step1}(2, 63) = .12$, N.S.; $F_{Step2}(3, 62) = .33$, N.S.; $F_{Step3}(4, 61) = .44$, N.S.; $F_{Step4}(5, 60) = .96$, N.S., only couple violence showed a marginally significant effect in predicting child depression in step 4 of the regression analysis ($\beta = .23$, $p < .10$). All of the variables together accounted for 7.4% of the variance in predicting the dependent variable, child depression. While the fourth step of the regression analysis created a trend for a statistically significant change in the F-value ($F_{change4} = 3.01$, $p < .10$), the second and third steps of the regression analysis did not create statistically significant changes in the F-value ($F_{change2} = .74$, N.S.; $F_{change3} = .78$, N.S.). In other words, only couple violence showed a marginally significant

effect in predicting childhood depression in this analysis, although the overall step was not statistically significant.

Therefore, the second hypothesis was not supported; G2 couple violence and G3 child depression were found to be associated with each other, but not at a level reaching statistical significance. The relation between G2 couple violence and child depression was unchanged after controlling for annual family income and maternal depression. However, the power of this regression design was not sufficient to produce a statistically significant effect with the current effect and sample sizes.

Path Model

To consolidate the previous findings, as well as to examine the way in which maternal depression affects the relation between couple violence and childhood depression, a path analysis was conducted. It was hypothesized that couple violence would mediate the relation between childhood aggression and depression in offspring. Specifically, it was predicted that there would be significant paths between G2 childhood aggression and couple violence, as well as between G2 couple violence and G3 child depression in a path model, controlling for the effects of maternal depression as a potential mediator. The coefficient for the path between childhood aggression and couple violence was .27 ($p < .05$) and this path accounted for 7.2% of the variability in the model ($\chi^2 = .35$, N.S., CFI = 1.00; see Figure 1).

Insert Figure 1 here

Further, the coefficient for the path between G2 couple violence and later childhood depression was .23 ($p < .05$). However, the correlation between G2 childhood aggression

and G3 childhood depression was -.05 (N.S.) prior to including the effect of couple violence, and the path coefficient between these variables was -.11 (N.S.) in the current model. Therefore, the path analysis did not support a mediational model, but rather an indirect or chain-link model. The pathways between childhood aggression and couple violence, as well as G2 couple violence and G3 child depression, were significant, while the path coefficient between G2 childhood aggression and G3 child depression was not ever statistically significant.

Within the current path analysis, it was hypothesized that couple violence would be related to child depression even after controlling for maternal depression. Specifically, it was predicted that maternal depression would not mediate the relation between G2 couple violence and G3 childhood depression. Results from the path analysis indicated that the coefficient for the path between couple violence and maternal depression was .06 (N.S.), and the coefficient for the path between maternal depression and child depression was .02 (N.S.). The entire pathway of G2 child aggression, couple violence, and maternal depression to G3 childhood depression accounted for 5.1% of the variability in the model. Therefore, there was evidence that couple violence was associated with childhood depression after controlling for the effects of maternal depression.

Relation Between Measures

Reports of child internalizing problems were collected from the mothers, fathers, and teachers of the children in the sample at three time points: early childhood (T1), middle childhood (T2), and pre-adolescence (T3). However, because the teacher reports were not available at T1 as children had not yet begun formal schooling, they were not considered in the data analyses. In addition, father CBCL reports were not available at

T2; this may be due to the difficulty of involving fathers in research, as well as the high percentage of families headed by single mothers in a high risk sample. Therefore, father CBCL reports were not considered in the data analyses. Because mothers' CBCL reports were available for all three time points, all results describing child internalizing problems are based on mothers' conceptions of their children's internalizing problems.

It was hypothesized that indicators of child internalizing problems and childhood depression would be related to each other, as they are assumed to represent various levels on a spectrum of the same disorder. Consequently, it was predicted that child internalizing scores, measured by mother reports on the CBCL at T3, would be positively correlated with child-reported depression scores, measured by the CDI and also at T3. Results indicated that mothers' reports of child internalizing problems at all time points did not significantly correlate with children's self-reported depression scores (see Table 4). Child depression scores taken at T3 correlated with T1 internalizing at $r = .11$ (N.S.), with T2 internalizing at $r = .12$ (N.S.), and with T3 internalizing at $r = .09$ (N.S.). T3 CBCL internalizing scores and T3 CDI scores should show the strongest correlations, as they were made at the same time point. However, CDI scores did not significantly correlate with CBCL internalizing scores at any of the time points; the CBCL did not predict future CDI scores, and it did not correlate with CDI scores at the same time point. Therefore, the third hypothesis was not supported; CDI scores and CBCL scores were not related to each other to a significant degree.

Insert Table 4 here

Stability of Internalizing Problems Over Time

It was also hypothesized that mothers' perceptions of child internalizing problems are stable over the course of time. It was thus predicted that CBCL internalizing problems scores in early childhood (T1), middle childhood (T2), and pre-adolescence (T3) would be positively correlated with each other. Results from a correlational analysis revealed significant relations between all three internalizing variables (see Table 4); mothers' T1 internalizing reports were related to mothers' T2 internalizing reports ($r = .35$, $p < .01$) as well as mothers' T3 internalizing reports ($r = .33$, $p < .01$), and T2 and T3 internalizing reports were also correlated ($r = .54$, $p < .01$). In other words, mother's perceptions of their children's level of problems, in terms of individual differences, were fairly constant across time.

In addition, it was predicted that the average magnitude of child internalizing problems across the group as a whole would not change over time. In other words, the mean level of internalizing problems in this group would not change, in comparison to population norms, across childhood. The mean values of CBCL internalizing problems scores are 52.3 at T1, 54.5 at T2, and 55.1 at T3 (SD = 8.59, 12.24, and 11.02, respectively; see Table 5). In other words, scores at each time point were elevated above the normal mean for the general population, which is a score of 50. However the level of elevation did not appear to change over time.

Insert Table 5 here

Finally, to examine predictors of internalizing problems over time, hierarchical linear modeling (HLM) analysis was performed. In this analysis, time was entered as the Level 1 variable, couple violence and maternal depression were entered as the Level 2

variables, and the dependent variable was CBCL internalizing scores. Results from the Level 1 analysis indicated that internalizing problems in children were stable over time (see Figure 2); only 3% of differences within participants were due to time, and internalizing problems did not significantly change across the 3 time points ($t_{63} = 1.16$, N.S.). Therefore, the fourth hypothesis was supported by the current results; mothers' reports of child internalizing problems in this risk sample, as measured by the CBCL, appear to be stable over time, both in terms of children's relative level (i.e. individual or within group differences) and in terms of the level of problems in the group over time.

Insert Figure 2 here

Couple Violence and Child Internalizing Problems

The fifth hypothesis stated that there is a relation between couple violence and the development of internalizing problems in offspring, as indicated by mothers on the CBCL. Specifically, it was predicted that G2 couple violence scores[2], measured by the CTS, would be positively correlated with G3 CBCL internalizing scores. Results revealed that couple violence and both mothers' T2 internalizing reports ($r = .40$, $p < .01$) and T3 internalizing reports ($r = .32$, $p < .01$) were associated, although couple violence and mothers' T1 internalizing reports were not significantly associated ($r = .23$, N.S.; see Table 4).

Further, HLM analysis was utilized to test the prediction that children with parents who have high couple violence scores would have higher internalizing scores than other children. As previously mentioned, the variables entered into Level 2 or between-subjects intercept effect analyses were couple violence and maternal depression. Results indicated

that between-subjects effects accounted for 29% of the variance in the data, and demonstrated that children who experience couple violence between their caregivers were reported by their mothers to be approximately 6.08 points higher on the CBCL than children who do not experience couple violence ($t_{54} = 1.99$, $p < .05$; see Figure 2). In addition to this intercept effect, there was no slope effect in this model, indicating that violence did not predict an increase or decrease in the level of mother-reported child internalizing problems over time (see Table 6). Therefore, Level 2 HLM analysis indicated that intercept differences in internalizing problems exist between children whose caregivers are violent towards each other and children who do not experience couple violence between their caregivers, and that these differences are uniform over time.

Insert Table 6 here

Maternal Depression, Income, and Child Internalizing Problems

A related hypothesis held that maternal depression would not affect the relation between couple violence and child internalizing problems. It was therefore predicted that maternal depression scores, measured using the SCL-90, would not be correlated with both couple violence scores and child internalizing scores. Consistent with previous results in the current study, maternal depression was not significantly correlated with couple violence; however, maternal depression was significantly correlated with mothers' internalizing reports at all 3 time points ($r_{T1} = .23$, $p < .05$; $r_{T2} = .32$, $p < .01$; $r_{T3} = .43$, $p < .01$).

It was also predicted that children with parents who have high couple violence scores would have high mother-reported internalizing scores even after controlling for the effects of maternal depression. The HLM analysis described above revealed that when maternal depression was entered into the Level 2 (i.e., between subjects model) along with couple violence, maternal depression was associated with an increase of .34 points in the intercept of children's internalizing scores ($t_{54} = 2.63$, $p < .01$; see Table 6). Together, couple violence and maternal depression explained 70% of the variance between participants on their reports of their children's internalizing problems (see Figure 2). There was no slope effect, indicating that neither maternal depression nor couple violence scores increased or decreased internalizing problems significantly over the course of time.

To control for the effects of annual family income, this variable was entered into Level 2 HLM analyses along with couple violence and maternal depression in predicting mother-reported child internalizing problems. Results showed that annual family income was not significant in predicting internalizing problems ($t_{54} = .21$, N.S.), indicating that couple violence and maternal depression significantly predict CBCL internalizing scores irrespective of family income level.

In sum, childhood aggression predicted later couple violence, which in turn predicted childhood depression in offspring, although the latter result only achieved statistical significance at the trend level. These relations continued to exist even after controlling for maternal depression, and the resulting model illustrated indirect links between G2 childhood aggression and G3 childhood depression through couple violence. In addition, couple violence was associated with mother-reported child internalizing

problems at three time points: early childhood, middle childhood, and pre-adolescence. In addition, internalizing problems themselves were stable over time. Family violence played an independent role in predicting child emotional problems, which was not due to the link between maternal depression and child internalizing levels.

Discussion

Childhood Aggression, Couple Violence, and Childhood Depression

In the current study, it was hypothesized that couple violence would mediate the relation between childhood aggression in one generation and child depression in the next. Correlation and path analyses have revealed that this was not the case for this sample; a significant relation existed between G2 childhood aggression and later couple violence, and there was a trend for a relation between G2 couple violence and G3 child depression. However, G2 childhood aggression was not associated with G3 childhood depression prior to incorporating couple violence into the model, therefore, couple violence did not mediate childhood aggression in one generation and childhood depression in the next generation. Instead, the three variables might be connected through indirect effects.

In addition, regression analyses indicated that the associations that were present existed after controlling for the effects of maternal depression and annual family income, although insufficient power rendered the results statistically non-significant. Nevertheless, these findings suggest the developmental continuity of childhood aggression; these childhood behaviours might be likely to manifest themselves as couple violence in adulthood, while indirectly affecting the emotional development of their own children. These results corroborate those of other researchers (e.g., Turner & Kopiec, 2006) in clarifying the links between couple violence and emotional adjustment in

children; however, by including child reports of depression, the current study goes further in examining child depression as an indirect outcome of aggressive behaviour in the parent generation over time.

One factor that might be involved in the relation between childhood aggression, later couple aggression and depression in offspring is assortative mating, the phenomenon in which individuals choose romantic partners who are similar to themselves on certain important dimensions. Indeed, research has indicated that individuals who are emotionally maladjusted or who have mental health problems are likely to develop romantic relationships with individuals who have similar problems (Capaldi & Crosby, 1997; du Fort et al., 1994; Merikangas et al., 1988). It was found within the Concordia Longitudinal Risk Project sample that partners in intimate relationships tended to resemble each other in terms of their aggressive behaviour (Peters, 2000). It is possible that aggressive children, who are likely to develop into aggressive adolescents, tend to be socially and romantically attracted to other aggressive adolescents, resulting in the learning and development of violent interactions with romantic partners throughout the lifespan, and culminating in couple violence as adults. Therefore, if two individuals are romantic partners and both of them were aggressive as children, the likelihood that violence will occur between them is assumed to be high, as is the likelihood of emotional and behavioural maladjustment in their offspring. There is currently no known published study of assortative mating and its relation with couple violence; therefore, assortative mating as an intervening variable in the association between couple violence and child depression is an important topic for further study, notably in a longitudinal data set and with a high risk population.

Couple Violence and Child Internalizing Problems

To further examine child emotional problems, it was hypothesized that mother-reported child internalizing problems would be stable over the course of time. In addressing this hypothesis, this study utilized multilevel modeling to reveal that internalizing problems did not change over time; children with higher mother-reported internalizing scores in preschool were likely to demonstrate similarly high scores up to 9 years later in late elementary school. These findings have implications for parents as well as teachers and mental health professionals who work with children who have internalizing problems. For example, it is essential to discover and employ protective factors that either prevent children from developing these problems or that help to minimize these internalizing behaviours once they have been identified. In other words, children do not appear to "just grow out of " internalizing problems as they grow older.

It was also hypothesized that couple violence would be associated with the development of children's internalizing problems. Correlation and path analyses indicated that couple violence was, indeed, related to the development of children's internalizing problems. Specifically, correlation analysis found significant relations between couple violence and both middle childhood and pre-adolescent internalizing problems. From these results, it is evident that couple violence was related to children's internalizing behaviours, an idea that has support in the existing research literature (e.g., El-Sheikh & Elmore-Staton, 2004). In addition, multilevel modeling analyses found that, in accordance with the hypothesis, children who experience couple violence between their caregivers displayed more internalizing symptoms than children whose caregivers are not aggressive towards each other. Indeed, the existence of couple violence needs to

be considered in developing treatment plans for children who display internalizing behaviours, whether they are very young or pre-adolescent.

Maternal Depression and Mother Reports of Child Internalizing Problems

Maternal depression played an interesting role in the current study. To begin, maternal depression was not associated with either couple violence or child depression in the correlation or path analyses performed in this study, a finding that supported the hypothesis. In addition, maternal psychopathology did not significantly predict child depression in the regression analyses. These findings stand in opposition to much of the research performed in this area, as maternal emotional instability has been repeatedly found to directly and indirectly relate to both patterns of couple violence in romantic relationships and emotional instability in their offspring (e.g., Low & Stocker, 2005). In the current sample, it appears as if maternal reports of their feelings of depression are not related to their children's reports of their own feelings of depression, a finding the requires further examination in other high risk community-based populations.

When the effects of maternal depression were considered in the relation between couple violence and child internalizing problems, maternal depression was associated with mother-reported internalizing problems in children at all three time points. In addition, multilevel modeling revealed that children whose mothers experience symptoms of depression and couple violence had significantly greater levels of internalizing problems than children whose mothers experience either couple violence or depression, and greater levels of internalizing problems than children whose mothers do not experience either of these problems. These results corroborate with those of other researchers who have found a role for maternal psychopathology in child emotional

outcomes, notably when in relation to couple violence (Cummings & Davies, 1994, 1999; Spence et al., 2002). The significant associations between maternal depression and maternal reports of child internalizing problems, as well as the non-significant association between CDI childhood depression scores and CBCL internalizing scores, indicate that maternal depression plays an important role in predicting mother-reported childhood internalizing problems.

It is important to note that that in this study, as in much of the existing literature, mothers reported children's internalizing problems. The strong relation between depression in mothers and their reports of their children's internalizing problems may be due to single rater bias; mothers who are depressed may be more likely to view their children as experiencing similar symptoms, and mothers who are emotionally healthy may be less likely to detect internalizing problems in their children. This theory is especially appealing when examining the relation between mother-reported child internalizing problems and child-reported depression. The third hypothesis held that scores from the CDI, a child self-report of depression, would be associated with scores from the CBCL, a mother-report of child internalizing problems. In fact, these measures were not found to be related. This result is both surprising and revealing, for it is often assumed that mothers can reliably identify their children's feelings of sadness, anxiety, and fear. In this high risk sample, mother reports of their children's internalizing problems differed from their children's own reports of their feelings of depression. The implications of this finding are especially important for mental health practitioners and researchers who regularly utilize the CBCL to measure children's internalizing problems. Consequently, it is important to obtain reports about children's internalizing problems

from multiple raters, including mothers, fathers, teachers, and the children themselves if they are old enough. In any case, the current study is in agreement with previous research (e.g., Seiffge-Krenke & Kollmar, 1998) in that great caution should be taken in interpreting parent reports of their children's internalizing problems.

Intergenerational Transfer of Risk

The current study examined couple violence in two distinct ways; it illustrated couple violence in the context of childhood aggression in one generation and child depression in the next generation, while subsequently considering couple violence in terms of its effect on longitudinal child internalizing problems. As a whole, this study supports the idea of the intergenerational transfer of risk. Results in this study demonstrated that the aggressive behaviour of parents towards each other can be associated with the emotional development in their children, allowing a cycle of aggressiveness and affective problems to form in future generations. Notably, the study began by revealing the indirect negative effects of aggressive behaviour for individuals over the lifespan as well as for the development of offspring. In addition, it continued by demonstrating the stability of childhood internalizing problems, and their relation with couple violence in children's caregivers. It is possible that childhood aggressive behaviour is maintained into adulthood, where it takes the form of couple violence; this couple violence, in turn, might be likely to result in feelings of depression, sadness, anxiety, fear, shyness, and social withdrawal in offspring, who themselves grow up to have maladaptive romantic and parent-child relationships, perpetuating the cycle of risk.

As socioeconomic variables have been shown to affect the intergenerational transfer of risk, the current study considered such variables, notably, parent's gender and

annual family income. Surprisingly, participants' annual family income did not affect any of the outcomes under consideration; neither child depression nor mother-reported child internalizing problems were associated with income, and even couple violence itself was unrelated to this particular measure of family income. This may be due to the measure itself; there was extremely high variability in the mean reported annual income. Perhaps in this high risk sample, annual family income does not capture the essence of participants' lifestyles; it is possible that measures such as neighborhood quality and maternal educational attainment may provide better indicators of socioeconomic status.

Strengths and Limitations

This research has certain strengths as well as various limitations. An advantage of this study includes its longitudinal nature. Most of the current research regarding affective outcomes of couple violence is cross-sectional, whereas the current study examines the effects of childhood aggression and couple violence not only across the lifespan, but also over multiple generations of individuals. This allows us to draw inferences about the development and transfer of risk as well as the experience of risky behaviour and its immediate effects on offspring. Indeed, the longitudinal approach utilized by this study allows us to examine the stability of children's emotional development over time, as well as potential mediators, moderators, and protective factors of psychological difficulties in children. A second strength of the current research is its participants; data obtained from a sample in inner city Montreal can be generalized to other high risk, French-speaking populations in Canada. This allows us to examine and develop an understanding of the unique perspective held by these individuals, and to

apply research findings to the development of social programs that will improve their quality of life.

Another strength of this research is its examination of the reporting methods used by popular psychometric tools. Notably, this study utilizes children's reports of their own symptoms of depression when they are between the ages of 10 and 12. This is relatively unique, as many studies utilize parent reports of their children's depression or internalizing problems until their children reach the age of adolescence. There is some controversy as to whether or not pre-adolescent children can identify feelings of depression in themselves with any degree of validity; indeed, there is some controversy as to whether or not pre-adolescent children can be said to experience depression at all. Nevertheless, results of the current research indicate that older children are adequate reporters of their own symptoms of depression, and that theirs is a viewpoint that needs to be taken more into account when considering children's affective problems. In addition to including child self-reports of depression, this study highlights some differences between parent reports of their children's internalizing problems and children's reports of their own feelings of depression. This finding adds to the research that suggests that parent CBCL reports may not be adequate in revealing children's internalizing problems on their own, especially when children are older and more likely to discuss problems with peers instead of parents. It is evident that a combination of parent, teacher, and child reports of internalizing problems are required to obtain a well-rounded view the child, even if the child in question in the pre-adolescent stage of development.

In addition to strengths, limitations of the current research must be considered in making interpretations about the results. First and foremost, the current study primarily

utilized mother reports, increasing the potential of single rater bias. While both mother and father reports of family violence were included into data analyses, there were many more questionnaires completed by mothers than fathers. In fact, when analyzing father reports separately, no significant associations were uncovered, most likely due to the lack of power in these analyses. Therefore, reports of couple violence were overwhelmingly made by mothers in this study. Moreover, while analyses were performed utilizing both mother and father reports of couple violence as much as possible, portions of data analyses involving multilevel modeling excluded all reports from the fathers in this sample. This is a methodological limitation, as the statistical software that performs multilevel modeling requires data to exist at three separate time points; father and teacher reports of child internalizing problems were only available at two time points. It is the nature of psychological research involving families to have mothers as the primary participants; for many reasons, fathers are not always their children's primary caregivers. The current research with a high risk sample amplifies this pattern, as in many cases the children in the study were raised in single-mother environments. Therefore, results of this study must be interpreted with caution, as multiple viewpoints must be obtained to ensure that single rater bias is avoided.

Directions for Future Research

The present study focused on parental characteristics and family relationships in examining child internalizing problems. While these factors are surely pieces of the puzzle that is children's emotional development, there are other factors that require investigation before we can truly understand this complex issue. Notably, this research did not take into account physiological or genetic variables in any way. It is possible that

genetic factors play a role in both parental aggression and children's development of affective problems, and these need to be further examined to increase our understanding of this topic. Similarly, physiological measures of stress can be used to illustrate the relation between couple violence and child internalizing problems. Furthermore, factors such as the parent-child relationship, peer relationships, and stress in the household may be important in the association between couple violence and child depression and/or internalizing problems; these need to be further examined in a high risk sample such as that of the Concordia Longitudinal Risk Project to draw conclusions about the relative roles played by these factors. Future investigation of this topic should eventually include such physiological, genetic, and other psychosocial factors to determine the role they play in children's affective development when children experience couple violence between their caregivers.

Other possibilities for future research include examining the effects of assortative mating on the relation between couple violence and the emotional development of offspring. In doing so, we could focus more clearly on the dynamics of the relationship between the caregivers instead of taking into account only a single aspect of their lives together: couple violence. Moreover, any future research could involve attempts to collect data more consistently from fathers as well as mothers in order to obtain a more balanced view of their children. Although this might not always be possible, it is important to recognize the various impacts that fathers have on the development of their children, impacts that are sometimes overlooked in social psychological research due to methodological limitations. Finally, future studies could further examine the longitudinal

associations between couple violence and child depression and internalizing problems in other high risk samples in Canada and worldwide.

Endnotes

[1]Couple violence is defined here as any form of violence from either partner to the other that occurred in the 12 months before completing the Conflict Tactics Scale (Straus, 1979).

[2]Couple violence is defined here as any form of violence from either partner to the other that occurred anytime before the 12 months prior to when the participant completed the Conflict Tactics Scale (Straus, 1979).

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Table 1

Correlations between variables including couple violence in the last 12 months (total sample)

	T1 Aggression	Couple Violence	Child Depression	Maternal Depression	Parent Gender	Family Income
T1 Aggression	--	.27**	-.05	.07	.04	-.11
Couple Violence		--	.20^{t}	.06	.24*	-.17
Child Depression			--	-.02	.09	.09
Maternal Depression				--	.08	.16
Parent Gender					--	-.04
Family Income						--

**p < .01, *p < .05, ^{t} < .10

n = 94

Table 2

Full regression for couple violence in the total sample

	β	R^2	F	F_{change}
Step 1				
Childhood Aggression	.21 ^{t}			
Parent Gender	.15			
		.072	2.66^t	2.66^t
Step 2				
Childhood Aggression	.19			
Parent Gender	.14			
Annual Family Income	-.14			
		.089	2.22^t	1.33

$^t p < .10$

n = 71

Table 3

Full regression for child depression in the total sample

	β	R^2	F	F_{change}
Step 1				
Parent's Gender	.04			
Childhood Aggression	-.05			
		.004	.12	.12
Step 2				
Parent's Gender	.05			
Childhood Aggression	-.03			
Annual Family Income	.11			
		.015	.33	.74
Step 3				
Parent's Gender	.04			
Childhood Aggression	-.05			
Annual Family Income	.08			
Maternal Depression	.12			
		.028	.44	.78
Step 4				
Parent's Gender	-.01			
Childhood Aggression	-.09			
Annual Family Income	.12			
Maternal Depression	.07			
Couple Violence	$.23^t$			
		.074	.96	3.01^t

$^t p < .10$

n = 64

Table 4

Correlations between variables including lifetime couple violence (total sample)

	Couple Violence	Mother Intern. (T1)	Mother Intern. (T2)	Mother Intern. (T3)	Child Depression	Maternal Depression	Family Income
Couple Violence	--	.23	.40**	.32*	.04	.13	.07
Mother Intern. (T1)		--	.35**	.33**	.11	.26*	-.03
Mother Intern. (T2)			--	.54**	.12	.32**	.08
Mother Intern. (T3)				--	.09	.43**	-.12
Child Depression					--	-.02	.09
Maternal Depression						--	.16
Family Income							--

**p < .01, *p < .05

n = 94

Table 5

Descriptive statistics

	n	Minimum	Maximum	Mean	Standard Deviation
Couple Violence	63	0	1	.16	.37
Mother Intern. (T1)	72	30	72	52.3	8.59
Mother Intern. (T2)	9091	33	95	54.5	12.24
Mother Intern. (T3)	90	31	79	55.1	11.02
Family Income ($)	72	5226	145600	77348	50373
Maternal Depression	86	34	71	51.9	9.87

Table 6

Level 2 Hierarchical Linear Model of Child Internalizing Problems (mothers only sample)

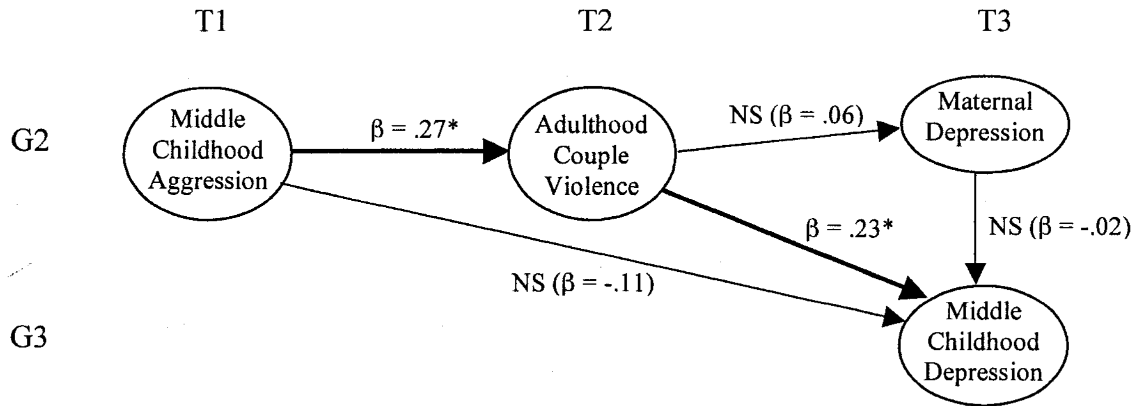
Fixed Effect	Coefficient	Standard Error	T-ratio
Intercept			
Intercept	34.32	6.79	5.06**
Couple Violence	6.08	3.06	1.99*
Maternal Depression	.34	.13	2.63**
Slope			
Intercept	-1.82	4.71	-.39
Couple Violence	2.03	2.17	.93
Maternal Depression	.05	.09	.61

**$p < .01$, *$p < .05$

$n = 54$

Figure 1.

Path model of the association between childhood aggression, later couple violence, and depression in offspring (total sample)



$\chi^2 = .350$, $p > .05$, CFI = 1.00

* $p < .05$

n = 94

Figure 2.

Effects of couple violence and maternal depression on child internalizing problems across three time points: preschool, early elementary, and late elementary (n = 54)