The Effects of Partner Aggression on Childhood Functioning: Parenting Quality as a Moderator for the Intergenerational Transmission of Aggression

by

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B.A., University of British Columbia, 2006
M.Sc., University of Victoria, 2010

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Abstract

Aggression between couples is a pervasive social problem throughout various life stages, including the transition to parenthood. Partner aggression during this life stage is particularly problematic given the possible negative effects it has on children's development, including the possibility of the intergenerational transmission of aggression. However, not all children who are exposed to parental aggression become perpetrators of aggression. The present study used an initial community sample of 98 pregnant couples that were followed for two years. It was found that over 90% of children were exposed to parental psychological aggression, and approximately a third of children were exposed to parental physical aggression. Exposure to psychological aggression was related to externalizing symptoms for girls, and exposure to physical aggression was related to select internalizing symptoms for boys and girls. Parenting behaviours moderated the link between exposure to parental psychological aggression and childhood aggressive behaviour. Surprisingly, although consistent with a strict interpretation of the social learning theory, high quality parenting behaviours were related to more childhood aggression within the context of an aggressive household. The findings of this study can be applied to prevention and treatment programs focused on curtailing childhood exposure to partner aggression and the intergenerational transmission of aggression.

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Acknowledgments

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The Effects of Partner Aggression on Childhood Functioning: Parenting Quality as a Moderator for the Intergenerational Transmission of Aggression

Aggression between couples is a pervasive social problem throughout various life stages, including the transition to parenthood. Partner aggression is commonly defined as being beaten, choked, kicked, pushed, or slapped by one's partner; or being threatened with a beating, choking, kick, weapon, or with death by one's partner (Wingwood, DiClemente, & Raj, 2000). Partner aggression (both psychological and physical forms) during the transition to parenthood is particularly problematic given the possible negative effects it has on children's development, including the continuation of partner aggression perpetration from generation to generation (Stith et al., 2000). Although extant research has provided consistent support for the intergenerational transmission of aggression (i.e., a small-to-moderate effect size between growing up in an aggressive family and later becoming involved in an aggressive romantic relationship; Stith et al., 2000), not all individuals who are exposed to parental aggression during childhood become perpetrators of aggression. Therefore, it is important to examine potential moderators of the intergenerational transmission of aggression.

Using a sample of couples transitioning to parenthood who were followed longitudinally over a two year period, there were three main goals of this study. First, I examined the prevalence and course of psychological and physical partner aggression for men and women throughout the transition to parenthood. Second, I examined the negative effects of childhood exposure to parental aggression, specifically examining internalizing and externalizing childhood behaviour problems. Finally, in an effort to

contribute to the existing literature on the intergenerational transmission of aggression, parenting behaviours were examined as possible moderators. Specifically, the moderating effects of parenting quality (parental laxness, over-reactivity, hostility, competence, and co-parenting alliance) on the link between exposure to parental aggression (both psychological and physical forms) and childhood aggressive behaviour were examined. In addition to having examined parenting behaviors as moderators of the intergenerational transmission of aggression, the current study further contributes to the existing research because it examined the early development of childhood aggressive behaviour (measured at age two). Moreover, the current study examined both psychological and physical partner aggression, and collected both parent reports of adult and child behaviours rather than solely collecting data from mothers as was commonly done in past research.

Prevalence of Partner Aggression

Physical Aggression. A large representative sample in the U.S. indicated that 12% of women and 12% of men reported having been the victim of at least one act of partner physical aggression in the past year (Stets & Straus, 1990). Furthermore, 5% of women, but only 1% of men in this study reported being the victim of severe physical aggression. Looking specifically at at-risk young couples, 21% of men and 26% of women reported engaging in physical aggression within their current relationship (Capaldi & Crosby, 1997). Schafer and colleagues (1998) estimated that more than 1 in 5 couples in the U.S. experienced at least one episode of partner aggression in their current relationship during the past year. When comparing countries, Canadian women and men were more likely than their American counterparts to use severe and minor

forms of physical aggression towards their partner (Grandin & Lupri, 1997). Taken together, these prevalence rates indicate that partner physical aggression is a serious problem in North America.

Psychological aggression. Although psychological aggression has historically received less notice from researchers, increased attention is now being given to psychological aggression as a distinct form of aggression. Psychological aggression can be defined as coercive or aversive acts that are intended to produce emotional harm or threat of harm (Taft et al., 2006). In a U.S. nationally representative sample of 1,461 married men and 1,909 married women, 75% of men and 80% of women reported perpetrating psychological aggression against their partner annually (Stets & Straus, 1990). Using a clinical sample of 273 couples who were participating in marital therapy, Simpson and Christensen (2005) found that 96.3% of men and 95.5% of women reported perpetrating psychological aggression against their partner in the past year. Looking specifically at severe psychological aggression, 36.6% of the men and 37.4% of the women reported perpetrating severe psychological aggression against their partner in the past year. These rates indicate that psychological aggression is highly prevalent in clinical samples as well as community-based samples. Given these high prevalence rates, psychological aggression may be a relatively normative method of managing conflict within romantic relationships (Jose & O'Leary, 2009). Unfortunately, past psychological aggression is an important predictor of initial incidents of physical aggression within intimate relationships (Murphy & O'Leary, 1989).

Partner Aggression and the Transition to Parenthood

It is important to explore aggression in the context of parenthood, because partner aggression does occur during pregnancy, and may have negative consequences for the couple's children. Charles and Perreira (2007) found that 33% of mothers and 40% of fathers of a nationally representative cohort of pregnant women in the U.S. reported being the victim of physical aggression during or just after pregnancy. Aggression perpetration rates during pregnancy were significantly higher for women than men in this sample (Charles & Perreira, 2007). Male-to-female partner aggression does decrease during pregnancy, but aggression levels increase again after the child's birth. Therefore, Charles and Perreira argue that the decrease in aggression during pregnancy should not be considered a permanent decline. Consistent with their argument, other research has shown that about 19% of women report being the victim of moderate or severe partner physical aggression during pregnancy, whereas 25% of women report aggression victimization postpartum (Gielen, O'Campo, Faden, Kass, & Xue, 1994). Importantly, 4% of these women prenatally and 6% postpartum reported five or more moderate to severe aggressive episodes during the previous six months.

Rates of partner aggression following childbirth vary by study. One study found that 22.9% and 27.2% of women reported being the victims of physical aggression at 6 weeks and 24 months postpartum, respectively (Gao, Paterson, Abbott, Carter, Iusitini, & McDonald-Sundborn, 2010). Specific to psychological aggression, women reported rates of 76.2% and 86.0% at 6 weeks and 24 months postpartum, respectively. This study also demonstrated the persistence of partner aggression as women who experienced aggression at 6 weeks were more likely to be victimized at 24 months (Gao

et al., 2010). This was true regardless of the form of aggression, given that the association between aggression at 6 weeks and 24 months postpartum was significant both for psychological aggression and physical aggression (Gao, et al., 2010). Using a large sample of women who were expecting their first child at the time of recruitment, approximately 17% of women experienced partner aggression during the first year postpartum (Gartland, Hemphill, Hegarty, & Brown, 2011). More specifically, 5.4% reported experiencing both physical and psychological aggression, 2.2% reported only physical aggression, and 9.0% reported only psychological aggression (Gartland et al., 2011). These rates are low in comparison to other studies examining partner aggression postpartum. The authors provide several methodological reasons to help account for these lower rates such as excluding women under 18 years of age and women that did not visit a hospital for prenatal care within the first 24 weeks gestation. Furthermore, the authors stated that the study under-sampled women 18-24 years old, an age group that normally has high rates of aggression (Gartland et al., 2011).

Macy and colleagues (2007) conducted a longitudinal study that investigated women's experiences with partner aggression beginning one year before their pregnancies, and continuing throughout their pregnancies until one year after delivery. They found that women who experienced physical aggression early in pregnancy continued to experience higher rates of partner aggression following pregnancy, relative to women who did not experience partner physical aggression early in pregnancy (Macy et al., 2007). Specifically, women who experienced physical aggression early in pregnancy had a mean rate of 1.29 acts of physical aggression during the first month after delivery compared to .14 acts of physical aggression for women who did not

experience physical aggression early in pregnancy. These researchers argue that this finding is consistent with other research that suggests that aggression during pregnancy is a risk factor for serious future aggression, and even death due to partner aggression. Furthermore, this study found that for women who experienced physical aggression early in pregnancy, their rate of physical aggression victimization peaked during this time period, and then quickly declined. This finding suggests that early pregnancy may trigger higher rates of physical aggression against women. One explanation for early pregnancy triggering higher rates of physical aggression towards women is that sexually jealous men may view their partner's pregnancy as a sign of infidelity, and this can increase aggression levels. In this study, rates of psychological aggression were greatest during the first month after delivery of the infant (Macy et al., 2007). Consistent with this finding, Jasinski (2004) argues that the increased stress associated with a newborn may increase rates of partner aggression.

Women who are at higher risk for partner physical aggression victimization during pregnancy include less educated women, women who report that their partner uses substances such as alcohol, women who are not married or cohabiting with their partner, and women who report that their pregnancy is unwanted (Charles & Perreira, 2007). Generally, if partner aggression occurs during pregnancy, there is a 70-80% greater likelihood of partner aggression occurring 1 year after pregnancy than if there was no aggression during pregnancy (Charles & Perreira). Given the high prevalence rates of partner aggression across the transition to parenthood, it is important to explore the prevalence and consequences of exposure to parental aggression during childhood.

Childhood Exposure to Parental Aggression

Approximately 20% to 40% of adults retrospectively report being exposed to physical aggression between their parents during childhood or adolescence (Evans, Davies, & DiLillo, 2008). Estimating the prevalence of exposure to aggression is difficult given that there is no standard definition for childhood exposure to aggression (Mohr, Lutz, Fantuzzo, & Perry, 2000). In fact, many studies do not provide a definition of "childhood exposure," and do not specify the type or extent of aggression to which the child is exposed (Evans et al., 2008). However, most researchers agree that exposure to aggression occurs when children see, hear, are directly involved in, or experience the aftermath of physical or sexual assaults that occur between their parents (Edleson, 1999; Jouriles, McDonald, Norwood, & Ezell, 2001). One problem with this definition is that it excludes exposure to psychological aggression, including aversive acts (e.g., yelling, insulting, and threatening) that are intended to produce emotional harm or threat of harm.

Childhood exposure to partner aggression has various negative effects on children including depression, anxiety, behaviour problems, and a proneness to violence perpetration and victimization (Owen et al., 2007). A meta-analysis of 41 studies concluded that childhood exposure to partner aggression was related to emotional and behaviour problems (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Specifically, there was a small effect size between childhood exposure to partner aggression and emotional and behavioural problems. The researchers concluded that a wide range of developmental outcomes are compromised by exposure to partner aggression including social, emotional, behavioural, and cognitive functioning, as well as general health

functioning. Another meta-analysis of 118 studies reported that about 63% of children who witness interparental aggression fare worse than children not exposed to partner aggression, in relation to their psychological, behavioural, social, and academic functioning (Kitzmann, Gaylord, Holt, & Kenny, 2003). Similarly, a more recent meta-analysis of 60 studies found a moderate effect between exposure to domestic violence and both internalizing and externalizing childhood symptoms (Evans, Davies, & DiLillo, 2008). Moreover, this meta-analysis revealed that the association between exposure to domestic violence and externalizing symptoms was significantly stronger for boys than for girls.

Research also indicates that interparental male-to-female psychological aggression is related to children's externalizing and internalizing behaviour problems over and above the effects of physical aggression (Clarke et al., 2007). Importantly, maternal distress fully mediated the association between interparental psychological aggression and child externalizing behaviour problems, whereas it only partially mediated the association between interparental psychological aggression and child internalizing problems. Unfortunately, like many studies focused on partner aggression, this study did not assess the impact of interparental female-to-male psychological aggression on children's functioning. Researchers have also demonstrated that regardless of whether children exposed to partner aggression suffer direct physical or verbal aggression, participate in the aggression against the parent, or witness the aggression without directly suffering the consequences themselves, they are similarly at risk for having psychological difficulties (Bayarri, Ezpeleta, & Granero, 2011).

Children exposed to aggression are at heightened risk for family breakup or relocation as well as other life stresses, including poverty, parental unemployment, and parental substance use and psychopathology (Margolin & Gordis, 2004). These life stresses increase the risk for continued aggression, which in turn increases the likelihood of these stresses. Interpersonal relationships are also negatively influenced by exposure to aggression. The disrupted parenting that is associated with family aggression exacerbates the negative effects of the exposure because these children are sensitized to hostile interactions and, therefore, may have difficulty negotiating peer conflicts. The interpersonal difficulties that these children experience can limit their social support, and put them at risk for engaging with deviant peers (Margolin & Gordis, 2004).

From a psychobiological perspective, exposure to aggression may influence an individual's biological makeup (Margolin & Gordis, 2004). Specifically, children who are exposed to aggression may experience dysregulation of the stress response system, the hypothalamic-pituitary-adrenal (HPA) axis (Margolin & Gordis). It is believed that this system releases more cortisol in children who have been exposed to aggression. Early exposure to aggression in the family may also influence physical and sexual development (Margolin & Gordis). The stress that is associated with aggression exposure may lead to increased gonadal hormones, and this may result in the early onset of puberty and premature sexual behaviour. Additionally, the increased sympathetic nervous system activity that often accompanies exposure to aggression may suppress immune functioning, and may negatively influence one's memory by damaging brain cells in the hippocampus (Margolin & Gordis). Finally, physical growth may be

influenced by alterations in the secretion of growth hormone for children that are exposed to aggression (Margolin & Gordis).

Children who are exposed to partner aggression may also be the victims of poor parenting practices as couples who engage in partner aggression are at-risk for engaging in negative parenting practices. About half of men and slightly more than a third of women who are perpetrators of partner physical aggression also report physically abusing their children (Saunders, 1994). Moreover, approximately 60% of youth who were exposed to parental aggression reported being the victim of physical abuse by either their mother or father (Moretti, Obsuth, Odgers, & Reebye, 2006). Partner aggression is also a risk factor for other types of child abuse. For example, mothers who reported being either the victims or perpetrators of partner aggression also reported perpetrating higher levels of child maltreatment (e.g., neglect, physical, psychological, and sexual abuse), than mothers who did not report partner aggression in the household (Smith Slep & O'Leary, 2001; Zolotor, Theodore, Coyne-Beasley, & Runyan, 2007). Some researchers argue for a family systems perspective to explain the fact that aggression in one family subsystem (e.g., between the parents) can spill over into other family subsystems (e.g., from parents to children) (Margolin & Gordis, 2004; Margolin & Gordis, 2003). More specifically, aggression in one family subsystem can overwhelm the family and reduce emotional and physical resources, thereby lowering the thresholds for aggression in other family subsystems.

The well-documented negative effects of exposure to aggression may vary depending on the child's age given that the perception and interpretation of aggression changes with age, as does an individual's level of coping skills. Some research suggests

that younger children are most affected by exposure to aggression; however, these children may experience a decrease in symptoms as they age (e.g., Sternberg, Lamb, Gutterman, Abbott, & Dawud-Noursi, 2006). It is possible that as these children age, they acquire coping mechanisms and seek out peer relationships that help buffer the negative effects of exposure to aggression. The fact that younger children may be most affected by exposure to aggression is concerning given that families with partner aggression tend to have higher numbers of young children compared to the general population (Fantuzzo et al., 1997). Moreover, partner aggression is highest during young adulthood, when children are likely to be young (O'Leary et al., 1989; O'Leary & Woodin, 2005). It is believed that the effects of exposure also vary by gender. More specifically, it is believed that boys are more likely to exhibit externalizing problems whereas girls tend to display more internalizing problems (Carlson, 1991; Stagg, Wills, & Howell, 1989; Yates, Dodds, Sroufe, & Egeland, 2003). However, this difference may change with age as boys start to experience more feelings of sadness, and girls express more anger during adolescence (e.g., Cummings, 1998; Cummings, Ballard, & El-Sheikh, 1991; Spaccarelli et al., 1994).

Developmental psychopathology emphasizes developmental processes, the importance of context, and the influence of multiple and interacting events in influencing adaptive and maladaptive development (Rutter & Sroufe, 2000). This framework can be applied to childhood exposure to aggression as it considers how children adapt to negative experiences, such as direct and indirect forms of aggression (e.g., Wolfe et al., 2003). From this perspective, exposure to aggression may result in the child attempting to accommodate to these events by forming a hypervigilant,

insecure approach to relationships that often consists of strong emotions, such as frustration, disappointment, hostility, and fear (Wolfe et al., 2003). Therefore, the development of emotional and behavioural problems in children that are exposed to aggression is understandable, as they represent efforts to adapt to a maladaptive situation.

Intergenerational Transmission of Aggression

In addition to the consequences of exposure to partner aggression just described, the literature consistently emphasizes exposure to parental partner aggression during childhood as an important risk factor for the perpetration of partner aggression in adulthood. Therefore, a wealth of research has been dedicated to the intergenerational transmission of aggression. There appears to be a small-to-moderate effect size between growing up in an abusive family and becoming involved in an aggressive romantic relationship during adulthood (Stith et al., 2000). Moreover, some research suggests that children do not actually have to directly witness parental aggression to be at risk for perpetrating partner aggression during adulthood; living in a house where partner aggression takes place is a risk factor in and of itself (Delsol & Margolin, 2004; Stith et al., 2000). Furthermore, recent research suggests that even young adults who currently witness parental aggression are at risk for perpetrating aggression in their own intimate relationships (e.g., Black, Sussman, & Unger, 2010). Because little is known about the intergenerational transmission of aggression during early childhood, it is important to examine the possible beginning stages of this transmission by utilizing a sample of very young children.

Various studies have been conducted in an attempt to find evidence of the intergenerational transmission of aggression. For instance, using a sample of 99 male undergraduate students, Carr and VanDeusen (2002) found that witnessing parental aggression significantly predicted perpetration of physical partner aggression. In this study, witnessing parental aggression was significantly correlated with experiencing child abuse; however, child abuse did not add to the prediction of physical partner aggression perpetration. Ehrensaft and colleagues (2003) also examined the intergenerational transmission of aggression using a sample of 543 children who were followed longitudinally over a 20 year period. They found that children who were exposed to parental aggression were more likely to be the perpetrators and victims of partner aggression during adulthood than children who were not exposed to parental aggression. Similarly, Ehrensaft and Cohen (2012) also found that exposure to partner aggression put children at increased risk for externalizing problems, and this association was not significantly mediated by parenting practices (e.g., inconsistency, satisfaction, closeness, discipline etc.). Skuja and Halford (2004) compared thirty young men who were exposed to parental aggression in their family of origin with thirty young men who were not exposed to parental aggression. When the men discussed a conflict topic with their current romantic partner, the men who had been exposed to parental aggression showed more negative communication, and were more domineering during their interactions. Moreover, these men also reported more negative affect and more relationship aggression, when compared to the unexposed group of men.

Although many studies examining the association between exposure to parental aggression and the perpetration of partner aggression only find significant results for

men (e.g., O'Leary, Smith Slep, & O'Leary, 2007; O'Leary, Malone, & Tyree, 1994), some studies demonstrate women's perpetration rates are also influenced by exposure to parental aggression. For instance, parental conflict was directly related to men's and women's anger as reported in daily diaries even after controlling for personality characteristics (Kennedy, Bolger, & Shrout, 2002). Similarly, using the same sample of 98 pregnant couples from the present study who retrospectively reported on their exposure to aggression during childhood, Caldeira and Woodin (2012) found a significant positive association between childhood exposure to parental aggression and adulthood partner aggression perpetration for both men and women.

Witnessing parental aggression in one's family of origin may also be a predictor of persistent physical partner aggression. A sample of 94 community couples who had at least one act of physical aggression perpetrated by the male during the engagement period were assessed one month prior to marriage and then 6, 18, and 30 months after marriage (Lorber & O'Leary, 2004). Witnessing parental aggression in the family of origin along with more frequent physical aggression at premarriage, aggressive personality styles, and general aggression were significant predictors of continued aggression. Importantly, child abuse in the family of origin, impulsivity, and problem drinking did not contribute to the persistence of aggression. Taken together, the results of these studies support the intergeneration transmission of aggression theory. Furthermore, it has been documented that the transmission of aggression begins as early as toddlerhood, and the development of aggression is quite stable as early as two years of age (Jouriles, Pfiffner, & O'Leary, 1988; Olweus, 1979).

Theories of the Intergenerational Transmission of Aggression

Some researchers argue that children learn to be aggressive by imitating the aggressive behaviours to which they are exposed (e.g., Skoler, Bandura, Ross, Ross, & Baron, 1994). According to *social learning theory*, aggressive behaviour is acquired by observing others (Bandura, 1973; MacEwen, 1994). This theory argues that individuals who are exposed to aggression within their family during childhood learn to resolve frustration and conflicts through aggression. These children begin to view aggression within couples as appropriate and as a means of relieving stress and anger; therefore, they do not learn prosocial methods of solving interpersonal problems. In addition to the occurrence of aggression in one's family of origin, this theory argues that aggressive behaviours are more likely to occur in adulthood if certain conditions were present in the original learning situation.

Relevant situational conditions include the frequency and severity of the aggression, the impact of the aggression, the degree to which the observer identifies with the aggressor, and the gender of the model and observer. First, it is believed that the frequency and severity of aggression in the family of origin affects whether the aggressive acts are attended to and retained in memory. It is believed that emotional experiences are rehearsed in memory more than experiences with little emotion. Thus, exposure to frequent, severe aggressive acts which are accompanied by emotions are more likely to be retained in memory and modeled later. Second, the impact of the aggression the individual is exposed to is thought to be important. The aggressive acts could be quickly dismissed by family members, and the household could quickly return to normal, or serious consequences could take place, such as the victim leaving the

household for a period of time. According to social learning theory, the likelihood of aggression being transmitted across generations will increase if the impact of the family of origin aggression was severe. Moreover, if the model was reinforced for his or her aggressive behaviour, such as the victim complying with the aggressor, the child will be more likely to model the aggression in the future. Third, it is suggested that those exposed to aggression during childhood are more likely to later act aggressively toward their own partner during adulthood if they identify with the aggressor. In other words, an individual who has been exposed to aggression during childhood, but does not identify strongly with the aggressor, may not perpetrate partner aggression during adulthood. In comparison, an individual who was exposed to an equal amount of aggression, but who identifies strongly with the aggressor, should be more likely to perpetrate partner aggression in adulthood. It is believed that various factors increase identification with an aggressor, including a hostile aggressor, dependence on the aggressor, and a victim who is unable to escape the aggressive behaviour. Finally, the gender of the model and observer plays a role in the intergenerational transmission of aggression. More specifically, within-gender modeling appears to be stronger than between-gender modeling. Moreover, male models are generally imitated more than female models regardless of the child's gender (Bandura, 1973).

In support of social learning theory, Bandura, Ross, and Ross (1961) found that nursery school children who were exposed to aggressive models imitated these aggressive behaviours, especially if the model was the same sex as the child. Similarly, Jankowski, Leitenberg, Henning, and Coffey (1999) found that individuals who witnessed only their same sex parent perpetrate physical partner aggression were at

increased risk for perpetrating physical aggression, but respondents who only witnessed their opposite sex parent perpetrate partner aggression were not at increased risk. Another study found that adolescent females who witnessed their mother perpetrate partner aggression, and adolescent males who witnessed their father perpetrate partner aggression were more aggressive towards their friends (Moretti et al., 2006). In this study, adolescents' exposure to their opposite-sex parent's perpetration of aggression was unrelated to their aggression towards their friends (Moretti et al., 2006). However, in contrast to social learning theory, this study found that mothers' perpetration of partner aggression was significantly related to children of both genders' use of partner aggression during adolescence, but fathers' aggression perpetration was not. The authors of this study argue that mothers are more often central attachment figures and, therefore, play an important role in shaping their children's methods of managing conflict in romantic relationships compared to fathers.

The *behavioural genetic approach* is a theory that was formulated as a reaction to social learning theory in relation to the intergenerational transmission of partner aggression. More specifically, whereas social learning theory argues that patterns of aggression are entirely due to environmental factors, the behavioural genetic approach argues for the examination of biological and genetic contributors to family aggression (Hines & Saudino, 2002). There currently is limited behavioural genetic research conducted on partner aggression, but research in related areas, such as antisocial behaviours, has been used to argue for the applicability of this theory to partner aggression (e.g., Hines & Saudino, 2002). For example, research has demonstrated that monozygotic twins are more similar than dyzygotic twins and adoptees are more similar

to their biological relatives than their adoptive relatives for several antisocial behaviours, such as commitment of felonies, antisocial personality disorder, delinquency, and hostility (Carey & Goldman, 1997).

Although biological and genetic factors play a role in the intergenerational transmission of aggression, some research suggests that parenting behaviours may be more important. For example, Harold and colleagues (2011) conducted a study using a sample of families with children conceived through in vitro fertilization. The sample included children who were genetically related or unrelated to the rearing mother and/or father. Although there was a direct association between the rearing parents' antisocial behaviour (for both genetically related and unrelated mothers and fathers) and child antisocial behaviour, this association was mediated by environmental factors. Specifically, parent-to-child hostility fully mediated the association between parent antisocial behaviour and child antisocial behaviour, for both genetically related and genetically unrelated parent-child dyads. Despite the importance of environmental factors in explaining the intergenerational transmission of aggression in this study, other research highlights the difficulty in teasing apart the contribution of genes and environment. For example, using a sample of adopted children, it was found that children who were classified as being at genetic risk for antisocial behaviour were more likely to receive negative parenting from their adoptive parents than children who were not at genetic risk (O'Connor, Deater-Deckard, Fulker, Rutter, & Plomin, 1998). Therefore, it is possible that children may evoke certain behaviours from their parents based on their genetic makeup.

Another theory often used to explain the intergeneration transmission of aggression is the *social information processing model* (Dodge, 1986). This model is a social-cognitive model that focuses on four cognitive steps that occur when an individual is exposed to aggression. The first step is encoding which consists of the amount of attention the child pays to the external and internal cues within a given social situation. The second step is interpretation or the child's attributions of the intent of the aggression. Response generation, the third step, includes the various possible responses the child can imagine the individual engaging in other than aggression. In the fourth step, response evaluation, the child evaluates each possible response generated during the third step relative to the goals, expected results, and feelings of self-efficacy. Some research suggests that both response generation and response evaluation mediates the association between exposure to parental relationship conflict and subsequent relationship conflict in young adulthood (e.g., Fite, Bates, Holtzworth-Munroe, Dodge, Nay, & Pettit, 2008).

The *developmental-interactional model* of intimate partner aggression is a recent theory that suggests that social learning processes in one's family of origin contribute to partner aggression in adulthood due to the development of an interpersonal style of functioning that is conducive to partner aggression (Capaldi & Gorman-Smith, 2003). In other words, children learn to behave aggressively in romantic relationships by watching their parents' interactions. Moreover, it is believed that children are affected by the way their parents interact with them, and this also assists in the development of an interpersonal way of functioning. Although parental aggression and parent-child aggression often co-occur in families (Slep & O'Leary, 2005), the developmental-

interactional model argues that the direct treatment of the child by the parent is more important than observational learning in the development of future aggressive behaviour. Although some research suggests that parents' behaviour toward their children is a more important factor than witnessing partner aggression (Capaldi & Clark, 1998), other research suggests otherwise (e.g., Carr & VanDeusen, 2002).

Influences on the Intergenerational Transmission of Aggression

Although extant research supports the intergenerational transmission of aggression, not all individuals who are exposed to aggression in their family of origin act aggressively. Therefore, it is important to examine moderators of the intergenerational transmission of aggression in order to determine whether certain conditions can break the cycle of aggression across generations. There currently is limited research in this area, but several studies have found that certain conditions moderate the intergenerational transmission of aggression. Using a sample of adolescents, Hare and colleagues (2009) found that attachment security served as a moderator of the link between paternal aggression and subsequent adolescent aggression, whereby the transmission of negative conflict strategies was reduced for securely attached adolescents. In other words, having a secure attachment may act as a buffer against replicating the destructive behaviours that the individual witnessed during childhood. Also examining adolescents, Levendosky and colleagues (2002) found that maternal warmth was a protective factor against negative communication with a dating partner for adolescents who were exposed to domestic violence. Perceived peer support was also a significant moderator in this study whereby perceived support was a protective factor against aggressive dating experiences for youth who were exposed to

low levels of domestic violence. However, perceived support was a risk factor for youth exposed to high rates of domestic violence. The authors interpret this finding by suggesting that adolescents who live in homes with high rates of domestic violence may surround themselves with peers who support violent behaviour, thus increasing the likelihood of negative dating experiences. In a study conducted by Levendosky and Graham-Bermann (1998), parenting stress served as a vulnerability factor for children's externalizing behaviour problems in families in which the mother experienced low levels of psychological abuse compared to families in which the mother experienced high levels of psychological abuse. In order to explain this moderating effect, the authors argue that it is possible that in families with low levels of domestic violence, parenting stress can provoke externalizing behaviour by the child, because they do not receive the structure and guidance that they need. In contrast, in families with high levels of domestic violence, childhood externalizing behaviour may be provoked by exposure to violence rather than by the mother's stress level.

In addition to studies examining moderating effects of the intergenerational transmission of aggression, several studies have focused on mediators also in an attempt to better understand the transmission of aggression across generations. In a sample of female college students, interpersonal problems with dominance, intrusiveness, and vindictiveness fully mediated the link between violence in the family of origin and participating in physically aggressive dating relationships (Murphy & Blumenthal, 2000). Perceived social support has also been shown to serve as a mediator between partner conflict and child adjustment, whereby perceptions of poor social support are linked to increased risk for adjustment problems in children whose mothers are abused

in a sample of low-income African American families (Owen et al., 2008). Specifically, children's perceived level of overall social support served as a mediator between parental conflict and both internalizing and externalizing problems in children, wherein diminished levels of social support associated with parental conflict increased both internalizing and externalizing problems. In contrast, mothers' perceived social support served a meditating role for the association between partner abuse and children's internalizing, but not externalizing problems. Based on these findings, the authors recommend that interventions that focus on improving childhood adjustment for children exposed to partner aggression should target enhancing the social support of both children and their mothers.

Examining partner conflict more generally rather than looking specifically at partner aggression, Kaczynski and colleagues (2006) found that parenting behaviours including rejection, coercion, and poor emotional support fully mediated the associations between marital conflict and child internalizing and externalizing behaviours in a sample of 226 families with a school-aged child. The authors argue that this finding is consistent with the spillover hypothesis, which suggests that negativity from the marital domain is carried into the parenting domain, and ultimately affects childhood functioning (Engfer, 1988). More specifically, Kaczynski and colleagues found that marital conflict was significantly associated with higher levels of ineffective parenting (e.g., high rejection and coercion, and low emotional support) by both mothers and fathers, and this related to poor child adjustment. It is possible that parents who are ineffective at managing conflict in their relationship also implement poor conflict management techniques with their child, thereby resulting in behaviour problems among

children. Similarly, Buehler and Gerard (2002) found that parents' use of harsh discipline and low parental involvement partially mediated the association between marital conflict and children's maladjustment using a sample of parents with children aged 2 through 11 years old. Given that poor parenting practices influence the association between partner conflict and child maladjustment, it is worth examining how the quality of different forms of parenting (parenting style, parenting competence, and parenting alliance) moderate the intergenerational transmission of aggression more specifically.

The Current Study

Using a sample of couples transitioning to parenthood who were followed from the third trimester of pregnancy to when their child was two years old, the current study had three primary goals. The first goal was to examine the prevalence and course of psychological and physical partner aggression for men and women throughout their transition to parenthood. The second goal was to explore the negative effects partner aggression had on the couples' child, specifically examining internalizing and externalizing consequences. The third goal was to examine the evidence for the intergenerational transmission of aggression, and contribute to the existing literature by identifying parenting moderators for the association between exposure to parental aggression and childhood aggressive behaviour. I examined several hypotheses to achieve these stated goals.

Hypothesis 1: Consistent with past research, I hypothesized that partner aggression would persist over the transition to parenthood for both men and women, whereby I expected the perpetration rates to be significantly correlated across

time points. Moreover, I expected that psychological aggression would be relatively stable across the transition to parenthood, whereas physical aggression may increase following childbirth.

Hypothesis 2: I hypothesized that exposure to parental aggression would have negative effects on children's mental health, and these effects would vary with the gender of the child. Specifically, I expected that girls who were exposed to partner aggression would be at greater risk for internalizing symptoms (anxiety, withdrawal, somatic complaints, sleep problems, and affective symptoms), whereas boys would be at greater risk for externalizing symptoms (oppositional behaviour and aggressive behaviour). I predicted that these associations would remain significant even after controlling for various demographic variables.

Hypothesis 3: Consistent with the intergenerational transmission of aggression, I hypothesized that exposure to parental aggression would be significantly associated with childhood aggressive behaviour, particularly for boys. Furthermore, consistent with the social learning model, I expected that mothers' aggression would be a better predictor of girls' aggressive behaviour than fathers' aggression, whereas fathers' aggression would be a better predictor of boys' aggressive behaviour than mothers' aggression.

Hypothesis 4: I hypothesized that parenting style (i.e., laxness, over-reactivity, and hostility), parenting competence (i.e., perceived efficacy, satisfaction, and interest in parenting one's child), and parenting alliance (i.e., the degree to which one believes they have a strong working relationship with the child's other parent) would moderate the expected association between parental aggression

and child aggressive behaviour. Specifically, I expected that poor parenting behaviours (i.e., high laxness, high over-reactivity, high hostility, low parenting competence, and weak parenting alliance) would result in a stronger association between exposure to parental aggression and childhood aggressive behaviour.

Method

Procedures

Data for this study came from the larger Partners to Parents Study conducted at the University of Victoria. The Partners to Parents Study is a longitudinal study of one hundred couples who were initially recruited when they were pregnant with their first child. The couples participated in the study at three time points: during the third trimester of pregnancy, one year after the child's birth, and two years after the child's birth. Participants were told that the study was designed to learn about how couples adjust to the transition to parenthood. For the first wave of the study, couples came to the University of Victoria for a 3.5 hour session. Anonymity and confidentiality procedures were carefully explained to both members of each couple verbally and through written consent forms. After consent was obtained, participants were seated in separate, non-adjoining rooms to complete a series of computerized questionnaires that measured demographic information, individual functioning, relationship functioning, and attitudes towards pregnancy and parenting. At the conclusion of the session, couples were debriefed regarding their participation and received a community resource list, an infant t-shirt, and each individual received a $50 honorarium for their time. The second and third wave of the study consisted of a series of computerized follow-up questionnaires that the couples completed individually at home which measured

demographic information, individual functioning, relationship functioning, parenting beliefs and behaviours, as well as questionnaires that pertain to the functioning of their child. Each individual received a $25 and $50 honorarium for participating in the second and third wave of the study, respectively.

Participants

Participants were recruited through brochures distributed to maternity physicians' offices, midwives, doulas, and prenatal classes as well as through advertisements on local university and college campuses, pregnancy-related websites, maternity-related stores, and local baby fairs. Interested couples were given a brief interview by telephone in order to determine if they were eligible to participate. A research assistant described the project in more detail to eligible couples, and scheduled interested couples for an appointment to participate in the study. To be eligible to participate, couples were initially required to be: (1) living together, (2) able to speak and read in the English language, and (3) in the third trimester of pregnancy with their first biological child.

One hundred couples participated in the first wave of study. Due to the nature of the research questions, two same-sex couples that participated in the study were excluded from the analyses, resulting in a final initial sample of 98 women and 98 men. Of the initial sample, 79 men (80.6%) and 88 women (89.8%) completed the second wave of the study and 74 men (75.5%) and 76 women (77.6%) completed the third wave of the study. One couple dropped out of the study due to an unsuccessful pregnancy. Given that several individuals chose not to participate in follow-up wave(s) of the study, attrition was examined by assessing whether certain demographic factors (e.g., age,

education, income, marital status, visible minority status, length of cohabitation) at wave 1 predicted attrition at wave 3. None of these variables were significant predictors of attrition. During the first wave of the study, 68 out of the 98 couples were legally married (69.4%) and the average time couples reported living together was 4.55 (SD = 3.15) years. Of the 98 men, approximately 87% identified as Caucasian, 6% identified with an aboriginal group, and the remaining 7% identified with other ethnic minority groups. Of the 98 women, approximately 86% identified as Caucasian, 4% identified with an aboriginal group, and 10% identified with other ethnic minority groups. Ethnic minority participants self-identified as Asian-Canadian, Indo-Canadian, African-Canadian, and Latin American. Approximately 93% of women who completed the third wave of the study reported still being in a romantic relationship with their child's other parent. Furthermore, 79% of women reported being legally married at the third time point. Sample demographics for each time point are presented in table 1. These participants are a fairly good representation of the greater Victoria metropolitan area, as reflected by the 2006 Canadian census figures.

Measures

Parental conflict

Parental aggression. The Conflict Tactics Scales Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996; See Appendix A) is a 78-item scale that assesses the extent of negotiation, psychological aggression, and physical aggression used to deal with conflicts in romantic relationships. The CTS2 is based on conflict theory which suggests that conflict is inevitable in relationships, but the use of violence to deal with conflict is not. Items are arranged in 39-item pairs. Each item pair assesses

Table 1

Participant Characteristics

	Men		*Women*	
Variable	Mean	*SD*	Mean	*SD*
Wave 1				
Age (years)	32.03	5.51	29.98	5.49
Education (years)	14.77	2.38	15.28	2.31
Income	51,716	35,254	35,019	24,825
Years Living Together	4.55	3.15	4.55	3.15
Wave 2				
Age (years)	33.32	5.51	31.19	5.39
Education (years)	14.77	2.38	15.30	2.53
Income	47,633	25,821	27,879	23,766
Wave 3				
Age (years)	34.52	5.51	32.34	5.43
Education (years)	14.81	2.37	15.46	2.36
Income	52,757	29,421	28,017	24,841

a specific behaviour and asks the respondent to report on their behaviour and their partner's behaviour (e.g., "Have you pushed or shoved your partner?" is arranged with "Has your partner pushed or shoved you?"). Although interpartner agreement on the CTS2 has been documented (O'Leary & Williams, 2006), it is best to have both partners complete the measure whenever possible. In the current study, the highest score between self-reports and partner-reports for the same aggressive act was used to compute each individual's perpetration rate as was done in other similar studies (e.g., Foran & O'Leary, 2007; Smith Slep & O'Leary, 2005). The CTS2 has five subscales used to measure *Negotiation*, *Psychological Aggression*, *Physical Aggression*, *Sexual Aggression*, and *Injury*. For the purpose of this study, the psychological and physical aggression subscales were administered at each time point and were used as measures of each form of aggression. Respondents were asked to indicate how many times the event occurred during the last 12 months on a scale of 0 to 6 (0 = never, 1 = 1 time, 2 = 2 times, 3 = 3-5 times, 4 = 6-10 times, 5 = 11-20 times, 6 = more than 20 times). The CTS2 requires only a sixth grade reading level, can be completed in 10-15 minutes, and can be utilized with many cultural groups (Straus et al.). There are many advantages of using the CTS2 rather than the original version including the increased number of items, increased clarity, simplified format, and the inclusion of the sexual coercion and physical injury scales (Straus et al.). Previous research has demonstrated that the CTS2 has internal reliabilities that range from .79 to .95 using a college sample (Straus et al.). In the current study, the psychological aggression subscale had internal reliabilities ranging from .60 to .69 (M = .63) for men and from .59 to .64, (M = .61) for women across the three waves of the study. The physical aggression subscale had internal

reliabilities ranging from .54 to .82 (*M* = .69) for men and from .76 to .82 (*M* = .78) for women across the three waves of the study.

Parenting quality

Parenting practices. The Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993; See Appendix B) is a 30-item measure used with parents of toddlers and preschool children designed to measure dysfunctional discipline practices. Parents are asked to indicate how they would respond to various discipline scenarios on a scale of 1-7. Scoring for 14 of the items is reversed so that overall, higher scores indicate greater degrees of dysfunctional discipline. A factor analysis of the measure demonstrated three subscales: *Laxness*, *Over-reactivity*, and *Hostility* (Rhoades & O'Leary, 2007). Using a sample of 453 couples parenting 3 to 7 year old children, previous research has documented good internal consistency reliabilities for each of the subscales, with alphas ranging from .78 to .85 for mothers and from .80 to .83 for fathers (Rhoades & O'Leary, 2007). Test-retest reliabilities over a 2-week interval were also good with the total scale having a correlation of .84 (Arnold et al., 1993). Scores on the PS also have been shown to positively correlate with observational measures of dysfunctional discipline and child misbehaviour (Arnold et al., 1993). For the purpose of this study, data on parenting practices were taken from the third wave of the study when the child was two years old. In the current study, the internal reliabilities for Laxness, Over-reactivity, and Hostility were .60, .62, and .72 for fathers and .75, .68, and .33 for mothers, respectively. The reliability for mothers' hostility was very low given that very few mothers reported engaging in hostile behaviours towards their child (i.e., only one mother endorsed the item related to insulting her child in response to her child behaving negatively).

Moreover, the hostility subscale consists of only three items, leading to low reliability across the items for the few women that did report some hostile behaviour towards their child. The analyses for mothers' hostility as a moderator of the intergenerational transmission of aggression were not carried out due to this low reliability.

Parenting competence. The Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989; See Appendix C) is a 17-item questionnaire that uses a 6-point scale ranging from "strongly disagree" to "strongly agree." The scale includes questions pertaining to *Satisfaction* (i.e., an affective dimension reflecting parenting frustration, anxiety, and motivation), *Efficacy* (i.e., an instrumental dimension reflecting competence, problem-solving ability, and capability in the parenting role), and *Interest* (i.e., a dimension reflecting interest in parenting one's child) (Johnston & Mash, 1989; Gilmore & Cuskelly, 2008). In the present study, the total scale was used to represent an overall level of parenting competence as was done in previous studies (e.g., Knoche, Givens, & Sheridan, 2007). Scoring for nine of the items is reversed so that higher scores indicate greater parenting competence. Previous research has reported good psychometric properties using a sample of parents of 4- to 9-year olds in a large Canadian city (Johnston & Mash, 1989). The scale has also been used with parents of infants, and has been found to have good reliability with this population (Knoche et al., 2007). Data on parenting competence was taken from the third wave of the study. The internal reliabilities for this scale were .87 for fathers and .90 for mothers in the present study.

Co-parenting. The Parenting Alliance Inventory (PAI; Abidin & Brunner, 1995; See Appendix D) is a questionnaire that assesses the degree to which parents believe

that they have a positive working relationship with the child's other parent. Respondents answer each of the 20 items on a 5-point scale ranging from strongly disagree to strongly agree. Past research using a sample of parents with children aged 2 to 7 years has indicated that the PAI has high internal consistency and the measure does not show any significant difference between the responses of men and women (Abidin & Brunner, 1995). The measure is able to discriminate accurately between couples who are married, separated, and divorced. It also has been reported that the PAI correlates significantly with measures of marital satisfaction, parenting stress, and parenting style (Abidin & Brunner, 1995). Furthermore, the PAI correlates significantly with the target child's positive adjustment and social competence (Abidin & Brunner, 1995). For the purpose of the present study, data on co-parenting abilities was taken from the third wave of data. In the current study, the internal reliabilities for this scale were .96 and .95 for men and women, respectively.

Child outcomes

Child adjustment. The Child Behaviour Checklist (CBCL; Achenbach & Rescorla, 2000; See Appendix E) is a measure that describes 100 problem behaviours in preschool children aged 18 months to 5 years. Respondents are asked to take into account their child's behaviour in the past two months, and rate each behaviour on a 3-point scale ranging from not true to very true of their child. The scale consists of two factors, one is labelled Internalizing and comprises *Anxiety, Withdrawal, Somatic Complaints, Sleep Problems*, and *Affective Symptoms*, and the other is labelled Externalizing and comprises *Oppositional Behaviour* and *Aggressive Behaviour*. Given that the present study includes both parents' reports on child adjustment, the higher total

score between mother-reports and father-reports for the same child outcome was used as the child's score for that particular subscale. Children's scores for each subscale were calculated in this fashion, rather than simply relying on mothers' reports as was done in past research, to account for the fact that some fathers spend more time with their child and, therefore, may be better judges of their child's adjustment. The CBCL has demonstrated good psychometric properties (Achenbach & Rescorla, 2000). Data on child adjustment was collected during the third wave of the study when the child was two years old. In the present study, internal reliabilities of the internalizing subscales ranged from .42 to .78 (M = .61) for boys, and from .76 to .90 (M = .83) for girls. Within the externalizing domain, internal reliabilities were .74 and .72 for boys' and girls' oppositional behaviour, respectively, and .87 and .86 for boys' and girls' aggressive behaviour, respectively.

Statistical Analyses

Before conducting the analyses, the data were examined for normality. As would be expected, several predictor and outcome variables were significantly positively skewed, and contained outliers greater than two standard deviations from the mean. To improve normality the skewed variables were re-coded so that all outliers were one unit larger than the next largest response (Tabachnick & Fidell, 2007). Descriptive statistics, including frequencies, percentages, means, and standard deviations were used to examine the prevalence and course of psychological and physical partner aggression separately across the transition to parenthood. In order to measure the stability of partner aggression across this transition, effect sizes between

measurement periods were reported as *r* values (point-biserial correlations) for both men and women.

Childhood exposure to parental aggression was measured separately at each of the two postpartum time points by combining the perpetration rates of men and women's aggression within each couple. This was done separately for psychological aggression and physical aggression given the distinction between the two forms of aggression. If only one partner in the couple completed the questionnaires, the perpetration of aggression by the partner who did not complete the questionnaires was estimated from the other partner's report as the CTS2 requires the respondent to report on their behaviour and their partner's behaviour. In an effort to examine the negative effects of childhood exposure to partner aggression, multiple regressions were conducted while controlling for demographic confounding variables (i.e., demographic variables that were significantly correlated with the dependent variable). More specifically, total exposure to parental aggression at each time point was used as the independent variable (separately for psychological and physical aggression), and each regression contained a distinct childhood outcome as the dependent variable measured during the third wave of the study (i.e., anxiety, withdrawal, somatic complaints, sleep problems, affective symptoms, oppositional behaviour, and aggressive behaviour). Childhood outcomes were analyzed separately rather than combining them into an internalizing dimension and an externalizing dimension to assess whether exposure to parental aggression differentially influences different childhood behaviours. Because I expected that girls would be at greater risk for internalizing symptoms (i.e., anxiety, withdrawal, somatic complaints, sleep problems, and affective symptoms), and boys

would be at great risk for externalizing symptoms (i.e., oppositional behaviour and aggressive behaviour), child gender was assessed as a moderator in each of these analyses.

In order to assess the social learning model as an explanation for the intergenerational transmission of aggression, the perpetration rates of each parent were examined separately. Specifically, each partner's perpetration rates of psychological and physical aggression at each postpartum time point were used as predictors of childhood aggression. Child gender was used as a moderator in each of the analyses to assess whether mothers' aggression is a better predictor of girls' aggressive behaviour, and fathers' aggression is a better predictor of boys' aggressive behaviour as argued by the social learning model.

Finally, to test whether different forms of parenting quality moderate the association between total exposure to parental aggression (separately for psychological aggression and physical aggression) and childhood aggressive behaviour, a hierarchical multiple regression analysis was conducted for each form of parenting quality, including parenting style (laxness, over-reactivity, and hostility), parenting competence, and parenting alliance while controlling for demographic variables (Aiken & West, 1991). In order to increase interpretability, all predictor variables were centered (i.e., the mean value of each variable was subtracted from the individual scores) and the interaction term was computed from the centered variables by multiplying the values of the independent and moderating variable (Judd, 2000). As an example of a two-way interaction analysis, the hierarchical multiple regression was conducted as follows: the covariates were entered in the first block, the independent variable (e.g., exposure to

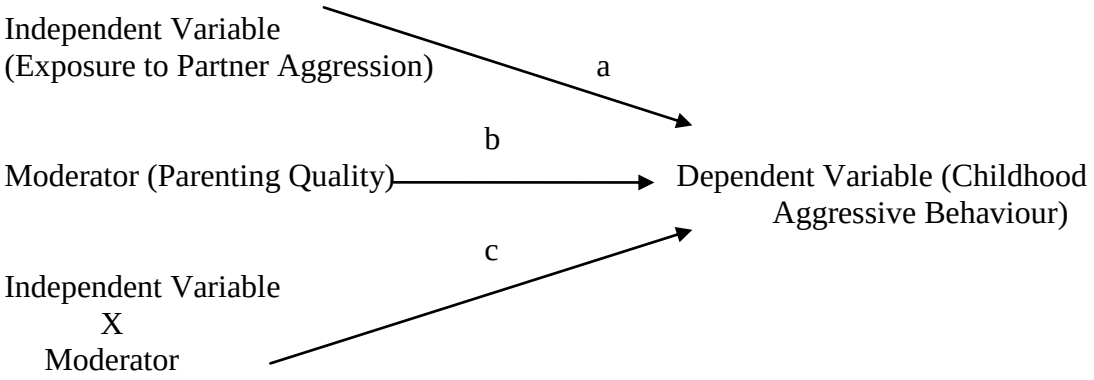
parental psychological aggression) and the moderator (e.g., parenting laxness) were entered simultaneously in the second block, and the interaction term was entered in the third block. As documented in Figure 1, there are three potential pathways to the dependent variable (childhood aggressive behaviour): exposure to parental aggression as the independent variable (path a), parenting quality as a moderator (path b), and the interaction or product of the independent variable and the moderator (path c) (Baron & Kenny, 1986). The moderator hypothesis is supported if the interaction (path c) is significant.

Results

Prevalence of Partner Aggression across the Transition to Parenthood

Approximately 74.5% of men and 83.7% of women perpetrated at least one act of psychological aggression against their partner during pregnancy. During the first year following childbirth, 81.6% of men and 87.5% of women perpetrated partner psychological aggression. Finally, 82.7% and 80.2% of men and women, respectively, perpetrated psychological aggression during the second year following childbirth. Although the rates of psychological aggression perpetration were generally high, the rates of severe forms of psychological aggression were lower. Specifically, 20.4% of men and 24.5% of women perpetrated at least one act of severe psychological aggression against their partner during pregnancy. During the first year following childbirth, approximately 15.9% of men and 20.5% of women perpetrated severe partner psychological aggression. Finally, 18.5% of men and 16.0% of women perpetrated severe partner psychological aggression during the second year following childbirth.

Figure 1. Moderator Model for the Proposed Moderating Effect of Parenting Quality for the Association between Exposure to Partner Aggression and Childhood Aggressive Behaviour.



Tables 2 and 3 include a detailed description of the percentage of individuals who perpetrated each act of psychological aggression assessed by the CTS2.

As expected, in comparison to psychological aggression, rates of physical aggression perpetration were lower during the transition to parenthood. During pregnancy, 24.2% of men and 28.6% of women perpetrated at least one incident of physical aggression against their partner. During the first year following childbirth, rates of physical aggression perpetration for men and women were 19.5% and 28.4%, respectively. Finally, during the second year following childbirth, 16.0% of men and 30.9% of women perpetrated physical aggression against their partner. Therefore, although women's rates of partner physical aggression perpetration are quite stable across the transition to parenthood, men's rates progressively decreased across the transition to parenthood. It is of note, however, that men who were physically aggressive prenatally were significantly less likely to participate in the third wave of the study ($\beta = -.27$, $p = .01$), but this was not true for women ($\beta = -.05$, $p = .63$). Specifically, 7 out of the 22 men (32%) who were physically aggressive prenatally did not complete the third wave of the study.

Considering severe forms of physical aggression perpetration at an individual level, approximately 12.1% of men and 11.0% of women perpetrated at least one act of severe physical aggression against their partner during pregnancy. During the first year following childbirth, approximately 6.8% of men and 5.7% of women perpetrated severe partner physical aggression. Finally, 2.5% of men and 6.2% of women perpetrated severe partner physical aggression during the second year following childbirth. Tables 4 and 5 include a detailed description of the percentage of individuals who perpetrated

Table 2

Percentage of Men who Perpetrated each Act of Psychological Aggression during the Last Year

	Never	1 time	2 times	3-5 times	6-10 times	11-20 times	20+ times
Wave 1 (n=98)							
Minor Aggression							
Insulted/Swore	45.9	11.2	10.2	15.3	7.1	6.1	4.1
Shouted/Yelled	36.7	6.1	14.3	16.3	11.2	7.1	8.2
Stomped out of room during disagreement	44.9	10.2	12.2	15.3	10.2	4.1	3.1
Said something to spite partner	79.6	3.1	8.2	7.1	2.0	0.0	0.0
Severe Aggression							
Called partner fat/ugly	87.8	5.1	1.0	6.1	0.0	0.0	0.0
Destroyed something belonging to partner	91.8	8.2	0.0	0.0	0.0	0.0	0.0
Accused partner of being lousy lover	92.9	0.0	4.1	2.0	1.0	0.0	0.0
Threatened to hit/throw something at partner	93.9	2.0	2.0	2.0	0.0	0.0	0.0

Wave 2 (n=88)							
Minor Aggression							
Insulted/Swore	47.7	9.1	9.1	11.4	11.4	6.8	4.5
Shouted/Yelled	34.1	9.1	12.5	15.9	13.6	6.8	8.0
Stomped out of room during disagreement	42.0	12.5	15.9	15.9	8.0	4.5	1.1
Said something to spite partner	72.7	3.4	10.2	8.0	2.3	1.1	2.3
Severe Aggression							
Called partner fat/ugly	93.2	2.3	1.1	1.1	0.0	1.1	1.1
Destroyed something belonging to partner	90.9	4.5	0.0	4.5	0.0	0.0	0.0
Accused partner of being lousy lover	92.0	2.3	3.4	1.1	0.0	1.1	0.0
Threatened to hit/throw something at partner	93.2	3.4	1.1	2.3	0.0	0.0	0.0
Wave 3 (n=81)							
Minor Aggression							
Insulted/Swore	38.3	6.2	11.1	18.5	7.4	8.6	9.9
Shouted/Yelled	27.2	9.9	9.9	12.3	14.8	14.8	11.1
Stomped out of room during disagreement	38.3	9.9	19.8	16.0	11.1	3.7	1.2

Said something to spite partner	64.2	4.9	16.0	3.7	6.2	2.5	2.5
Severe Aggression							
Called partner fat/ugly	96.3	1.2	1.2	0.0	0.0	0.0	1.2
Destroyed something belonging to partner	91.4	4.9	2.5	0.0	1.2	0.0	0.0
Accused partner of being lousy lover	90.1	2.5	4.9	0.0	1.2	1.2	0.0
Threatened to hit/throw something at partner	91.4	4.9	0.0	2.5	1.2	0.0	0.0

Table 3

Percentage of Women who Perpetrated each Act of Psychological Aggression during the Last Year

	Never	1 time	2 times	3-5 times	6-10 times	11-20 times	20+ times
Wave 1 (n=98)							
Minor Aggression							
Insulted/Swore	36.7	11.2	12.2	17.3	11.2	5.1	6.1
Shouted/Yelled	30.6	17.3	9.2	15.3	9.2	9.2	9.2
Stomped out of room during disagreement	35.7	11.2	21.4	19.4	8.2	2.0	2.0
Said something to spite partner	81.6	4.1	7.1	3.1	1.0	3.1	0.0
Severe							
Called partner fat/ugly	90.8	3.1	2.0	3.1	0.0	0.0	1.0
Destroyed something belonging to partner	89.8	5.1	3.1	2.0	0.0	0.0	0.0
Accused partner of being lousy lover	89.8	5.1	3.1	2.0	0.0	0.0	0.0
Threatened to hit/throw something at partner	89.8	6.1	1.0	2.0	1.0	0.0	0.0

Wave 2 (n=88)							
Minor Aggression							
Insulted/Swore	51.1	8.0	5.7	12.5	10.2	4.5	8.0
Shouted/Yelled	45.5	8.0	5.7	15.9	9.1	5.7	10.2
Stomped out of room during disagreement	43.2	17.0	15.9	14.8	3.4	3.4	2.3
Said something to spite partner	83.0	2.3	6.8	5.7	1.1	1.1	0.0
Severe Aggression							
Called partner fat/ugly	89.8	4.5	3.4	2.3	0.0	0.0	0.0
Destroyed something belonging to partner	95.5	2.3	2.3	0.0	0.0	0.0	0.0
Accused partner of being lousy lover	94.3	0.0	2.3	2.3	1.1	0.0	0.0
Threatened to hit/throw something at partner	96.6	2.3	1.1	0.0	0.0	0.0	0.0
Wave 3 (n=81)							
Minor Aggression							
Insulted/Swore	40.7	8.6	14.8	16.0	4.9	6.2	8.6
Shouted/Yelled	29.6	11.1	8.6	17.3	11.1	9.9	12.3

Stomped out of room during disagreement	34.6	16.0	18.5	17.3	9.9	2.5	1.2
Said something to spite partner	66.7	6.2	12.3	8.6	4.9	1.2	0.0
Severe Aggression							
Called partner fat/ugly	92.6	6.2	0.0	1.2	0.0	0.0	0.0
Destroyed something belonging to partner	96.3	2.5	0.0	1.2	0.0	0.0	0.0
Accused partner of being lousy lover	90.1	2.5	3.7	2.5	1.2	0.0	0.0
Threatened to hit/throw something at partner	96.3	2.5	0.0	1.2	0.0	0.0	0.0

Table 4

Percentage of Men who Perpetrated each Act of Physical Aggression during the Last Year

	Never	1 time	2 times	3-5 times	6-10 times	11-20 times	20+ times
Wave 1 (n=98)							
Minor Aggression							
Threw something	86.7	4.1	5.1	3.1	0.0	1.0	0.0
Twisted arm or hair	95.9	3.1	0.0	1.0	0.0	0.0	0.0
Pushed/shoved	87.8	4.1	4.1	4.1	0.0	0.0	0.0
Grabbed	91.8	4.1	0.0	2.0	2.0	0.0	0.0
Slapped	94.9	1.0	2.0	2.0	0.0	0.0	0.0
Severe Aggression							
Used knife/gun	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Punched or hit	92.9	6.1	1.0	0.0	0.0	0.0	0.0
Choked	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slammed partner against wall	99.0	0.0	1.0	0.0	0.0	0.0	0.0
Beat up partner	98.0	1.0	0.0	0.0	0.0	0.0	1.0

Burned or Scalded	99.0	1.0	0.0	0.0	0.0	0.0	0.0
Kicked	95.6	2.2	2.2	0.0	0.0	0.0	0.0
Wave 2 (n=88)							
Minor Aggression							
Threw something	87.5	6.8	3.4	1.1	0.0	1.1	0.0
Twisted arm or hair	92.0	3.4	2.3	2.3	0.0	0.0	0.0
Pushed/shoved	86.4	4.5	3.4	3.4	2.3	0.0	0.0
Grabbed	88.6	6.8	2.3	1.1	1.1	0.0	0.0
Slapped	95.5	3.4	1.1	0.0	0.0	0.0	0.0
Severe Aggression							
Used knife/gun	98.9	1.1	0.0	0.0	0.0	0.0	0.0
Punched or hit	97.7	1.1	1.1	0.0	0.0	0.0	0.0
Choked	97.7	1.1	1.1	0.0	0.0	0.0	0.0
Slammed partner against wall	96.6	1.1	0.0	1.1	1.1	0.0	0.0
Beat up partner	98.9	1.1	0.0	0.0	0.0	0.0	0.0
Burned or Scalded	97.7	1.1	1.1	0.0	0.0	0.0	0.0

Kicked	96.6	3.4	0.0	0.0	0.0	0.0	0.0
Wave 3 (n=81)							
Minor Aggression							
Threw something	81.5	11.1	2.5	0.0	2.5	2.5	0.0
Twisted arm or hair	87.7	7.4	2.5	0.0	1.2	1.2	0.0
Pushed/shoved	86.4	6.2	6.2	0.0	0.0	1.2	0.0
Grabbed	87.7	7.4	3.7	0.0	1.2	0.0	0.0
Slapped	91.4	4.9	3.7	0.0	0.0	0.0	0.0
Severe Aggression							
Used knife/gun	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Punched or hit	97.5	2.5	0.0	0.0	0.0	0.0	0.0
Choked	97.5	1.2	1.2	0.0	0.0	0.0	0.0
Slammed partner against wall	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Beat up partner	97.5	1.2	1.2	0.0	0.0	0.0	0.0
Burned or Scalded	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Kicked	96.3	2.5	1.2	0.0	0.0	0.0	0.0

Table 5

Percentage of Women who Perpetrated each Act of Physical Aggression during the Last Year

	Never	1 time	2 times	3-5 times	6-10 times	11-20 times	20+ times
Wave 1 (n=98)							
Minor Aggression							
Threw something	87.8	8.2	3.1	0.0	0.0	0.0	1.0
Twisted arm or hair	95.9	1.0	1.0	1.0	1.0	0.0	0.0
Pushed/shoved	82.7	5.1	6.1	5.1	1.0	0.0	0.0
Grabbed	89.8	3.1	2.0	5.1	0.0	0.0	0.0
Slapped	89.8	6.1	2.0	0.0	1.0	1.0	0.0
Severe Aggression							
Used knife/gun	99.0	1.0	0.0	0.0	0.0	0.0	0.0
Punched or hit	95.9	2.0	1.0	0.0	1.0	0.0	0.0
Choked	98.0	1.0	0.0	1.0	0.0	0.0	0.0
Slammed partner against wall	96.9	2.0	1.0	0.0	0.0	0.0	0.0
Beat up partner	98.0	0.0	1.0	1.0	0.0	0.0	0.0

Burned or Scalded	100.0	0.0	0.0	0.0	0.0	0.0	0.0
Kicked	95.6	2.2	1.1	1.1	0.0	0.0	0.0
Wave 2 (n=88)							
Minor Aggression							
Threw something	92.0	3.4	3.4	1.1	0.0	0.0	0.0
Twisted arm or hair	96.6	1.1	2.3	0.0	0.0	0.0	0.0
Pushed/shoved	89.8	4.5	4.5	0.0	1.1	0.0	0.0
Grabbed	95.5	2.3	2.3	0.0	0.0	0.0	0.0
Slapped	90.9	8.0	1.1	0.0	0.0	0.0	0.0
Severe Aggression							
Used knife/gun	100	0.0	0.0	0.0	0.0	0.0	0.0
Punched or hit	96.6	1.1	2.3	0.0	0.0	0.0	0.0
Choked	100	0.0	0.0	0.0	0.0	0.0	0.0
Slammed partner against wall	100	0.0	0.0	0.0	0.0	0.0	0.0
Beat up partner	98.9	1.1	0.0	0.0	0.0	0.0	0.0
Burned or Scalded	100	0.0	0.0	0.0	0.0	0.0	0.0

Kicked	96.6	2.3	0.0	1.1	0.0	0.0	0.0
Wave 3 (n=81)							
Minor Aggression							
Threw something	91.4	3.7	0.0	1.2	2.5	1.2	0.0
Twisted arm or hair	91.4	4.9	1.2	0.0	1.2	1.2	0.0
Pushed/shoved	96.3	2.5	0.0	0.0	0.0	1.2	0.0
Grabbed	90.1	4.9	2.5	1.2	0.0	1.2	0.0
Slapped	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Severe Aggression							
Used knife/gun	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Punched or hit	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Choked	97.5	1.2	1.2	0.0	0.0	0.0	0.0
Slammed partner against wall	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Beat up partner	97.5	1.2	1.2	0.0	0.0	0.0	0.0
Burned or Scalded	98.8	1.2	0.0	0.0	0.0	0.0	0.0
Kicked	98.8	1.2	0.0	0.0	0.0	0.0	0.0

each act of physical aggression assessed by the CTS2. The means and standard deviations of partner psychological and physical aggression at each time point are presented in Table 6.

Zero-Order Correlations of Aggression across the Transition to Parenthood

The bivariate correlations among partner aggression perpetration across the three time points are presented in Table 6. Consistent with the hypotheses, psychological aggression was more stable across the transition to parenthood. For men, the rate of psychological aggression during pregnancy was significantly correlated with the rates of psychological aggression perpetration as reported when the child was one year old and two years old ($r = .48$, $p < .001$ and $r = .45$, $p < .001$, respectively). The rates of male psychological aggression perpetration when the child was one year old and two years old were also significantly correlated ($r = .77$, $p < .001$). For women, rates of psychological aggression perpetration were also significantly correlated across time points. Specifically, psychological aggression perpetration during pregnancy was significantly correlated with psychological aggression perpetration one year after childbirth and two years after childbirth ($r = .48$, $p < .001$ and $r = .53$, $p < .001$, respectively). Women's rates of psychological aggression were also significantly correlated at the second and third time point ($r = .76$, $p < .001$), when the child was one year and two years old, respectively.

Table 6

Means, Standard Deviations, and Correlations among Psychological and Physical Aggression across the Transition to Parenthood

	1	2	3	4	5	6	Mean	SD
Alcohol								
1. T1 Psychological Aggression Perpetration [a]	–	.39***	.48***	.24*	.45***	-.03	12.36	14.77
2. T1 Physical Aggression Perpetration	.62***	–	.34**	.40***	.33**	-.03	1.27	3.16
3. T2 Psychological Aggression Perpetration [b]	.48***	.16	–	.56***	.77***	.06	13.69	15.35
4. T2 Physical Aggression Perpetration	.35**	.35**	.49***	–	.39***	.21†	.61	1.54
5. T3 Psychological Aggression Perpetration [c]	.53***	.28*	.76***	.47***	–	.26*	14.54	17.11
6. T3 Physical Aggression Perpetration	.10	.13	.23*	.38***	.30**	–	.94	2.80
Mean	13.90	1.68	17.23	1.25	17.41	1.56		
SD	15.75	3.81	19.31	2.56	19.51	3.48		

Note. Coefficients printed above the diagonal are for men, coefficients below the diagonal are for women.
[a]T1=Time-point 1, third trimester of pregnancy
[b]T2=Time-point 2, child approximately one-year-old
[c]T3=Time-point 3, child approximately two-years-old
†p <.10 *p < .05 **p < .01***p < .001

There was also some continuity in the rates of physical aggression across the transition to parenthood. Men's rate of physical aggression perpetration during pregnancy was significantly correlated with their rate of physical aggression perpetration during the year following childbirth ($r = .40$, $p < .001$). However, there was less stability when examined over other time points. The correlation between men's physical aggression perpetration when the child was one year old and two years old was only marginally significant ($r = .21$, $p = .06$). Furthermore, when physical aggression perpetration was examined over a longer period of time, there was much less consistency in behaviour. Specifically, the rate of male physical aggression perpetration was not significantly correlated from pregnancy to two years following childbirth ($r = -.03$, $p = .79$). For women, rates of physical aggression perpetration were significantly correlated from pregnancy to one year following childbirth and from one year following childbirth to two years following childbirth ($r = .35$, $p = .002$ and $r = .38$, $p < .001$, respectively). However, similar to the results for men, there was also a nonsignificant correlation between the rates of female physical aggression perpetration at pregnancy and two years following childbirth ($r = .13$, $p = .27$). Therefore, although the overall prevalence of female physical aggression perpetration was quite stable across the transition to parenthood, there was some instability in the frequency of aggressive acts within couples across the transition.

Prevalence of Childhood Exposure to Aggression

Childhood exposure to psychological and physical aggression was measured by combining the perpetration rates of men and women's aggression for each couple at each time point following childbirth. The two time points were analyzed separately to

determine whether the consequences of exposure to parental aggression vary according to the developmental period in which the child was exposed to the aggression. During the first year following childbirth, 90.8% of children were exposed to parental psychological aggression and 31.0% of children were exposed to parental physical aggression. The rates of aggression during the second year following childbirth were fairly similar wherein 84.0% of children were exposed to parental psychological aggression and 33.3% of children were exposed to parental physical aggression.

Demographic Control Variables

In order to control for confounding variables in the analyses, the zero-order correlations between child outcomes (internalizing and externalizing problems) and various demographic variables were examined. Analyses indicated that child outcomes were significantly associated with select demographic variables (see Table 7). In order to conserve statistical power, all regression analyses presented below were conducted controlling only for demographic variables that had a significant zero-order correlation with the dependent variable. These demographic control variables included paternal visible minority status for all the childhood internalizing behaviours, and maternal age for childhood sleep problems. Although children's age (in months) was not significantly correlated with any of the outcome variables, this variable was controlled in all analyses given that there was some variability in the exact age of children when parents completed the questionnaires at the postnatal time points.

Table 7
Correlations among Childhood Outcome Behaviours and Demographic Variables

	Anxiety	Withdrawal	Somatic Complaints	Sleep Problems	Affective Symptoms	Oppositional Behaviour	Aggressive Behaviour
1. In Romantic Relationship with Childs other Parent [a]	.11	.03	.08	.06	.10	.21	.15
2. Marital Status [b]	.05	.03	-.02	-.09	-.07	-.11	-.12
3. Family Yearly Income	-.20	-.15	-.10	-.05	-.11	-.02	-.12
4. Paternal Age	.17	.15	.06	.22	.18	.02	.08
5. Maternal Age	.18	.16	.05	.31**	.21	-.14	.01
6. Father's Education	-.08	-.10	-.19	.00	-.02	-.03	-.07
7. Mother's Education	.03	.10	.03	.07	.07	-.14	-.17
8. Father's Visible Minority Status [c]	.35**	.36**	.34**	.41***	.52***	.12	.21
9. Mother's Visible Minority Status [c]	.06	.17	.02	.22	.22	-.04	.07
10. Child age	.02	.13	.04	.04	.06	.17	.15

[a] 0=not in relationship with child's other parent, 1=in relationship with child's other parent
[b] 0=unmarried, 1=legally married
[c] 0=non-visible minority, 1=visible minority
*$p < .05$ **$p < .01$ ***$p < .001$

The Associations between Exposure to Psychological Aggression and Childhood Behaviour

Means and standard deviations for each child outcome are listed in Table 8. The results of several independent samples t-tests indicated that there were no significant differences between means for boys and girls, for any of the childhood behaviour problems. To examine the links between exposure to parental aggression and child behaviour problems, several hierarchical regressions were conducted while controlling for potentially confounding demographic variables. Exposure to psychological aggression was analyzed separately from exposure to physical aggression. Moreover, exposure to aggression during the child's first year was analyzed separately from exposure to aggression during their second year. Gender was also assessed as a moderator in the final block of these analyses to examine whether girls were at greater risk for internalizing symptoms (i.e., anxiety, withdrawal, somatic complaints, sleep problems, and affective symptoms) and boys were at great risk for externalizing symptoms (i.e., oppositional behaviour and aggressive behaviour), when previously exposed to parental aggression. More specifically, separate hierarchical multiple regressions were conducted for each child outcome with the demographic control variables entered in the first block, the independent variable (i.e., exposure to psychological aggression or physical aggression) and the moderator variable (i.e., child gender) entered in the second block, and the interaction term entered in the third block. Within each block, the beta weights represent the slope of the linear relationship between the dependent variable and the part of the predictor variable that is independent of all other predictor variables in that block (i.e., the unique variance). The adjusted R^2

Table 8

Childhood Behaviour Problems

	Boys		Girls	
Variable	Mean	*SD*	Mean	*SD*
Anxiety	12.61	2.05	12.00	2.00
Withdrawal	9.16	1.59	9.06	1.37
Somatic Complaints	12.63	1.48	12.70	1.90
Sleep Problems	10.44	2.90	9.48	2.65
Affective Problems	12.05	2.07	11.88	2.09
Oppositional Behaviour	8.93	2.02	8.48	2.08
Aggressive Behaviour	26.86	5.12	26.30	5.13

represents the amount of variance accounted for in the dependent variable, adjusted by the number and importance of the independent variables included in the model. The ΔR^2 term represents the increased amount of variance accounted for in the dependent variable from one block to the next.

Exposure to psychological aggression during the first year of life. After controlling for demographic variables, exposure to psychological aggression during the first year of life was not significantly associated with childhood internalizing or externalizing problems at age two. Furthermore, gender did not serve as a moderator in any of these analyses (see Tables 9 to 15); that is, gender and exposure to psychological aggression did not interact to predict children's later behaviour problems.

Exposure to psychological aggression during the second year of life. The links between exposure to psychological aggression during the second year of life and childhood behaviours were also examined. Consistent with the results of exposure to psychological aggression during the first year of life, exposure to psychological aggression during the second year of life was not significantly associated with any childhood internalizing problems (see Tables 16 to 20). Moreover, child gender did not significantly interact with exposure to psychological aggression to predict any of the childhood internalizing problems at age two (see Tables 16 to 20).

Regarding externalizing symptoms, exposure to psychological aggression during the second year of life did not significantly predict childhood oppositional behaviour after controlling for the age of the child ($\beta = .21$, $p = .07$; see Table 21). However, there was a significant interaction between exposure to psychological aggression and child gender in predicting oppositional behaviour ($\beta = .32$, $p = 0.04$; see Table 21).

Table 9

Hierarchical Regression Analysis Regressing Childhood Anxiety Symptoms on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.00	.04	-.01		
Paternal Visible Minority [a]	2.29	.71	.36**		
Block 2				.14	.19**
Child Gender [b]	-.39	.22	-.19		
Exposure to Psychological Aggression	.01	.01	.19		
Block 3				.13	.19*
Child Gender X Exposure to Psychological Aggression	.00	.01	-.02		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 10

Hierarchical Regression Analysis Regressing Childhood Withdrawal Symptoms on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.04	.03	.16		
Paternal Visible Minority [a]	1.47	.54	.31**		
Block 2				.09	.14*
Child Gender [b]	-.09	.17	-.06		
Exposure to Psychological Aggression	.00	.01	.06		
Block 3				.09	.15*
Child Gender X Exposure to Psychological Aggression	.01	.01	.17		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 11

Hierarchical Regression Analysis Regressing Childhood Somatic Symptoms on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.08	.11*
Child Age	.01	.03	.02		
Paternal Visible Minority [a]	1.70	.59	.33**		
Block 2				.06	.11
Child Gender [b]	.08	.19	.05		
Exposure to Psychological Aggression	.00	.01	-.06		
Block 3				.05	.12
Child Gender X Exposure to Psychological Aggression	.00	.01	.12		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 12

Hierarchical Regression Analysis Regressing Childhood Sleep Problems on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.23	.26***
Child Age	.03	.05	.07		
Paternal Visible Minority [a]	3.66	.96	.41**		
Maternal Age	.15	.07	.24*		
Block 2				.24	.29***
Child Gender [b]	-.52	.30	-.18		
Exposure to Psychological Aggression	.01	.01	.06		
Block 3				.23	.29**
Child Gender X Exposure to Psychological Aggression	.00	.01	.05		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 13

Hierarchical Regression Analysis Regressing Childhood Affective Symptoms on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.28	.30***
Child Age	.01	.03	.03		
Paternal Visible Minority [a]	3.62	.66	.55***		
Block 2				.26	.31***
Child Gender [b]	-.09	.22	-.04		
Exposure to Psychological Aggression	.00	.01	.01		
Block 3				.26	.31***
Child Gender X Exposure to Psychological Aggression	.00	.01	.06		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 14

Hierarchical Regression Analysis Regressing Childhood Oppositional Behaviour on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.06	.04	.18		
Block 2				.01	.05
Child Gender [a]	-.29	.24	-.14		
Exposure to Psychological Aggression	.00	.01	.08		
Block 3				.02	.08
Child Gender X Exposure to Psychological Aggression	.01	.01	.23		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 15

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Exposure to Psychological Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.14	.10	.17		
Block 2				.00	.05
Child Gender [a]	-.58	.61	-.12		
Exposure to Psychological Aggression	.01	.02	.08		
Block 3				-.01	.05
Child Gender X Exposure to Psychological Aggression	.01	.02	.08		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 16

Hierarchical Regression Analysis Regressing Childhood Anxiety Symptoms on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.11	.13**
Child Age	.00	.04	-.01		
Paternal Visible Minority [a]	2.29	.71	.36**		
Block 2				.14	.18**
Child Gender [b]	-.37	.22	-.19		
Exposure to Psychological Aggression	.01	.01	.17		
Block 3				.12	.18*
Child Gender X Exposure to Psychological Aggression	.00	.01	.04		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 17

Hierarchical Regression Analysis Regressing Childhood Withdrawal Symptoms on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.04	.03	.16		
Paternal Visible Minority [a]	1.49	.53	.31**		
Block 2				.08	.13*
Child Gender [b]	-.08	.17	-.05		
Exposure to Psychological Aggression	.00	.00	.06		
Block 3				.08	.15
Child Gender X Exposure to Psychological Aggression	.01	.01	.16		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 18

Hierarchical Regression Analysis Regressing Childhood Somatic Symptoms on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.08	.11*
Child Age	.00	.03	.01		
Paternal Visible Minority [a]	1.72	.59	.33**		
Block 2				.07	.12
Child Gender [b]	.06	.19	.04		
Exposure to Psychological Aggression	.01	.01	.11		
Block 3				.07	.13
Child Gender X Exposure to Psychological Aggression	.01	.01	.11		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 19

Hierarchical Regression Analysis Regressing Childhood Sleep Problems on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.24	.27***
Child Age	.03	.05	.07		
Paternal Visible Minority [a]	3.66	.95	.40**		
Maternal Age	.16	.06	.26*		
Block 2				.25	.31***
Child Gender [b]	-.50	.29	-.18		
Exposure to Psychological Aggression	.01	.01	.10		
Block 3				.25	.31***
Child Gender X Exposure to Psychological Aggression	.01	.01	.12		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 20

Hierarchical Regression Analysis Regressing Childhood Affective Symptoms on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.28	.30***
Child Age	.01	.03	.02		
Paternal Visible Minority [a]	3.65	.66	.55***		
Block 2				.27	.31***
Child Gender [b]	-.08	.21	-.04		
Exposure to Psychological Aggression	.01	.01	.09		
Block 3				.27	.32***
Child Gender X Exposure to Psychological Aggression	.01	.01	.14		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 21

Hierarchical Regression Analysis Regressing Childhood Oppositional Behaviour on Exposure to Psychological Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.06	.04	.18		
Block 2				.05	.09
Child Gender [a]	-.32	.23	-.16		
Exposure to Psychological Aggression	.01	.01	.21†		
Block 3				.10	.15*
Child Gender X Exposure to Psychological Aggression	.02	.01	.32*		

[a] -1=boy, 1=girl

$^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

This interaction accounted for approximately 10% of the variance in childhood oppositional behaviour. This interaction was probed using procedures outlined by Aiken and West (1991), whereby the data were segmented into two groups (i.e., boys and girls) to examine the association between exposure to psychological aggression and oppositional behaviour for each child gender. Results indicated that exposure to psychological aggression during the second year of life was significantly associated with more oppositional behaviour for girls (β = .47, p = .008), but not boys (β = -.04, p = .80; see Figure 2).

Specific to childhood aggressive behaviour, exposure to psychological aggression during the second year of life was not a significant unique predictor of childhood aggressive behaviour (β = .21, p = .08), but the interaction between exposure to psychological aggression and child gender neared significance (β = .29, p = .06; see Table 22). This interaction was probed for exploratory purposes. Results indicated that exposure to psychological aggression during children's second year of life was significantly positively related to aggressive behaviour for girls (β = .44, p = .01), but not boys (β =- .02, p = .88; see Figure 3).

The Associations between Exposure to Physical Aggression and Childhood Behaviour

Exposure to physical aggression during the first year of life. The associations between exposure to physical aggression and childhood internalizing and externalizing behaviours were also examined. Consistent with the previous analyses, gender was examined as a moderator in the last block of these analyses. After controlling for children's age and paternal visible minority status, exposure to physical aggression

Figure 2

Moderating Effect of Child Gender on the Association between Exposure to Psychological Aggression during the Second Year of Life and Childhood Oppositional Behavhiour.

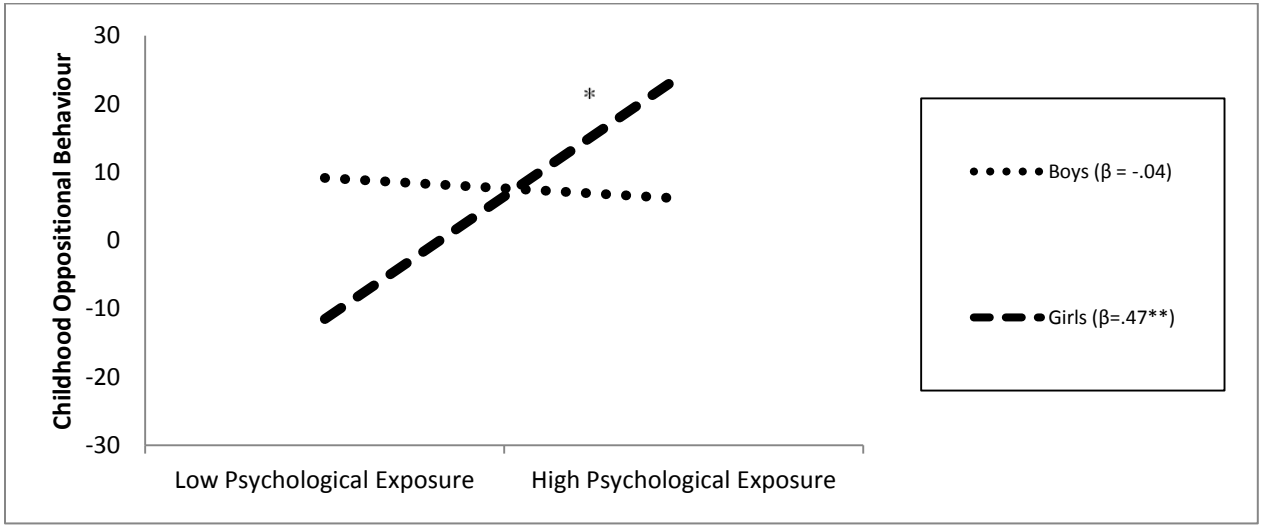


Table 22

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Exposure to Psychological Aggression during the Second Year of Life

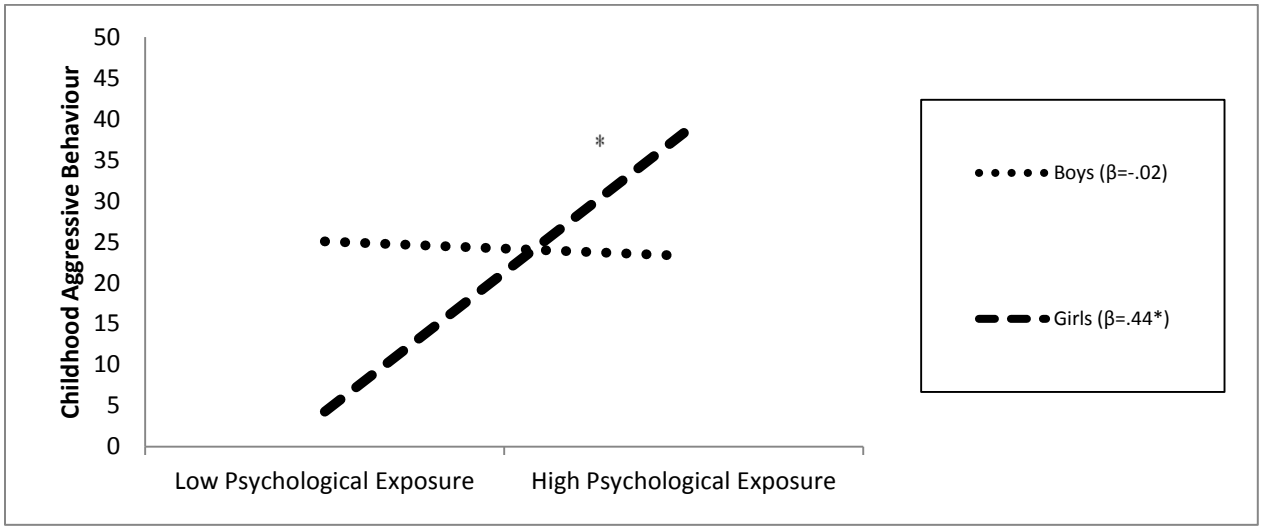
Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.01	.02
Child Age	.13	.10	.16		
Block 2				.04	.08
Child Gender [a]	-.61	.59	-.12		
Exposure to Psychological Aggression	.03	.02	.21[†]		
Block 3				.07	.12
Child Gender X Exposure to Psychological Aggression	.02	.02	.29[†]		

[a] -1=boy, 1=girl

[†]$p < .10$ [*]$p < .05$ [**]$p < .01$

Figure 3

Moderating Effect of Child Gender on the Association between Exposure to Psychological Aggression during the Second Year of Life and Childhood Aggressive Behaviour.



during the first year of life was not significantly associated with childhood anxiety or withdrawal at age two (β = .12, *p* = .27 and β = .14, *p* = .21, respectively; see Tables 23 and 24). Furthermore, child gender did not significantly interact with exposure to physical aggression to predict childhood anxiety or withdrawal (β = .20, *p* = .11 and β = .11, *p* = .38, respectively).

Specific to somatic symptoms, results indicated that the main effect of exposure to physical aggression during the first year of life on greater somatic symptoms at age two neared significance (β =.21, *p* = .07; see Table 25), accounting for approximately 10% of the variance. The interaction between child gender and exposure to physical aggression was nonsignificant (β = .19, *p* = .13).

The association between exposure to physical aggression during the first year of life and poor sleep at age two was also examined. After controlling for demographic variables (i.e., child age, paternal visible minority status, and maternal age), there was no main effect of exposure to physical aggression on sleep problems (β =.10, *p* = .33). However, the interaction between child gender and physical aggression exposure neared significance (β = .22, *p* = .057; see Table 26). This interaction was probed for exploratory purposes. Results indicated that exposure to physical aggression was not significantly associated with boys' sleep (β =-.10, *p* = .47); however, there was a significant positive association between exposure to physical aggression and greater sleep problems for girls (β = .34, *p* = .038; see Figure 4).

Specific to affective problems, after controlling for child age and paternal visible minority status, the main effect of exposure to physical aggression during the first year of life was marginally significant (β = .17, *p* = .08). Child gender did not interact with

Table 23

Hierarchical Regression Analysis Regressing Childhood Anxiety Symptoms on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.00	.04	-.01		
Paternal Visible Minority [a]	2.29	.71	.36**		
Block 2				.12	.17*
Child Gender [b]	-.37	.23	-.19		
Exposure to Physical Aggression	.06	.05	.12		
Block 3				.14	.20**
Child Gender X Exposure to Physical Aggression	.09	.05	.20		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 24

Hierarchical Regression Analysis Regressing Childhood Withdrawal Symptoms on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.04	.03	.16		
Paternal Visible Minority [a]	1.47	.54	.31**		
Block 2				.10	.15*
Child Gender [b]	-.11	.17	-.08		
Exposure to Physical Aggression	.05	.04	.14		
Block 3				.10	.16*
Child Gender X Exposure to Physical Aggression	.04	.04	.11		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 25

Hierarchical Regression Analysis Regressing Childhood Somatic Symptoms on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.08	.11*
Child Age	.01	.03	.02		
Paternal Visible Minority [a]	1.70	.59	.33**		
Block 2				.10	.15*
Child Gender [b]	.02	.19	.01		
Exposure to Physical Aggression	.08	.05	.21†		
Block 3				.12	.18*
Child Gender X Exposure to Physical Aggression	.07	.05	.19		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

†p <.10 *p < .05 **p < .01

Table 26

Hierarchical Regression Analysis Regressing Childhood Sleep Problems on Exposure to Physical Aggression during the First Year of Life

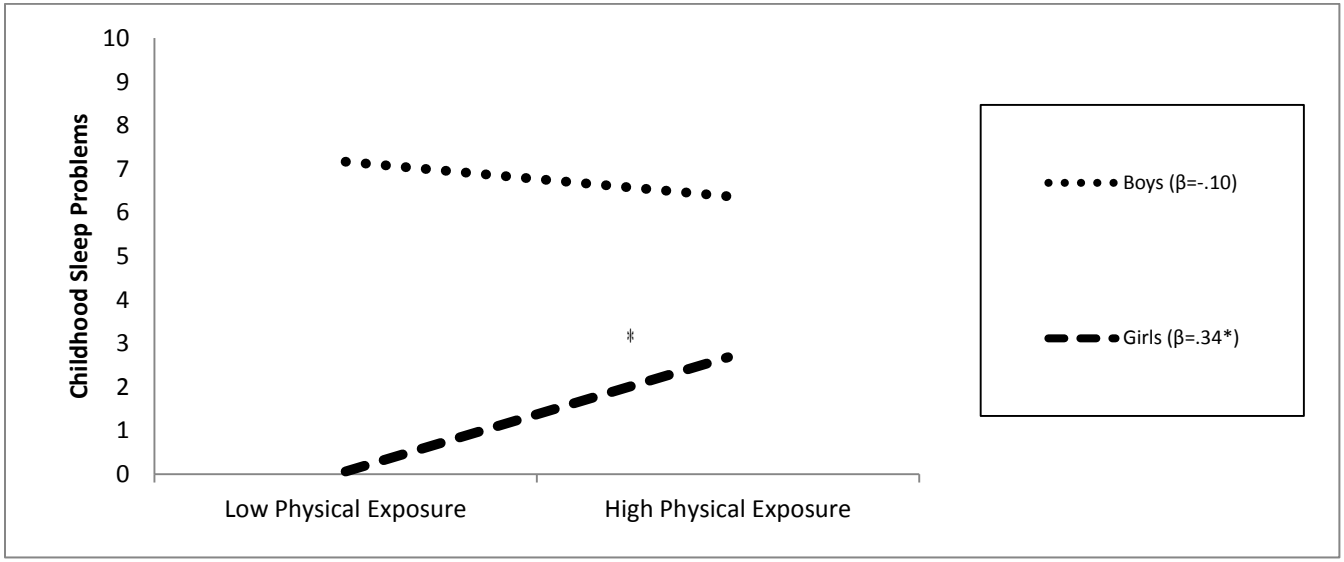
Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.23	.26***
Child Age	.03	.05	.07		
Paternal Visible Minority [a]	3.66	.96	.41***		
Maternal Age	.15	.07	.24*		
Block 2				.25	.30***
Child Gender [b]	-.54	.30	-.19		
Exposure to Physical Aggression	.07	.07	.10		
Block 3				.28	.34***
Child Gender X Exposure to Physical Aggression	.14	.07	.22†		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

†p <.10 *p < .05 **p < .01 ***p < .001

Figure 4

Moderating Effect of Child Gender on the Association between Exposure to Physical Aggression during the FirstYear of Life and Childhood Sleep Problems.



exposure to physical aggression (β = .07, *p* = .55*;* see Table 27); therefore, exposure to physical aggression may have had a negative influence on affective problems for both boys and girls.

The association between exposure to physical aggression during the first year following childbirth and externalizing childhood behaviours were also examined, while controlling for the age of the child. Results indicated that there was no significant association between exposure to physical aggression and childhood oppositional behaviour (β = .05, *p* = .71). Furthermore, exposure to physical aggression did not significantly interact with child gender to predict childhood oppositional behaviour (β = .19, *p* = .16; see Table 28). Also, inconsistent with the hypotheses, exposure to physical aggression during the first year of life was not a significant predictor of childhood aggressive behaviour nor was there a significant interaction effect with child gender (β = .09, *p* = .46 and β = .14, *p* = .30, respectively; see Table 29).

Exposure to physical aggression during the second year of life. The associations between exposure to physical aggression during the second year of life and childhood internalizing and externalizing problems were also examined. Consistent with the effects of exposure to physical aggression during the first year of life, there were no significant main effects or interactions for symptoms of childhood anxiety or withdrawal, after controlling for child age and paternal visible minority status (see Tables 30 and 31).

Regarding somatic complaints, consistent with the findings for exposure to physical aggression during the first year of life, the main effect was marginally significant after controlling for child age and paternal visible minority status (β = .21, *p*

Table 27

Hierarchical Regression Analysis Regressing Childhood Affective Problems on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.28	.30***
Child Age	.01	.03	.03		
Paternal Visible Minority [a]	3.62	.66	.55**		
Block 2				.30	.33***
Child Gender [b]	-.14	.21	-.07		
Exposure to Physical Aggression	.09	.05	.17 †		
Block 3				.29	.34***
Child Gender X Exposure to Physical Aggression	.03	.05	.07		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

†p <.10 *p < .05 **p < .01 ***p < .001

Table 28

Hierarchical Regression Analysis Regressing Childhood Oppositional Behaviour on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.06	.04	.18		
Block 2				.01	.05
Child Gender [a]	-.28	.24	-.14		
Exposure to Physical Aggression	.02	.06	.05		
Block 3				.02	.08
Child Gender X Exposure to Physical Aggression	.08	.06	.19		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 29

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Exposure to Physical Aggression during the First Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.14	.10	.17		
Block 2				.01	.05
Child Gender [a]	-.59	.61	-.12		
Exposure to Physical Aggression	.11	.15	.09		
Block 3				.01	.06
Child Gender X Exposure to Physical Aggression	.15	.15	.14		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 30

Hierarchical Regression Analysis Regressing Childhood Anxiety Symptoms on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.11	.13**
Child Age	.00	.04	-.01		
Paternal Visible Minority [a]	2.29	.71	.36**		
Block 2				.14	.19**
Child Gender [b]	-.41	.22	-.21		
Exposure to Physical Aggression	.06	.04	.18		
Block 3				.14	.20*
Child Gender X Exposure to Physical Aggression	.04	.04	.12		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

Table 31

Hierarchical Regression Analysis Regressing Childhood Withdrawal Symptoms on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.10	.13**
Child Age	.04	.03	.16		
Paternal Visible Minority [a]	1.49	.53	.31**		
Block 2				.10	.15*
Child Gender [b]	-.11	.17	-.07		
Exposure to Physical Aggression	.03	.03	.13		
Block 3				.09	.15*
Child Gender X Exposure to Physical Aggression	.02	.03	.06		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

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

= .07; see Table 32). The interaction between child gender and exposure to physical aggression was nonsignificant (β = .22, p = .11), suggesting that exposure to parental physical aggression during the second year of life may be positively associated with somatic symptoms regardless of the child's gender.

Exposure to physical aggression during the second year of life was significantly positively associated with childhood sleep problems, even after controlling for child age, paternal visible minority status, and maternal age (β = .23, p = .025; see Table 33). This main effect accounted for approximately 30% of the variance in childhood sleep problems. Moreover, consistent with the findings for exposure to physical aggression during the first year of life, there was a significant interaction between child gender and exposure to physical aggression in predicting childhood sleep problems (β = .28, p = .02; see Table 33). When this interaction was probed, results indicated that there was a significant association between exposure to physical aggression during the second year of life and sleep problems for girls (β = .53, p = .001), but not boys (β = -.08, p = .56; see Figure 5).

Regarding affective symptoms, after controlling for child age and paternal visible minority status, there was a significant positive association between exposure to physical aggression and childhood affective symptoms (β = .27, p = .007; see Table 34). This main effect accounted for approximately 34% of the variance in childhood affective symptoms. The interaction between child gender and exposure to physical aggression was nonsignificant (β = .09, p = .42); therefore, exposure to physical aggression during the second year of life was positively related to problems with mood for both boys and girls.

Table 32

Hierarchical Regression Analysis Regressing Childhood Somatic Symptoms on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.08	.11*
Child Age	.00	.03	.01		
Paternal Visible Minority [a]	1.73	.59	.33**		
Block 2				.10	.15*
Child Gender [b]	.01	.19	.01		
Exposure to Physical Aggression	.06	.03	.21†		
Block 3				.12	.18*
Child Gender X Exposure to Physical Aggression	.05	.03	.22		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

†$p < .10$ *$p < .05$ **$p < .01$

Table 33

Hierarchical Regression Analysis Regressing Childhood Sleep Problems on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.24	.27***
Child Age	.03	.05	.07		
Paternal Visible Minority [a]	3.66	.95	.40**		
Maternal Age	.16	.06	.26*		
Block 2				.30	.35***
Child Gender [b]	-.61	.29	-.22*		
Exposure to Physical Aggression	.11	.05	.23*		
Block 3				.34	.40***
Child Gender X Exposure to Physical Aggression	.12	.05	.28*		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Figure 5

Moderating Effect of Child Gender on the Association between Exposure to Physical Aggression during the SecondYear of Life and Childhood Sleep Problems.

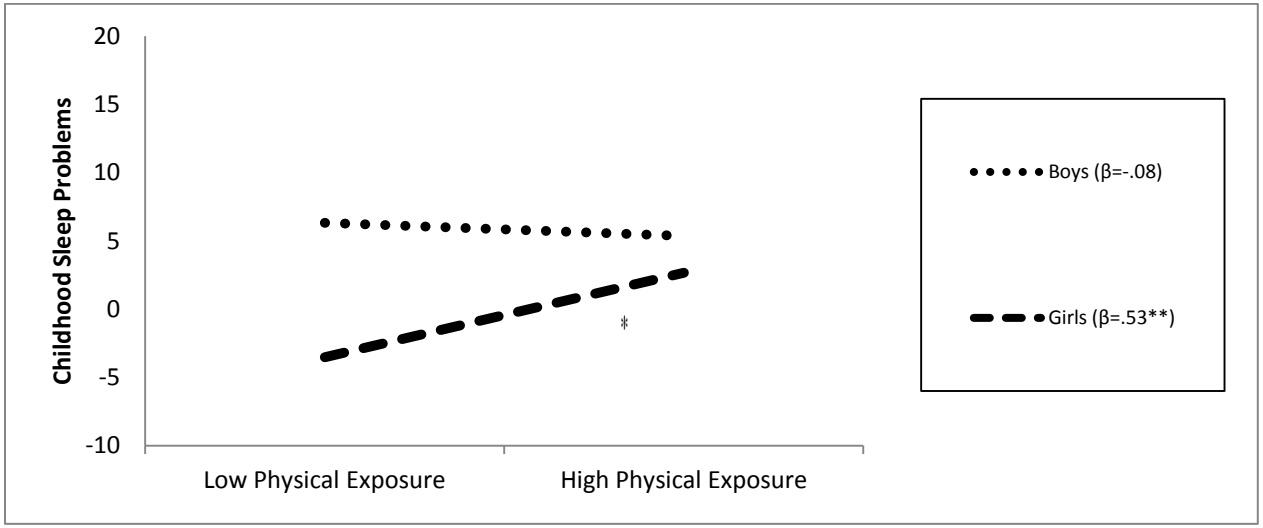


Table 34

Hierarchical Regression Analysis Regressing Childhood Affective Symptoms on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.28	.30***
Child Age	.01	.03	.02		
Paternal Visible Minority [a]	3.65	.66	.55***		
Block 2				.34	.38***
Child Gender [b]	-.19	.21	-.09		
Exposure to Physical Aggression	.09	.03	.27**		
Block 3				.34	.38***
Child Gender X Exposure to Physical Aggression	.03	.04	.09		

[a] 0=non-visible minority, 1=visible minority
[b] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

The relationship between exposure to physical aggression during the second year of life and childhood externalizing symptoms was also examined, while controlling for the age of the child. Results indicated that exposure to physical aggression did not significantly predict oppositional behaviour or aggressive behaviour in two year old children (see Tables 35 and 36). Moreover, gender did not serve as a moderator in these analyses (see Tables 35 and 36). The intergenerational transmission of aggression was examined more closely to determine whether the gender of the perpetrator holds importance, rather than total exposure to parental aggression, in the transmission of aggression.

Within-Gender Social Modeling of the Intergenerational Transmission of Aggression

The intergenerational transmission of aggression was examined more closely to provide evidence for the social learning model wherein mothers' aggression is expected to be a better predictor of girls' aggressive behaviour and fathers' aggression is expected to be a better predictor of boys' aggressive behaviour (Bandura, 1973). In these analyses, each partner's perpetration rates of psychological aggression and physical aggression when the children were one year old and when they were two years old were used as the independent variables to predict childhood aggressive behaviour at age two. The exact age of the children (in months) was controlled for in these analyses.

Psychological Aggression. Specific to psychological aggression perpetration during the first year of life, there were no significant main effects or interaction effects for mothers or fathers in predicting children's aggressive behaviour (see Table 37). The effect of partner psychological aggression perpetration during the second year of life

Table 35

Hierarchical Regression Analysis Regressing Childhood Oppositional Behaviour on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.02	.03
Child Age	.06	.04	.18		
Block 2				.01	.05
Child Gender [a]	-.26	.24	-.13		
Exposure to Physical Aggression	.00	.04	.00		
Block 3				.01	.06
Child Gender X Exposure to Physical Aggression	.04	.04	.14		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 36

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Exposure to Physical Aggression during the Second Year of Life

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Block 1				.01	.03
Child Age	.13	.10	.16		
Block 2				.01	.05
Child Gender [a]	-.59	.61	-.12		
Exposure to Physical Aggression	.09	.10	.11		
Block 3				.02	.07
Child Gender X Exposure to Physical Aggression	.15	.11	.20		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 37

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Psychological Aggression Perpetration during the First Year Postpartum

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Men					
Block 1				.02	.03
Child Age	.14	.10	.17		
Block 2				.00	.04
Child Gender [a]	-.54	.60	-.11		
Father Psychological Aggression Perpetration	.02	.04	.07		
Block 3				-.01	.04
Child Gender X Father Psychological Aggression Perpetration	.02	.04	.07		
Women					
Block 1				- .01	.00
Child Age	.05	.10	.06		
Block 2				-.03	.01
Child Gender [a]	-.35	.61	-.07		
Mother Psychological Aggression Perpetration	.01	.03	.05		
Block 3				-.04	.01
Child Gender X Mother Psychological Aggression Perpetration	.01	.03	.08		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

was also examined. After controlling for children's age, child gender was found to moderate the link between mother's psychological aggression perpetration during the second year of life and childhood aggressive behaviour (β = .40, *p* = .01; see Table 38). This interaction accounted for approximately 9% of the variance in the dependent variable. Since the main effect of mother's psychological aggression perpetration did not uniquely contribute to the prediction of childhood aggression (β = .22, *p* = .06), the significant interaction in this analysis indicates that the combination of child gender and mother's psychological aggression perpetration is particularly important rather than mother's aggression perpetration alone. Exploration of the significant interaction term indicated that mother's perpetration of psychological aggression was significantly positively associated with girls' aggressive behaviour (β = .51, *p* = .003; see Figure 6), but not boys' aggressive behaviour (β = -.04, *p* = .79). The interaction between child gender and father psychological aggression perpetration during the second year of life was marginally significant (β = .28, *p* = .07; see Table 38). This interaction was probed for exploratory purposes. Inconsistent with the social learning theory, probing the interaction indicated that father's psychological aggression perpetration was significantly positively associated with girl's aggressive behaviour (β = .41, *p* = 0.02), but not boy's aggressive behaviour (β =- .02, *p* = 0.88; see Figure 7).

Physical Aggression. Men's and women's physical aggression perpetration during the first year of life did not have significant main effects on childhood aggressive behaviour nor were there significant interactions with child gender (see Table 39). Similarly, there were no significant main effects or interactions for men's or women's physical aggression perpetration during the second year of life (see Table 40).

Table 38

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Psychological Aggression Perpetration during the Second Year Postpartum

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Men					
Block 1				.01	.03
Child Age	.13	.10	.16		
Block 2				.03	.07
Child Gender [a]	-.54	.59	-.11		
Father Psychological Aggression Perpetration	.05	.03	.19		
Block 3				.06	.11
Child Gender X Father Psychological Aggression Perpetration	.06	.03	.28†		
Women					
Block 1				- .01	.00
Child Age	.05	.10	.06		
Block 2				.01	.05
Child Gender [a]	-.44	.59	-.09		
Mother Psychological Aggression Perpetration	.06	.03	.22†		
Block 3				.09	.14*
Child Gender X Mother Psychological Aggression Perpetration	.08	.03	.40*		

[a] -1=boy, 1=girl

$^{\dagger}p < .10$ $^{*}p < .05$ $^{**}p < .01$

Figure 6

Moderating Effect of Child Gender on the Association between Exposure to Maternal Psychological Aggression Perpetration during the Second Year of Life and Childhood Aggressive Behaviour.

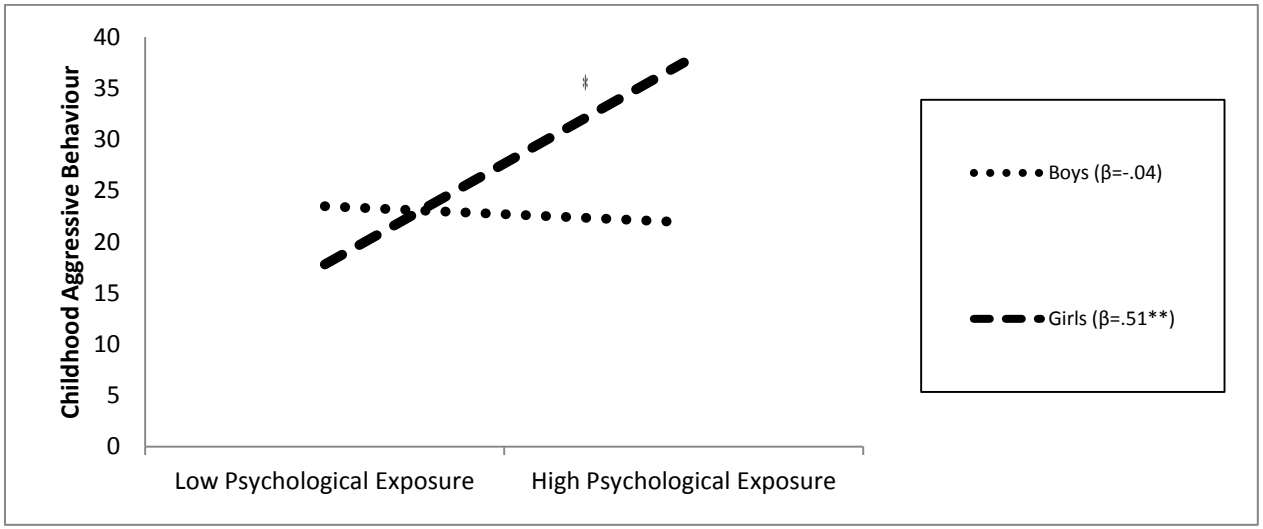


Figure 7

Moderating Effect of Child Gender on the Association between Exposure to Paternal Psychological Aggression Perpetration during the Second Year of Life and Childhood Aggressive Behaviour.

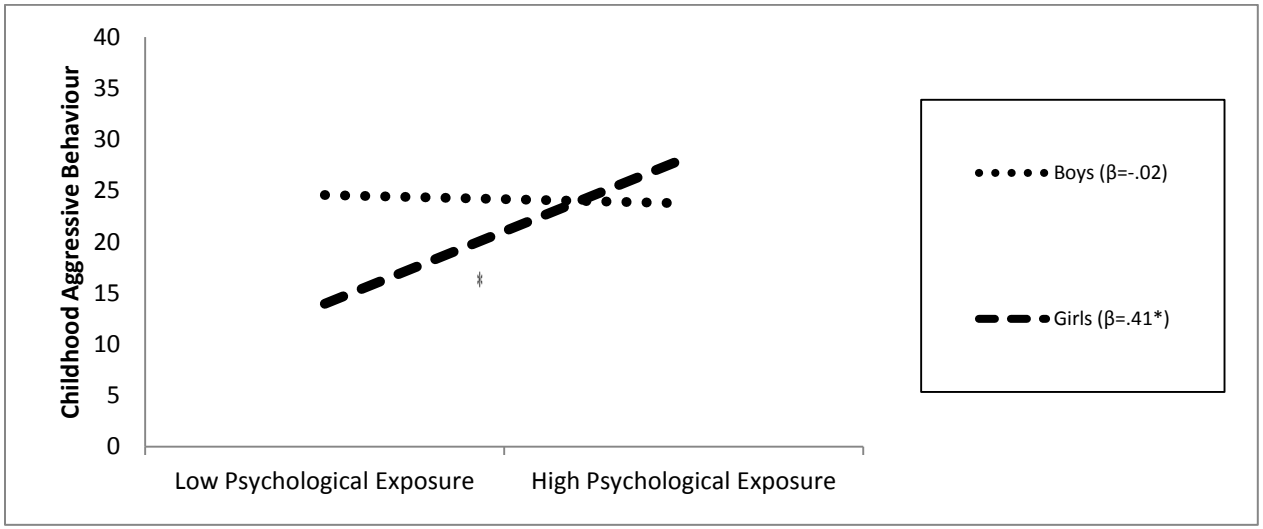


Table 39

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Physical Aggression Perpetration during the First Year Postpartum

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Men					
Block 1				.02	.03
Child Age	.14	.10	.17		
Block 2				.00	.04
Child Gender [a]	-.57	.61	-.11		
Father Physical Aggression Perpetration	.26	.36	.08		
Block 3				.01	.06
Child Gender X Father Physical Aggression Perpetration	.40	.36	.14		
Women					
Block 1				- .01	.00
Child Age	.05	.10	.06		
Block 2				-.03	.01
Child Gender [a]	-.34	.61	-.07		
Mother Psychological Aggression Perpetration	.09	.22	.05		
Block 3				-.03	.02
Child Gender X Mother Psychological Aggression Perpetration	.24	.22	.14		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 40

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Physical Aggression Perpetration during the Second Year Postpartum

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Men					
Block 1				.01	.03
Child Age	.13	.10	.16		
Block 2				-.01	.04
Child Gender [a]	-.48	.60	-.09		
Father Physical Aggression Perpetration	.04	.21	.02		
Block 3				-.01	.05
Child Gender X Father Physical Aggression Perpetration	.21	.21	.13		
Women					
Block 1				- .01	.00
Child Age	.05	.10	.06		
Block 2				-.02	.02
Child Gender [a]	-.46	.61	-.09		
Mother Psychological Aggression Perpetration	.19	.17	.14		
Block 3				.00	.05
Child Gender X Mother Psychological Aggression Perpetration	.27	.19	.20		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Parenting Moderators of the Intergenerational Transmission of Aggression

In an effort to examine the moderating effects of parenting quality on the intergenerational transmission of aggression, multiple hierarchical regressions were conducted. Exposure to psychological aggression and physical aggression were examined separately during only the second year of life to assess whether this exposure interacts with parenting behaviours that were also measured during the second year following childbirth. All analyses controlled for the exact age of the child during the third wave of the study. A three-way interaction that included child gender was included in the final block to assess whether the hypothesized interactions between exposure to aggression and parenting variables vary by child gender. Although exposure to aggression was measured as total exposure (the sum of mother's and father's perpetration), the analyses were conducted separately for mothers and fathers to assess the potential influence of each parent's parenting behaviours. Parenting style (laxness, over-reactivity, and hostility; Arnold, O'Leary, Wolff, & Acker, 1993), parenting competence (Johnston & Mash, 1989), and co-parenting alliance (Abidin & Brunner, 1995) were assessed as potential moderators of the associations between exposure to aggression (psychological and physical) and childhood aggressive behaviour.

Exposure to Psychological Aggression. For men, parental laxness did not serve as a significant moderator in the two-way or three-way interaction analyses (β = -.19, p = .27 and β = -.17, p = .37, respectively; see Table 41). However, for women, the three-way interaction was marginally significant (β = -.28, p = .059; see Table 41), indicating that exposure to psychological aggression, maternal laxness, and child gender

Table 41

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parental Laxness and Exposure to Psychological Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.03	.10
Child Gender [a]	-1.19	.70	-.23		
Paternal Laxness	-.04	.20	-.03		
Exposure to Psychological Aggression	.02	.02	.14		
Block 3				.02	.14
Paternal Laxness X Child Gender	.07	.22	.05		
Exposure to Psychological Aggression X Child Gender	.03	.02	.19		
Exposure to Psychological Aggression X Paternal Laxness	-.01	.01	-.19		
Block 4				.01	.16
Exposure to Psychological aggression X Paternal Laxness X Child Gender	-.01	.01	-.17		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				-.03	.05
Child Gender [a]	-.04	.73	-.01		
Maternal Laxness	.16	.20	.11		
Exposure to Psychological Aggression	.02	.02	.14		
Block 3				.10	.22
Maternal Laxness X Child Gender	-.32	.22	-.22		
Exposure to Psychological Aggression X Child Gender	.04	.02	.32*		
Exposure to Psychological Aggression X Maternal Laxness	-.01	.01	-.28		
Block 4				.16	.27*
Exposure to Psychological aggression X Maternal Laxness X Child Gender	-.02	.01	-.28 †		

[a] -1=boy, 1=girl

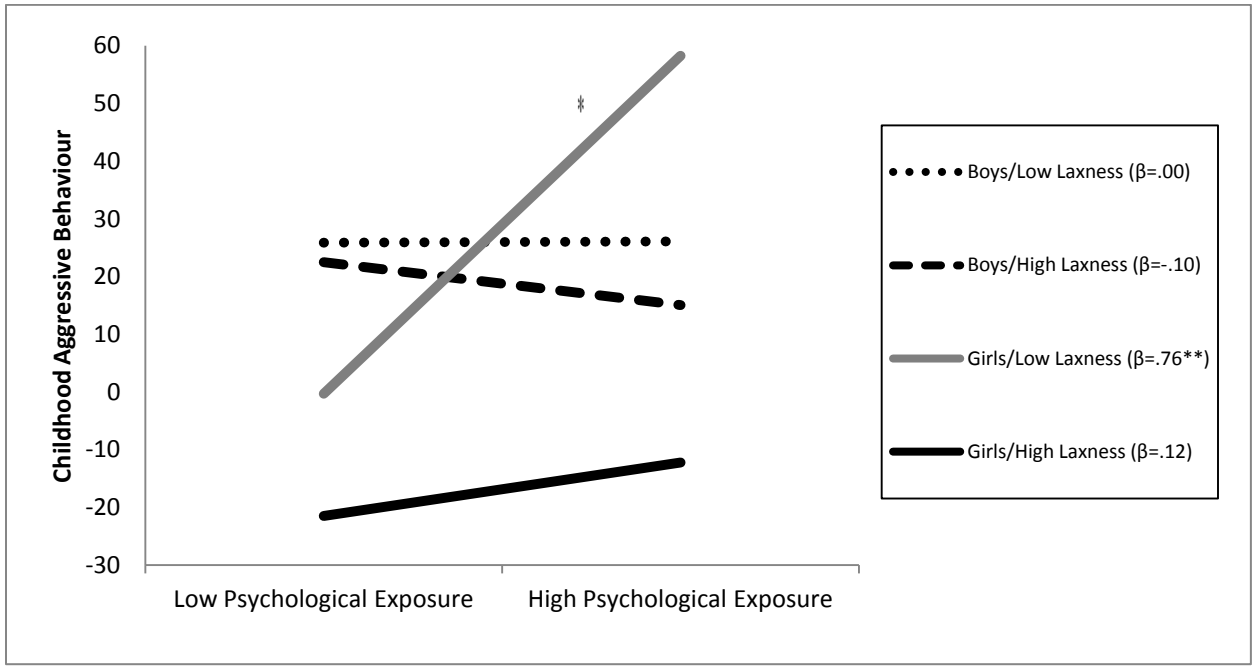
†$p < .10$ *$p < .05$ **$p < .01$

interact to predict childhood aggressive behaviour. Although the three-way interaction was only marginally significant, it was probed for exploratory purposes according to procedures outlined by Aiken and West (1991). The data were segmented into two groups of women who reported levels of maternal laxness that were: (a) below the mean and (b) above the mean in order to reflect low and high levels of maternal laxness, respectively. Each group of data was further divided into two groups to assess the effect for each child gender. Inconsistent with the hypotheses, the only significant association between exposure to psychological aggression and childhood aggressive behaviour was for girls who received a low level of maternal laxness ($\beta = .76$, $p = .005$; see Figure 8). All other simple slopes were nonsignificant. Regarding over-reactivity, there were no significant two-way or three-way interactions for men or women (see Table 42); however, high levels of maternal over-reactivity was a predictor of greater childhood aggressive behaviour ($\beta = .46$, $p < 0.001$; see Table 42), but not high levels of paternal over-reactivity ($\beta = -.02$, $p = .89$). The impact of paternal hostility was also examined. Paternal hostility did not serve as a significant moderator (two-way or three-way) in these analyses nor was there a significant main effect (see Table 43). As mentioned previously, maternal hostility was not examined due to low internal reliability for this gender.

Parents' sense of competence was examined as a potential moderator of the association between exposure to parental psychological aggression and childhood aggressive behaviour. For men, there were no significant two-way or three-way interactions; however, paternal competence on its own was related to less childhood aggressive behaviour ($\beta = -.30$, $p = .025$; see Table 44). Similarly, for women, maternal

Figure 8

Moderating Effects of Maternal Laxness and Child Gender on the Association between Exposure to Psychological Aggression and Childhood Aggressive Behaviour.



Note. Categories of low and high maternal laxness reflect mothers who reported levels of laxness below the mean and above the mean, respectively.

Table 42

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parental Over-reactivity and Exposure to Psychological Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.03	.10
Child Gender [a]	-1.17	.71	-.23		
Paternal Over-reactivity	-.03	.19	-.02		
Exposure to Psychological Aggression	.02	.02	.13		
Block 3				.02	.14
Paternal Over-reactivity X Child Gender	.10	.20	.07		
Exposure to Psychological Aggression X Child Gender	.02	.02	.14		
Exposure to Psychological Aggression X Paternal Over-reactivity	-.01	.01	-.16		
Block 4				.01	.16
Exposure to Psychological aggression X Paternal Over-reactivity X Child Gender	.01	.01	.16		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.19	.24**
Child Gender [a]	.19	.64	.04		
Maternal Over-reactivity	.57	.15	.46***		
Exposure to Psychological Aggression	.02	.02	.14		
Block 3				.20	.29*
Maternal Over-reactivity X Child Gender	.05	.18	.04		
Exposure to Psychological Aggression X Child Gender	.03	.02	.22		
Exposure to Psychological Aggression X Maternal Over-reactivity	.00	.00	.06		
Block 4				.20	.31*
Exposure to Psychological aggression X Maternal Over-reactivity X Child Gender	.01	.01	.17		

[a] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 43

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Paternal Hostility and Exposure to Psychological Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.03	.10
Child Gender [a]	-1.17	.70	-.23		
Paternal Hostility	-.18	.54	-.05		
Exposure to Psychological Aggression	.02	.02	.14		
Block 3				.01	.14
Paternal Hostility X Child Gender	.56	.58	.14		
Exposure to Psychological Aggression X Child Gender	.02	.02	.13		
Exposure to Psychological Aggression X Paternal Hostility	.01	.01	.12		
Block 4				.03	.17
Exposure to Psychological aggression X Paternal Hostility X Child Gender	.02	.02	.26		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 44

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parenting Competence and Exposure to Psychological Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.12	.19*
Child Gender [a]	-1.36	.67	-.26*		
Paternal Competence	-.13	.06	-.30*		
Exposure to Psychological Aggression	.02	.02	.12		
Block 3				.14	.25*
Paternal Competence X Child Gender	.08	.06	.18		
Exposure to Psychological Aggression X Child Gender	.02	.02	.18		
Exposure to Psychological Aggression X Paternal Competence	.00	.00	.02		
Block 4				.17	.29*
Exposure to Psychological aggression X Paternal Competence X Child Gender	.00	.00	-.21		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.16	.22*
Child Gender [a]	-.08	.64	-.02		
Maternal Competence	-.19	.05	-.44**		
Exposure to Psychological Aggression	.01	.02	.09		
Block 3				.26	.35**
Maternal Competence X Child Gender	.07	.05	.16		
Exposure to Psychological Aggression X Child Gender	.05	.02	.36**		
Exposure to Psychological Aggression X Maternal Competence	.00	.00	-.22		
Block 4				.30	.39**
Exposure to Psychological aggression X Maternal Competence X Child Gender	.00	.00	-.23†		

[a] -1=boy, 1=girl

†$p < .10$ *$p < .05$ **$p < .01$

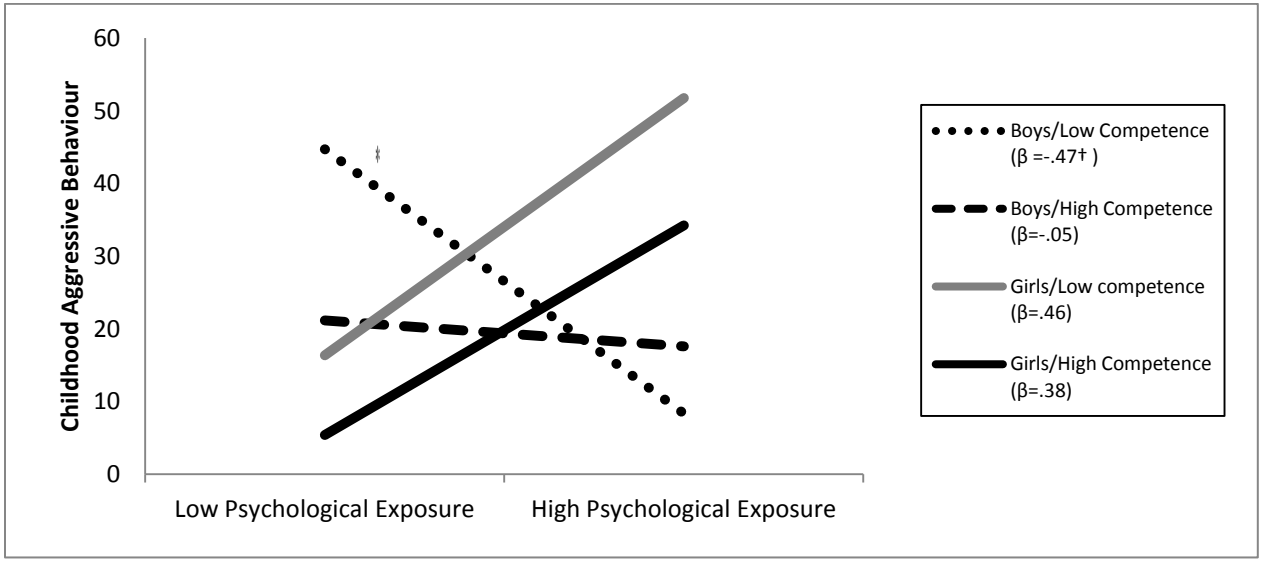
competence was related to less childhood aggressive behaviour (β = -.44, *p* = .001; see Table 44). Moreover, the three-way interaction between exposure to psychological aggression, maternal competence, and child gender neared significance (β = -.23, *p* = .067), accounting for approximately 30% of the variance in childhood aggressive behaviour. This three-way interaction was probed for exploratory purposes. When probed, the only simple slope that neared significance was a negative association between exposure to psychological aggression and childhood aggressive behaviour for boys who have mothers with a low level of perceived parenting competence (β = -.47, *p* = .069; see Figure 9). All other simple slopes were nonsignificant.

The impact of parenting alliance was also examined. For men, there were no significant two-way or three-way interactions (see Table 45). For women, the three-way interaction was also nonsignificant; however, there was a significant two-way interaction between children's exposure to psychological aggression and parenting alliance (β = .29, *p* = .035; see Table 45). This block accounted for approximately 15% of the variance in childhood aggression. Exploration of the significant two-way interaction indicated that there was a significant positive association between exposure to psychological aggression and childhood aggressive behaviour for children of mothers who have a high degree of perceived parenting alliance (β = .40, *p* = .016; see Figure 10). In contrast, the association between exposure to psychological aggression and childhood aggressive behaviour was nonsignificant for children of mothers who endorsed a low level of parenting alliance (β = -.13, *p* = .54).

Exposure to Physical Aggression. The moderating influences of parenting behaviours were also examined for the association between exposure to physical

Figure 9

Moderating Effects of Maternal Parenting Competence and Child Gender on the Association between Exposure to Psychological Aggression and Childhood Aggressive Behaviour.



Note. Categories of low and high maternal competence reflect mothers who reported levels of parental competence below the mean and above the mean, respectively.

Table 45

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parenting Alliance and Exposure to Psychological Aggression

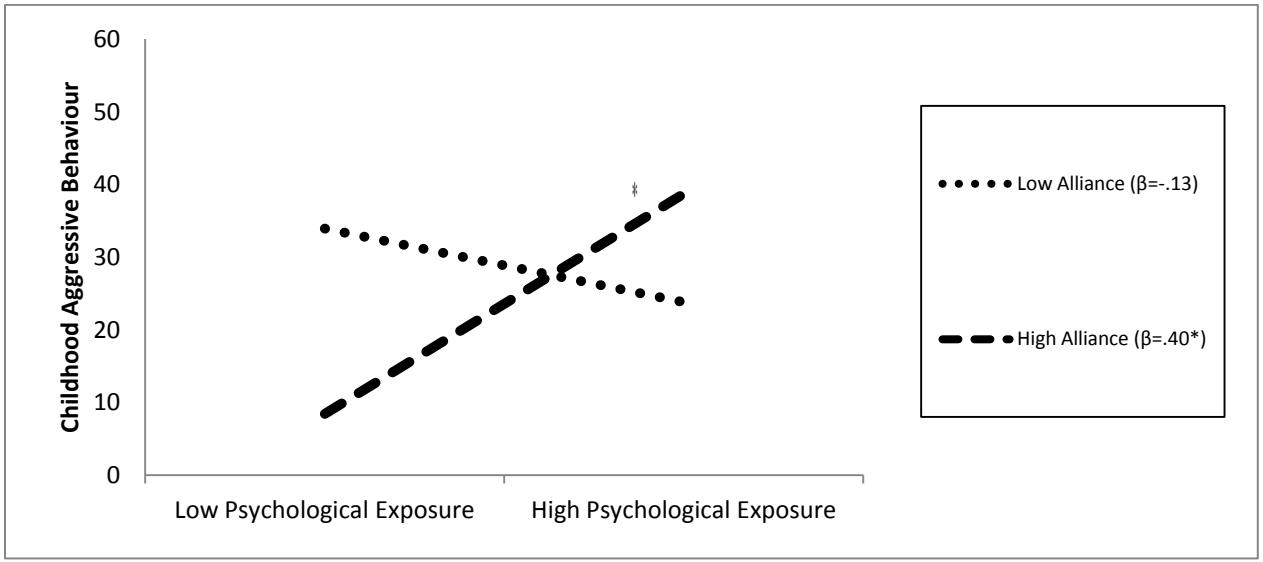
Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.06	.13
Child Gender [a]	-1.19	.68	-.23		
Paternal Alliance	-.09	.07	-.18		
Exposure to Psychological Aggression	.02	.02	.11		
Block 3				.03	.15
Paternal Alliance X Child Gender	.04	.08	.07		
Exposure to Psychological Aggression X Child Gender	.02	.02	.14		
Exposure to Psychological Aggression X Paternal Alliance	.00	.00	-.05		
Block 4				.01	.16
Exposure to Psychological aggression X Paternal Alliance X Child Gender	.00	.00	-.09		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.02	.08
Child Gender [a]	-.23	.70	-.04		
Maternal Alliance	-.13	.08	-.23		
Exposure to Psychological Aggression	.01	.02	.09		
Block 3				.15	.26*
Maternal Alliance X Child Gender	.12	.07	.22		
Exposure to Psychological Aggression X Child Gender	.05	.02	.38**		
Exposure to Psychological Aggression X Maternal Alliance	.00	.00	.29*		
Block 4				.14	.26*
Exposure to Psychological aggression X Maternal Alliance X Child Gender	.00	.00	.02		

[a] -1=boy, 1=girl

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

Figure 10

Moderating Effect of Maternal Perceived Parenting Alliance on the Association between Exposure to Psychological Aggression and Childhood Aggressive Behaviour.



Note. Categories of low and high maternal alliance reflect mothers who reported levels of perceived parenting alliance below the mean and above the mean, respectively.

aggression during the second year of life and childhood aggressive behaviour. Specific to parenting style, laxness did not serve as a significant moderator in the two-way or three-way interactions for men or women (see Table 46). Over-reactivity was not a significant moderator for men or women (see Table 47); however, as noted previously women's over-reactivity was significantly positively related to childhood aggressive behaviour ($\beta = 0.46$, $p < 0.001$). The influence of men's hostility on the intergenerational transmission of aggression was also examined; there were no significant two-way or three-way interactions (see Table 48).

The influence of perceived parenting competence was also examined as a potential moderator. For men, parenting competence did not significantly moderate the intergenerational transmission of aggression in the two-way or three-way interactions (see Table 49). However, as reported previously, parenting competence did have a significant main effect on childhood aggressive behaviour whereby increased parenting competence predicted decreased childhood aggressive behaviour ($\beta = -0.30$, $p = .035$). Similarly, there were no significant two-way or three-way interactions for women but, as noted previously, maternal parenting competence also negatively predicted childhood aggressive behaviour ($\beta = -0.46$, $p < 0.001$; see Table 49).

Perceived parenting alliance was also examined as a potential moderator of the association between exposure to physical aggression and childhood aggressive behaviour. Parenting alliance did not serve as a significant moderator in the two-way or three-way interactions for men or women (see Table 50). Additionally, perceived parenting alliance did not have a significant main effect on childhood aggressive behaviour for men or women (see Table 50).

Table 46

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parental Laxness and Exposure to Physical Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.03	.10
Child Gender [a]	-1.34	.73	-.26		
Paternal Laxness	-.04	.20	-.03		
Exposure to Physical Aggression	.10	.11	.13		
Block 3				.01	.14
Paternal Laxness X Child Gender	.03	.23	.02		
Exposure to Physical Aggression X Child Gender	.15	.12	.19		
Exposure to Physical Aggression X Paternal Laxness	-.01	.03	-.08		
Block 4				-.01	.14
Exposure to Psychological aggression X Paternal Laxness X Child Gender	-.02	.08	-.11		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				-.04	.03
Child Gender [a]	-.05	.76	-.01		
Maternal Laxness	.18	.20	.13		
Exposure to Psychological Aggression	.04	.11	.06		
Block 3				-.06	.07
Maternal Laxness X Child Gender	-.18	.25	-.12		
Exposure to Psychological Aggression X Child Gender	.19	.17	.23		
Exposure to Psychological Aggression X Maternal Laxness	.01	.04	.03		
Block 4				-.08	.07
Exposure to Psychological aggression X Maternal Laxness X Child Gender	-.01	.05	-.04		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 47

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parental Over-reactivity and Exposure to Physical Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.03	.10
Child Gender [a]	-1.30	.72	-.25		
Paternal Over-reactivity	-.07	.21	-.05		
Exposure to Physical Aggression	.10	.11	.14		
Block 3				.01	.14
Paternal Over-reactivity X Child Gender	.06	.22	.04		
Exposure to Physical Aggression X Child Gender	.14	.12	.18		
Exposure to Physical Aggression X Paternal Over-reactivity	-.02	.03	-.11		
Block 4				-.01	.14
Exposure to Physical Aggression X Paternal Over-reactivity X Child Gender	-.01	.05	-.05		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.17	.22**
Child Gender [a]	.16	.66	.03		
Maternal Over-reactivity	.57	.15	.46***		
Exposure to Physical Aggression	.04	.10	.05		
Block 3				.22	.31**
Maternal Over-reactivity X Child Gender	.15	.18	.12		
Exposure to Physical Aggression X Child Gender	.32	.22	.40		
Exposure to Physical Aggression X Maternal Over-reactivity	.02	.05	.10		
Block 4				.22	.33**
Exposure to Physical Aggression X Maternal Over-reactivity X Child Gender	.05	.05	.24		

[a] -1=boy, 1=girl

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

Table 48

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Paternal Hostility and Exposure to Physical Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.04	.11
Child Gender [a]	-1.38	.72	-.27		
Paternal Hostility	-.59	.66	-.15		
Exposure to Physical Aggression	.16	.13	.21		
Block 3				.01	.14
Paternal Hostility X Child Gender	.13	.82	.03		
Exposure to Physical Aggression X Child Gender	.09	.20	.12		
Exposure to Physical Aggression X Paternal Hostility	-.03	.07	-.10		
Block 4				.00	.15
Exposure to Physical aggression X Paternal Hostility X Child Gender	-.09	.12	-.37		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Table 49

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parenting Competence and Exposure to Physical Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.11	.18*
Child Gender [a]	-1.35	.69	-.26		
Paternal Competence	-.14	.06	-.30*		
Exposure to Physical Aggression	.01	.11	.01		
Block 3				.20	.31*
Paternal Competence X Child Gender	.11	.06	.24		
Exposure to Physical Aggression X Child Gender	.27	.11	.34*		
Exposure to Physical Aggression X Paternal Competence	.02	.01	.35		
Block 4				.19	.31*
Exposure to Physical aggression X Paternal Competence X Child Gender	-.01	.02	-.10		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.16	.22**
Child Gender [a]	-.18	.66	-.03		
Maternal Competence	-.20	.05	-.46***		
Exposure to Physical Aggression	.08	.10	.10		
Block 3				.17	.27*
Maternal Competence X Child Gender	.02	.06	.04		
Exposure to Physical Aggression X Child Gender	.19	.15	.23		
Exposure to Physical Aggression X Maternal Competence	.00	.01	.01		
Block 4				.15	.27*
Exposure to Physical aggression X Maternal Competence X Child Gender	.00	.01	-.01		

[a] -1=boy, 1=girl

*$p < .05$ **$p < .01$ ***$p < .001$

Table 50

Hierarchical Regression Analysis Regressing Childhood Aggressive Behaviour on Parenting Alliance and Exposure to Physical Aggression

Variables	*B*	SE *B*	β	Adj. R^2	ΔR^2
Fathers					
Block 1				.02	.04
Child Age	.14	.10	.19		
Block 2				.06	.13
Child Gender [a]	-1.27	.71	-.25		
Paternal Alliance	-.09	.07	-.17		
Exposure to Physical Aggression	.06	.11	.08		
Block 3				.06	.18
Paternal Alliance X Child Gender	.04	.09	.07		
Exposure to Physical Aggression X Child Gender	.23	.14	.30		
Exposure to Physical Aggression X Paternal Alliance	.01	.01	.23		
Block 4				.05	.19
Exposure to Physical aggression X Paternal Alliance X Child Gender	-.02	.03	-.35		
Mothers					
Block 1				-.01	.01
Child Age	.08	.11	.10		
Block 2				.01	.08
Child Gender [a]	-.25	.72	-.05		
Maternal Alliance	-.14	.07	-.26		
Exposure to Physical Aggression	.02	.11	.02		
Block 3				.03	.15
Maternal Alliance X Child Gender	.07	.07	.12		
Exposure to Physical Aggression X Child Gender	.17	.12	.21		
Exposure to Physical Aggression X Maternal Alliance	.01	.02	.14		
Block 4				.04	.17
Exposure to Physical aggression X Maternal Alliance X Child Gender	-.02	.02	-.24		

[a] -1=boy, 1=girl

$^{*}p < .05$ $^{**}p < .01$

Summary

Results indicated that the vast majority of couples engaged in psychological aggression throughout the transition to parenthood. Moreover, a quarter to a third of all couples engaged in physical aggression across this transition. Although there is some stability in physical aggression across the transition to parenthood, there is greater stability in the rates of psychological aggression. These rates of aggression indicate that approximately a third of children are exposed to parental physical aggression and over 90% of children are exposed to parental psychological aggression at some point during the first two years of childhood. Results indicated that exposure to psychological aggression during the second year of life was related to externalizing symptoms for girls, but not boys. Exposure to physical aggression during the first and second year of life was shown to predict somatic and affective symptoms for boys and girls, as well as sleep problems for girls only. Looking specifically at within-gender social modeling for the intergenerational transmission of aggression, I found that both mothers' and fathers' psychological aggression perpetration predicted girls' aggressive behaviour, but not boys' aggressive behaviour. The findings for parenting moderators of the intergenerational transmission of aggression were not consistent with the hypotheses. Low levels of maternal laxness were associated with more childhood aggressive behaviour for girls who were exposed to high levels of parental psychological aggression. Low maternal competence resulted in a negative association between exposure to psychological aggression and childhood aggressive behaviour for boys. Also inconsistent with the hypotheses, maternal perceived parenting alliance moderated the association between exposure to psychological aggression and childhood aggressive

behaviour whereby children of mothers who reported a high level of parenting alliance had a positive association between exposure to psychological aggression and childhood aggressive behaviour. Parenting behaviours did not moderate the association between exposure to parental physical aggression and childhood aggressive behaviour.

Discussion

Prevalence of Partner Aggression across the Transition to Parenthood

In the present study, psychological aggression appears to be a common method of conflict management for couples. Approximately 76% of men and 84% of women perpetrated psychological aggression against their partner during the previous year as measured during the third trimester of pregnancy. Rates remained high following childbirth wherein approximately 82% of men and 88% of women perpetrated partner psychological aggression during the first year postpartum and approximately 83% of men and 80% of women perpetrated psychological aggression during the second year postpartum. The postpartum male rates in the present study are fairly consistent with the rates reported in a study focusing on female victimization postpartum (Gao et al., 2010). This study reported that women's rates of psychological aggression victimization were approximately 76% and 86% at 6 weeks and 24 months postpartum, respectively. Overall, the rates in the present study are also fairly consistent with the rates reported in a study with developmentally heterogeneous couples using an earlier version of the CTS which found that 75% of men and 80% of women perpetrate psychological aggression (Stets & Straus, 1990). It is of note that women's rates of psychological aggression perpetration were higher than men's rates during pregnancy and the first year postpartum in the present study. This finding is consistent with

research that suggests women perpetrate more psychological aggression than men (e.g., Hines & Saudino, 2003). It is possible that women's rates of psychological aggression perpetration were elevated during pregnancy and the first year postpartum in the current study because of the stress and fatigue associated with pregnancy and early child rearing, particularly for women.

Approximately 24% of men and 29% of women perpetrated at least one incident of physical aggression against their partner during the previous year as measured during the last trimester of pregnancy in the present study. During the first year following childbirth, rates of physical aggression perpetration for men and women were approximately 20% and 28%, respectively. Rates during the second year postpartum were approximately 16% for men and 31% for women. The prevalence of partner physical aggression during pregnancy in the current study is relatively low compared to a study which found that 33% of mothers and 40% of fathers of a nationally representative cohort of pregnant women in the U.S. reported physical aggression victimization during or just after pregnancy (Charles & Perreira, 2007). Similarly, the male prevalence rates of postpartum physical aggression perpetration are somewhat low compared to a study that found approximately 23% and 27% of women are the victims of physical aggression at 6 weeks and 24 months postpartum, respectively (Gao et al., 2010). Furthermore, although some research suggests that male-to-female partner aggression decreases during pregnancy, but increases again after the child's birth (Charles & Perreira, 2007; Gielen et al., 1994); the present study found the opposite results whereby male-to-female aggression decreased following childbirth. It is important to note that men who were aggressive prenatally were more likely to drop out

of the study by the last time point. This finding may partially explain the decrease in male perpetration over time.

Although the prevalence of physical aggression in the current study is low compared to other studies examining aggression during and soon after pregnancy, rates of physical aggression in the current study are high compared to other studies. For example, the frequency of physical aggression perpetration in the present study is high compared to a study using a large representative sample of individuals from various developmental periods which found that 12% of men and 12% of women are the victims of partner physical aggression (Stets & Straus, 1990). Moreover, the female rate of physical aggression perpetration across all three time points in the current study is slightly higher than the rate of 26% among at-risk young couples (Capaldi & Crosby, 1997). Compared to a newlywed sample, however, the rates for each gender in the present study may be relatively low. Specifically, Lawrence and Bradbury (2001) reported that 29% of newlywed husbands and 46% of newlywed wives are physically aggressive towards their partner. Similarly, looking specifically at severe partner aggression, a study using a random sample of 453 young couples with young children found that one quarter of respondents reported severe partner aggression (Smith Slep & O'Leary, 2005).

There are four possible explanations as to why the rates of physical aggression perpetration in this sample are higher than studies which include couples from various developmental periods. First, the stress that is associated with having a first child and parenting this child could partially account for the higher prevalence rates reported in this study. Second, partner aggression is more prevalent during early adulthood and

rates tend to decline with age (O'Leary & Woodin, 2005). The current study may have relatively high rates of aggression because the sample was predominantly comprised of young adult couples rather than examining couples throughout the lifespan. Third, there is some research that suggests that the frequency and severity of male-to-female aggression may increase for some couples during pregnancy. Specifically, sexually jealous men may view their wife's pregnancy as a sign of infidelity thereby resulting in an increase in partner aggression during the transition to parenthood for these couples (Burch & Gallup, 2004). Finally, this study included individual reports and partner reports of aggression perpetration. Therefore, other studies that only include self-reports may be underestimating the prevalence of aggression as individuals tend to minimize their own aggressive behaviour (O'Leary & Williams, 2006). The inclusion of both individual reports and partner reports yields a more reliable estimate of aggressive behaviour.

It is of note that women's rates of physical aggression perpetration were consistently higher than men's rates across the transition to parenthood. This finding is consistent with the recent literature arguing that women may be more likely than men to engage in partner physical aggression. For example, a study found that during late adolescence and young adulthood, women initiate physical aggression at least two times more often than men (Capaldi et al., 2007). It is believed that the gender difference is even larger among at-risk couples given that a study focusing on these couples found that women were approximately three times more likely to use physical aggression than men (Capaldi & Crosby, 1997). However, even though women may be more likely to engage in aggression against their partner, research suggests that men tend to use more

severe forms of partner aggression (Hettrich & O'Leary, 2007). Therefore, male-to-female aggression is more likely to result in psychological and physical injury than female-to-male aggression (Archer, 2000). It is also possible that sometimes women's aggression is a pre-emptive strike, whereby they act aggressively towards their partner to prevent their partner from acting aggressively towards them.

Stability of Aggression across the Transition to Parenthood

As expected, psychological aggression was stable across the transition to parenthood. Although psychological aggression was stable across all time points, the greatest stability in psychological aggression perpetration occurred following childbirth. In other words, there was more stability in the rates of psychological aggression following childbirth (i.e., first year postpartum to second year postpartum) compared to the stability of aggression across childbirth (i.e., prenatally to first year postpartum, and prenatally to second year postpartum). This finding is consistent with results reported by Gao and colleagues (2010) which demonstrated the persistence of psychological aggression victimization for women at 6 weeks postpartum and 24 months postpartum. The stability of partner psychological aggression for men and women in the present study is also consistent with a 10-year longitudinal study examining wife and husband-perpetrated aggression across the transition to marriage (Fritz & O'Leary, 2004), in which there were significant changes in physical aggression, but no significant pattern of change for psychological aggression. The authors argued that psychological aggression may be a form of aggression that is particularly persistent over time. Few existing studies have examined psychological aggression perpetration across the

transition to parenthood; therefore, this study is an important contribution to the existing literature.

As expected, there was less stability in physical aggression perpetration across the transition to parenthood. Specifically, there was moderate stability in physical aggression perpetration for both men and women from pregnancy to the first year postpartum. From the first year postpartum to the second year postpartum, there was some stability in women's rates of physical aggression, but not men's rates. When examined over a longer period of time (i.e., pregnancy to second year postpartum), there was much less stability in rates of physical aggression for both men and women. For men, part of the instability is likely related to the fact that men who were physically aggressive prenatally were more likely to drop out of the study by the third wave than men who were not physically aggressive prenatally. Additionally, I also believe that part of the reason for the instability of physical aggression for both men and women across the transition to parenthood is an increase in age across the time points. Using data from several U.S. cross sectional studies, O'Leary and Woodin (2005) reported that partner aggression is most prevalent in the early to mid-twenties and much less common from then on. Therefore, as couples age across the transition to parenthood, they may naturally decrease their use of physical aggression as a form of conflict management. Similarly, using longitudinal data, Fritz and O'Leary (2004) found that wives reported wife- and husband-perpetrated premarriage physical aggression at rates of 48% and 35% respectively. Ten years later, these numbers dropped to 13% and 10%, respectively. Moreover, husband- and wife-perpetrated physical aggression decreased at an average of approximately one act of aggression per month, regardless of the severity of the

aggression and even after controlling for marital satisfaction. It has also been documented that male-to-female physical partner aggression sharply declines from age 25 to age 35 (O'Leary, 1999). This research provides evidence that there can be significant changes in the rates of physical aggression even within a two year period, particularly given that couples were, on average, in their early 30s in the present study.

In contrast to these findings as well as the present study's findings, Gao and colleagues (2010) found persistence in male-to-female physical aggression during the postpartum period. Specifically, women who experienced physical aggression at 6 weeks postpartum were more likely to be victimized at 24 months postpartum demonstrated by a significant positive correlation between the two time points. Similarly, Charles and Perreira (2007) found that if male-to-female physical aggression occurs during pregnancy, there is a 70-80% greater likelihood of male-to-female physical aggression occurring 1 year after pregnancy than if there was no male-to-female aggression during pregnancy. There is a need for more research examining the stability of partner physical aggression across the transition to parenthood in an effort to explain these inconsistent findings.

Prevalence of Childhood Exposure to Aggression

During the first year following childbirth, approximately 91% of children were exposed to parental psychological aggression and 31% of children were exposed to parental physical aggression. The rates of exposure to aggression during the second year following childbirth were fairly consistent wherein approximately 84% of children were exposed to parental psychological aggression and 33% of children were exposed to parental physical aggression. The rates of exposure to physical aggression are fairly

consistent with other research indicating that approximately 20% to 40% of children are exposed to aggression (e.g., Evans et al., 2008). Given the high rates of partner psychological aggression perpetration for men and women (e.g., Stets & Straus, 1990), the rates of childhood exposure to parental psychological aggression are not surprising. Although the present study did not examine whether children directly observed these behaviours, research suggests that living in a house where partner aggression takes place has detrimental effects regardless of whether the child witnesses the aggression or not (Delsol & Margolin, 2004). It is possible that children as young as two years old may also be negatively influenced by partner aggression that occurs in the household, even without directly observing the aggression.

It is of note that paternal visible minority status was a significant predictor of childhood internalizing behaviours and, therefore, was controlled for in the analyses. Although the proportion of ethnic minority fathers is small and consists of diverse ethnic backgrounds, some attention should be given to this finding. This finding is consistent with literature that has documented higher rates of internalizing disorders among ethnic minority youth living in the U.S. (Anderson & Mayes, 2010). The authors argue that there are several factors that may account for the higher rates of internalizing disorders among ethnic minority youth, including expressing distress through physical complaints, vulnerability in their biological makeup (e.g., 5HT transporter gene), and environmental/social factors (e.g., risky neighbourhoods, poverty, discrimination) (Anderson & Mayes, 2010). It appears that the effects of these ethnic differences may be observed as early as age two, as demonstrated in the current study. That being said, because of the small number and diversity of ethnic minority fathers in the current

study, I am unable to make strong conclusions regarding this finding. More research is needed with this young age group to determine whether this finding can be replicated with a larger sample of ethnic minority individuals.

Exposure to Parental Psychological Aggression and Child Behaviour

Although it was expected that exposure to aggression would put girls at risk for internalizing symptoms and boys at risk for externalizing symptoms, the results were not so clear-cut. Exposure to parental psychological aggression during the first year of life did not have an effect on children's mental health at age two. Similarly, exposure to psychological aggression during the second year of life did not have an effect on children's internalizing symptoms. However, exposure to parental psychological aggression during the second year of life positively predicted girls' externalizing behaviours whereby more exposure to parental psychological aggression was associated with more oppositional behaviour and aggressive behaviour for girls. Contrary to the hypotheses, exposure to parental psychological aggression was not significantly associated with boys' oppositional or aggressive behaviour. Although many studies argue that the association between exposure to parental aggression and externalizing symptoms is stronger for boys than girls (e.g., Evans et al., 2008; Wolfe et al., 2003; Yates et al., 2003), other studies suggest otherwise. For example, consistent with the finding of the present study, a recent study using the same sample found that women who retrospectively reported being exposed to family aggression during childhood were at increased risk for engaging in antisocial behaviour during childhood and adolescence, but this was not the case for men who reported being exposed to family aggression during childhood (Caldeira & Woodin, 2012). Similarly, a study that exposed 9 to 19

year olds to videotaped segments of inter-adult anger expression found that girls reported more anger than boys in response to these videotaped segments (Cummings et al., 1991).

There is a need for more studies examining the relationship between exposure to parental psychological aggression and childhood internalizing and externalizing symptoms. The results of the present study are important in that they provide evidence for the intergenerational transmission of aggression for girls as early as age two. Furthermore, these results suggest that exposure to psychological aggression is indeed related to negative childhood development. Although genes play a role in the intergenerational transmission of aggression, reducing early exposure to parental aggression may help prevent the development of aggression during childhood. Given that the development of aggression is quite stable beginning around age two (Jouriles et al., 1988; Olweus, 1979), it is important to reduce exposure to parental aggression as early in development as possible.

Exposure to Parental Physical Aggression and Child Behaviour

The effects of exposure to parental physical aggression during the first and second year of life were consistent with each other. Inconsistent with the hypotheses, exposure to parental physical aggression did not have a significant effect on childhood symptoms of anxiety or withdrawal for boys or girls. However, exposure to parental physical aggression did predict more childhood somatic and affective symptoms. Although it was expected that girls would be at higher risk for internalizing symptoms, these results indicate that boys and girls were equally likely to suffer from somatic complaints and problems with mood when exposed to parental physical aggression. The

extant research on gender differences in the association between exposure to parental aggression and internalizing symptoms is mixed. Although some research suggests that girls are at greater risk for internalizing symptoms than boys (e.g., Yates et al., 2003), other researchers report no significant gender difference for childhood internalizing symptoms as a result of exposure to parental aggression (Evans et al., 2008; Wolfe et al., 2003). Furthermore, some studies actually indicate that boys may be more vulnerable to internalizing symptoms as a result of exposure to parental aggression. For example, using a community sample, Kerig and colleagues (1999) found that boys from violent homes were rated higher on internalizing problems than girls from violent homes.

Exposure to high levels of physical aggression during the first two years of life also predicted sleep problems for girls. Although girls were less likely than boys to have sleep problems when exposed to a low level of partner physical aggression, their problems with sleep significant increased as exposure to physical aggression increased. Few studies have been conducted specifically examining the link between exposure to parental aggression and childhood sleep problems. One study using a sample of 8 to 9 year olds found that increased marital conflict was associated with disruptions in the quantity and quality of children's sleep (El-Sheikh, Buckhalt, Mize, & Acebo, 2006). Similarly, a longitudinal study that focused on early childhood sleep problems found that marital instability at 9 months prospectively predicted child sleep problems at 18 months (Mannering et al., 2011). These results are important given that disruptions in the quality and duration of children's sleep has been shown to negatively influence children's behavioural and emotional functioning, as well as their academic achievement (e.g., El-Sheikh, Buckhalt, Cummings, & Keller, 2007).

Although exposure to psychological aggression during the second year of life positively predicted externalizing behaviour in girls, this was not the case for exposure to physical aggression during either time point. More specifically, inconsistent with the hypotheses, exposure to parental physical aggression did not predict oppositional behaviour or aggressive behaviour for boys or girls. This lack of a relationship can partly be explained by the lower levels of partner physical aggression compared to partner psychological aggression.

Taken together, it appears from the present study that girls may be more vulnerable to developing internalizing and externalizing behaviours in the context of exposure to parental aggression. Although both boys and girls experienced somatic and affective symptoms when exposed to parental physical aggression, girls are also at risk for problems with sleep when exposed to this form of aggression. Furthermore, girls are also at risk for oppositional behaviour and aggressive behaviour when exposed to parental psychological aggression. It is concerning that children as young as age two are sensitive to the possible effects of exposure to parental aggression because these children spend a lot of time in the household where the aggression likely occurs. Although these children may experience a decrease in symptoms as they age (e.g., Sternberg et al., 2006), it is also possible that other symptoms may develop with age. For example, children who are exposed to parental aggression may come to view the aggression as normative and surround themselves with peers who also endorse these beliefs. More research needs to be done on the behavioural outcomes of exposure to parental psychological and physical aggression during this early developmental period.

Within-Gender Social Modeling of Aggressive Behaviour

According to the social learning theory, the gender of the model and the observer play a role in the intergenerational transmission of aggression. Specifically, it is believed that within-gender modeling is stronger than between-gender modeling (Bandura, 1973). Therefore, the intergenerational transmission of aggression was examined more closely to assess whether mothers' aggression was a better predictor of girls' aggressive behaviour and fathers' aggression was a better predictor of boys' aggressive behaviour.

Consistent with the hypotheses, the gender of the child interacted with both mother's and father's psychological aggression perpetration to predict childhood aggressive behaviour. As expected, mother's psychological aggression perpetration was a significant predictor of girls' aggressive behaviour, but not boys' aggressive behaviour. This finding is consistent with several studies arguing for within-gender modeling. Specifically, Bandura and colleagues (1961) found that nursery school children who were exposed to aggressive models imitated these aggressive behaviours, particularly if the model was the same sex as the child. Similarly, a more recent study found that individuals who witnessed only their same sex parent perpetrate partner physical aggression were at increased risk for perpetrating physical aggression, but respondents who only witnessed their opposite sex parent perpetrate partner aggression were not at increased risk (Jankowski et al., 1999).

Although it was hypothesized that father's perpetration of aggression would predict boys' aggressive behaviour, the present study did not find evidence for this hypothesis. Specifically, contrary to the social learning theory, increased exposure to

father's psychological aggression perpetration during the second year of life predicted high rates of girls' aggressive behaviour, but this was not true for boys' aggressive behaviour. Although the social learning theory argues for within-gender modeling, it also suggests that male models are imitated more than female models (Bandura, 1973). The present study provided some support for within-gender modeling given that girls, but not boys, modeled their mother's aggressive behaviour. This study also provided evidence for the importance of male models given that girls also modeled their father's aggressive behaviour. Given that mother's aggression is correlated with father's aggression, it appears that in this study girls are simply just more likely to model parental aggressive behaviour, regardless of the gender of the adult perpetrator.

There are several reasons as to why girls may be more vulnerable to modeling both parents' aggressive behaviour. The social learning theory suggests that exposure to frequent, severe aggressive acts which are accompanied by emotions are more likely to be retained in memory and, therefore, modeled later (Bandura, 1973). Although boys and girls in this study were equally likely to experience emotional problems as a result of exposure to parental aggression, it is possible that girls experience stronger emotions during the aggression exposure and, therefore, may be more likely to model the behaviour at a later time. An alternate explanation is related to the fact that within nonaggressive households, boys had higher rates of aggressive behaviour than girls in the present study. Boys are, therefore, as likely to use aggression as a means of resolving conflict whether they are exposed to a low or high level of parental aggression whereas girls are more likely to use aggression as a means of resolving conflict if they have been exposed to a high level of parental aggression. In other words, girls may

begin to view aggression within couples as appropriate and a means of relieving stress and anger as they are exposed to more parental aggression. However, boys' beliefs about the appropriateness of aggression may not depend on their parents' use of aggression.

Parental Moderators of the Intergenerational Transmission of Aggression

Although it was hypothesized that parenting style (laxness, over-reactivity, and hostility), parenting competence, and parenting alliance would moderate the link between exposure to parental aggression and childhood aggressive behaviour wherein high quality parenting behaviours would attenuate the intergenerational transmission of aggression, the results of this study did not support this hypothesis.

In the present study there was an interaction between exposure to psychological aggression, maternal laxness, and child gender in predicting childhood aggressive behaviour. It was found that boys' aggressive behaviour was generally unaffected by the amount of exposure to psychological aggression or the amount of maternal laxness they received. However, contrary to the hypotheses, girls who were exposed to a high level of parental psychological aggression showed higher rates of aggressive behaviour if they also received a low level of maternal laxness. This finding was surprising given that previous studies have demonstrated that mothers of aggressive toddlers display more lax discipline when addressing misbehaviour that precedes aggression (e.g., Del Vecchio & O'Leary, 2006). Moreover, low laxness is considered high quality parenting whereby these mothers appropriately address their child's misbehaviour (e.g., firmly telling their child to stop doing something when necessary and addressing their child's misbehaviour every time it occurs). In the present study, it appears that low maternal

laxness in combination with exposure to high rates of psychological aggression, rather than a low level of maternal laxness on its own, is important in predicting girls' aggressive behaviour. A possible explanation for this finding is that children are more likely to imitate aggressive behaviour if they like or identify with the individual exhibiting the behaviour and if the model is the same gender as the observer (e.g., Bandura, 1973). The present findings support this explanation in that girls are more likely to identify with mothers who have strong parenting abilities (i.e., low laxness) and, therefore, these girls may be more likely to model the aggression to which they are exposed. In contrast, girls with mothers who have weaker parenting skills (i.e., high laxness) may feel more distant from their mothers and are then less likely to emulate their behaviour.

Over-reactivity did not moderate the intergenerational transmission of aggression for boys or girls; however, over-reactivity on its own was harmful given that high levels of maternal over-reactivity (e.g., getting into a long argument with one's child about their misbehaviour, raising voice as a response to child's misbehaviour, and holding a grudge following a problem with one's child) predicted more childhood aggressive behaviour. This result is consistent with other research that suggests over-reactive discipline is associated with childhood aggression. For example, a study using 54 mother-toddler dyads categorized the toddlers as aggressive or nonaggressive based on their behaviour towards their mother during a 30-minute interaction (Del Vecchio & O'Leary, 2006). This study found that mothers of aggressive children displayed more over-reactive discipline when addressing misbehaviours that preceded aggression than

did mothers of nonaggressive children. In the present study, also contrary to the hypotheses, paternal hostility did not predict childhood aggressive behaviour.

Parental sense of competence was also examined as a potential moderator of the intergenerational transmission of aggression. As expected, both maternal and paternal perceived parenting competence (e.g., believing parenting is manageable and problems are easily solved, believing that you are highly skilled at figuring out what is troubling your child, and believing you have the skills necessary to be a good parent) predicted less childhood aggressive behaviour for boys and girls. Moreover, exposure to psychological aggression, maternal competence, and child gender interacted to predict childhood aggressive behaviour. Consistent with the hypotheses, boys who had mothers with a low level of parenting competence had a high rate of childhood aggressive behaviour even when exposed to minimal parental aggression. However, in contrast to the hypotheses, it was found that when the boys with mothers who had a low degree of parenting competence were exposed to a high level of parental psychological aggression, they showed lower rates of childhood aggressive behaviour. In other words, low maternal competence protected against childhood aggressive behaviour for boys in highly aggressive homes. In contrast, boys with mothers who had a high degree of parental competence had stable rates of aggressive behaviour regardless of the amount of parental psychological aggression to which they were exposed. For girls, aggressive behaviour was not significantly related to exposure to parental aggression, regardless of maternal competence. Similar to the results of the moderating influence of maternal laxness, the degree of identification with one's mother may be driving the moderating effect (e.g., Bandura, 1973). Specifically, because of their gender, boys are less likely

than girls to identify with their mothers. Moreover, boys of mothers who are not very competent in their parenting abilities may be less likely to identify with or trust their parents and, therefore, may be less likely to view their actions as behaviour that should be imitated. It is important to note that this questionnaire measures perceived parenting competence, therefore, it is possible that some parents view themselves as competent when in fact they are not and vice versa.

Parenting alliance was also examined as a potential moderator of the intergenerational transmission of aggression. Fathers' perceived parenting alliance did not serve as a significant moderator. However, mothers' perceived parenting alliance was a significant moderator of the association between exposure to psychological aggression and childhood aggressive behaviour for boys and girls. In households with a low level of parental psychological aggression, children of mothers who had a weak parenting alliance (i.e., mothers who did not believe they had a positive working relationship with their child's other parent), were more aggressive than children of mothers who had a strong parenting alliance. However, surprisingly, in homes with a high level of parental psychological aggression, children of mothers who had a strong perceived parenting alliance engaged in more childhood aggressive behaviour than children of mothers who had a weak perceived alliance with their partner. Although these results are surprising, they are consistent with the findings of a recent study.

Using a sample of 2,088 undergraduate students, Simons and colleagues (2012) found that interparental warmth interacted with interparental hostility to predict young adults' aggression within romantic relationships (both perpetration and victimization). Rather than attenuating the negative effects of interparental hostility, interparental

warmth amplified the probability that offspring imitated their parents' aggressive behaviour in their own romantic relationships. The authors argue for a strict interpretation of the social learning theory whereby the marital relationship teaches children how to treat those they care about. Therefore, if parental hostility occurs within the context of apathy it would provide very little information as to how to treat their loved ones. In contrast, if parental hostility occurs within the context of warmth and support, children may view the hostility as a normal part of loving relationships and, therefore, may be more likely to view aggression as normative within their own future romantic relationships (Simons et al., 2012). This research can be applied to the present study given that children may be more likely to view aggression as normative and, therefore, model the aggression in their own behaviour when their parents have a strong alliance with one another. In contrast, a weak parental alliance might result in children interpreting the aggressive behaviour as an action used towards those for whom you have little regard; therefore, these children may not be aggressive towards individuals within their everyday surroundings.

It is of note that only mothers' parenting behaviours served as significant moderators in the present study. It is possible that mothers' parenting is more influential than fathers' parenting because mothers play a larger role in disciplining children, particularly during these early years of development. Furthermore, some research suggests that mothers are more often central attachment figures and, therefore, are more likely to play a critical role in shaping children's aggressive behaviour (e.g., Moretti et al., 2006). Mothers' parenting behaviours may also be more important than fathers'

parenting behaviours simply because mothers tend to spend more time with their children, particularly during the infancy years.

Parenting style (i.e., laxness, over-reactivity, and hostility), parenting competence, and parenting alliance were also examined as potential moderators of the association between exposure to parental physical aggression and childhood aggressive behaviour. Contrary to the hypotheses, none of these parenting variables served as moderators in these analyses. It is possible that the lower rates of exposure to parental physical aggression compared to parental psychological aggression accounts for the lack of significant interactions for this form of aggression.

Clinical Implications

Couples transitioning to parenthood represent an important target group for prevention and treatment programs as these couples may be more open to change than couples at other life stages, because of the desire to create a positive environment for their child. This research suggests that partner aggression is fairly stable across the transition to parenthood, particularly psychological aggression. Given that exposure to parental aggression is associated with internalizing and externalizing childhood behaviours, it is important to attempt to reduce partner aggression prior to the transition to parenthood. Although both boys and girls are affected, it appears that girls may be more vulnerable to the negative effects of childhood exposure to parental aggression during this early developmental period. Although the present study found a significant association between exposure to parental physical aggression and childhood somatic and affective problems, it is of note that not all children who are exposed to aggression suffer from these negative consequences. Similarly, not all girls who are exposed to

parental aggression experience problems with sleep and externalizing behaviour. It should be noted, however, that these are the associations that appear as early as age two. It is possible that these same children may develop additional behavioural problems as they get older. Therefore, preventing exposure to parental aggression is important from a very early age for both boys and girls.

Specific to the intergenerational transmission of aggression, this study demonstrated that girls were more likely than boys to model their mothers' and fathers' aggressive behaviour. Since childhood aggression appears to be stable as early as two years of age, childhood exposure to parental aggression should be eliminated as early in development as possible in order to prevent the intergenerational transmission of aggression (Olweus, 1979). Furthermore, recent research suggests that for women, the link between exposure to aggression during childhood and adulthood partner aggression perpetration may be explained by childhood antisocial behaviour. Specifically, using the same sample as the current study, adults retrospectively reported on their exposure to aggression during childhood and their childhood antisocial behaviour. It was found that childhood antisocial behaviour mediated the association between exposure to aggression during childhood and partner aggression perpetration during adulthood for women but not men (Caldeira & Woodin, 2012). Therefore, although there is stability in aggression starting at an early age, targeting female childhood aggressive behaviour may be a means of preventing the intergenerational transmission of partner aggression for this gender.

The present study found that when partner aggression is combined with high quality parenting there is more childhood aggressive behaviour. Although some

research suggests that interventions can strengthen coparenting which may then positively influence childhood development (e.g., Feinberg & Kan, 2008), this may not be the case within highly aggressive households. Quality parenting may increase the probability that children will imitate parental aggressive behaviour as this behaviour may be more likely to be viewed as normal and the child may be more likely to identify with the perpetrator under these circumstances. Some parents may believe they can counteract the negative effects of exposure to parental aggression by providing quality parenting to their child. However, this study provides support for the opposite result wherein children are more aggressive under these conditions.

This research should not be interpreted as support for discouraging high quality parenting. This research does suggest, however, that strong parenting skills do not counter the negative effects of exposure to parental aggression. Parents' interactions with one another provide important information to children regarding acceptable behaviours towards other individuals. Therefore, rather than using quality parenting as a means of buffering the intergenerational transmission of aggression, prevention programs geared towards preventing the transmission of aggression across generations should attempt to eliminate partner aggression prior to the transition to parenthood.

This research may appear to contradict intervention programs that are designed to reduce conduct problems for children that are exposed to partner aggression. For example, Jouriles and colleagues (2009) found that children recruited from domestic violence shelters showed greater reductions in conduct problems if their mothers' received training in child management skills (e.g., training to reduce inconsistent and harsh parenting behaviours). However, mothers who returned to their abusive partner

following the departure of the shelter were excluded from the study. Therefore, parent training appears to be effective when children are no longer exposed to partner aggression. In contrast, when children continue to live in aggressive homes, focusing on strengthening parenting skills rather than on reducing exposure to aggression may actually result in more problematic childhood behaviours.

Taken together, it is ideal for prevention programs to educate future parents about the possible consequences of exposure to parental aggression in the hope of reducing partner aggression. In terms of intervention programs for children who have previously been exposed to parental aggression, enhancing parenting quality may be a means of reducing childhood behaviour problems if the parental abusive relationship no longer exists. However, in cases where children continue to be exposed to parental aggression, enhancing parenting quality through intervention programs may actually be detrimental to child development. Instead, in these cases, it may be more beneficial for intervention programs to focus on childhood social cognitive and behaviour problem solving strategies. These techniques may help children learn effective ways of solving interpersonal conflicts, rather than modeling the parental aggression to which they have been exposed.

Strengths and Limitations

Several considerable strengths of the current study are noteworthy. First, the study used a fairly large community sample of diverse couples who were pregnant during the first wave of the study. Couples were recruited through brochures and advertisements distributed throughout the city in order to acquire a sample that represented the socioeconomic and ethnic diversity of the greater Victoria metropolitan

area. Furthermore, there was a high retention rate of participants across the three waves of data and none of the demographic variables predicted attrition. Secondly, the longitudinal design allowed for assessing partner aggression and the possible consequences of childhood exposure to this aggression throughout the transition to parenthood. Third, both psychological and physical forms of partner aggression were examined in the present study rather than focusing solely on physical aggression as was done in several previous studies. Further, the perpetration rates of these forms of aggression were measured by individual reports and partner reports in order to obtain a more reliable estimate of aggressive behaviour. Finally, childhood internalizing and externalizing symptoms were examined at a very early age (i.e., two years old) in an effort to examine the early development of these behaviours. Moreover, mothers and fathers reported on their child's behaviour to obtain comprehensive information on childhood behaviour rather than solely collecting data from mothers as was commonly done in past research.

Despite these important strengths, the results of the study should be interpreted in light of several limitations. First, given the correlational nature of this study, directional causality cannot be determined between the variables. For instance, it is possible that childhood internalizing and externalizing behaviours lead to more partner aggression because of the stress of parenting these children. This interpretation is unlikely, however, given the extensive amount of research that argues that internalizing and externalizing behaviours are consequences of exposure to aggression (e.g., Evans et al., 2008; Kitzmann et al., 2003; Owen et al., 2007; Wolfe et al., 2003). The data also suggests that partner aggression is fairly stable across the transition to parenthood,

particularly psychological aggression. This suggests that individuals who engaged in partner aggression following childbirth were also likely to perpetrate aggression prior to childbirth. Therefore, it is more likely that partner aggression preceded the development of childhood internalizing and externalizing behaviours. Directional causality also cannot be determined for the moderator analyses. For instance, it is possible that childhood aggressive behaviour leads to parents strengthening their alliance with one another in an attempt to reduce their child's aggression. Similarly, having an aggressive child may lead to mothers attempting to effectively attend to their child's misbehaviour, rather than utilizing lax parenting practices. More research is needed in this area given that it is well known that childhood externalizing behaviour and parenting behaviours are related in a bidirectional manner (e.g., De Haan, Prinzie, & Dekovic, 2012).

Similarly, also given the correlational nature of the study, genetic confounds were not controlled for in the analyses. It is well known that genes and environment interact with one another. For example, research suggests that the *MAOA* gene moderates the association between childhood maltreatment and the development of antisocial behaviour, even after controlling for passive and evocative gene-environment effects (Kim-Cohen et al., 2006). Specifically, this study found that 7-year old boys who were exposed to physical maltreatment had significantly more mental health problems if they had the low-activity *MAOA* allele than if they had the high-activity allele (Kim-Cohen et al., 2006).

Second, given the self-report nature of the study, it is possible that the reports for some of the behaviours are biased, such as parenting style or childhood behaviours. For instance, mothers and fathers may have rated their parenting behaviours in a biased

manner because of the social desirability of having strong parenting skills. Similarly, although mothers and fathers rated their child's behaviour, these reports may be biased given that parents' observations of their children's problematic behaviour may depend on the parents' own mental health status and what they consider to be normative. Future research should assess childhood behaviour using other methods in addition to parent reports, such as observational data or preschool teacher reports.

Third, although this study had a relatively high retention rate of participants across the three waves of the study, the overall sample size was limited compared to other studies in this research area. This sample size has limited power to identify significant associations between dimensions of interest. This is particularly the case in the analyses with a large number of variables, and when data are segmented into several groups to interpret the moderating effects.

Fourth, the findings of this study cannot be generalized to other populations, such as couples from other cultures. The current study was conducted with a Western population; therefore, the results may not apply to other countries or possibly even immigrant families living in Canada. Some research suggests that the same parenting behaviour may impact children's behaviour differently depending on the cultural context (e.g., Ho, Bluestein, & Jenkins, 2008). Given the lack of research on diverse cultures, future research should explore the link between exposure to parental aggression and childhood internalizing and externalizing behaviour among diverse cultural groups, as well as the potential moderating effects of parenting behaviours.

Future Directions

Despite these limitations, the findings of the present study provide several important advances to what is known about the associations between exposure to parental aggression and early childhood functioning. This study highlights the importance of exploring other moderators of the intergenerational transmission of aggression in addition to parenting style, parenting competence, and parenting alliance, particularly for exposure to physical aggression as these parenting variables were not significant moderators for this form of aggression. Furthermore, other parenting moderators for fathers (e.g., parental satisfaction, parental stress, and parent-child attachment) should be examined, given that the parenting behaviours examined in this study were unimportant in the intergenerational transmission of aggression for fathers. Finally, this research should be replicated given that, to my knowledge, it is the first study to demonstrate that strong parenting abilities may strengthen the intergenerational transmission of aggression in children as early as two years old.

Conclusion

In conclusion, this study contributes to a better understanding of the prevalence and possible childhood consequences of partner aggression. Importantly, this research considered the implications of childhood exposure to both psychological and physical partner aggression. By examining child gender as a moderator of the link between exposure to aggression and childhood behaviours (internalizing and externalizing symptoms), it is clear that exposure to aggression impacts children differently for some childhood behaviours. Furthermore, by examining the moderating influence of parenting quality (parenting style, parenting competence, and parenting alliance) on the

intergenerational transmission of aggression, it is evident that various forms of parenting quality differentially interact with exposure to aggression to predict childhood aggressive behaviour, although not in the direction that was expected. The findings of this study can be applied to prevention and treatment programs focused on curtailing childhood exposure to partner aggression and the intergenerational transmission of aggression.

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Appendix A

Conflict Tactics Scales Revised (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996)

0=never, 1=1 time, 2=2 times, 3=3-5 times, 4=6-10 times, 5=11-20 times, 6=more than 20 times

Physical Aggression

1. Have you thrown something at your partner that could hurt?
2. Has your partner thrown something at you that could hurt?
3. Have you twisted your partner's arm or hair?
4. Has your partner twisted your arm or hair?
5. Have you pushed or shoved your partner?
6. Has your partner pushed or shoved you?
7. Have you used a knife or gun on your partner?
8. Has your partner used a knife or gun on you?
9. Have you punched or hit your partner with something that could hurt?
10. Has your partner punched or hit you with something that could hurt?
11. Have you chocked your partner?
12. Has your partner choked you?
13. Have you slammed your partner against a wall?
14. Has your partner slammed you against a wall?
15. Have you beat up your partner?
16. Has your partner beat you up?
17. Have you grabbed your partner?
18. Has your partner grabbed you?
19. Have you slapped your partner?
20. Has your partner slapped you?
21. Have you burned or scalded your partner on purpose?
22. Has your partner burned or scaled you on purpose?
23. Have you kicked your partner?
24. Has your partner kicked you?

Psychological Aggression

1. Have you insulted or sworn at your partner?
2. Has your partner insulted or sworn at you?
3. Have you called you called your partner fat or ugly?
4. Has your partner called you fat or ugly?
5. Have you destroyed something belonging to your partner?
6. Has your partner destroyed something belonging to you?
7. Have you shouted or yelled at your partner?
8. Has your partner shouted or yelled at you?
9. Have you stomped out of the room or house or yard during a disagreement?
10. Has your partner stomped out of the room or house or yard during a disagreement?

11. Have you accused your partner of being a lousy lover?
12. Has your partner accused you of being a lousy lover?
13. Have you done something to spite your partner?
14. Has your partner done something to spite you?
15. Have you threatened to hit or throw something at your partner?
16. Has your partner threatened to hit or throw something at you?

Appendix B

The Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993)

Instructions: At one time or another, all children misbehave or do things that could be harmful, that are "wrong," or that parents don't like. Examples include:

hitting someone	whining	not picking up toys
forgetting homework	throwing food	refusing to go to bed
having a tantrum	lying	wanting a cookie before dinner
running into the street	arguing back	coming home late

Parents have many different ways or styles of dealing with these types of problems. Below are items that describe some styles of parenting.

For each item, fill in the circle that best describes your style of parenting during the past two months with **the child indicated above**.

SAMPLE ITEM:

At meal time…

I let my child decide how much to eat. **0---0---●---0---0---0---0** I decide how much my child eats.

1. **When my child misbehaves…**
   I do something right away. **0---0---0---0---0---0---0** I do something about it later.
2. **Before I do something about a problem…**
   I give my child several reminders or warnings. **0---0---0---0---0---0---0** I use only one reminder or warning.
3. **When I'm upset or under stress…**
   I am picky and on my child's back. **0---0---0---0---0---0---0** I am no more picky than usual.
4. **When I tell my child not to do something…**
   I say very little. **0---0---0---0---0---0---0** I say a lot.
5. **When my child pesters me…**
   I can ignore the pestering. **0---0---0---0---0---0---0** I can't ignore pestering.
6. **When my child misbehaves…**
   I usually get into a long argument with my child. **0---0---0---0---0---0---0** I don't get into an argument.

7. I threaten to do things that…

I am sure I can carry out. **0---0---0---0---0---0---0** I know I won't actually do.

8. I am the kind of parent that…

set limits on what my child is allowed to do. **0---0---0---0---0---0---0** lets my child do whatever he/she wants.

9. When my child misbehaves…

I give my child a long lecture. **0---0---0---0---0---0---0** I keep my talks short and to the point.

10. When my child misbehaves…

I raise my voice or yell. **0---0---0---0---0---0---0** I speak to my child calmly.

11. If saying "No" doesn't work right away…

I take some other kind of action. **0---0---0---0---0---0---0** I keep talking and try to get through to my child.

12. When I want my child to stop doing something…

I firmly tell my child to stop. **0---0---0---0---0---0---0** I coax or beg my child to stop.

13. When my child is out of my sight…

I often don't know what my child is doing. **0---0---0---0---0---0---0** I always have a good idea of what my child is doing.

14. After there's been a problem with my child…

I often hold a grudge. **0---0---0---0---0---0---0** things get back to normal quickly.

15. When we're not at home…

I handle my child the way I do at home. **0---0---0---0---0---0---0** I let my child get away with a lot more.

16. When my child does something I don't like…

I do something about it. every time it happens. **0---0---0---0---0---0---0** I often let it go.

17. When there is a problem with my child…

things build up and I do things I don't mean to do. **0---0---0---0---0---0---0** things don't get out of hand.

18. When my child misbehaves, I spank, slap, grab, or hit my child…

never or rarely. **0---0---0---0---0---0---0** most of the time.

19. When my child doesn't do what I ask…

I often let it go or end up doing it myself. **0---0---0---0---0---0---0** I take some other action.

20. When I give a fair threat or warning…

I often don't carry it out. **0---0---0---0---0---0---0** I always do what I said.

21. If saying "No" doesn't work…

I take some other kind of action. **0---0---0---0---0---0---0** I offer my child something nice so he/she will behave.

22. When my child misbehaves…

I handle it without getting upset. **0---0---0---0---0---0---0** I get so frustrated or angry that my child can see I'm upset

23. When my child misbehaves…

I make my child tell me why he/she did it. **0---0---0---0---0---0---0** I say "No" or take some other action.

24. If my child misbehaves and then acts sorry…

I handle the problem like I usually would. **0---0---0---0---0---0---0** I let it go that time.

25. When my child misbehaves…

I rarely use bad language or curse. **0---0---0---0---0---0---0** I almost always use bad language.

26. When I say my child can't do something…

I let my child do it anyway. **0---0---0---0---0---0---0** I stick to what I said.

27. When I have to handle a problem…

I tell my child I'm sorry about it. **0---0---0---0---0---0---0** I don't say I'm sorry.

28. When my child does something I don't like, I insult my child, say mean things, or call my child names…

never or rarely. **0---0---0---0---0---0---0** most of the time.

29. If my child talks back or complains when I handle a problem…

I ignore the complaining and stick to what I said. **0---0---0---0---0---0---0** I give my child a talk about not complaining.

30. If my child gets upset when I say "No"…

I back down and give in to my child. **0---0---0---0---0---0---0** I stick to what I said.

Appendix C

The Parenting Sense of Competence Scale (PSOC; Johnston & Mash, 1989)

Please rate how you feel about being a parent.

Responses:

6=Strongly agree
5=Agree
4=Somewhat Agree
3=Somewhat Disagree
2=Disagree
1=Strongly Disagree

1. The problems of taking care of an infant are easy to solve once you know how your actions affect a child, an understanding I have acquired.
2. Even though being a parent could be rewarding, I am frustrated now while my child is at his/her present age.
3. I go to bed the same way I wake up in the morning: feeling I have not accomplished a whole lot.
4. I do not know why it is, but sometimes when I'm supposed to be in control, I feel more like the one being manipulated.
5. My parents were better prepared to be a good parent than I am.
6. I would make a fine model for a new parent to follow in order to learn what they would need to know in order to be a good parent.
7. Being a parent is manageable, and any problems are easily solved.
8. A difficult problem in being a parent is not knowing whether you're doing a good job or a bad one.
9. Sometimes I feel like I'm not getting anything done.
10. I meet my own personal expectations for expertise in caring for my child.
11. If anyone can find the answer to what is troubling my child, I am the one.
12. My talents and interests are in other areas, not in being a parent.
13. Considering how long I've been a parent, I feel thoroughly familiar with this role.
14. If being a parent of a child were only more interesting, I think I would be motivated to do a better job as a parent.
15. I honestly believe I have all the skills necessary to be a good parent to my child.
16. Being a parent makes me tense and anxious.
17. Being a good parent is a reward in itself.

Appendix D

The Parenting Alliance Inventory (PAI; Abidin & Brunner, 1995)

Directions: The questions listed below concern what happens between you and your child's other parent, or the other adult most involved in the care of your child. While you may not find an answer which exactly describes what you think, please circle the answer that comes closest to what you think. Your first reaction should be your answer.

5 = Strongly Agree
4 = Agree
3 = Not Sure
2 = Disagree
1 = Strongly Disagree

1. My child's other parent enjoys being alone with our child
2. During pregnancy, my child's other parent expressed confidence in my ability to be a good parent.
3. When there is a problem with our child, we work out a good solution together.
4. My child's other parent and I communicate well about our child.
5. My child's other parent is willing to make personal sacrifies to help take care of our child.
6. Talking to my child's other parent about our child is something I look forward to.
7. My child's other parent pays a great deal of attention to our child.
8. My child's other parent and I agree on what our child should and should not be permitted to do.
9. I feel close to my child's other parent when I see him/her play with our child.
10. My child's other parent knows how to handle children well.
11. My child's other parent and I are a good team.
12. My child's other parent believes I am a good parent.
13. I believe my child's other parent is a good parent
14. My child's other parent makes my job of being a parent easier.
15. My child's other parent sees our child in the same way I do.
16. My child's other parent and I would basically describe our child in the same way.
17. If our child needs to be punished, my child's other parent and I usually agree on the type of punishment.
18. I feel good about my child's other parent's judgment about what is right for our child.
19. My child's other parent tells me I am a good parent.
20. My child's other parent and I have the same goals for our child.

Appendix E

Child Behaviour Checklist (CBCL; Achenbach, 1991)

Below is a list of items that describe children. Please respond to these items to reflect *your* view of your child's behaviour even if other people might not agree. For each item, rate how your child is ***now or within the past two months***.

0= Not True (as far as you know) 1 = Somewhat or Sometimes True 2 = Very True or Often True

Sample items for each subscale of the CBCL:

Anxiety

1. Doesn't want to go out of home
2. Shows panic for no good reason
3. Nervous, highstrung, or tense

Withdrawal

1. Doesn't answer when people talk to him/her
2. Refuses to play active games
3. Shows little affection towards people

Somatic Complaints

1. Aches or pains (without medical cause; ***do not*** include stomach or headaches)
2. Diarrhea or loose bowels (when not sick)
3. Nausea, feels sick (without medical cause)

Sleep Problems

1. Has trouble getting to sleep
2. Nightmares
3. Resists going to bed at night

Affective Symptoms

1. Cries a lot
2. Looks unhappy without good reason
3. Overtired

Oppositional Behaviour

1. Disobedient
2. Angry moods
3. Stubborn, sullen, or irritable

Aggressive Behaviour

1. Hits others
2. Physically attacks people
3. Destroys things belonging to his/her family or other children