

RESEARCH ARTICLE

Intimate Partner Violence Victimization, Maternal harsh discipline, and the Mediating Impact of caregiving helplessness and parental control

Karin Grip

Author's affiliation:

PhD, Licensed psychologist and psychotherapist

University of Gothenburg, Department of Psychology, Sweden

E-mail: karin.grip@psy.gu.se

Abstract

The current study involved a sample of 142 mothers subjected to intimate partner violence (IPV). The study examined the relationship between trauma symptoms and frequency of harsh discipline and tested the indirect effects of perceived caregiving helplessness and parental control of children's behavior on this relationship. Using the newly developed Caregiving Helplessness Questionnaire to measure caregiving helplessness we identified potential processes by which trauma symptoms may be associated with the frequency of harsh discipline. Taken together, perceived caregiving helplessness and lack of parental control of children's behavior mediated the effect of trauma symptoms on harsh discipline. Both lack of perceived parental control and caregiving helplessness had specific indirect effects on the relationship between trauma symptoms and the frequency of harsh discipline.

Keywords: Intimate partner violence, mental health, mothering, parenting, parental control, physical assault, caregiving helplessness, indirect effects, mediation

1.1. Intimate partner violence affecting mothers

Intimate partner violence (IPV) continues to affect large proportions of mothers and children around the globe and mothers of young children are especially afflicted (Tjaden & Thoene, 2000). Nearly 40% of female victims of IPV have children in the household (Catalano, 2007), which indicates the importance of examining parenting approaches in mothers subjected to IPV.

Mothers subjected to IPV parent under stress and struggle to maintain their capacity to parent despite the strain of violence. Only during the last decade has research begun to focus specifically upon the effects of IPV on mothering. The primary aim of the current study was to test whether trauma symptoms in the mother had an effect (direct and/or indirect) on the degree of harsh discipline toward the child via perceived caregiving helplessness and parental control of child's behavior.

2.1. Parenting

Within a general multivariate ecological framework, social context, child characteristics, and parental personality and knowledge have all been found to shape parents' beliefs and behaviors (Bronfenbrenner & Morris, 2006; Lerner, 2002). Parenting behaviors are determined by multiple factors including (a) characteristics of the parent (e.g. mental health), (b) characteristics of the child (e.g. temperament), and (c) contextual factors such as unemployment and functioning of the marital relationship (Belsky, 1984). Contextual sources of stress and support are proposed to influence parenting either directly or indirectly by first affecting the parent's mental health. Parenting practices are those behaviors including disciplinary strategies that parents use to attain specific socialization goals in their children (Darling & Steinberg, 1993). Harsh disciplinary behaviors including yelling, screaming, threatening, and hitting present a risk to healthy child development (Harper, Brown, Arias, & Brody, 2006; Renk, McKinney, Klein, & Oliveros, 2006). Harsh discipline strategies also seem to risk evolving into child maltreatment (Fontes, 2005). Mental health problems, young age, and various indicators of low socioeconomic status have repeatedly been associated with risk for maternal harsh discipline (Barkin, Scheindlin, Ip, Richardson, & Finch, 2007; Jansen *et al.*, 2012).

2.2. Parents' perceptions of the level of control over their lives might be important for their parenting (Bandura, 1997; Skinner, 1996). Parental locus of control refers to whether parents perceive themselves to be efficacious in raising their children or not. How a parent represents the relationship with her/his child and parents' perceived locus of control in childrearing situations are factors likely to affect parenting and disciplining behaviors. Parents with an internal parental locus of control believe they have a powerful influence on their children

(Campis, Lyman, & Prenticedunn, 1986); therefore, they approach parenting using problem-solving strategies, setting appropriate boundaries, rewarding good behavior, and correcting poor behavior. Parents with an external parental locus of control believe they have little ability to control their children because of outside influences, including peer groups, society, luck, and factors inherent in the child, such as temperament, personality, and/or developmental stage (Campis *et al.*, 1986). Parental control beliefs has been linked to parental warmth and positive discipline practices (Jones & Prinz, 2005).

2.3. An important component of parenting is the caregiving system. The caregiving system is a biologically based motivational system that guides parents' protective responses to their children and shapes parental sensitivity and responsiveness to their children's needs. Parents develop an internal representation of their caregiving relationship with their child (Aber, Belsky, Slade, & Crnic, 1999), influenced by their own attachment experiences in childhood, the particular child, and the family and cultural contexts (George & Solomon, 1996).

2.4. Caregiving models characterized by helplessness involve parents' failed struggles to control or manage both their children's and their own distress or emotions (Solomon & George, 2011). Caregiving helplessness has been associated with parenting behaviors that are frightening or frightened (Hesse & Main, 2006; Lyons-Ruth & Jacobvitz, 2008). Frightening or frightened interactive behaviors occur, for example, when the parent enters a dissociative state, suffers role confusion or role reversal with the child, or becomes threatening to the child. Followed longitudinally, role confusion in infants' and adolescents' relationships with their mothers has been associated with mothers' self-reported and observer-reported helplessness in the parenting role (Vulliez-Coady, Obsuth,

Torreiro-Casal, Ellertsdottir, & Lyons-Ruth, 2013). Mothers who are traumatized can also engage in frightened or frightening behaviors with the child in response to memories or ideas related to trauma (Lyons-Ruth & Jacobvitz, 2008).

3.1. Parenting and interpersonal aggression and violence

Research has shown that interparental conflicts are associated with poor parenting (Erel & Burman, 1993; Krishnakumar & Buehler, 2000), in that strain, aggression, and conflicts in the interparental relationship tend to negatively influence the parent-child relationship (i.e., the spillover hypothesis). IPV is often a source of repeated stress that can influence parenting both directly and indirectly through compromising the parent's mental health. The detrimental consequences of IPV on women's mental and physical health are well documented (Bonomi, Anderson, Rivara, & Thompson, 2007; Campbell et al., 2002; Devries et al., 2011; Ellsberg et al., 2008; Golding, 1999; Jones, Hughes, & Unterstaller, 2001). IPV has a significant impact on women's mental health that can affect the quality of their parental care.

3.2. One indicator consistently shown to increase the risk of child abuse is IPV (Jouriles, McDonald, Slep, Heyman, & Garrido, 2008). Results regarding the parenting capacity of mothers subjected to IPV are however mixed. IPV has been linked to mothers' parenting and parenting-related constructs (e.g., parenting stress), which may influence child outcomes. Some studies report that the mother's capacity to parent is negatively affected by IPV (Holmes, 2013; Kelleher et al., 2008; Timmer, Thompson, Culver, Urquiza, & Altenhofen, 2012). Whether or not IPV is ongoing and the time elapsed since IPV are factors, other studies have found important in affecting parenting quality. In one study,

ongoing, but not past, IPV was associated with negative parenting (Levendosky, Leahy, Bogat, Davidson, & von Eye, 2006), and another study revealed that mothers with past IPV scored higher on parenting quality (measured on observed behaviors of spanking, parental responsiveness, and learning stimulation) than mothers with ongoing abuse (Casanueva, Martin, & Runyan, 2009). In Japan, several parenting behaviors (neglect, praise, and play) in mothers improved when they separated from their violent partner, but their psychological abuse of the child increased (Fujiwara, Okuyama, & Izumi, 2012). Other studies indicate that mothers may compensate for the insecurity caused by IPV by providing high levels of care and nurturance. These studies have shown that abused women were just as affectionate, proactive, and capable of providing structure for their children as mothers who had not been abused (Letourneau et al., 2013; Letourneau, Fedick, & Willms, 2007; Levendosky, Huth-Bocks, Shapiro, & Semel, 2003). A study consistent with a compensating perspective on parenting showed that mothers who had experienced more IPV at baseline assessment tended to be warmer, more accepting, and firmer in their parenting when assessed a few months later and their children displayed fewer problem behaviors (Greeson et al., 2014).

3.3. As reported above, in homes where IPV occurs children have a greater risk of being victims of child abuse than children in families without violence (Jouriles et al., 2008; Knickerbocker, Heyman, Smith, Jouriles, & McDonald, 2007). In a context of cumulative stress, husband-to-wife aggression has been linked to the potential for child abuse, i.e., behaviors associated with the risk of physically maltreating the children, in both husbands and wives (Margolin et al., 2003). Fathers who are perpetrators of IPV are more likely to be violent toward their own children and those of their wives

or partners. However, sometimes mothers who are victims of IPV abuse their children (Peled, 2011). Some researchers have tried to explain this phenomenon by citing either the toll that IPV and the stress takes on the mothers and their coping resources (Kerig & Fedorowicz, 1999) or their diminished tolerance for, or ability to manage, parenting stress (Coohey, 2004). Others have suggested that mothers might hit their children out of frustration with their own abuse (Appel & Holden, 1998; Coohey, 2004), and still others posit violence as the mother's attempt to reduce negative child behaviors that might annoy the partner and give rise to further IPV (Peled, 2011). IPV may therefore be seen to increase the risk for negative psychological responses in the victim that, ultimately, promote harsh discipline toward the child.

3.4. Rodriguez found depression, anxiety, and attachment insecurity were significantly associated with the potential for child abuse in mothers who had suffered IPV (Rodriguez, 2006). Another study found that mothers subjected to IPV had a heightened risk for maltreatment of their children that was independent of the impact of IPV on their mental health (Taylor, Guterman, Lee, & Rathouz, 2009). In one of the few studies of the indirect effects of IPV on the psychological and physical abuse of children, Juby and colleagues found that mothers subjected to IPV were more likely than other mothers to abuse their children. IPV victimization had a direct as well as an indirect effect on psychological abuse and an indirect effect on physical abuse. The relationship between IPV victimization and physical abuse of the child was fully mediated through family disruptions (Juby, Downs, & Rindels, 2013).

The spillover theory is often used to explain the positive relationship between IPV and parent-to-child violence (Erel & Burman, 1993; Margolin, Gordis, Medina, & Oliver,

2003). This study set out to investigate how harsh parenting in mothers stressed by IPV, was related their trauma symptoms, perceived control in the parental role and caregiving helplessness.

Study aims

The primary purpose of the current study was to test whether trauma symptoms had a direct and/or indirect effect on frequency of harsh discipline, via perceived caregiving helplessness and parental control of children's behavior. It was hypothesized that more trauma symptoms would be positively related to higher levels of perceived caregiving helplessness and greater lack of parental control. It was expected that as trauma symptoms increased, the mothers would perceive higher caregiving helplessness and greater lack of parental control of their children's behavior, and these would be related to an increase in frequency of harsh discipline.

Method

Data for the current study was collected as part of an evaluation commissioned by the Swedish National Board of Health and Welfare and conducted between 2008 and 2011 of interventions for children exposed to IPV and their mothers. A subsample of 142 mothers completing the third assessment round constitutes the present sample. The mothers from the third data collection wave were chosen because they were at that time asked to self-rate their perceived caregiving helplessness and parental control in addition to the outcome measures used in the evaluation study.

Procedure

In the evaluation study, IPV was defined as self-reported "behaviors directed to the mother by a current or former male partner of hers that threatened, attempted, or actual-

ly inflicted psychological or physical harm.” There were three exclusion criteria: (1) more than 3 years had passed since the mother was subjected to IPV, (2) the mother was not able to conduct the interview and self-ratings in Swedish or English, and (3) she did not have children aged 3 to 13 years. In all, 16 units (4 mental health service and 12 community-based social service units) offering group or individual support to children exposed to IPV and their mothers were included. Most of the units were small, with staffs of only two to six. Mothers in contact with the units were informed about the research project by unit staff. If the mother was interested in taking part she allowed the unit staff to give her contact information to the research group. The research group then contacted the mother with additional verbal and written information. If the mother agreed to take part in the research, a meeting was scheduled. Mothers’ interviews and ratings were obtained before or in proximity to the start of support (pretest), after six months (post-test), and a year after study entry (follow-up). Assessments were conducted by the research group’s licensed psychologists or social workers. The study was approved by the Regional Ethics committee in Gothenburg (Dnr 565-08).

Participants

The 142 mothers in the sample had lived in a violent relationship for an average of 7 years (range <1–19 years). Nearly half of the mothers had ≥ 12 years of education, and their socioeconomic positions as rated on the Hollingshead Index (Hollingshead, 1975) were lower than that of Swedish women in the general population. All but 8

of the mothers regarded their relationship with the perpetrator as having ended and none still lived with the perpetrator. For most (60%) the physical IPV had occurred more than a year prior to study entry, but 11 mothers said at the third assessment that they had been subjected to physical IPV during the last year (Grip & Broberg, 2013). In 87% of cases, the mother’s assailant was the biological father of her child. A majority of the children did not have any contact nor had a very sporadic contact with the perpetrator, but 6 children were reported to have daily contact (Table 1). The vast majority of mothers ($n=135$) had received some kind of professional support for themselves and their children in the preceding year, (7 mothers had received between one or two sessions which we did not consider as taking part in professional support).

The 142 mothers who took part in the third wave of data collection were compared with the initial sample of 219 mothers on socioeconomic position, education, number of children, age, and number of years with violence. Mothers in the present sample had higher socioeconomic position ($t = 3.79, p < .05$), were more highly educated ($t = 3.16, p < .05$), had fewer children ($t = -2.59, p < .05$), and were older ($t = 2.08, p < .05$), but on average had lived with IPV for as long as the non-completing mothers. Of the 142 mothers, 8 had missing items or one missing instrument. Attrition was tested using Little’s missing completely at random (MCAR) test for all the independent and dependent variables used in analysis (Little, 1988). The test revealed that means, covariances, and correlations were all non-significant, indicating that the missed values were MCAR ($p = 0.46$).

Table 1. Characteristics of the sample (n = 142)

	<i>Freq (%)</i>
<i>Origin</i>	
Born in Sweden or Nordic country	109 (76.80)
Born in Europe	8 (5.60)
Born outside Europe	25 (17.60)
<i>Educational level</i>	
9 years or less	16 (11.10)
11–12 years	57 (40.20)
University 1–2 years	37 (26.10)
University > 2 years	32 (22.60)
<i>Occupation</i>	
Working	88 (62.00)
Unemployed	11 (7.70)
Sick-leave > 6 months	18 (12.70)
Student	12 (8.50)
Parental leave	8 (5.60)
Other	5 (3.5)
<i>Custody of child(ren)</i>	
Shared	80 (56.3)
Mother	58 (40.8)
Father	1 (0.7)
Other	3 (2.1)
<i>Physical contact between child(ren) and perpetrator</i>	
Never/almost never	70 (49.3)
Rarely	10 (7.0)
≥ once every 2 months	6 (4.2)
≥ once a week	50 (35.2)
Daily	6 (4.2)
	M (SD)
Number of children	2.08 (1.01)
Socioeconomic position	32.45 (14.61)
Age	36.54 (6.34)

Measures

Mothers were asked to complete the revised Conflict Tactics Scales (CTS2) (Straus, Hamby, BoneyMcCoy, & Sugarman, 1996) regarding violent tactics directed at her

from her partner or former partner during the last year. Only the 39 statements assessing victimization by violence were administered to the participants. Mothers estimated the prevalence with which their partners used different conflict tactics with them and

responses for this study were coded as had ever happened (1) and had never happened (0).

Trauma symptoms were assessed on the Impact of Event Scale–Revised (IES-R) (Creamer, Bell, & Failla, 2003), which is a 22-item self-report inventory. The frequency of symptoms was rated on a 5-point scale ranging from (0) “not at all” to (4) “extremely often”, ($\alpha = .93$). A suggested cut-off score for having symptoms in the clinical range and indicating a possible post-traumatic stress disorder is 33 points of a maximum 88, and 33% of the mothers had symptoms in this clinical range even one year after being enrolled in support services.

The newly developed Caregiving Helplessness Questionnaire (CHQ) (Solomon & George, 2011), was used to identify dysregulated caregiving. The 25 items concern how the mother feels about her relationship with her child. Examples of statements are “When I am with my child, I often feel out of control,” “My child hits, kicks, or bites me,” and “My child is very sensitive to the feelings and needs of others.” The higher the ratings, the higher the perceived helplessness. The scale has three subscales: helplessness ($\alpha = .85$), fear ($\alpha = .66$), and childcare ($\alpha = .64$). Coefficient α for the total scale was .80. Self-report assessment of caregiving helplessness with the CHQ has been associated with observer-based ratings of helplessness indicated by role confusion in infants and adolescents (Solomon & George, 2011; Vulliez-Coady *et al.*, 2013). Because there was no available Scandinavian comparison group, mothers in the present study were compared to a group of American mothers taking part in the psychometric testing of the CHQ (Solomon & George, 2011).

The Parental Locus of Control (PLOC) scale (Campis *et al.*, 1986) assesses a parent’s belief in their ability to direct, influ-

ence, and have an impact on their child. We used one 10-item subscale of the PLOC measuring the mothers’ perceived parental control of their children’s behavior ($\alpha = .87$). This subscale has been shown to discriminate most significantly between parents of children with behavior difficulties and parents of children without identified problems (Campis *et al.*, 1986). The items are rated on a 5-point scale from strongly disagree (1) to strongly agree (5). Items included are “It is often easier to let my child have his/her way than to put up with a tantrum,” “My child’s behavior is sometimes more than I can handle,” and “I find that sometimes my child can get me to do things I really do not want to do.” Items were coded so that a high score reflects experiences of low parental control, indicating a feeling of low power in raising the child. The study group was compared to a group of Swedish parents to children in the same age range (Personal communication Broberg, M. 2016).

The Parent-Child Conflict Tactics Scales (CTSPC) (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) contains items on which the parent reports the frequency with which they have engaged in a series of behaviors arising from parent-child conflicts. To indicate harsh discipline this study used the subscale minor physical assaults ($\alpha = .71$). The minor physical assaults subscale includes corporal discipline (e.g. shook the child, hitting on the bottom with the hand or something like a belt or hairbrush, pinching, or slapping on the hand). The subscale of highly aggressive parental behavior in the severe physical assault scale (e.g. hitting the child on some part of the body other than the bottom with something like a belt, hairbrush, stick, or some other hard object, hitting the child with a fist, or kicking the child forcefully), was excluded in analysis due to low alpha coefficient ($\alpha < .60$). The behaviors are rated by frequency as: (0) “never happened,” (1) “once in

the past year,” (2) “twice in the past year,” (3) “3 to 5 times in the past year,” (4) “6 to 10 times in the past year,” (5) “11 to 20 times in the past year,” (6) “more than 20 times in the past year,” and (7) “not in the past year, but it has happened.” Responses are scored based on the frequency range reported by the parent (only if it happened during the last year though): responses of (0), (1), and (2) score 0, 1, and 2, respectively; response (3) for 3–5 times in the past year scores 4; response (4) for 6–10 times 8; response (5) for 11–20 times scores 15; and response (6) for ≥ 20 times scores 25.

Statistical analyses

The alpha level was set to .05 for all of the inferential tests. Prior to analysis, the data were screened for missing values and outliers. Multiple imputations for missing data were conducted using SPSS. The continuous variables included in the study were used to estimate the missing values. We conducted Pearson product moment correlations between study variables and independent *t*-tests to compare our sample with comparison groups. To address the aim of the study, a bootstrapping multiple mediation method (Preacher & Hayes, 2008) was used to estimate direct and indirect effects. This approach is recommended for small samples. Other advantages are that the approach does not require the sampling distribution to be normal, it relies on fewer inferential tests than the traditional Baron and Kenny approach (Baron & Kenny, 1986), thereby lowering the chances of a Type I error, and it allows for the testing of multiple mediators simultaneously, thereby reducing parameter bias (Hayes, 2009; Preacher & Hayes, 2004; Zhao, Lynch, & Chen, 2010). Using the SPSS INDIRECT Macro developed by Preacher and Hayes (Preacher & Hayes, 2008), 5,000 bootstrapped samples were drawn to construct bias-corrected (BC) 95% confidence intervals (CIs) to estimate the effect for the

model tested. As in Baron and Kenny’s (1986) method, the macro first computes the effects of the independent variable (trauma symptoms) on the proposed mediators (perceived caregiving helplessness and perceived parental control of child’s behavior; path a), the effects of the proposed mediators on the dependent variable (frequency of harsh discipline; path b), and the total (path c) and direct effects (path c’) of the independent variable on the dependent variable. It then uses bootstrapping to estimate the total and specific indirect effects (ab) of the independent variable on the dependent variable through the proposed mediators. In the analysis, the indirect effects are significant if the 95% BC CIs for the indirect effects do not include 0 (Preacher & Hayes, 2004). Effect size R^2 was presented using the Cohen’s (1988) benchmark range of effect sizes: < 0.13 small range, between 0.13–0.26 medium range, and > 0.26 large range).

Results

Means and standard deviations for the study group appear in Table 2. In all, 35% of the mothers had been subjected to psychological IPV during the study year, and only 8% ($n = 11$) reported at the third assessment round that they had been physically assaulted again during the study year. As a group, the mothers did not exceed the cutoff score for trauma symptoms (IES-R), however a third (33%) did have symptoms in the clinical range indicating a possible need for treatment of their trauma symptoms. Mothers in the present sample showed a higher total score on perceived caregiving helplessness (CHQ) ($t_{(348)} = 8.46, p < .05$) than a similar group of American mothers (there was no similar Scandinavian group for comparison), but their perceived parental control (PLOC) did not differ from Swedish parents in the general population ($t_{(549)} = 1.14, p = \text{n.s.}$). Nearly half of the mothers (46%) stated that they

had reacted to conflicts with their child by using minor physical assault in the last year such as a slap on the hand, arm, or leg or shaking or pinching the child. The frequen-

cy for those who used harsh discipline varied from one to three times during the last year to regular use > 20 times or more.

Table 2. Descriptive statistics (mean and standard deviation) for study measures.

Instrument	Study sample
	<i>M (SD)</i>
IES-R total	
<i>Completer sample</i>	27.70 (18.89)
<i>Multiple imputations sample</i>	27.62 (18.82)
CHQ total	
<i>Completer sample</i>	43.04 (9.15)
<i>Multiple imputations sample</i>	43.02 (9.06)
PLOC parental control	
<i>Completer sample</i>	22.22 (7.81)
<i>Multiple imputations sample</i>	22.28 (7.81)
CTSPC harsh discipline	
<i>Completer sample</i>	2.38 (6.21)
<i>Multiple imputations sample</i>	2.43 (6.18)

Table 3. Pearson bivariate correlation matrix for study variables.

	1	2	3	4	5
1. Prevalence violence exposure (CTS2)	-	0.08	0.19*	0.16	0.10
2. Trauma symptoms (IES-R)		-	0.40**	0.24**	0.19*
3. Caregiving helplessness (CHQ)			-	0.60**	0.37**
4. Parental control (PLOC)				-	0.29**
5. Harsh discipline (CTSPC)					-

As indicated in Table 3, the independent variable (trauma symptoms [IES-R]), was significantly related to the proposed mediators (perceived caregiving helplessness [CHQ] and parental control [PLOC]), and to the dependent variable (harsh discipline [CTSPC]). Perceived caregiving helplessness and parental control of children's behavior were both positively associated with the dependent variable, harsh discipline. Prevalence of mother's exposure to violence in the last year (CTS2) was related

to caregiving helplessness, but not to trauma symptoms, parental control, or the use of harsh discipline (Table 3), and was therefore not used in further analysis.

The figure (Figure 1) presents the direct effects of trauma symptoms on each proposed mediator (path a) and the direct effects of the proposed mediators on frequency of harsh discipline (path b). We found that the total effect of trauma symptoms on frequency of harsh discipline (path c) was significant, coefficient = .07, $p < .05$. How-

ever, once mediators were included in the model (path c'), the direct effect of trauma symptoms became insignificant ($\alpha = .03$, $p > .05$), consistent with Baron and Kenny's (1986) criteria for mediation. The result for the whole model tested was significant ($F [3; 138] = 8.15$, $p < .01$, $R^2 = .15$, Adj. $R^2 = .13$). The effect size R^2 (.15) was in the medium range.

Preacher and Hayes' bootstrapping of indirect effects estimated a total indirect effect of .04 (95 % BC CI .0146 – .0826), which indicates that trauma symptoms influence the frequency of harsh discipline through

the combined effect of perceived caregiving helplessness and lack of parental control. We then examined the specific indirect effects of trauma symptoms through caregiving helplessness and parental control, to examine if both, or only one of the two proposed mediators, contributed to the mediational model. Point estimates and BC CIs, presented in Table 4, reveal that parental control and caregiving helplessness both had BC CIs that did not cross 0. In sum, the result suggests with 95% CI that trauma symptoms influence the frequency of harsh discipline, through parental control and caregiving helplessness together.

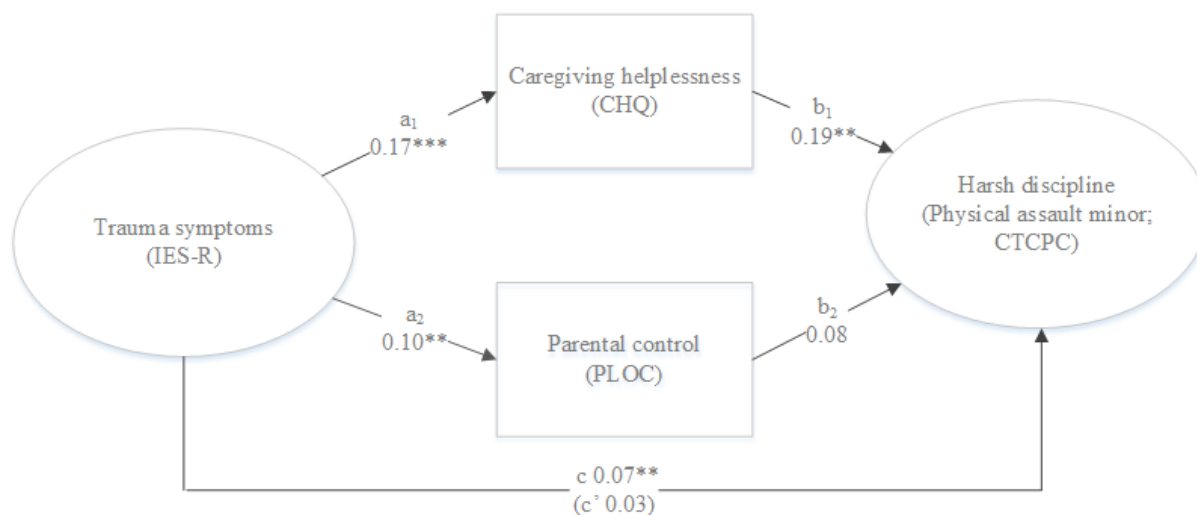


Figure 1. Full model. All path values represent unstandardized regression coefficients. The path values on the left arrows show the effect of the independent variable on the proposed mediators. The path values on the right arrows represent show the direct effects of the two proposed mediators on the dependent variable, frequency of harsh discipline. The first of the bottom two coefficients represents the full effect of trauma symptoms on the dependent variable, and the value in parenthesis represents the direct effect of trauma symptoms after the proposed mediators of caregiving helplessness and parental control are included in the model. The fact that the full effect was significant, and the direct effect was not suggesting that trauma symptoms influence the frequency of harsh discipline indirectly through the mediators. Note. * $p < 0.05$. ** $p < 0.01$, *** $p < 0.001$.

Table 4. Indirect effects of trauma symptoms on frequency of harsh discipline mediated by perceived caregiving helplessness and parental control of children's behavior.

	Point estimate	SE	Bootstrapping	
			Lower BC 95 % CI	Upper BC 95% CI
Total	.0401	.0170	.0146	.0826
Perceived caregiving helplessness (CHQ)	.0319	.0163	.0085	.0745
Parental control (PLOC)	.0082	.0055	.0004	.0232

Note. BC= Bias corrected.

Discussion

The current study examined the relationship between trauma symptoms and frequency of harsh discipline and tested the indirect effects of perceived caregiving helplessness and parental control of children's behavior on this relationship. The findings shed light on potential processes by which trauma symptoms may be associated with frequency of harsh discipline. Taken as a set, perceived caregiving helplessness and lack of parental control mediated the effect of trauma symptoms on harsh discipline. The finding suggests that mothers subjected to IPV who have more trauma symptoms may be more likely to experience lack of parental control in their caregiving and caregiving helplessness, and in turn rely more on harsh discipline with their children. Importantly, the results imply that abused women are not a homogenous group. The majority of the mothers had received professional support for themselves and their children in the preceding year and did not have a high level of trauma symptoms, and about half of them reported no use of harsh discipline with their children in the last year.

Because none of the mothers continued to cohabit with the violent partner, the use of harsh discipline is likely not explained as an attempt to reduce negative child behaviors that might annoy the partner and cause further IPV. Rather, it could be explained by

their diminished tolerance for, or ability to manage, parenting stress (Coohey, 2004) or the toll IPV took on their coping resources (Kerig & Fedorowicz, 1999). Many abused mothers encounter a number of stressful circumstances outside the parenting system, such as fewer economic resources and pressures to meet the demands of the violent partner (Letourneau et al., 2011). Indeed, a handful of children had daily contact with the perpetrator, and about a third had some contact at least every second week, and this ongoing contact might have affected and shaped the parenting practices of the mothers.

The usefulness of self-reports of disciplinary practice is limited due to the chance self-report bias. Individuals may represent themselves, intentionally or not, in a favorable or socially desirable manner. Fear of potentially negative consequences from reporting their behaviors can lead to inaccurate responses (Bennett, Sullivan, & Lewis, 2006). Despite the possible effects of social desirability in self-reporting, many of the mothers admitted having used harsh discipline with their child in the previous year, and 46% said that they had used corporal discipline, which puts some of these children at risk of abuse at the hands of their mother. In a Nordic and Swedish context this is a high number given that all forms of corporal punishment of children have been

banned since 1979 (Chapter 6, Section 1, Föräldrabalken).

In summary, our study provided evidence that the majority of mothers did not have clinical levels of trauma symptoms, and the effects of trauma symptoms on parenting may manifest in various forms. As shown in the present study, mothers with higher levels of trauma symptoms may be more inclined to perceive a lack of parental control and helplessness in their caregiving role, which in turn may cause them to use harsh discipline with their children more frequent.

Limitations

The results should be interpreted in light of important study limitations, including a cross-sectional design, which limits our ability to test longitudinal indirect effects and infer causality or determine the temporal relationships between variables of interest. The data were collected from the mothers who completed the third assessment round in the evaluation study, and these mothers were generally older, better educated and had a higher socioeconomic status than those who did not take part in the third assessment. Our sample size was only moderate, and it would be important to replicate these results with a larger number of participants. The statistical method we used, however, employed bootstrapping from 5000 samples lending more confidence to our results. Another significant limitation was the reliance upon self-report measures for all constructs assessed. Future research should include an external assessment of parenting. Further research is recommended to investigate the contribution of trauma symptoms on the formation of women's discipline strategies and perceived parental competency. In addition, research is needed to establish evidence-based interventions that are designed to ameliorate the consequences of IPV trauma experienced by mothers.

Despite the limitations, the findings inform our understanding of how trauma symptoms may contribute to harsh physical discipline via perceived parental control and caregiving helplessness have important implications for future studies and interventions. Pinpointing the specific processes through which trauma symptoms impact parenting practice may stimulate the development of targeted interventions improve those currently in use. These findings may also inform screening tools, allowing mothers with high levels of trauma symptoms, perceived lack of parental control and a helplessness in their caregiving role, to be identified and enrolled in targeted interventions efforts. In conclusion, the findings support the need to targeting the specific processes of parental control perception and caregiving helplessness as potential means to reduce the use of harsh physical discipline by mothers subjected to IPV. Indeed, there is an urgent need for support programs for mothers subjected to IPV that focus on their role as parents and help them to develop more effective parenting behaviors.

Acknowledgements: The Swedish National Board of Health and Welfare.

References

- Aber, J. L., Belsky, J., Slade, A., & Crnic, K. (1999). Stability and change in mothers' representations of their relationship with their toddlers. *Developmental Psychology*, 35(4), 1038-1047. doi: 10.1037//0012-1649.35.4.1038
- Appel, A. E., & Holden, G. W. (1998). The co-occurrence of spouse and physical child abuse: A review and appraisal. *Journal of Family Psychology*, 12(4), 578-599. doi: 10.1037/0893-3200.12.4.578

- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barkin, S., Scheindlin, B., Ip, E. H., Richardson, I., & Finch, S. (2007). Determinants of parental discipline practices: a national sample from primary care practices. *Clinical Pediatrics*, 46(1), 64-69. doi: 10.1177/0069922806292644
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological-research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. doi:10.1037//0022-3514.51.6.1173
- Belsky, J. (1984). The determinants of parenting: a process model. *Child Development*, 55(1), 83-96. doi: 10.1111/j.1467-8624.1984.tb00275.x
- Bennett, D. S., Sullivan, M. W., & Lewis, M. (2006). Relations of parental report and observation of parenting to maltreatment history. *Child Maltreatment*, 11(1), 63-75. doi: 10.1177/1077559505283589
- Bonomi, A. E., Anderson, M. L., Rivara, F. P., & Thompson, R. S. (2007). Health outcomes in women with physical and sexual intimate partner violence exposure. *Journal of Women's Health*, 16(7), 987-997. doi: DOI 10.1089/jwh.2006.0239
- Bronfenbrenner, U & Morris, P.A. (2006). The bioecological model of human development. I: W. Damon & R.M. Lerner (Series editors), *Handbook of child psychology. Vol. XX. Theoretical models of human development* (s. 793–828). New York: Wiley.
- Campbell, J., Jones, A. S., Dienemann, J., Kub, J., Schollenberger, J., O'Campo, P., . . . Wynne, C. (2002). Intimate partner violence and physical health consequences. *Archives of Internal Medicine*, 162(10), 1157-1163. doi: 10.1001/archinte.162.10.1157
- Campis, L. K., Lyman, R. D., & Prentice-Dunn, S. (1986). The parental locus of control scale: development and validation. *Journal of Clinical Child Psychology*, 15(3), 260-267. Doi: 10.1207/s15374424jccp1503_10
- Casanueva, C., Martin, S. L., & Runyan, D. K. (2009). Repeated reports for child maltreatment among intimate partner violence victims: findings from the National Survey of Child and Adolescent Well-Being. *Child Abuse & Neglect*, 33(2), 84-93. doi: 10.1016/j.chiabu.2007.04.017
- Catalano, Shannan. (2007). Intimate partner violence in the United States. <http://bjs.ojp.usdoj.gov/content/pub/pdf/ipvus.pdf>.
- Cohen, J. (1988). *Statistical power analysis for behavioral sciences*: Hillsdale, NJ: Eelbaum.
- Coohey, C. (2004). Battered mothers who physically abuse their children. *Journal of Interpersonal Violence*, 19(8), 943-952. doi: 10.1177/0886260504266886
- Creamer, M., Bell, R., & Failla, S. (2003). Psychometric properties of the Impact of Event Scale - Revised. *Behaviour Research and Therapy*, 41(12), 1489-1496. doi: 10.1016/j.brat.2003.07.010
- Darling, N., & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological*

- Bulletin*, 113(3), 487-496. doi: 10.1037/0033-2909.113.3.487
- Devries, K., Watts, C., Yoshihama, M., Kiss, L., Schraiber, L. B., Deyessa, N., . . . Garcia-Moreno C; WHO Multi-Country Study Team.. (2011). Violence against women is strongly associated with suicide attempts: evidence from the WHO multi-country study on women's health and domestic violence against women. *Social Science & Medicine*, 73(1), 79-86. doi: 10.1016/j.socscimed.2011.05.006
- Ellsberg, M., Jansen, H. A. F. M., Heise, L., Watts, C. H., & Garcia-Moreno, C.;WHO Multicountry Study on Women's Health and Domestic Violence Against Women Study Team. (2008). Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: an observational study. *Lancet*, 371(9619), 1165-1172. doi: 10.1016/S0140-6736(08)60522-X.
- Erel, O., & Burman, B. (1993). *Interrelatedness of marital relations and parent-child relations - a metaanalytic review*. Paper presented at the Biennial Meeting of the Society for Research in Child Development, New Orleans, LA; Mar 25-28, 1993. doi: 10.1037//0033-2909.118.1.108
- Fontes, L. A. (2005). *Child abuse and culture. Working with diverse families*. New York: Guilford.
- Fujiwara, T., Okuyama, M., & Izumi, M. (2012). The impact of childhood abuse history, domestic violence and mental health symptoms on parenting behaviour among mothers in Japan. *Child Care Health and Development*, 38(4), 530-537. doi: 10.1111/j.1365-2214.2011.01272.x
- George, C., & Solomon, J. (1996). Representational models of relationships: links between caregiving and attachment. *Infant Mental Health Journal*, 17(3), 198-216. doi: 10.1002/(sici)1097-0355(199623)17:3<198::aid-imhj2>3.0.co;2-l
- Golding, J. M. (1999). Intimate partner violence as a risk factor for mental disorders: a meta-analysis. *Journal of Family Violence*, 14(2), 99-132. doi: 10.1023/a:1022079418229
- Greeson, M. R., Kennedy, A. C., Bybee, D. I., Beeble, M., Adams, A. E., & Sullivan, C. (2014). Beyond deficits: intimate partner violence, maternal parenting, and child behavior over time. *American Journal of Community Psychology*, 54(1-2), 46-58. doi: 10.1007/s10464-014-9658-y
- Grip, K., & Broberg, A. G. (2013). Utvärdering av stödsatser för mammor som utsatts för våld i en nära relation av en manlig partner [Evaluation of support services for mothers subjected to intimate partner violence]. Gothenburg University: Department of Psychology.
- Harper, F. W. K., Brown, A. M., Arias, I., & Brody, G. (2006). Corporal punishment and kids: how do parent support and gender influence child adjustment? *Journal of Family Violence*, 21(3), 197-207. doi: 10.1007/s10896-006-9018-2
- Hayes, A. F. (2009). Beyond Baron and Kenny: statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4),

- 408-420. doi: 10.1080/03637750903310360
- Hesse, E., & Main, M. (2006). Frightened, threatening, and dissociative parental behavior in low-risk samples: description, discussion, and interpretations. *Development and Psychopathology*, *18*(2), 309-343. doi: 10.1017/s0954579406060172
- Hollingshead, A. B. (1975). *The four factor index of social position*. Unpublished manuscript available from the department of Sociology, Yale university New Haven, CT. Swedish translation and adaption Broberg, A. G. (1984/1992), Department of Psychology, Gothenborg.
- Holmes, M. R. (2013). Aggressive behavior of children exposed to intimate partner violence: an examination of maternal mental health, maternal warmth and child maltreatment. *Child Abuse & Neglect*, *in press*. doi: 10.1016/j.chabu.2012.12.006
- Jansen, P. W., Raat, H., Mackenbach, J. P., Hofman, A., Jaddoe, V. W. V., Bakermans-Kranenburg, M. J., . . . Tiemeier, H. (2012). Early determinants of maternal and paternal harsh discipline: The Generation R Study. *Family Relations*, *61*(2), 253-270. doi: 10.1111/j.1741-3729.2011.00691.x
- Jones, L., Hughes, M., & Unterstaller, U. (2001). Post-traumatic stress disorder (PTSD) in victims of domestic violence: a review of the research. *Trauma, Violence, & Abuse*, *2*(2), 99-119.
- Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, *25*(3), 341-363. doi: 10.1016/j.cpr.2004.12.004
- Jouriles, E. N., McDonald, R., Slep, A. M. S., Heyman, R. E., & Garrido, E. (2008). Child abuse in the context of domestic violence: prevalence, explanations, and practice implications. *Violence and Victims*, *23*(2), 221-235. doi: 10.1891/0886-6708.23.2.221
- Juby, C., Downs, W., & Rindels, B. (2014). Intimate partner violence victimization, maternal child maltreatment, and the mediating impact of changes in family structure. *Child and Adolescent Social Work Journal*, *31*, 237-249 (published online Dec 2013). doi: 10.1007/s10560-013-0318-0
- Kelleher, K. J., Hazen, A. L., Coben, J. H., Wang, Y., McGeehan, J., Kohl, P. L., & Gardner, W. P. (2008). Self-reported disciplinary practices among women in the child welfare system: association with domestic violence victimization. *Child Abuse & Neglect*, *32*(8), 811-818. doi: DOI 10.1016/j.chiabu.2007.12.004
- Kerig, P. K., & Fedorowicz, A. E. (1999). Assessing maltreatment of children of battered women: methodological and ethical considerations. *Child Maltreatment*, *4*(3), 103-115. doi: 10.1177/1077559599004002003
- Knickerbocker, L., Heyman, R., Smith, A., Jouriles, E., & McDonald, R. (2007). Co-occurrence of child and partner maltreatment. *European Psychologist*, *12*(1), 36-44.
- Krishnakumar, A., & Buehler, C. (2000). Interparental conflict and parenting behaviors: a meta-analytic review.

- Family Relations*, 49 (1), 25-44. doi: 10.1111/j.1741-3729.2000.00025.x
- Lerner, R. M., Rothbaum, F., Boulos, S., & Castellino, D.R. (2002). Developmental systems perspectives on parenting. In M. H. Bornstein (Ed.), *Handbook of parenting, Biology and ecology of parenting* (Vol. 2, pp. 315-344). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Letourneau, N., Young-Morris, C., Secco, L., Stewart, M., Hughes, J., & Critchley, K. (2013). Mothers and infants exposed to intimate partner violence compensate. *Violence and Victims*, *in press*. doi: org/10.1891/0886-6708.VV-D-12-00077
- Letourneau, N. L., Fedick, C. B., & Willms, J. D. (2007). Mothering and domestic violence: a longitudinal analysis. *Journal of Family Violence*, 22(8), 649-659. doi: 10.1007/s10896-007-9099-6
- Letourneau, N., Young, C., Secco, L., Stewart, M., Hughes, J., & Critchley, K. (2011). Supporting mothering: service providers' perspectives of mothers and young children affected by intimate partner violence. *Research in Nursing & Health*, 34(3), 192-203. doi: 10.1002/nur.20428
- Levendosky, A. A., Huth-Bocks, A. C., Shapiro, D. L., & Semel, M. A. (2003). The impact of domestic violence on the maternal-child relationship and preschool-age children's functioning. *Journal of Family Psychology*, 17(3), 275-287. doi: 10.1037/0893-3200.17.3.275
- Levendosky, A. A., Leahy, K. L., Bogat, G. A., Davidson, W. S., & von Eye, A. (2006). Domestic violence, maternal parenting, maternal mental health, and infant externalizing behavior. *Journal of Family Psychology*, 20(4), 544-552. doi: 10.1037/0893-3200.20.4.544
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198-1202. doi: 10.2307/2290157
- Lyons-Ruth, K., & Jacobvitz, D. (2008). Attachment disorganization: genetic factors, parenting context, and developmental transformation from infancy to adulthood. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of Attachment Theory, Research, and Clinical Applications* (2nd ed.). New York: Guilford Press.
- Margolin, G., Gordis, E. B., Medina, A. M., & Oliver, P. H. (2003). The co-occurrence of husband-to-wife aggression, family-of-origin aggression, and child abuse potential in a community sample: implications for parenting. *Journal of Interpersonal Violence*, 18(4), 413-440. doi: 10.1177/0886260502250835
- Peled, E. (2011). Abused women who abuse their children: a critical review of the literature. *Aggression and Violent Behavior*, 16(4), 325-330. doi: 10.1016/j.avb.2011.04.007
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36(4), 717-731. doi: 10.3758/bf03206553
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling

- strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879-891. doi: 10.3758/brm.40.3.879
- Renk, K., McKinney, C., Klein, J., & Oliveros, A. (2006). Childhood discipline, perceptions of parents, and current functioning in female college students. *Journal of Adolescence*, 29(1), 73-88. doi: 10.1016/j.adolescence.2005.01.006
- Rodriguez, C. M. (2006). Emotional functioning, attachment style, and attributions as predictors of child abuse potential in domestic violence victims. *Violence and Victims*, 21(2), 199-212.
- Skinner, E. A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology*, 71(3), 549-570. doi: 10.1037/0022-3514.71.3.549
- Solomon, J., & George, C. (2011). *Disorganized attachment and caregiving*. New York: Guilford Publications.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, 22(4), 249-270; erratum: 22(11), 1177. doi: 10.1016/S0145-2134(97)00174-9
- Straus, M. A., Hamby, S. L., Boney McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scales (CTS2): development and preliminary psychometric data. *Journal of Family Issues*, 17(3), 283-316. doi: 10.1177/019251396017003001
- Taylor, C. A., Guterman, N. B., Lee, S. J., & Rathouz, P. J. (2009). Intimate partner violence, maternal stress, nativity, and risk for maternal maltreatment of young children. *American Journal of Public Health*, 99(1), 175-183. doi: 10.2105/ajph.2007.126722
- Timmer, S. G., Thompson, D., Culver, M. A., Urquiza, A. J., & Altenhofen, S. (2012). Mothers' physical abusiveness in a context of violence: effects on the mother-child relationship. *Development and Psychopathology*, 24(1), 79-92. doi: 10.1017/s0954579411000678
- Tjaden, P., & Thoenne, N. (2000). Prevalence and consequences of male-to-female and female-to-male intimate partner violence as measured by the National Violence Against Women Survey. *Violence against women*, 6(2), 142-161. doi:10.1177/10778010022181769
- Vulliez-Coady, L., Obsuth, I., Torreiro-Casal, M., Ellertsdottir, L., & Lyons-Ruth, K. (2013). Maternal role confusion: relations to maternal attachment and mother-child interaction from infancy to adolescence. *Infant Mental Health Journal*, *In press*. doi: 10.1002/imhj.21379
- Zhao, X. S., Lynch, J. G., & Chen, Q. M. (2010). Reconsidering Baron and Kenny: myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. doi: 10.1086/651257