

# **Reduced Posttraumatic Stress in Mothers Taking Part in Group Interventions for Children Exposed to Intimate Partner Violence**

**Karin Pernebo, PhD**

*Department of Psychology, Linnaeus University, Växjö, Sweden*

*Department of Research and Development, Region Kronoberg, Växjö, Sweden*

**Kjerstin Almqvist, PhD**

*Department of Social and Psychological Sciences, Karlstad University, Karlstad, Sweden*

This study investigated whether interventions for children exposed to intimate partner violence combining parallel groups for children and mothers contribute to positive outcomes for partaking mothers. The study included 39 mothers in a long-term within-subject design without a control group in a Swedish naturalistic setting. Maternal psychological health was assessed pre- and posttreatment and at 6-month and 12-month follow-up. Mothers reported medium- to large-sized decrease in psychological symptoms, including symptoms of posttraumatic stress, postintervention ( $p < .001$   $d = 0.45\text{--}0.96$ ). During the follow-up period, sustained and further decrease of symptoms was reported ( $p < .001$   $d = 0.58\text{--}1.60$ ). Mothers also reported decreased exposure to violence. Results indicate that these child-focused programs have major and sustainable positive effects on mothers' psychological health.

**Keywords:** domestic violence; child–parent interventions; women; psychological health; revictimization; treatment

## **HIGHLIGHTS**

- These child-focused programs showed major positive effects on mothers' health.
- Mothers reported decreased psychological symptoms, including posttraumatic stress.
- Mothers reported decreased exposure to physical and psychological violence.
- The positive effects on mothers' health appear to be sustainable.
- Mothers benefit from participating in child-focused interventions after intimate partner violence (IPV).

According to the World Health Organization (WHO, 2013), violence toward women and children is one of the most serious threats to their health. Worldwide, one-third of all women and one-fourth of all children are estimated to be exposed to domestic violence (United Nations Children's Fund, 2017; WHO, 2013). This study was conducted in Sweden, where demographic studies suggest that 14% to 20% of Swedish women have been subjected to violence by an intimate partner, and 14% of children are exposed to violence toward a caregiver (Andersson et al., 2015; Jernbro & Jansson, 2017).

### Consequences of Domestic Violence

Research has shown short- and long-term negative consequences of IPV for women and children. Women subjected to IPV display symptoms of physical and psychological ill-health including indications of posttraumatic stress disorder (PTSD), anxiety, depression, and sleep and eating disorders; health-risk behaviors such as substance abuse; risks of suicidal and self-harming behavior; and social dysfunction (Andersson et al., 2015; Bacchus et al., 2018; Spencer et al., 2019). Abused women also risk negative effects on their parenting capacity, with subsequent risks to their children's health and development (Chiesa et al., 2018; Murray et al., 2012; Schechter et al., 2008). The symptoms of ill-health in women caused by their exposure to IPV have in some cases been used to discredit them as parents. The parenting deficiencies of the abusive father seem, however, to constitute a worse risk for children's health and development (Cater & Forssell, 2014; Holt, 2015; Salisbury et al., 2009), and there is an urgent need to empower mothers exposed to IPV and develop effective and feasible interventions that support their recovering. Children exposed to violence toward a caregiver risk negative short- and long-term consequences on their social adjustment and emotional, behavioral, cognitive, physical, and biological functioning (Bellis et al., 2015; Evans et al., 2008; Kitzmann et al., 2003; Teicher & Samson, 2016). An increased risk of revictimization has also been found for both mothers and children (Finkelhor et al., 2007; Frugaard Stroem et al., 2019; Pill et al., 2017; Zamir & Lavee, 2014).

Some associations between maternal and child psychological symptoms have been put forward. IPV has been shown to be a risk factor for dysfunctional maternal behavior and insecure child attachment to the mother, which are associated with emotional dysregulation in children (Chiesa et al., 2018; McIntosh et al., 2021; Sancho-Rossignol et al., 2018). Additionally, it has been suggested that continuing psychological stress in mothers—particularly symptoms of posttraumatic stress—may hinder their children's recovery and positive development (Chemtob et al., 2010; Fong et al., 2019; Jouriles et al., 2018; Leen-Feldner et al., 2013; Pernebo et al., 2018, 2019).

Even after leaving a violent relationship, problems associated with exposure to violence are unlikely to remit in a substantial proportion of mothers and children without intervention (Bellis et al., 2015; Blasco-Ros et al., 2010; Grych et al., 2000; Hiller et al., 2016). Health-care costs for women exposed to IPV have been shown to be 42% higher than for comparable women with no violence in their relationships (Bonomi et al., 2009). In sum, mothers exposed to IPV, as well as their children who have witnessed and experienced the IPV, are negatively affected and risk long-term consequences. This implies that effective support and interventions are necessary to support both parents' and children's health and functioning in the aftermath of IPV. Combining group-based interventions for children with parallel groups for parents is one way to reach out to both parties in the same program.

## **Outcomes of Individual and Group Treatment Interventions for Women Exposed to Intimate Partner Violence**

Support for women exposed to IPV covers a wide range of interventions, including risk and protection assessments, legal support, access to shelters, medical support, crisis intervention, and psychotherapy. Research on outcomes of interventions for women exposed to IPV is limited, and many studies report dropout rates of 50% or more (Hansen et al., 2014). The majority of interventions to reduce PTSD symptoms among adult women who have experienced IPV rely on some form of cognitive therapy delivered as individual treatment (Iverson et al., 2011; Santos et al., 2017). Existing evaluations indicate that both individual and group treatments are effective in reducing posttraumatic stress and depression, generally with high effect sizes and decreased likelihood of IPV revictimization (Hansen et al., 2014; Iverson et al., 2011; Kimberley & Van Ee, 2018; Santos et al., 2017).

## **Interventions after Intimate Partner Violence Including Children and Parents**

Several child-focused programs include an active component focusing on parental health and functioning. These programs typically have either a group format with separate groups for children and abused parents or a dyadic/family setting with joint treatment focused on the child–parent relationship. The Moms’ Empowerment Program, run in tandem with the Kids’ Club, is an example of the first type, while Child–Parent Psychotherapy is a conjoint family-based intervention actively including a focus on caregiver history and health (Graham-Bermann et al., 2018; Lieberman et al., 2015). The different models for combined child–parent interventions share a clear focus on children’s experiences and needs; the main rationale of a focus on caregiver’s health and functioning is its importance for the children’s well-being and development. Improved maternal psychological health, however, is also an independent objective in these interventions.

Programs combining individual and joint work seem to generate the most successful psychosocial recovery for mothers and children after IPV (Kimberley & Van Ee, 2018). Evaluations of programs with parallel group interventions for mothers and children have reported medium- to large-sized effects in reduced symptoms of posttraumatic stress in mothers postintervention (Graham-Bermann et al., 2018; Graham-Bermann & Miller, 2013; Grip et al., 2011) and reduced maternal symptoms of general psychological stress at a 1-year follow-up (Grip et al., 2011). Similarly, small- to medium-sized improvement effects in maternal symptoms of posttraumatic stress and general psychological health posttreatment and at 6-month follow-up were reported for a conjoint dyadic intervention (Lieberman et al., 2005, 2006). In addition, improved positive parenting and less use of corporal physical punishment have been reported post-intervention (Grogan-Kaylor et al., 2019; Howell et al., 2015). In summary, existing research indicates that mothers may themselves benefit from participating in an intervention that reduces child symptoms. Due to the crucial role of caregivers in the recovery of children, as well as in respect to women’s health, further exploration of the benefits for mothers concerning their own symptom reduction from participating in programs primarily targeting child psychological health is called for.

## **Aim and Research Questions**

The aim of the present study was to investigate the outcomes for mothers taking part in two different group interventions designed primarily for children exposed to domestic violence. Research questions were as follows: (a) What are the short- and long-term effects

on mothers' psychological symptoms, including posttraumatic stress? (b) Are mothers exposed to continued or renewed violence during or after termination of the intervention? (c) What are the effects of moderating and mediating factors such as age, educational level, frequency of IPV, ongoing legal disputes, or child symptoms?

## METHODS

### Study Design

The current effectiveness study had a naturalistic design investigating two well-established interventions for children and mothers exposed to IPV. Outcomes for mothers were defined as psychological symptoms, including symptoms of posttraumatic stress and exposure to violence. Sociodemographic data were collected, and maternal psychological symptoms were assessed before intervention (T1), after termination (T2), and at 6-month (T3) and 12-month (T4) follow-up. This was an explorative study aimed at investigating whether mothers benefit from taking part in interventions primarily designed for children and was not a comparative study investigating differences in outcomes between interventions. Consequently, mothers taking part in these two different interventions were included and analyzed as one group in this study. The design was in line with a previous study on children's outcomes from the interventions, where no differences in maternal background variables, initial symptoms, or exposure to violence between mothers taking part in the two interventions were found (Pernebo et al., 2018, 2019). Moreover, the initial review of the data indicated no differences between the two interventions in outcomes on maternal symptoms. Nevertheless, all background variables and results were additionally analyzed separately for the two groups to detect any differences.

### Participants

The study was carried out in two units specialized in interventions for children suffering the consequences of domestic violence: one child and adolescent mental health outpatient unit and one community-based unit. Both units offered group interventions for children and mothers exposed to IPV as part of their regular service. All participating parents were mothers. In all, 39 mothers aged 23–51 years ( $M = 36.6$  years,  $SD = 6.7$  years) were included in the study. The mothers were recruited from 11 different treatment groups across 2 different agencies. Five groups ( $n = 18$  mothers) took place at a child and adolescent mental health service unit, and six groups ( $n = 21$  mothers) took place in a community-based setting.

The standard procedure before offering mothers the opportunity to take part in the intervention groups implied that all included mothers had self-reported having been subjected to physical and psychological violence by a former partner. The age of the partner who had been violent was 24–54 years ( $M = 39.1$  years,  $SD = 7.4$  years). There was a high prevalence of additional reports of sexual coercion (79%) and partner-inflicted physical injuries (82%) from the same perpetrator. Time since the violence had ended varied from 3–72 months ( $M = 25.5$  months,  $Med = 22.0$ ,  $SD = 21.3$  months). Other background variables are described in Table 1. Mothers who were offered interventions in the two different agencies did not differ in any background characteristics or in self-reported symptoms.

**TABLE 1. Background Characteristics of Mothers Taking Part in the Group Interventions, *n* = 39**

<b>Demographic description mother</b>	<b><i>n</i></b>	<b>%</b>
Ethnicity		
Born in Sweden	25	64
Born in Europe	3	8
Born outside Europe	11	28
Marital status		
Single	33	85
Married or cohabiting with other than the perpetrator	6	15
Educational level		
University education	19	49
12th grade	17	44
9th grade	3	8
Employment status		
Employed	25	64
Student	3	8
Unemployed	11	28
Type of violence suffered		
Physical	39	100
Psychological	39	100
Sexual	31	79
Partner-inflicted physical injuries	32	82
Custody and judicial disputes		
Mother custodian	25	64
Joint custody	14	36
Ongoing judicial and custody disputes	23	59
Perpetrator		
Biological father of child/children	37	95
Step-parent	2	5
Born in Sweden	19	49
University-educated	6	15
Employed or student	27	69
Participating child		
Girl	17	44
Boy	22	56

The children in the study were 4–13 years old ( $M = 7.2$  years,  $SD = 2.4$  years), 17 girls, and 22 boys. The mothers reported that all the included children had been exposed to IPV; 25 children (64%) had also experienced child physical abuse. Details of the children's background variables, pretreatment symptoms, and outcomes have been reported elsewhere (Pernebo et al., 2018, 2019).

## Procedure

To be included in the study, both mothers and children had to participate in the interventions, and the mothers needed to be able to understand and answer questionnaires in Swedish. During the period of inclusion (2013–2015), 43 mothers and their children were invited to take part in the interventions; 2 mothers declined to participate in the study; and 2 mothers were excluded because of poor language skills.

Mothers invited to take part in the intervention received written and verbal information about the study. On their next appointment, they were asked for written consent to participate in the pre-, posttreatment, and follow-up assessments. No payment or other compensation for participation was provided, and participation did not affect access to treatment in any way. The pre- and posttreatment assessments were conducted at the treatment units by the regular staff as part of the regular procedures. Mothers could choose how they wished to be contacted for follow-up assessments (by telephone call, text message, or email). Mothers were then contacted 6 and 12 months after the intervention and asked to schedule an appointment for a follow-up assessment. To respect the autonomy, confidentiality, and privacy of the mothers, the follow-up assessments were conducted by the regular staff or by the first author, at the treatment units, family home, or a neutral location according to the mother's preference.

## The Intervention Programs

Both agencies offered well-established manualized group interventions with 12–15 weekly parallel 90-minute sessions for children and abused parents. The children's groups included 4–8 children within an 18-month age range, and the parents' groups included nonabusive parents. Experienced social workers or psychologists led both the children's and parents' groups. It was required that the intimate relationship between the participating parent and the abusive partner was terminated before the start of the intervention and that the IPV was acknowledged by the child and the abused parent. The child's exposure to IPV was to be the main reason for the intervention. Participation was voluntary and free of charge.

The program offered at the child and adolescent mental health outpatient unit was a trauma-focused time-limited psychotherapeutic treatment intervention in a group setting for children exposed to IPV who showed psychiatric symptoms and complex reactions. The theoretical foundation for the treatment was trauma theory, attachment theory, and psychodynamic theory (Brager & Lichtenstein, 2015). At the community-based agency, a psychoeducative intervention was offered for children who had been exposed to IPV, whether or not they presented symptoms or problems. This program was based on the Children Are People Too program (Hawthorne, 1990), which has been adjusted and evaluated for use with children exposed to IPV (Grip et al., 2011, 2012). Both programs included parallel groups for nonoffending parents. The parents' groups in both programs shared a similar structure. The abused parents (mothers) met together weekly for 90-minute sessions. The sessions focused on the same topics as the children's program and the approach were

psychoeducative. Children's reactions when exposed to IPV were explained and discussed, along with strategies and approaches for parents to promote health and development in their children. The group format also allowed for the sharing of experiences aiming at reducing stigmatization and bringing relief from feelings of shame. For a more thorough description of the interventions, see Pernebo et al. (2018). It is notable, though, that both programs stressed psychoeducation about family violence and trauma, processing experiences, and attachment and family relations over parenting training.<sup>1</sup>

### Attrition and Missing Data

The dropout rate from pretreatment to posttreatment assessment was 12.8%, due to 5 of the 39 included mother-child dyads discontinuing the interventions. The dropouts did not provide posttreatment or follow-up data. Group leaders estimated high attendance from all participants, with only a few mothers missing one or two sessions. All mothers who completed the intervention participated in the posttreatment assessment. At the 6-month follow-up, three mothers could not be contacted, and at the 12-month follow-up, three more mothers could not be reached, resulting in a 17.6% dropout from posttreatment to the 12-month follow-up. Missing data due to nonresponses were few. There were no significant differences in background variables or in initial maternal or child symptoms between the completers and noncompleters.

### Measures

Three instruments were used to measure exposure to violence, maternal mental health, and symptoms of posttraumatic stress. In addition to their self-reports, mothers reported on their child's mental health, symptoms of posttraumatic stress, and emotionality and emotional reactivity. These results are reported elsewhere (Pernebo et al., 2018, 2019). Identical instruments for the assessment were used at all four assessments.

**Exposure to Violence.** The revised Conflict Tactics Scale (CTS2; Straus et al., 1996) was used to assess continuing levels of IPV, including prevalence and frequency of psychological aggression, physical assault, sexual coercion, injury, and negotiation. The revised version includes parental reports on the child's exposure to the violence experienced by the parent (Broberg et al., 2011). In the present study, internal consistency ( $\alpha$ ) ranged from 0.59–0.90, with poor consistency on the injury subscale and acceptable or good consistency on the remaining subscales.

**Maternal Mental Health.** The Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) was used to assess the current maternal psychological distress and symptoms. This screening instrument is based on the Symptom Checklist-90 (SCL-90; Derogatis & Melisaratos, 1983). The Global Severity Index (GSI) was used in the analyses. In the Swedish validation, the norm group had a mean score of 0.45 ( $SD = 0.4$ ) (Fridell et al., 2002). Internal consistency in the present study was satisfactory ( $\alpha = 0.93$ ).

**Maternal Posttraumatic Stress Symptoms.** The Impact of Event Scale—Revised (IES-R; Weiss, 2004) was used to measure maternal symptoms of posttraumatic stress. The total score contains the three subscales of intrusion, avoidance, and hyperarousal. The IES-R is not intended as a diagnostic instrument; nevertheless, a mean of  $\geq 1.89$  in a subscale is considered to indicate problems and a mean of  $\geq 1.8$  in the total score indicates PTSD. In the current study, internal consistency was good:  $\alpha = 0.83$  for the intrusion subscale, 0.79 for the avoidance subscale, 0.82 for the hyperarousal subscale, and 0.90 for the total score.

## Statistical Analyses

Background variables, initial symptoms, and results were analyzed for mothers taking part in the two different interventions as one compiled group as well as two different groups. If no differences were found between the groups, the whole sample analyses were to be presented, as the study sought to address the effectiveness of this type of intervention—that is, parallel mother–child interventions rather than two specific interventions. Due to the wide age range of the children (4–14) and the possible influence on the mothers of developmental differences in their children, background variables and results of the mothers were also analyzed in their children’s age groups (4–6, 7–9, 10–12, and 13–14) as well as for the whole group. All statistical analyses were carried out on both completers and intent-to-treat groups using the last observation carried forward (LOCF) method.

An independent *t* test and Pearson’s chi-squared test were used to compare differences in background variables and initial symptoms between the mothers in the two interventions. A two-tailed paired *t* test was used to calculate the differences between pretreatment, posttreatment, 6-month follow-up, and 12-month follow-up assessments. Cohen’s *d* was used to calculate effect sizes, with  $\geq 0.80$  indicating a large effect,  $\geq 0.50$  a moderate effect, and  $\geq 0.20$  a small effect (Cohen, 1988). Dependent *t* tests using the LOCF method were conducted for dropouts. Univariate regression analyses were used to investigate possible covariation of outcomes with maternal age, educational level, and frequency of IPV as predictors. Multiple regression analysis was used to explore possible associations between outcomes and possible influencing variables (i.e., ongoing legal disputes, child ongoing symptoms, maternal trauma symptoms at the onset of intervention, and maternal use of other services or support). The IES-R clinical cutoff scores of  $\geq 1.8$  on the total score and  $\geq 1.89$  on the subscales were considered to indicate problems within the clinical range. All calculations were computed using the statistical software SPSS, version 23.0.

## Ethical Approval

The study was approved by the Regional Ethics Committee in Uppsala (Dnr 2012/246).

## RESULTS

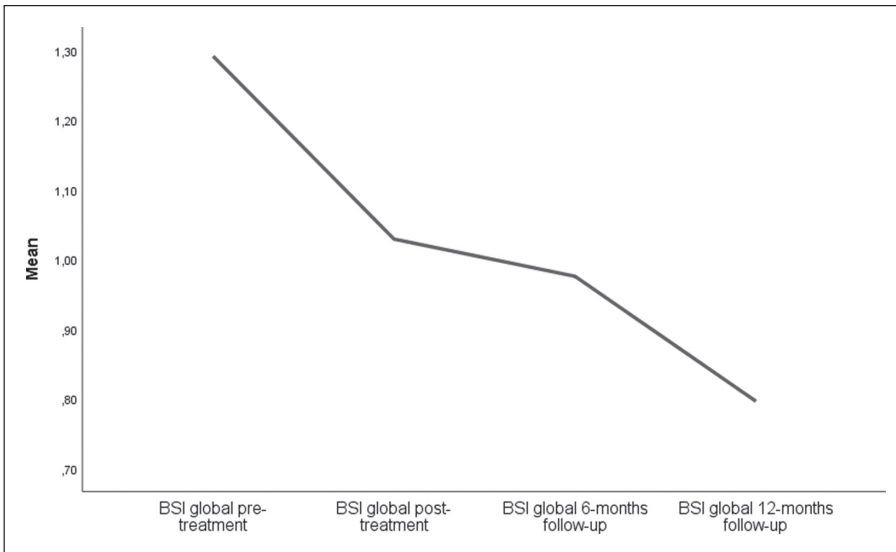
The two intervention groups did not differ in background variables, initial symptoms, or intervention effects. For all analyses below, the results for all participants are presented as one group.

Initial symptoms did not vary based on any of the background variables, except custody: mothers with sole custody scored lower on initial symptoms on the BSI global ( $p = .043$ ) and the IES-R hyperarousal ( $p = .016$ ) scales. No differences in background variables, mothers’ initial symptoms, or intervention effects were found between child age groups; neither were any significant differences found between completers and intent-to-treat groups on any of the analyses. Only data from the completers are presented in the following section, while Table 2 includes the mean scores for all mothers assessed at the different time points (pre- and posttreatment and at 6- and 12-months’ follow-up).

## Overview of Outcomes of the Interventions

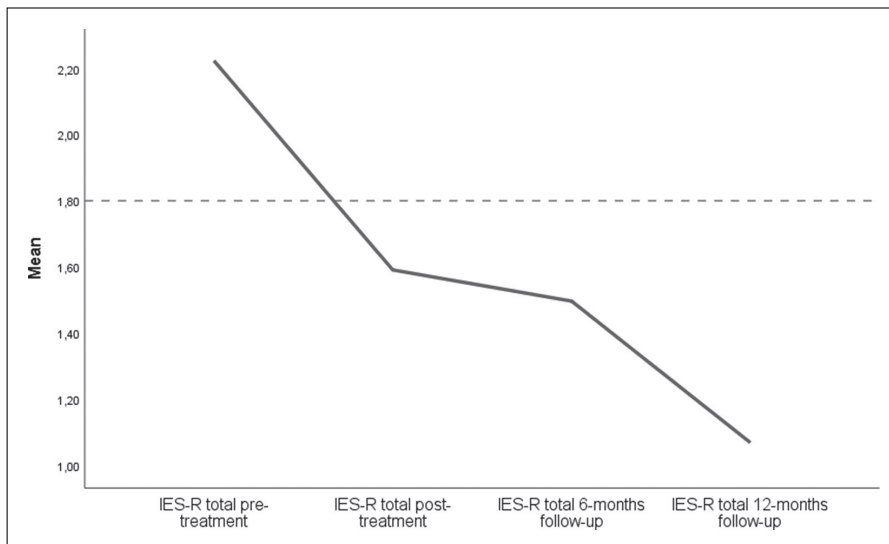
Mothers reported decreased psychological symptoms, including symptoms of posttraumatic stress, postintervention. During the follow-up period, mothers reported sustained





**FIGURE 1.** Maternal symptoms on the Brief Symptom Inventory (BSI) score preintervention, postintervention, and at 6 and 12 months after termination of the group intervention.

and continuing significant improvements. The continuing and sustained decreases in reported symptoms from preintervention to the 12-month postintervention follow-up are illustrated in Figure 1, which shows maternal reports of general psychological symptoms (BSI, GSI), and Figure 2, which shows maternal reports of symptoms of posttraumatic stress (IES-R, total score) at the four assessment times. Mothers also reported decreased exposure to physical and psychological violence during the follow-up period.



**FIGURE 2.** Maternal symptoms on the Impact of Event Scale—Revised (IES-R) total score preintervention, postintervention, and at 6 and 12 months after termination of the group intervention.

### **Changes in Mothers' Symptoms From Preintervention to Postintervention and to 6- and 12-Month Follow-Up Assessments**

Postintervention, mothers reported significant improvements (with medium to large effect sizes) in posttraumatic stress symptoms (IES-R) and significant improvements (with a medium effect size) in their general mental health (BSI; see Table 2). At the 6- and 12-month follow-ups, mothers reported sustained significant improvement on all measures, with even larger effect sizes (see Table 2).

### **Changes in Mothers' Symptoms From Postintervention to 6- and 12-Month Follow-Up Assessments**

There were no significant changes in mothers' scores on any measure between postassessment and 6-month follow-up, indicating sustained improvements. Between postassessment and 12-month follow-up, significant improvements were reported on all measures: IES-R total score ( $p = .002$ ,  $d = 0.47$ ); IES-R subscales measuring intrusion ( $p = .007$ ,  $d = 0.44$ ), avoidance ( $p = .004$ ,  $d = 0.48$ ), and hyperarousal ( $p = .009$ ,  $d = 0.54$ ); and BSI global ( $p = .031$ ,  $d = 0.36$ ). Between the 6- and 12-month follow-ups, there were significant decreases on all measures: IES-R total score ( $p = .001$ ,  $d = 0.36$ ); IES-R subscales measuring intrusion ( $p = .004$ ,  $d = 0.34$ ), avoidance ( $p = .019$ ,  $d = 0.34$ ), and hyperarousal ( $p = .002$ ,  $d = 0.39$ ); and BSI global ( $p = .038$ ,  $d = 0.26$ ).

### **Clinical Significance**

The proportion of mothers reporting symptoms within the clinical range decreased by half from the preintervention to the postintervention assessment. The decrease was sustained at the 6-month follow-up and was even larger at the 12-month follow-up (see Table 3).

### **Continued or Renewed Exposure to Violence**

Mothers reported decreasing frequencies of physical and psychological violence. Physical violence was reported to decrease more rapidly and fully than psychological abuse (see Table 4).

### **Use of Other Support or Services**

Before starting treatment, 15 of the mothers had stayed at a shelter on at least one occasion, and many had received support from social services or psychiatric treatment other than the group intervention. During and after the interventions, the use of other supports and services decreased substantially (see Table 5). Mothers simultaneously in psychiatric treatment had no more initial symptoms than the others and no more improvement postintervention or at follow-up.

### **The Influence of Moderating and Mediating Factors on Long-Term Outcomes**

No interactions were found between outcomes and background variables. No significant associations were found between mothers' age, ethnicity, educational level, employment status, frequency of IPV, ongoing judicial disputes, age of participating child, initial level of posttraumatic stress, or level of reported initial or ongoing posttraumatic stress in the child (as measured by the Trauma Symptom Checklist for Young Children; Briere et al.,

**TABLE 2. Outcomes on the Brief Symptom Inventory (BSI) and the Impact of Event Scale—Revised (IES-R) preintervention, postintervention, and at 6 and 12 months after termination of the group intervention**

Measure	Pre ( <i>n</i> = 39)		Post ( <i>n</i> = 34)		6 months ( <i>n</i> = 31)		12 months ( <i>n</i> = 28)		
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	<i>d</i>	<i>M</i> ( <i>SD</i> )	<i>d</i>	
BSI global	1.35 (.60)	1.05 (.73)	.003**	0.45	0.97 (.70)	<.001***	0.58	0.78 (.54)	<.001***
IES-R total	2.31 (.74)	1.54 (.87)	<.001***	0.96	1.44 (.91)	<.001***	1.05	1.08 (.80)	<.001***
IES-R intrusion	2.41 (.83)	1.57 (.97)	<.001***	0.67	1.49 (1.08)	<.001***	0.96	1.15 (.93)	<.001***
IES-R avoidance	2.09 (.86)	1.39 (.92)	.002**	0.79	1.31 (1.01)	<.001***	0.83	0.97 (.84)	<.001***
IES-R hyperarousal	2.45 (.97)	1.68 (1.05)	.001**	0.76	1.52 (.99)	<.001***	0.95	1.16 (.86)	<.001***

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**TABLE 3. Percentage of Mothers With Psychiatric Symptoms Within Clinical Range on the Impact of Events Scale Revised (IES-R) Pre- and Postintervention and at 6 and 12 Months After Termination of Intervention**

Measure	Pre ( <i>n</i> = 39)	Post ( <i>n</i> = 34)	6 months ( <i>n</i> = 31)	12 months ( <i>n</i> = 28)
IES-R total	75	37	36	21
IES-R intrusion	70	42	36	21
IES-R avoidance	61	21	25	11
IES-R hyperarousal	75	33	36	21

*Note.* Cutoff scores on IER-R: total  $\geq 1.8$ ; subscales  $\geq 1.89$ .

**TABLE 4. Percentage of Mothers Reporting Exposure to Physical and Psychological Violence Ever, at the Start of the Intervention, Postintervention, and at 6 and 12 Months After Termination**

	Ever <i>n</i> = 39	Pre <i>N</i> = 39	Post <i>n</i> = 34	6 months <i>n</i> = 31	12 months <i>n</i> = 28
Physical violence	100	0	9	0	0
Psychological violence	100	36	38	10	14

**TABLE 5. Percentages of Mothers Reporting Use of Other Support and Services Pre- and Postintervention and at 6 and 12 Months After Termination of Intervention**

	Pre <i>n</i> = 39	Post <i>n</i> = 34	6 Months <i>n</i> = 31	12 Months <i>n</i> = 28
Stayed at shelter at least once during the previous 6 months	38	6	0	0
Ongoing psychiatric treatment or social support	59	59	35	35

2001); neither were there any interactions between outcomes and mothers' use of support from social service or simultaneous or continuing psychiatric treatment. No significant differences in maternal outcomes were found between mothers in the two interventions.

## DISCUSSION

The aim of this study was to investigate the short- and long-term outcomes for mothers taking part in group interventions for children exposed to domestic violence. The results indicate significant and large treatment gains for a majority of mothers taking part in these child-oriented interventions. The results further indicate sustained treatment gains from posttreatment to 6-months follow-up and further decrease of symptoms from the 6- to 12-month follow-ups.

The statistically significant symptom reduction posttreatment was medium to large, and during the follow-up period, effect sizes increased to large on all measures. The proportion of mothers reporting symptoms of posttraumatic stress within the clinical range decreased radically. The results are in accord with previous research on adult-focused interventions for women exposed to IPV (Kimberley & Van Ee, 2018), indicating that these primarily child-oriented interventions are at least as effective for mothers as adult-focused interventions. Nevertheless, it is important to notice that a substantial part, 21%, of the participating mothers still reported clinical levels of symptoms of posttraumatic stress at the 12-month follow-up. This is in line with previous findings (Graham-Bermann et al., 2018; Grip et al., 2011) and indicates a need to identify and offer different or complementing interventions and support for women with lasting symptoms.

The results further indicate that mothers' exposure to physical and psychological violence decreased following the interventions. It is notable that no mothers reported physical violence at either the 6- or 12-month follow-up. It is worth emphasizing this result in light of the considerable risk for revictimization (Pill et al., 2017; Zamir & Lavee, 2014). Regarding psychological violence, 14% of the women reported continuing psychological violence. This result can be seen in the context of Swedish legislation obliging many of the women to have ongoing contact with the perpetrator of the violence concerning issues of custody and children's visitations. The use of parallel and/or continuing support from other services can be regarded as another sign of the long-term negative consequences of IPV or slow recovery. To the best of our knowledge, this is seldom followed and reported in existing studies. The women in this study substantially diminished their use of services such as shelters, support from social services, and psychiatric treatment. Although the small sample size limits the generalizations that can be made, the simultaneous decrease in exposure to violence, improved psychological health, and diminished use of support services are important indicators of health. In addition to the obvious individual health benefits, this indicates important gains for the economy of the health system, as this is a group otherwise reported to represent high costs for healthcare and social services (Bonomi et al., 2009).

The study design, however, does not allow conclusions about whether the intervention contributed to the diminished risk of revictimization, the protection from violence and abuse, and improved psychological health, or whether the results represented a bidirectional process.

The sample in this study was diverse, with many participants born outside of Sweden. This reflects the population seeking help and support within community and health-care settings in Sweden, and makes the results clinically valid. Nevertheless, the limitations of the findings for women of diverse cultural and gendered identifications are obvious, given the limited sample and the contextual constraints of the study being carried out in two urban areas in Sweden.

The fact that no moderating or mediating factors were detected might be due to the small sample size or to insensitive measures; it may also be that the group format made the interventions generic enough to be well suited to mothers with varying backgrounds and challenges.

One can hypothesize about which components contributed to the large effect on mothers' psychological health. The programs share a distinct focus on the child and on the child–parent relationship, in contrast to other programs, which focus primarily on individual adults or parental support through psychoeducation. Parenthood may be seen as a substantial part of a person's identity. Mothers' trust in their capacity to protect and nurture, and to comfort and regulate their child, may be damaged by their experience of

IPV and combined with worries about their child's health and development. Noticing improvements in the child's health and their own parenting may contribute substantially to mothers' improved psychological health and decreased symptoms of posttraumatic stress. From the child's perspective, parental mental health and ability to parent are crucial. When parenting goes well, IPV has less effect on children's outcomes such as traumatic stress (Ehrensaft et al., 2017), whereas ongoing psychological distress in the parent may hinder the child's recovery (Fong et al., 2019; Pernebo et al., 2019). This suggests a reciprocal benefit of supporting the parent and child at the same time. It is noteworthy that the drop-out rate in this study was not as high as that reported elsewhere (Hansen et al., 2014). The format of parallel sessions for mothers and children may foster high attendance, which may in turn be a prerequisite for an effective intervention.

While the results indicate that the majority of mothers improved to the point of no longer showing symptoms within the clinical range, some mothers did not. A proportion of participants showed insufficient improvement and may need supplementary support and treatment.

### **Clinical Implications**

The results show that mothers in the study benefited from taking part in group interventions primarily designed for children exposed to IPV. This suggests that earlier findings showing that children benefit from combined interventions for mothers and children in the aftermath of IPV is also true for mothers. The results further indicate a need to identify and offer supplementary support to the minority of mothers who continue to suffer high levels of posttraumatic stress following the intervention.

### **Strengths and Limitations**

A main strength of the study is its naturalistic study design including follow-up data, which strengthens the study's external validity and makes the results generalizable to similar clinical and community-based settings. The follow-up assessments identified sustained and additional maternal treatment gains that would not have been possible to detect otherwise. The low rate of attrition substantially strengthens the reliability of the results. Nevertheless, the early dropouts who discontinued the intervention might have been more resistant to treatment and may have shown less gain from treatment had they continued.

The limited sample size and lack of control group are obvious limitations of the study and imply that results should be interpreted, and conclusions drawn, with caution. Furthermore, the limited sample size may have made moderating and mediating factors difficult to detect. The limitations of the study further include the sole reliance on self-reports, the lack of formal screening for adverse life events, and no measures of treatment fidelity.

## **CONCLUSION**

The results of this study indicate that these child-focused programs have major positive effects on mothers' psychological health. Mothers' reduced symptoms and protection from further violence appear to be sustainable. The results further indicate sustained treatment gains from posttreatment to 6-months follow-up and further decreased symptoms from the 6- to the 12-month follow-up.

## NOTE

1. More detailed material describing the interventions can be provided by the corresponding author on request.

## REFERENCES

- Andersson, T., Heimer, G. M., & Lucas, S. (2015). *Violence and health in Sweden: A national prevalence study on exposure to violence among women and men and its association to health*. National Centre for Knowledge on Men's Violence Against Women (NCK).
- Bacchus, L. J., Ranganathan, M., Watts, C., & Devries, K. (2018). Recent intimate partner violence against women and health: A systematic review and meta-analysis of cohort studies. *BMJ Open*, 8(7), e019995. <https://doi.org/10.1136/bmjopen-2017-019995>
- Bellis, M. A., Hughes, K., Leckenby, N., Hardcastle, K. A., Perkins, C., & Lowey, H. (2015). Measuring mortality and the burden of adult disease associated with adverse childhood experiences in England: A national survey. *Journal of Public Health*, 37(3), 445–454. <https://doi.org/10.1093/pubmed/dfu065>
- Blasco-Ros, C., Sánchez-Lorente, S., & Martínez, M. (2010). Recovery from depressive symptoms, state anxiety and post-traumatic stress disorder in women exposed to physical and psychological, but not to psychological intimate partner violence alone: A longitudinal study. *BMC Psychiatry*, 10, 98–98. <https://doi.org/10.1186/1471-244X-10-98>
- Bonomi, A. E., Anderson, M. L., Rivara, F. P., & Thompson, R. S. (2009). Health care utilization and costs associated with physical and nonphysical-only intimate partner violence. *Health Services Research*, 44(3), 1052–1067. <https://doi.org/10.1111/j.1475-6773.2009.00955.x>
- Brager, S., & Lichtenstein, A. (2015). *Traumafokuserad psykoterapigrupp för barn som upplevt våld i familjen [Trauma focused group psychotherapy for children with experience of family violence]*. BUP Traumaenhet.
- Briere, J., Johnson, K., Bissada, A., Damon, L., Crouch, J., Gil, E., Hanson, R., & Ernst, V. (2001). The Trauma Symptom Checklist for Young Children (TSCYC): Reliability and association with abuse exposure in a multi-site study. *Child Abuse & Neglect*, 25(8), 1001–1014. [https://doi.org/10.1016/S0145-2134\(01\)00253-8](https://doi.org/10.1016/S0145-2134(01)00253-8)
- Broberg, A., Almqvist, L., Axberg, U., Almqvist, K., Cater, Å., & Eriksson, M. (2011). *Stöd till barn som upplevt våld mot mamma. Resultat från en nationell utvärdering [Support to children who have witnessed violence against their mothers. Results from a national evaluation study]*. Department of Psychology, Göteborg University.
- Cater, Å., & Forssell, A. M. (2014). Descriptions of fathers' care by children exposed to intimate partner violence (IPV)—relative neglect and children's needs. *Child & Family Social Work*, 19(2), 185–193. <https://doi.org/10.1111/j.1365-2206.2012.00892.x>
- Chemtob, C. M., Nomura, Y., Rajendran, K., Yehuda, R., Schwartz, D., & Abramovitz, R. (2010). Impact of maternal posttraumatic stress disorder and depression following exposure to the September 11 attacks on preschool children's behavior. *Child Development*, 81(4), 1129–1141. <https://doi.org/10.1111/j.1467-8624.2010.01458.x>
- Chiesa, A. E., Kallechey, L., Harlaar, N., Rashaan Ford, C., Garrido, E. F., Betts, W. R., & Maguire, S. (2018). Intimate partner violence victimization and parenting: A systematic review. *Child Abuse & Neglect*, 80, 285–300. <https://doi.org/10.1016/j.chiabu.2018.03.028>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: An introductory report. *Psychological Medicine*, 13(3), 595–605. <https://doi.org/10.1017/S0033291700048017>
- Ehrensaft, M. K., Knous-Westfall, H., & Cohen, P. (2017). Long-term influence of intimate partner violence and parenting practices on offspring trauma symptoms. *Psychology of Violence*, 7(2), 296–305.

- Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior, 13*(2), 131–140. <https://doi.org/10.1016/j.avb.2008.02.005>
- Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007). Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19*(1), 149–166. <https://doi.org/10.1017/S0954579407070083>
- Fong, V. C., Hawes, D., & Allen, J. L. (2019). A systematic review of risk and protective factors for externalizing problems in children exposed to intimate partner violence. *Trauma, Violence, & Abuse, 20*(2), 149–167. <https://doi.org/10.1177/1524838017692383>
- Fridell, M., Cesarec, Z., Johansson, M., & Malling Thorsen, S. M. (2002). *SCL-90 Svensk normering, standardisering och validering av symtomskalan [SCL-90 Swedish norms, standardization and validation of the symptom scale]*. Report 4/02. National Board of Institutional Care (SiS).
- Frugaard Stroem, I., Aakvaag, H. F., & Wentzel-Larsen, T. (2019). Characteristics of different types of childhood violence and the risk of revictimization. *Violence Against Women, 25*(14), 1696–1716. <https://doi.org/10.1177/1077801218818381>
- Graham-Bermann, S. A., Howell, K. H., Miller-Graff, L. E., Galano, M. M., Lilly, M. M., & Grogan-Kaylor, A. (2018). The moms' empowerment program addresses traumatic stress in mothers with preschool-age children experiencing intimate partner violence. *Journal of Aggression, Maltreatment & Trauma, 28*(10), 1–22. <https://doi.org/10.1080/10926771.2018.1494652>
- Graham-Bermann, S. A., & Miller, L. E. (2013). Intervention to reduce traumatic stress following intimate partner violence: An efficacy trial of the Moms' Empowerment Program (MEP). *Psychodynamic Psychiatry, 41*(2), 329–349. <https://doi.org/10.1521/pdps.2013.41.2.329>
- Grip, K., Almqvist, K., & Broberg, A. G. (2011). Effects of a group-based intervention on psychological health and perceived parenting capacity among mothers exposed to intimate partner violence (IPV): A preliminary study. *Smith College Studies in Social Work, 81*(1), 81–100. <https://doi.org/10.1080/00377317.2011.543047>
- Grip, K., Almqvist, K., & Broberg, A. G. (2012). Maternal report on child outcome after a community-based program following intimate partner violence. *Nordic Journal of Psychiatry, 66*(4), 239–247. <https://doi.org/10.3109/08039488.2011.624632>
- Grogan-Kaylor, A., Galano, M. M., Howell, K. H., Miller-Graff, L., & Graham-Bermann, S. A. (2019). Reductions in parental use of corporal punishment on pre-school children following participation in the moms' empowerment program. *Journal of Interpersonal Violence, 34*(8), 1563–1582. <https://doi.org/10.1177/0886260516651627>
- Grych, J. H., Jouriles, E. N., Swank, P. R., McDonald, R., & Norwood, W. D. (2000). Patterns of adjustment among children of battered women. *Journal of Consulting and Clinical Psychology, 68*(1), 84–94. <https://doi.org/10.1037/0022-006X.68.1.84>
- Hansen, N. B., Eriksen, S. B., & Elklit, A. (2014). Effects of an intervention program for female victims of intimate partner violence on psychological symptoms and perceived social support. *European Journal of Psychotraumatology, 5*(1). <https://doi.org/10.3402/ejpt.v5.24797>
- Hawthorne, T. (1990). *Children Are People, chemical abuse prevention programs, support group training manual*. Children Are People, Inc.
- Hiller, R. M., Meiser-Stedman, R., Fearon, P., Lobo, S., McKinnon, A., Fraser, A., & Halligan, S. L. (2016). Research review: Changes in the prevalence and symptom severity of child post-traumatic stress disorder in the year following trauma – a meta-analytic study. *Journal of Child Psychology and Psychiatry, 57*(8), 884–898. <https://doi.org/10.1111/jcpp.12566>
- Holt, S. (2015). Post-separation fathering and domestic abuse: Challenges and contradictions. *Child Abuse Review, 24*(3), 210–222. <https://doi.org/10.1002/car.2264>
- Howell, K. H., Miller, L. E., Lilly, M. M., Burlaka, V., Grogan-Kaylor, A. C., & Graham-Bermann, S. A. (2015). Strengthening positive parenting through intervention: Evaluating the moms' empowerment program for women experiencing intimate partner violence. *Journal of Interpersonal Violence, 30*(2), 232–252. <https://doi.org/10.1177/0886260514533155>



- Iverson, K. M., Lester, K., & Resick, P. A. (2011). Psychosocial treatments. In D. M. Benedek & G. H. Wynn (Eds.), *Clinical manual for the management of PTSD* (pp. 157–203). American Psychiatric Publishing.
- Jernbro, C., & Jansson, S. (2017). *Våld mot barn 2016. En nationell kartläggning [Violence against children 2016. A national survey]*. Stiftelsen Allmänna barnhuset.
- Jouriles, E. N., McFarlane, J., Vu, N. L., Maddoux, J., Rosenfield, D., Symes, L., Fredland, N., & Paulson, R. (2018). Mothers' posttraumatic stress and child adjustment problems in families seeking services for intimate partner violence. *Journal of Consulting and Clinical Psychology, 86*(7), 604–614. <https://doi.org/10.1037/ccp0000318>
- Kimberley, A., & Van Ee, E. (2018). Mothers and children exposed to intimate partner violence: A review of treatment interventions. *International Journal of Environmental Research and Public Health, 15*(9), 1955. <https://doi.org/10.3390/ijerph15091955>
- Kitzmann, K. M., Gaylord, N. K., Holt, A. R., & Kenny, E. D. (2003). Child witnesses to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*(2), 339–352. <https://doi.org/10.1037/0022-006X.71.2.339>
- Leen-Feldner, E. W., Feldner, M. T., Knapp, A., Bunaciu, L., Blumenthal, H., & Amstadter, A. B. (2013). Offspring psychological and biological correlates of parental posttraumatic stress: Review of the literature and research agenda. *Clinical Psychology Review, 33*(8), 1106–1133. <https://doi.org/10.1016/j.cpr.2013.09.001>
- Lieberman, A. F., Ghosh Ippen, C., & Van Horn, P. (2006). Child-parent psychotherapy: 6-month follow-up of a randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*(8), 913–918. <https://doi.org/10.1097/01.chi.0000222784.03735.92>
- Lieberman, A. F., Ghosh Ippen, C., & Van Horn, P. (2015). *Don't hit my mommy! A manual for child-parent psychotherapy with young children exposed to violence and other trauma* (2nd ed.). National Center for Clinical Infant Programs.
- Lieberman, A. F., Van Horn, P., & Ghosh Ippen, C. (2005). Toward evidence-based treatment: Child-parent psychotherapy with preschoolers exposed to marital violence. *Journal of the American Academy of Child & Adolescent Psychiatry, 44*(12), 1241–1248. <https://doi.org/10.1097/01.chi.0000181047.59702.58>
- McIntosh, J. E., Tan, E. S., Levendosky, A. A., & Holtzworth-Munroe, A. (2021). Mothers' experience of intimate partner violence and subsequent offspring attachment security ages 1–5 years: A meta-analysis. *Trauma, Violence & Abuse, 22*(4), 885–899. <https://doi.org/10.1177/1524838019888560>
- Murray, K. W., Bair-Merritt, M. H., Roche, K., & Cheng, T. L. (2012). The impact of intimate partner violence on mothers' parenting practices for urban, low-income adolescents. *Journal of Family Violence, 27*(6), 573–583. <https://doi.org/10.1007/s10896-012-9449-x>
- Pernebo, K., Fridell, M., & Almqvist, K. (2018). Outcomes of psychotherapeutic and psychoeducative group interventions for children exposed to intimate partner violence. *Child Abuse & Neglect, 79*, 213–223. <https://doi.org/10.1016/j.chiabu.2018.02.014>
- Pernebo, K., Fridell, M., & Almqvist, K. (2019). Reduced psychiatric symptoms at 6 and 12 months' follow-up of psychotherapeutic and psychoeducative group interventions for children exposed to intimate partner violence. *Child Abuse & Neglect, 93*, 228–238. <https://doi.org/10.1016/j.chiabu.2019.05.002>
- Pill, N., Day, A., & Mildred, H. (2017). Trauma responses to intimate partner violence: A review of current knowledge. *Aggression and Violent Behavior, 34*, 178–184. <https://doi.org/10.1016/j.avb.2017.01.014>
- Salisbury, E. J., Henning, K., & Holdford, R. (2009). Fathering by partner-abusive men: Attitudes on children's exposure to interparental conflict and risk factors for child abuse. *Child Maltreatment, 14*(3), 232–242. <https://doi.org/10.1177/1077559509338407>
- Sancho-Rossignol, A., Schillinger, Z., Cordero, M. I., Rusconi Serpa, S., Epiney, M., Hüppi, P., Ansermet, F., & Schechter, D. S. (2018). The association of maternal exposure to domestic violence during childhood with prenatal attachment, maternal-fetal heart rate, and infant behavioral regulation. *Frontiers in Psychiatry, 9*(358), 1–10. <https://doi.org/10.3389/fpsy.2018.00358>

- Santos, A., Matos, M., & Machado, A. (2017). Effectiveness of a group intervention program for female victims of intimate partner violence. *Small Group Research, 48*(1), 34–61. <https://doi.org/10.1177/1046496416675226>
- Schechter, D. S., Coates, S. W., Kammer, T., Coots, T., Zeanah Jr., C. H., Davies, M., Schonfeld, I. S., Marshall, R. D., Liebowitz, M. R., Trabka, K. A., McCaw, J. E., & Myers, M. M. (2008). Distorted maternal mental representations and atypical behavior in a clinical sample of violence-exposed mothers and their toddlers. *Journal of Trauma & Dissociation, 9*(2), 123–147. <https://doi.org/10.1080/15299730802045666>
- Spencer, C., Mallory, A. B., Cafferky, B. M., Kimmes, J. G., Beck, A. R., & Stith, S. M. (2019). Mental health factors and intimate partner violence perpetration and victimization: A meta-analysis. *Psychology of Violence, 9*(1), 1–17. <https://doi.org/10.1037/vio0000156>
- 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. <https://doi.org/10.1177/019251396017003001>
- Teicher, M. H., & Samson, J. A. (2016). Annual research review: Enduring neurobiological effects of childhood abuse and neglect. *Journal of Child Psychology and Psychiatry, 57*(3), 241–266. <https://doi.org/10.1111/jcpp.12507>
- United Nations Children's Fund (UNICEF). (2017). *A familiar face: Violence in the lives of children and adolescents*. UNICEF.
- Weiss, D. S. (2004). The impact of event scale-Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (2nd ed., pp. 168–189). Guilford Press.
- World Health Organization (WHO). (2013). *Global and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violence*. World Health Organization.
- Zamir, O., & Lavee, Y. (2014). Emotional regulation and revictimization in women's intimate relationships. *Journal of Interpersonal Violence, 31*(1), 147–162. <https://doi.org/10.1177/0886260514555125>

**Disclosure.** No potential conflict of interest is reported by the authors.

**Acknowledgments.** We would like to thank all participating women and Stiftelsen Bojen in Gothenburg and the Child and Adolescents Psychiatry Trauma Unit in Stockholm for their contributions and collaboration on this study.

**Funding.** The study was funded by Region Kronoberg and the County Council of Värmland, Sweden.

Correspondence regarding this article should be directed to Karin Pernebo, PhD, Senior Lecturer, Licensed Psychologist and Psychotherapist, Department of Psychology, Linnaeus University, Department of Research and Development, Region Kronoberg Box 1223, S-351 12 Växjö, Sweden. E-mail: [karin.pernebo@kronoberg.se](mailto:karin.pernebo@kronoberg.se); [karin.pernebo@lnu.se](mailto:karin.pernebo@lnu.se)