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Kuijpers, K.F.; van der Knaap, L.M.; Winkel, F.W.

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PTSD Symptoms as Risk Factors for Intimate Partner Violence Revictimization and the Mediating Role of Victims' Violent Behavior

Karlijn F. Kuijpers,¹ Leontien M. van der Knaap,² and Frans Willem Winkel^{2,3}

¹Institute for Criminal Law and Criminology, Leiden Law School, Leiden University, Leiden, The Netherlands

²International Victimology Institute Tilburg (INTERVICT), Tilburg University, Tilburg, The Netherlands

³Centre for Psychotrauma, Reinier van Arkel Group, 's-Hertogenbosch, The Netherlands

Apart from being a consequence of intimate partner violence (IPV), posttraumatic stress disorder (PTSD) can also be a risk factor for IPV revictimization. The current study examined how each of 4 PTSD symptom clusters (reexperiencing, arousal, avoidance, and numbing) related to revictimization in a sample of 156 female help-seeking victims of IPV, recruited from various victim support services in the Netherlands. In addition, we hypothesized that victim-perpetrated IPV would mediate the relation between PTSD symptomatology and IPV revictimization. Our results show that victims' PTSD reexperiencing symptoms predict revictimization of partner violence ($d = .45$ for physical IPV revictimization; $d = .35$ for psychological IPV revictimization); the other 3 PTSD symptom clusters were not related to IPV revictimization. Furthermore, victim-perpetrated psychological IPV was found to partially mediate the relation between victims' PTSD reexperiencing symptoms and IPV revictimization ($Z = 2.339$, $SE = 0.044$, $p = .019$ for physical IPV revictimization, and $Z = 2.197$, $SE = 0.038$, $p = .028$ for psychological IPV revictimization). Findings indicate that IPV victims with higher levels of PTSD reexperiencing symptoms may be more likely to perpetrate psychological IPV themselves, which may put them at greater risk for receiving IPV in return. Based on these results, a focus on individual PTSD symptom clusters and victim behaviors seems relevant for practice and may contribute to a decrease in victims' risk for future IPV.

Intimate partner violence (IPV) is a major public health problem and has been associated with a variety of serious physical and mental health problems. A frequently reported mental health consequence among victims of IPV includes posttraumatic stress disorder (PTSD; Babcock, Roseman, Green, & Ross, 2008; Jones, Hughes, & Unterstaller, 2001). A meta-analysis of 11 studies concluded that between 31% and 84% of female IPV victims met criteria for PTSD (Golding, 1999). Apart from being a consequence of partner violence, however, PTSD can also be a risk factor for future IPV victimizations. For instance, in their conceptual models on women's influence on partner violence, Foa, Cascardi, Zoellner, and Feeny (2000)

suggested victims' PTSD increases the risk for IPV revictimization. Although this suggestion received some empirical support (e.g., Krause, Kaltman, Goodman, & Dutton, 2006; Perez & Johnson, 2008), a recent systematic review of prospective studies of victim-related risk factors for IPV revictimization concluded that more definite conclusions regarding the role of victims' PTSD in explaining revictimization risk are needed (Kuijpers, Van der Knaap, & Lodewijks, 2011). To further clarify the relation between victims' PTSD and IPV revictimization more prospective research is needed.

Moreover, it remains unclear what mechanisms might explain the relation between PTSD and IPV revictimization among victims of partner violence. Research among male combat veterans shows that PTSD symptomatology is often associated with aggressive behaviors, perpetration of violence towards others, and perpetration of violence against a partner (e.g., Beckham, Moore, & Reynolds, 2000; Sherman, Sautter, Jackson, Lyons, & Han, 2006). In the current study, we aimed to examine whether the association between PTSD symptomatology and perpetration of partner violence may also be found in victims of partner violence.

In studying the role of PTSD in explaining revictimization risk, it has been suggested that it is important to consider the individual role of each PTSD symptom cluster (see e.g., Krause et al., 2006). The *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV*; American Psychiatric Association, 1994) defines three PTSD symptom clusters: reexperiencing,

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Correspondence concerning this article should be addressed to Karlijn F. Kuijpers, Institute for Criminal Law and Criminology, Leiden Law School, Leiden University, Room C1.20, P.O. Box 9520, 2300 RA Leiden, The Netherlands. E-mail: k.f.kuijpers@law.leidenuniv.nl

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avoidance, and arousal. A fourth numbing cluster, however, can be identified by splitting the original *DSM-IV* avoidance cluster into a new avoidance cluster and a numbing cluster (Krause et al., 2006). This 4-cluster solution for PTSD has been supported in various studies (Asmundson, Wright, McCreary, & Pedlar, 2003; Naifeh, Elhai, Kashdan, & Grubaugh, 2008). Krause et al. (2006) showed PTSD numbing symptoms to significantly increase risk for IPV revictimization, whereas PTSD avoidance symptoms decreased risk. In addition, the PTSD symptom clusters of reexperiencing and arousal were found to be unrelated to future partner violence.

With the present study, we aimed to get a better understanding of the role of victims' PTSD symptomatology in predicting risk for IPV revictimization. We prospectively examined the influence of each of four PTSD symptom clusters (reexperiencing, arousal, avoidance, and numbing) on IPV revictimization. Other than the above study by Krause et al. (2006), few studies consider the individual role of the PTSD symptom clusters. Moreover, as previous studies show that PTSD symptoms increase an individual's risk for perpetrating IPV (Orcutt, King, & King, 2003; Parrott, Drobles, Saladin, Coffey, & Dansky, 2003), IPV victims with PTSD symptoms may be more inclined to perpetrate IPV themselves. This, in turn, might put them at greater risk for IPV revictimization because prior research has suggested that victim-perpetrated partner violence is related to (re)victimization of IPV (Fergusson, Horwood, & Ridder, 2005; Stith, Smith, Penn, Ward, & Tritt, 2004). Therefore, we hypothesized that victim-perpetrated IPV mediates the relation between PTSD symptomatology and IPV revictimization.

Method

Procedure and Participants

Participants were recruited from various victim support services in the Netherlands in four large and four medium-sized cities. Participants were approached and included if (a) they had been a victim of physical, sexual, or psychological violence by their current or ex-partner at least once in the past 2 years; and (b) if they sufficiently mastered the Dutch language to understand the Dutch questionnaires we used. Participants were recruited through the collaborating victim support organizations by having staff inform eligible clients about this study. Not all clients seen at the recruitment sites were approached because in certain crisis situations staff felt it was not the right time to ask their client about participation in our study. Clients who indicated interest in participating received a registration form asking them to provide their contact details and to return it to the researchers. A researcher then telephoned registered participants to discuss any questions about the study they might have. For any questions during completion of the questionnaire, participants could phone or e-mail the researchers. Participants were asked to take part in the study at three different moments in time: After the initial assessment at baseline (Time 1), assessments were re-

peated 2 (Time 2), and 6 months later (Time 3). Participants were paid a 100-euro compensation for their time after completing the questionnaire at all three moments of data collection (data were collected between August 2008 and August 2010).

In total, 166 victims were included at Time 1 of our study, 162 at Time 2, and 159 at Time 3. As we decided to exclude three participants from final analyses (two because they were men and one because she was younger than 18 years), our final sample consisted of 156 female help-seeking victims of partner violence on which all subsequent analyses were based. Participants ranged in age from 20 to 68, with a mean age of 37.74 years ($SD = 10.42$). The cultural background of the participants was determined by their parents' birthplace. Ninety-six participants (61.5%) had Dutch parents, 15 (9.6%) had a Western immigrant background, 43 (27.6%) had a non-Western background, and 2 (1.3%) participants' background was unknown. Of all respondents, 75.6% were born in the Netherlands. A large majority had one or more children (85.3%). Most participants completed intermediate vocational education (46.8%), a second group completed lower vocational education (19.9%). Only 43.6% held a paid job, the other 56.4% did not. The annual income of participants was rather low. Of the respondents who answered this question ($n = 142$), 78.2% had an income of less than 20,000 euros. Thirty-six victims (23.1%) reported being in a romantic relationship with the perpetrator at Time 1, 30 (19.2%) at Time 2, and 25 (16.0%) at Time 3. At Time 1 and Time 2, 11.5% reported living in a shelter, at Time 3 this was even less: 7.1%. The mean number of days between Time 2 and Time 3 (4 months later) was 122.24 ($SD = 11.28$, range: 106–202). There was some variability in the number of days, although only a few exceeded a period of 5 months; 97.4% filled out the Time 3 questionnaire within 150 days.

Measures

Demographics (Time 1). At Time 1, we elicited information from participants on a range of demographic factors, including age, cultural background, number of children, education, employment, and income. Shelter status (in/out) and relationship status (together with perpetrator or not) were measured at all three time points of data collection.

PTSD symptoms (Time 2). PTSD symptom severity was assessed at Time 2 with the Dutch PTSD Symptom Scale-Self Report (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993; Dutch translation, Arntz, 1993). The PSS-SR contains 17 items reflecting the criteria for a diagnosis of PTSD listed in the *DSM-IV*. Current PTSD symptom severity was measured by asking respondents to indicate to what extent they experienced each of the symptoms during the previous week, following past incident(s) of IPV. By doing so, we slightly modified the items of the Dutch PSS-SR, which originally refer to "the traumatic event" instead of past incidents of IPV (Arntz, 1993). Answers were rated on a 4-point Likert scale, ranging from 0 = *Never* to 3 = *Five times or more*. Items were clustered into 5 reexperiencing,

5 arousal, 2 avoidance, and 5 numbing symptoms. For each of these symptom clusters, sum scores were computed. The PSS-SR has been reported to have good psychometric properties (Foa et al., 1993). Cronbach's α for the Dutch PSS-SR used in the current study was .88 for the reexperiencing, .83 for the arousal, and .85 for the numbing clusters. The two items on the avoidance cluster were strongly correlated ($r = .61, p < .001$).

Victim-perpetrated intimate partner violence (Time 2).

Intimate partner violence perpetrated by the victim was assessed at Time 2. We focused on victim-perpetrated psychological IPV because this type of violence is more common than victim-perpetrated physical IPV. At Time 2, only 9.0% of victims in our final sample ($N = 156$) reported that they perpetrated some form of physical IPV, whereas 40.4% of victims reported to have perpetrated some form of psychological IPV. Psychological IPV perpetration by the victim was assessed with the revised version of the Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). As no Dutch version of the CTS2 was available at the time we conducted our study, we translated the instrument. The CTS2 consists of 78 items listing violent behaviors for which respondents report the frequency of occurrence by either spouse. Thus, it measures both violent behaviors that have been committed by a partner or ex-partner against the respondent (victimization measure), as well as the violent behaviors that have been perpetrated by the respondent (perpetration measure). As we were interested in IPV perpetrated by the victim, we used the scores on the perpetration measure of the CTS2.

Items of the CTS2 are divided into five subscales: physical assault, psychological aggression, negotiation, injury, and sexual coercion. We assessed the victim's own perpetration of psychologically violent behaviors against her partner or ex-partner during the previous 2 months (i.e., the period between Time 1 and 2) using the 8-item CTS2 subscale psychological aggression. Sample items include "I insulted or swore at my (ex-)partner" and "I called my (ex-)partner fat or ugly." The CTS2 is usually scored using an 8-point ordinal scale indicating the frequency of occurrence of conflict tactics (Straus et al., 1996). According to Straus (2006), the CTS2 can be used as a frequency measure of conflict tactics, but also as a prevalence measure of violent behaviors, by instructing respondents to indicate *if* the behaviors had occurred or not, instead of *how frequent*. Accordingly, participants in the current study were asked to indicate their perpetration of each of the violent behaviors in the previous 2 months by giving a yes or no answer, thus using the CTS2 as a prevalence measure. If there were one or more affirmative responses to any of the psychological aggression items, we considered it as any victim-perpetrated psychological IPV being present. Good internal consistency has been demonstrated for all subscales of the CTS2, as well as adequate construct and discriminant validity (Straus et al., 1996). To obtain a satisfying reliability for our measure of victim-perpetrated IPV, we had to delete one item on the scale ("I threatened to hit or throw something at my [ex-]partner")

due to a high number of missing values on that item. Therefore, our final scale of victim-perpetrated psychological IPV consisted of seven items (before dichotomization), for which (Cronbach's α was .78.

IPV revictimization (Time 3). The two outcome variables of our study—the occurrence of any physical and psychological IPV revictimization—were assessed at Time 3 (4 months after Time 2). Both outcomes were measured with the same measure used at Time 2. To assess any physical IPV revictimization, we used the 12-item CTS2 subscale physical assault; for any psychological IPV revictimization, we used the 8-item CTS2 subscale psychological aggression. Participants in the current study were asked to indicate the occurrence of victimization by each of the violent behaviors in the previous 4 months by giving a yes or no answer. If there were one or more affirmative responses to any of the physical assault items, we considered it as any physical IPV revictimization being present. Similarly, if there were one or more affirmative responses to any of the psychological aggression items, we considered it as any psychological IPV revictimization being present. Cronbach's α for the CTS2 measure of physical IPV revictimization in this study was .95. To obtain a satisfactory reliability for our measure of psychological IPV revictimization, we again had to delete one item on the scale ("My [ex]-partner threatened to hit or throw something at me") due to a high number of missing values on that item. Therefore, our final scale for psychological IPV revictimization consisted of seven items, for which Cronbach's α was .86.

Statistical Analyses

As a first step in our analyses, we generated descriptive statistics for our study variables and performed t tests to compare mean PTSD symptom scores for nonrevictimized and revictimized participants. To test the relationship between the four PTSD symptom clusters and IPV revictimization, two multivariate logistic regression analyses were performed. The reexperiencing, arousal, avoidance, and numbing clusters were simultaneously entered as predictors in the model; outcomes were physical IPV revictimization and psychological IPV revictimization, respectively. Next, we examined the mediating effect of victim-perpetrated psychological IPV on the relation between PTSD symptom severity and IPV revictimization. Although originally developed for continuous mediator and outcome variables, mediational analyses can also be performed for dichotomous mediator and outcome variables (Herr, n.d.; MacKinnon & Dwyer, 1993; MacKinnon, Fairchild, & Fritz, 2007). The four criteria to establish mediation proposed by Baron and Kenny (1986) stay the same (see also Kraemer, Kiernan, Essex, & Kupfer, 2008, for the more recent MacArthur definition), yet they are tested with logistic regression analyses. The first criterion holds that the predictor variable (PTSD symptoms) is significantly related to the outcome variable (physical IPV revictimization for the first and

psychological IPV revictimization for the second mediational model). Second, the predictor variable must be significantly related to the potential mediator (victim-perpetrated psychological IPV). Third, the potential mediator is required to hold a significant relation with the outcome variable after controlling for the effects of the predictor variable. Fourth, to establish full mediation, the effect of the predictor on the outcome variable after controlling for the potential mediator should be zero. If this effect is not equal to zero, but is significantly reduced, then partial mediation is indicated. Mediation can be tested using the Sobel test, which calculates whether the indirect effect of the predictor on the outcome via the mediator is significantly different from zero (Sobel, 1982). Because both continuous as well as dichotomous variables are included in our mediational models, unstandardized logistic regression coefficients were standardized to make them comparable before applying the Sobel test (see, e.g., Herr, n.d.; MacKinnon & Dwyer, 1993). Specifically, we multiplied each coefficient by the standard deviation of the predictor variable and divided this by the standard deviation of the outcome variable.

Results

Of our final sample of 156 victims, a quarter (25.6%) reported being revictimized by any physical IPV and more than half (58.3%) by any psychological IPV between Times 2 and 3. Means, standard deviations, and *t* tests for PTSD symptoms in revictimized and nonrevictimized IPV victims are presented in Table 1. It shows that for all four PTSD symptom clusters mean scores were higher for victims who were revictimized by physical and psychological IPV during the 4-month follow-up. The difference between the nonrevictimized and revictimized group, however, was only significant for PTSD reexperiencing symptoms, $t(154) = 2.47, p = .014, d = .45$ for physical IPV, and $t(154) = 2.12, p = .035, d = .35$ for psychological IPV. Among all 156, 40.4% of victims reported to have perpetrated some form of psychological partner violence themselves at Time 2 versus 59.6% who did not. If we examine *physical and psychological* partner violence perpetrated by victims during the *whole period of study* (Time 1–3), analyses show that 21.1% of victims in our sample reported having perpetrated one act of physical and/or psychological partner violence themselves and another 57.1% of victims reported having perpetrated multiple acts of violence (ranging from 2 to 21 acts). Therefore, IPV can be considered to be mutual for the majority of cases.

PTSD Symptom Clusters and IPV Revictimization

We performed two multivariate logistic regression analyses to assess the relationships among the four PTSD symptom clusters and IPV revictimization. Results indicated that when the four PTSD symptom clusters were entered simultaneously in the model, PTSD reexperiencing symptoms significantly predicted physical IPV revictimization ($OR = 1.17, p = .041$) and were

Table 1
Means, Standard Deviations, and Effect Sizes for PTSD Symptoms in Revictimized and Nonrevictimized IPV Victims

PTSD at Time 2	Physical IPV at Time 3				Psychological IPV at Time 3				Cohen's <i>d</i>
	Revictimized (<i>n</i> = 40)		Not revictimized (<i>n</i> = 116)		Revictimized (<i>n</i> = 91)		Not revictimized (<i>n</i> = 65)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Reexperiencing	7.06	4.35	5.17	4.10	6.26	4.28	4.82	4.06	.35*
Arousal	6.93	4.38	6.39	4.29	6.82	4.20	6.12	4.45	.16
Avoidance	2.74	2.12	2.25	2.02	2.50	2.12	2.20	1.95	.15
Numbing	6.40	4.35	5.39	4.37	5.91	4.38	5.28	4.37	.14

Note. We had data for 155 victims on PTSD avoidance symptoms due to missing values for one victim. Of these 155 victims, 116 were not revictimized and 39 victims were revictimized by physical IPV; 65 were not revictimized; 90 were revictimized by psychological IPV. For the other PTSD symptom clusters, we had data for 156 victims. PTSD = posttraumatic stress disorder; IPV = intimate partner violence.

**p* ≤ .05.

Table 2
Multivariate Analyses of PTSD Symptom Clusters and IPV Revictimization

PTSD at Time 2	Any physical IPV revictimization at Time 3		Any psychological IPV revictimization at Time 3	
	OR	95% CI	OR	95% CI
Reexperiencing	1.17*	[1.01, 1.37]	1.15*	[1.00, 1.33]
Arousal	0.90	[0.76, 1.05]	0.98	[0.86, 1.12]
Avoidance	0.98	[0.73, 1.30]	0.92	[0.71, 1.18]
Numbing	1.04	[0.90, 1.20]	0.98	[0.87, 1.11]

Note. $N = 155$. PTSD = posttraumatic stress disorder; IPV = intimate partner violence; OR = odds ratio; CI = confidence interval.

* $p \leq .05$.

very close to significance for psychological IPV revictimization ($OR = 1.15, p = .051$). The other three PTSD symptom clusters were not related to our IPV revictimization outcomes (Table 2).

Victim-Perpetrated Psychological IPV as a Mediator

Mediational analyses were performed to examine whether the relation between victims' PTSD symptoms and IPV revictimization is mediated by victims' use of psychological violence against their partner. Because previous analyses showed that only PTSD reexperiencing symptoms were related to IPV revictimization, we performed mediational analyses with this specific symptom cluster. First, we conducted the analysis with physical IPV revictimization as the outcome variable. Figure 1 indicates that Criteria 1, 2, and 3 (Baron & Kenny, 1986) to establish mediation were met. Regarding Criterion 4, results show that the effect of PTSD reexperiencing symptoms on physical IPV revictimization after controlling for victim-perpetrated psychological IPV was not zero; therefore, full mediation could not be established. However, results from the Sobel test indicated that the indirect effect of PTSD reexperiencing symptoms on physical IPV revictimization via victim-perpetrated psychological IPV was significantly different from zero ($Z = 2.339, SE = 0.044, p = .019$), which suggests partial media-

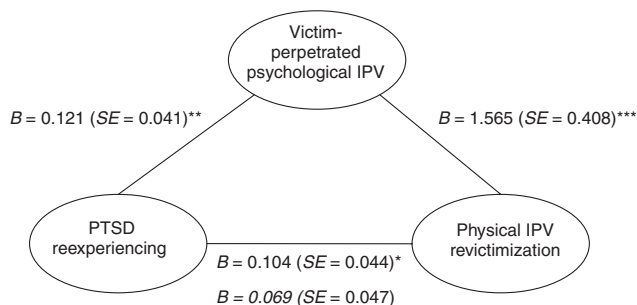


Figure 1. Mediation model physical intimate partner violence (IPV) revictimization. This figure shows unstandardized logistic regression coefficients. The italicized coefficient (0.069) is the effect after controlling for the mediator variable. PTSD = posttraumatic stress disorder. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

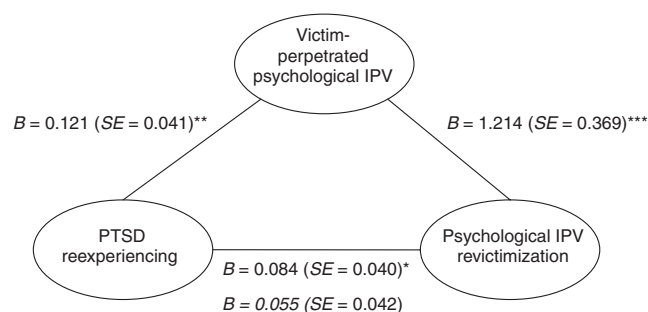


Figure 2. Mediation model psychological intimate partner violence (IPV) revictimization. This figure shows unstandardized logistic regression coefficients. The italicized coefficient (0.055) is the effect after controlling for the mediator variable. PTSD = posttraumatic stress disorder. * $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

tion. Victim-perpetrated psychological IPV explained 41.8% of the effect of PTSD reexperiencing symptoms on physical IPV revictimization.

Next, we conducted the same analysis with psychological IPV revictimization as the outcome variable with similar results (see Figure 2). The effect of PTSD reexperiencing symptoms on psychological IPV revictimization after controlling for victim-perpetrated psychological IPV was not zero; therefore, full mediation could not be established. As results from the Sobel test revealed that the indirect effect of PTSD reexperiencing symptoms on psychological IPV revictimization via victim-perpetrated psychological IPV was significantly different from zero ($Z = 2.197, SE = 0.038, p = .028$), partial mediation was indicated. Victim-perpetrated psychological IPV explained 41.1% of the effect of PTSD reexperiencing symptoms on psychological IPV revictimization.

Discussion

The current study investigated the relation between four PTSD symptom clusters and IPV revictimization, thereby following a prior study into the role of distinct PTSD symptoms in intimate partner reabuse by Krause et al. (2006). Our results showed that victims' PTSD reexperiencing symptoms

predicted revictimization by physical and psychological partner violence. The other three symptom clusters (arousal, avoidance, and numbing) were not related to IPV revictimization outcomes. Moreover, we found victim-perpetrated psychological IPV to partially mediate the relation between PTSD re-experiencing symptoms and IPV revictimization. Our results suggest that victims' continuous reexperiencing of prior incidents of partner violence may build up frustration and negative emotions to such a high amount that it leads to psychologically violent outbursts of victims against their partner. In turn, this expression of victims' psychological aggression increases risk for IPV revictimization. Moreover, victims in our sample might not only reexperience IPV in their thoughts and feelings, but also in reality. The current study's descriptive analyses showed that the majority appears to live in an ongoing cycle of mutual violence in which IPV perpetration by one partner is followed by IPV perpetration by the other member of the couple. This may be a second reason for the strong relation between PTSD reexperiencing symptoms and the actual experience of an incident of IPV revictimization in these victims.

Prior research has already suggested PTSD reexperiencing symptoms predict exposure to interpersonal violence (Cogle, Resnick, & Kilpatrick, 2009). When examining perpetrator status, however, women's PTSD reexperiencing symptoms were only related to physical and/or sexual interpersonal violence by a nonintimate partner, yet not to physical and/or sexual interpersonal violence by an intimate partner. Cogle et al. (2009) used a national household probability sample of women, whereas in the current study we used a sample of female help-seeking victims of IPV. Therefore, it might be that the relation between PTSD reexperiencing symptoms and IPV revictimization is only present among specific groups of IPV victims. Our help-seeking victims may have been less able to cope with their reexperiencing symptoms: This may have increased their risk for IPV revictimization. Furthermore, our results differ from the findings of Krause et al. (2006) who reported PTSD numbing symptoms predicted IPV revictimization. In the current study, no relation was found between the numbing cluster and IPV revictimization. These different findings might be due to differences in study samples. Krause et al. recruited their sample mainly from a domestic violence protection order court and a domestic violence criminal court, whereas in the current study we used a clinical sample of help-seeking victims of IPV. In our victim sample, the majority of cases involve mutual IPV perpetrated by both members of the couple. Yet, research shows that court samples, such as the sample of Krause and colleagues, are more likely to involve cases of "intimate terrorism": one-sided violence initiated by the male partner with the objective to dominate and control his wife (Johnson, 1995, 2006). These different types of partner violence may lead to differences in PTSD symptom profiles in both samples. For instance, according to the mutual IPV perspective, violence can mainly be described as an emotional response in reaction to an unpleasant experience, and cycles of revictimization are

thought to be characterized by mutual emotional aggression (see, e.g., Dutton, 2008; Stets & Straus, 1989). Therefore, the chance that victims of mutual IPV show PTSD symptoms of emotional numbing is likely to be low and this may explain the fact that we did not find a relation between numbing symptoms and IPV revictimization in the current sample. Another finding of Krause et al. was the protective effect of PTSD avoidance symptoms on IPV revictimization. In the current study, we did not find support for this relation. However, as already indicated by Krause et al. (2006), caution should be taken when interpreting findings related to the PTSD avoidance scale because it includes only two items, which may lead to problems concerning reliability.

When interpreting the results of this study, several limitations need to be addressed. First, although we assessed psychological partner violence perpetrated by victims, we did not ask for their motives. In the above, we assumed victims' psychological violence to be a way to express their frustration and negative emotions; however, research shows that women report using partner violence for other reasons as well, including self-defense and retaliation (Bair-Merritt et al., 2010). Second, information on study variables was elicited by means of victims' self-reports only. In the case of our perpetration and victimization measures of IPV, additional perpetrator self-reports would have provided information on victim and perpetrator agreement on the amount and type of partner violence they experienced. As we only used victims' self-reports here, we could not determine the level of agreement; hence, we were not able to identify cases in which there might have been over- or underreporting of partner violence. Although some studies show evidence of over- and underreporting in both men and women (for a discussion, see Dutton & Nicholls, 2005; George, 2003), other studies report good agreement between partners regarding relationship violence (Archer & Ray, 1989). Third, PTSD symptoms were assessed specifically in response to the incidents of partner violence that the help-seeking victims in our sample had experienced. We argue that the prior experience of partner violence can be regarded as a traumatic event because it was severe enough for respondents to seek help. However, we cannot fully substantiate this claim because other reasons may have played a role in victims' help-seeking behaviors as well. Fourth, our findings are based on a clinical sample of help-seeking victims of IPV where mutual IPV was most prevalent. We do not know if results are generalizable to victims of other types of IPV, such as one-sided intimate terrorism (Johnson, 1995, 2006), or to other victim samples, such as court samples or samples of non-help-seeking IPV victims who remain outside the scope of victim support organizations. A final remark we would like to make is that we did not include in the analyses prior IPV committed by the perpetrator. First, such perpetrator-related characteristics cannot be changed by victims. Second, including prior IPV by the perpetrator may lead to diverting the attention from certain victim-related risk factors because they may become insignificant in analyses. Because we were interested in what victim-related factors are important in curtailing

future IPV and might be relevant for interventions by practice, we decided to focus on victim-related factors specifically.

Despite these limitations, the current study leads us to formulate a number of recommendations for practice. First, practitioners may pay close attention to victims' PTSD reexperiencing symptoms, as these are shown to be associated with risk for future IPV. Furthermore, practice should screen for psychological partner violence perpetrated by victims themselves as this explains a substantial part of the relation between PTSD reexperiencing symptoms and IPV revictimization. Decrease of victims' psychological aggression may help in decreasing their risk of IPV revictimization; in that way victims might be able to stop the cycle of mutual violence. Therapies to reduce anger and aggression in couples are numerous; however, they are often based on models of male violence against women and are suggested to be inappropriate for women (Kernsmith, 2005; Swan, Gambone, Caldwell, Sullivan, & Snow, 2008). As Swan and colleagues rightfully stated, "gender-specific interventions tailored to the needs of women who are violent are more likely to be successful in creating behavior change" (p. 310). Yet, as the results of our study are preliminary in nature and the effect sizes are modest, findings should be replicated first before valid suggestions for treatment can be made.

In addition to these practical recommendations, the current study results in a number of recommendations for future research. Relating our results to a prior study by Cogle et al. (2009), who concluded that PTSD reexperiencing symptoms did not predict violence by an intimate partner, we argue that victims in their national household sample may have been able to cope more effectively with their PTSD reexperiencing symptoms. This suggestion should be examined in future research to gain empirical support. Next, comparison of our findings with those of Krause et al. (2006) led us to hypothesize that the relation between PTSD symptom clusters and IPV revictimization might be different across victim samples due to the different types of IPV they may have experienced (i.e., one-sided vs. mutual IPV). Further empirical testing of this hypothesis is needed before firm conclusions on this point can be made. Also, the relation between PTSD symptoms and IPV revictimization may be mediated by different types of victim behavior. In our sample of mainly mutual IPV victims, we found victim-perpetrated psychological IPV to be an important mediator. In other victim samples, however, different types of victim behavior might be relevant. For instance, as victims of one-sided intimate terrorism show elevated levels of fear and anxiety (Kelly & Johnson, 2008), anxious behavior could be hypothesized to influence the relation between PTSD and IPV revictimization in victims of this specific form of IPV. Future research is necessary to further support this suggestion. Finally, we already mentioned that we used victims' self-reports to elicit information on our study variables, including PTSD symptoms. Although victims' self-reports of PTSD symptoms give some indication, however, they do not provide a basis for a clinical PTSD diagnosis. Future research should examine whether current findings can be replicated if valid clinical PTSD diagnoses are used.

In conclusion, this was the first study to our knowledge to show PTSD reexperiencing symptoms to predict revictimization of physical and psychological IPV, and victim-perpetrated psychological IPV to partially mediate this relation. Our findings suggest that individual PTSD symptom clusters and victim behaviors are relevant in explaining risk for IPV revictimization.

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