

# Prevalence of Intimate Partner Violence Victimization and Victims' Relational and Sexual Well-Being

Sabine Hellemans<sup>1</sup> · Tom Loeys<sup>2</sup> · Marieke Dewitte<sup>1</sup> · Olivia De Smet<sup>1</sup> · Ann Buysse<sup>1</sup>

Published online: 19 April 2015  
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**Abstract** Research shows that experiences with intimate partner violence (IPV) harm victims' individual well-being. Surprisingly, little is known about how IPV might impact on victims' well-being at the relationship level. Based on a population-based study in Flanders (the Northern part of Belgium), this study concentrates on how lifetime experience with IPV impacts on victims' relational and sexual well-being with their current partner. Ten percent of the population was confronted with physical violence and 56.7 % with psychological violence. Higher levels of IPV victimization corresponded with an adverse mental, relational (relationship satisfaction, attachment), and sexual (sexual satisfaction, sexual dysfunction, sexual communication) well-being in both women and men but except for the latter correlates, the effects were more pronounced for women than for men.

**Keywords** Intimate partner violence · Relationship satisfaction · Attachment · Sexual satisfaction · Sexual dysfunction · Sexual communication

Intimate partner violence (IPV) refers to “behaviour within an intimate relationship that causes physical, sexual or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours” (WHO 2010, p. 11). Different theoretical perspectives have debated the etiology of violence within intimate relationships, entitled “the feminist perspective” and “the family violence perspective”.

According to Johnson (1995, 2008), Johnson and Ferraro (2000), and Johnson and Leone (2005), these two theoretical perspectives refer to distinct types of IPV, which they, respectively, labeled “intimate terrorism” and “common couple violence”. Intimate terrorism defines violence, which tends to be used to control the intimate partner and contains severe forms of aggression. It embodies a systematic strategy to intimidate the partner and is related to psychopathological perpetrator characteristics. Differently, common couple violence tends to be used to control a stressful conflict escalation in the course of the relationship, consists of mild to severe forms of violence, and is associated with disturbed relationship dynamics (Carlson and Jones 2010; Johnson 1995). As this control is short-term and context-specific, this latter type of violence is also called situational couple violence. Johnson (1995, 2008) further argues that data collected from clinical samples is likely to measure intimate terrorism and that community samples mainly measure common couple violence.

World-wide high prevalence rates of this complex and multifaceted phenomenon have led scholars to examine the individual health correlates associated with experienced IPV. No unique set of symptoms can be considered as definitely characteristic of IPV victimization, but clear evidence has been provided that experiences with IPV harm the physical, mental, and sexual health of victims (e.g., Campbell 2002; Coker et al. 2002; Follingstad 2009). Although this line of research has revealed important information about the health outcomes of IPV, the study of physical and psychological violence within relationships could certainly benefit from more research taking an interpersonal perspective. Yet, at this point, there is only limited research examining the effect of experiences with IPV on victims' intimate partner relationships. Therefore, the aim of the present study was to build on and expand previous research in this area by addressing the effects of lifetime IPV victimization on victims' relational (i.e., relationship

✉ Sabine Hellemans  
Sabine.Hellemans@UGent.be

<sup>1</sup> Department of Experimental Clinical and Health Psychology, Ghent University, Henri Dunantlaan 2, 9000 Ghent, Belgium

<sup>2</sup> Department of Data Analysis, Ghent University, Ghent, Belgium

satisfaction and attachment) and sexual well-being (i.e., sexual satisfaction, sexual dysfunction, sexual communication) with the current intimate partner. In the following paragraphs, different theoretical models will be outlined with regard to IPV and a specific range of relational correlates.

### IPV and Relational Well-Being

Relationships are intrinsically interactional and the everyday exchanges between two partners influence the affective and cognitive perceptions people have on intimate relationships (Bartholomew and Cobb 2011; Bradbury and Karney 2010; McNulty and Karney 2001). In this vein, it is logical to assume that experiences with violence by an intimate partner affect victims' relational well-being. Drawing from social learning theory within intimate relationships (SLT; see Bradbury and Karney 2010) and attachment theory (Bowlby 1969, 1973, 1982), we outline below how IPV experiences might impact on victims' relationship satisfaction and adult attachment orientation.

**Relationship Satisfaction** The SLT is a meaningful theory to understand how adverse relationship experiences may lead to adverse feelings about that relationship (see Bradbury and Karney 2010). Specifically, this model posits that one's relationship satisfaction is largely determined by a couples' positive and negative interaction patterns. A sequence of positive interactions enhances relationship satisfaction, while the accumulation of unresolved conflicting and violent interactions erode satisfying feelings about the relationship (Lawrence and Bradbury 2007). The association between the presence of IPV victimization and less relationship satisfaction has repeatedly been illustrated (e.g., Fournier et al. 2011; Godbout et al. 2009; Katz et al. 2002; Testa and Leonard 2001). Still, the question whether IPV victimization takes a toll on the level of relationship satisfaction is more complex than one would expect (Lawrence and Bradbury 2007). For instance, Williams and Frieze (2005) revealed that about one-fourth of the respondents reporting mutually mild to high levels of violent behaviors still characterized their intimate relationship as excellent. Additionally, Follingstad et al. (2012) revealed that the more a woman believed she contributed to her partner's use of psychological violence, the higher her score on relationship satisfaction. It thus seems that violent acts are perceived as less harmful for the relationship when both partners are violent (see also Anderson 2002; Follingstad et al. 2012; Williams and Frieze 2005). Although research in general found that higher levels of IPV victimization corresponded with lower levels of relationship satisfaction (for a review, see Stith et al. 2008), variations across studies underscore the importance of further investigation. Moreover, it is not known whether lifetime experience with IPV impacts on the current level of relationship satisfaction.

**Adult Attachment Orientation** From another perspective, attachment theory clearly explains how negative relationship experiences influence the regulation of emotions, cognitions, and behavior within intimate relationships (Mikulincer and Shaver 2007). Throughout the years, a two-dimensional approach to determine individual differences in attachment orientation has been favored (e.g., Brennan et al. 1998). The anxiety dimension denotes the extent to which individuals strive for closeness and proximity, worry about rejection and abandonment, and feel distressed when significant others are unavailable or unresponsive. The avoidance dimension reflects the extent to which individuals avoid closeness and relational intimacy, remain emotionally independent, and strive for self-reliance. Individuals who score low on both dimensions are perceived as securely attached individuals, whereas individuals scoring high on one or both dimensions are perceived as insecurely attached. There is research demonstrating stability in attachment orientations throughout life (Collins and Read 1994), as well as evidence showing that attachment orientations are to some degree changeable as they influence and are influenced by relationship experiences. Stated differently, the latter perspective implies that attachment orientations are subject to revision and updated in response to new relationship experiences (Birnbaum et al. 2006; Collins and Read 1994; Fraley et al. 2011).

The paradoxical fact that an intimate partner can be a comforting figure as well as a source of distress stimulated researchers to examine how IPV is related to people's attachment orientation. During times of distress in intimate relationships—such as IPV—negative emotions are activated, which, in turn, activate the attachment system (Ainsworth et al. 1978). People behave in ways that are conforming to their attachment-related beliefs and expectations. It is, therefore, not surprising that IPV is related to elevated levels of insecure attachment. In line with theory, a series of studies have found an association between insecure attachment orientations and IPV perpetration (e.g., Allison et al. 2008; Babcock et al. 2000; Fournier et al. 2011). Furthermore, it may be that lifetime experiences with IPV victimization have a negative effect on attachment orientation by increasing insecure attachment. Specifically, lifetime IPV victimization might affect the way victims perceive and interpret cognitions, emotions and behavior within future intimate relationships (e.g., Weston 2008).

### IPV and Sexual Well-Being

Studies examining the health correlates of IPV have consistently found an adverse effect on victims' individual sexual well-being (Campbell 2002; Coker et al. 2002). To date, there is evidence that (physical) IPV victimization is associated with increased prevalence of sexual risk-taking

behaviors, which in turn leads to an increased risk of sexually transmitted diseases, more unwanted pregnancies and abortions, an increased likelihood of dyspareunia, and a lack of sexual pleasure (for an overview, see Coker 2007). Yet, at this point, it has remained unstudied how lifetime IPV experiences might undermine victims' current sexual well-being and sexual communication at the relationship level. In this study, sexual well-being is referred to as a satisfying sexual relationship, characterized by satisfaction with the quality and frequency of sex and by the absence of sexual dysfunction (Bodenmann et al. 2007).

**Sexual Satisfaction and Sexual Dysfunction** Recently, a growing body of research has been produced that demonstrates the important role of the relational context in understanding the different aspects of couples' sexual well-being. For instance, various studies have shown that relationship problems are associated with a decline in sexual satisfaction (e.g., Sprecher and Cate 2004) and—especially among women—with sexual dysfunctions and sexual distress (Bodenmann et al. 2007; King et al. 2007; Stephenson and Meston 2010). Given this strong interdependence between sex and intimate relationships, it is plausible to assume that lifetime experiences with tensed and discordant relationships, characterized by negative affect and negative behavioral patterns in the relationship, interfere with current positive sexual interactions.

**Sexual Communication** Sexual communication refers to the interpersonal verbal communication of one's sexual thoughts, feelings, and needs (Holmberg and Blair 2009; Traen and Skogerbo 2009). The extent and quality of (sexual) communication within a relationship are often considered as important determinants of the overall relationship satisfaction and the level of intimacy between partners (Greeff and Malherbe 2001). In addition, research has shown that intimate communication is associated with the quality of the sexual relationship between partners (e.g., Cupach and Comstock 1990; Montesi et al. 2013). Thus, when discussing the association between adverse relationship experiences and victims' current sexual well-being it is also highly interesting to have a clearer view on the interactional processes between partners such as sexual communication. Yet, studies examining the link between IPV victimization and sexual communication as a function of maintaining a satisfying sexual relationship with the partner are non-existent. Since the ability to communicate in a sexual context is related to sexual risk-taking behaviors (e.g., Testa et al. 2007), and since people are more likely to disclose their sexual likes when they have positive relationship schemas (Byers and Demmons 1999), it is expected that lifetime IPV experiences also diminish the extent to which a victim is likely to discuss their sexual needs and desires with their current partner.

## The Present Study

This study adds to the IPV literature by taking into account several thematic limitations of previous research. First, this study specifically addresses victims' relational and sexual well-being in their current intimate relationship—besides their mental well-being that traditionally received the most research attention—using a large-scale representative sample. Although previous studies have used community samples, studies examining victims' relational well-being in the context of IPV have mainly used dating (e.g., Follingstad et al. 2002) or clinical samples (e.g., Rhatigan and Axson 2006), limiting the generalizability of the existing findings on the IPV—relational well-being link. Next to IPV victims' mental and relational well-being, this study examines IPV victims' sexual well-being in their intimate relationships, which has only rarely been studied. Second, this study informs about how intimate violence might impact male victims. Even though some victimization studies assessed the impact of IPV for both women and men, only a few of them have directly compared the health correlates for male and female victims (Caldwell et al. 2012). Third, this study enlarges the existing knowledge on IPV by specifically examining the effects of psychological victimization. Only recently, scholars expanded the IPV research with the investigation of psychological violence and these studies revealed that psychological aggression may account for a greater impact on victims' individual and relational well-being than physical IPV (e.g., Bartholomew and Cobb 2011; Coker et al. 2002).

Related to the previous points, the overall aims of the present study were (a) to examine the lifetime experiences of women and men with physical and psychological IPV (RQ1), and (b) to investigate the effects of lifetime physical and psychological IPV victimization on respondents' current mental well-being as well as their relational and sexual well-being in the relationship with their partner (RQ2). In line with prior research on IPV in community samples, we hypothesized that neither for physical (H1a), nor for psychological (H1b) IPV gender differences would be found in lifetime victimization rates. Furthermore, we hypothesized that increased levels of lifetime physical and psychological IPV victimization would correspond with lower mental health scores (H2a and 2b), less relationship satisfaction (H3a and 3b), more anxious (H4a and 4b) and avoidant (H5a and 5b) attachment orientations, decreased levels of sexual satisfaction (H6a and 6b) and sexual communication (H7a and 7b) and increased levels of sexual dysfunction (H8a and 8b). Potential differences between women and men were examined as evidence has been found that IPV victimization might affect the well-being (e.g., Anderson 2002; Williams and Frieze 2005) of both genders differently.

## Method

### Participants and Procedure

This sample drew on data from the survey “Sexual Health in Flanders” (Buysse et al. 2013), a large-scale representative survey on sexuality, sexual health and relationships in Flanders (i.e., the Northern, Dutch speaking part of Belgium). The survey contained extensive information on sexual health characteristics and biomedical, psychological, demographic, and socio-cultural correlates. Data were collected between February 2011 and January 2012 and respondents between 14 and 80 years of age were included. Our final sample consisted of 1832 respondents (response rate: 40.0 % of the eligible respondents), who were randomly drawn from the Belgian National Register. The sample was stratified by age (aged 14 to 25, 26 to 49, and 50 to 80). Data were gathered via face-to-face interviews, along with a combination of computer-assisted personal interviewing (CAPI) and computer-assisted self-interviewing (CASI). More specifically, all sensitive information (i.e., a wide range of sexual health characteristics) was gathered in a CASI set-up, so that respondents never had to share private information about their sexual health with an interviewer. In this study, we report on a subsample of the total sample, namely on adult ( $\geq 18$  years) heterosexual women and men with both parents having the Belgian nationality<sup>1</sup> ( $N=1448$ ). The mean age of the women ( $n=694$ ) was 46.87 years ( $SD=16.88$ , Range: 18–79). The mean age of the men ( $n=754$ ) was 45.99 years ( $SD=16.38$ , Range: 18–80). Most women (79.8 %) and men (83.2 %) were in a romantic relationship. Among the respondents, 4.5 % were still studying, 29.9 % held no degree or a secondary school degree, 35.4 % had earned a high secondary school degree, 20.2 % held a bachelor degree, and 10.0 % had earned a higher level university degree.

### Measures

**Sociodemographic Characteristics** Next to their age, education level and relationship status, respondents were asked about sociodemographic characteristics that have been identified as risk factors that strongly relate to IPV victimization (see Stith et al. 2004). These included how often they meet family (0 = *never in the past 6 months* to 7 = *daily or almost daily*), or friends (0 = *never in the past 6 months* to 7 = *daily or almost daily*) at home or elsewhere, how important religion is (1 = *very unimportant* to 5 = *very important*), whether their family income is above 2000 euros (1 = *no* and 2 = *yes*), and whether they perceived this family income as sufficient to live

<sup>1</sup> A specific population-based survey “Sexual Health of Ethnic Minorities in Flanders” was used to examine IPV victimization among non-Western, ethnic minorities in Flanders (i.e., Turkish and Moroccan descents).

comfortable (1 = *very uncomfortable* to 7 = *very comfortable*). Additionally, five questions assessed the extent of social support (e.g., “There are several people I can go to for a chat when I feel lonely”) on a 5-point Likert scale (from 1 = *totally disagree* to 5 = *totally agree*). A score for social support was computed by summing the scores on each item ( $\alpha=.73$ ).

**Intimate Partner Violence** In the present study, lifetime IPV is defined as self-reported experiences of physical or psychological violence at the hands of a current or former partner. Physical IPV was assessed with one question measuring different acts of physical aggression (adapted from the Conflict Tactics Scale, CTS; Straus 1979). Respondents were asked “If you think about your current or former partner, has he/she ever hit you with the flat of their hand, hit you with their fist, kicked you, or physically hurt you in another way?” This question was rated on a 5-point Likert scale (from 0 = *never* to 4 = *very often*).

To assess psychological IPV, we adopted and modified items from the WHO Multi-country Study on Women’s Health and Domestic Violence against Women (Garcia-Moreno et al. 2005). Respondents were asked “If you think about your current or former partner, has he/she ever...” (a) tried to limit the contact you have with your friends or family members, (b) insisted on knowing your whereabouts and who you were with at every moment of the day, (c) ignored you or treated you indifferently, (d) criticized you or ridiculed you for what you do or say, (e) belittled or humiliated you in front of other people, (f) intentionally done something to scare or intimidate you, and (g) threatened to hurt you or someone you love. These seven items were rated on a 5-point Likert scale (from 0 = *never* to 4 = *very often*). The total scale score for psychological violence was computed by summing the scores for each item, with a higher score indicating more severe psychological IPV (Range: 0–28). The seven items proved to be internally consistent ( $\alpha=.87$ ). It should be noted that we did not make a distinction between IPV that is happening at present and IPV that occurred in past relationships. Consequently, the current partner is not necessarily the perpetrator of all aggression experienced by a respondent. Therefore, we cannot be sure whether the health correlates—described below—are long term correlates from aggression in the previous relationship, or whether it is definitely directly linked with the current relationship.

**Mental Health** Respondents’ current mental health was assessed using the MHI-5, a five-item short version of the 18-item Mental Health Inventory (MHI; Veit and Ware 1983). All items (e.g., “During the past 4 weeks, how much of the time were you a happy person?”) were scored on a 5-point Likert scale (from 0 = *never* to 5 = *all the time*). Higher scores were indicative for a better mental well-being (Range: 0–25). The alpha reliability for the MHI-5 in this study was .82.

**Relationship Satisfaction and Sexual Satisfaction** Respondents' relationship and sexual satisfaction with their current partner was assessed using the Maudsley Marital Questionnaire (MMQ; Arrindell et al. 1983; Crowe 1978). The original scale consists of 25 items and yields three subscales. Given the focus of this study, only the relationship satisfaction (e.g., "Regardless sex, how satisfied are you about the life with your partner?") and the sexual satisfaction (e.g., "How much do you enjoy having sex with your partner?") scales were used. All items were rated on a 9-point Likert scale (from 0 = *very satisfied* to 8 = *very unsatisfied*). Scores for relationship satisfaction (Range: 0–80) and for sexual satisfaction (Range: 0–40) were computed by summing the scores of all items in each scale. Higher scores corresponded with more relationship dissatisfaction and more sexual dissatisfaction. The 10-item measure for relationship satisfaction ( $\alpha = .91$ ) and the five-item measure for sexual satisfaction ( $\alpha = .80$ ) were reliable in the present study.

**Adult Attachment Orientation** Individual differences in attachment orientations in their current intimate relationship were assessed with the Experiences in Close Relationships Scale-Short Form (ECR-S; Wei et al. 2007; Dutch version by Conradi et al. 2006). The ECR-S comprises two scales, attachment anxiety and attachment avoidance. On a 5-point Likert scale (from 1 = *totally not agree* to 5 = *very agree*), respondents scored six anxious items (e.g., "I worry that my partner won't care about me as much as I care about him/her.") and six avoidant attachment items (e.g., "I am nervous when my partner gets too close to me."). Higher scores reflected greater anxious or avoidant attachment. The Cronbach's alpha reliabilities were .55 for attachment anxiety and .68 for attachment avoidance. Dropping one or more items did not significantly increase the internal consistency of the subscales.

**Sexual Communication** A four-item short version of the 13-item Dyadic Sexual Communication Questionnaire (DSC; Catania 1986) was used to assess sexual communication with the current partner. All items (e.g., "Do you find some sexual matters too difficult to discuss with your partner?") were rated on a 5-point Likert scale (from 1 = *never* to 5 = *almost always or always*). A scale for sexual communication was computed by summing the scores for all items (Range: 4–20). A higher score indicated more difficulties with communicating on a sexual topic. The four-item measure was reliable in the present study ( $\alpha = .73$ ).

**Sexual Function and Sexual Distress** The Sexual Functioning Scale (SFS; Enzlin et al. 2012) was used to examine impaired sexual function and sexual distress associated with impaired sexual function. The SFS covers a range of sexual problems, such as increased or decreased spontaneous/responsive sexual desire, arousal dysfunction, orgasmic

dysfunction, dyspareunia, vaginismus, retrograde ejaculation, and lack of a forceful propulsive ejaculation. All sexual difficulties (e.g., "In the past 6 months, did you have the feeling that you had a decreased interest in sex, in sexual activities or decreased sexual fantasies or erotic thoughts?") were rated on a 4-point scale (ranging from 1 = *no* to 4 = *severe or extreme*). In order to determine the clinical significance of these sexual difficulties, respondents who had scores of  $\geq 2$  on any of these items were asked to evaluate how distressing each sexual difficulty was. That is, they were asked to what extent they experienced this sexual difficulty as a source of distress for themselves, for their partner, and for their relationship. Each type of distress was scored 1 (= *no or mild distress*), 2 (= *moderate distress*) or 3 (= *severe or extreme distress*). Distress was considered to be present if they had a sum score of  $\geq 5$  (i.e., moderate levels of distress in at least two of three domains, namely personal distress, partner distress or relational distress). For this study, a sexual dysfunction scale was computed (0 = *no dysfunction*, 1 = *one or more dysfunctions without distress*, 2 = *one or more dysfunctions with distress*).

## Results

### Prevalence of Intimate Partner Violence

Descriptive statistics and correlations are provided in Table 1. Overall, 10.0 % of the respondents reported at least one experience with physical IPV (RQ1). Lifetime psychological IPV was reported by 56.7 % of the respondents with—as shown in Table 2—"being criticized or ridiculed for what you do or say" as the most frequently reported act and "threats made to hurt a loved one" as the least prevalent act. According to the overall frequencies, respondents reported on average low counts of physical and psychological IPV victimization (Table 1). As theoretically expected, a strong correlation was found between both forms of aggression ( $r = .54$ ,  $p < .001$ ). Furthermore, both lifetime physical and psychological IPV were significantly correlated with all outcome variables (i.e., mental health, relationship dissatisfaction, attachment orientations, sexual dissatisfaction and sexual communication; see Table 1).

### Sociodemographic Characteristics of IPV Victimization

As illustrated in Figs. 1 and 2, physical and psychological IPV victimization are not normally distributed in this sample. To analyze the effect of gender (H1a and H1b) and the aforementioned sociodemographic characteristics on IPV victimization (i.e., the dependent variables), we used count models that are specifically designed to analyze (right) skewed counts. Several models have been developed for analyzing count data such as the Poisson regression or the Negative Binomial regression (NB) when the data is overdispersed (i.e., variance is

**Table 1** Descriptive statistics and Pearson correlations of the main variables

Variable	N	M (SD)	Min	Max	2	3	4	5	6	7	8
1. Physical IPV	1427	.14 (.46)	0.00	4.00	.54**	-.16**	.35**	.11**	.13**	.13**	.10**
2. Psychological IPV	1422	2.69 (4.07)	0.00	28.00	—	-.19**	.62**	.27**	.34**	.26**	.25**
3. Mental health	1445	19.26 (3.83)	4.00	25.00	—	—	-.35**	-.24**	-.15**	-.25**	-.13**
4. Relationship dissatisfaction	1149	12.37 (11.85)	0.00	70.00	—	—	—	.41**	.57**	.56**	.45**
5. Anxious attachment	1135	2.52 (.70)	1.00	4.83	—	—	—	—	.33**	.28**	.24**
6. Avoidant attachment	1133	1.95 (.67)	1.00	4.67	—	—	—	—	—	.36**	.46**
7. Sexual dissatisfaction	1115	9.17 (7.80)	0.00	39.00	—	—	—	—	—	—	.50**
8. Sexual communication	1079	8.89 (3.65)	4.00	20.00	—	—	—	—	—	—	—
9. Sexual dysfunctions	1060	No=61.6 %, without distress=20.2 %, with distress=18.2 %	4.00	20.00	—	—	—	—	—	—	—

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\*\*  $p < .01$

larger than the mean; see Atkins and Gallop 2007; Karaszia and van Dulmen 2010). Because count data often display a lot of zero observations, extended versions of these models were developed such as the Poisson logit hurdle model and the Negative Binomial logit hurdle model (NBLH; for a detailed explanation, see Loeys et al. 2012). These models split the distribution in zero-counts (i.e., zero-hurdle part) and non-zero counts (i.e., counts part). The zero-hurdle part is a binary logistic regression and examines the effect of a predictor (e.g., gender) on the *likelihood* of experiencing IPV, while the counts part examines the effect of a predictor on the *frequency* of IPV experiences specifically among victims. In both parts, regression coefficients are exponentiated ( $e^B$ ) and called odds ratios (*ORs*) and rate ratios (*RRs*), respectively. When expressed in percentages,  $100 \times (e^B - 1)$ , *ORs* indicate the percentage decrease or increase in the odds of experiencing IPV, whereas *RRs* indicate the percentage of decrease or increase in the expected frequency of IPV experiences for every unit increase in the predictor variable, while holding all other variables in the model constant. Graphs and statistical tests (see Atkins and Gallop 2007; Loeys et al. 2012) showed that the NB model yielded the best fit for physical IPV (Fig. 1) and the NBLH model for psychological IPV (Fig. 1).

Table 3 summarizes the effects from the NB model for physical IPV. No significant effects were found for the sociodemographics age, education level, relationship status, frequency of social contact, religion and income. In contrast, less social support and perceiving the family income as insufficient were significantly related to higher levels of physical IPV victimization. As hypothesized (H1a), no significant effect was found for gender: Controlling for the aforementioned sociodemographics, women and men reported on average the same frequency of lifetime physical IPV victimization.

The Hurdle NB model for psychological IPV revealed no significant effect for frequency of social contact, religion, and income either in the zero-hurdle part, or in the counts part (Table 3). In the zero-hurdle part, a significant effect was found for gender, age, education level, social support, and perception of income. This implies that the chance of being psychologically victimized decreased by 24 % when the respondent was female (relative to male respondents), decreased by 2 % for every unit increase in age, increased by 39 % if they had a high level of education (relative to a lower education level), decreased by 38 % for every unit increase in social support, and decreased by 13 % when they perceived their income as more comfortable. In the counts part, this regression showed that the variables education level, relationship status, social support and the subjective perception of income were significantly related to the frequency of experienced psychological IPV: Victims in a romantic relationship (relative to singles;  $RR=0.63$ , a 37 % decrease), those who had a higher education level ( $RR=0.82$ , a 18 % decrease), those who

**Table 2** Descriptives and frequencies of IPV victimization

Physical IPV	M (SD)	%
Hit you with the flat of their hand, with their fist, kicked you or physically hurt you in another way	.14 (.46)	10.0 %
Psychological IPV	2.69 (4.07)	56.7 %
Tried to restrict your contact with family and friends	.36 (.77)	21.9 %
Insisted upon knowing your whereabouts every moment of the day	.63 (.10)	35.7 %
Ignored you and treated you indifferently	.51 (.84)	33.7 %
Criticized you or ridiculed you for what you do or say	.58 (.88)	38.2 %
Belittled or humiliated you in front of other people	.38 (.77)	25.6 %
Intentionally done something to scare or intimidate you	.15 (.55)	9.4 %
Threatened to hurt either you or someone you love	.10 (.51)	5.3 %

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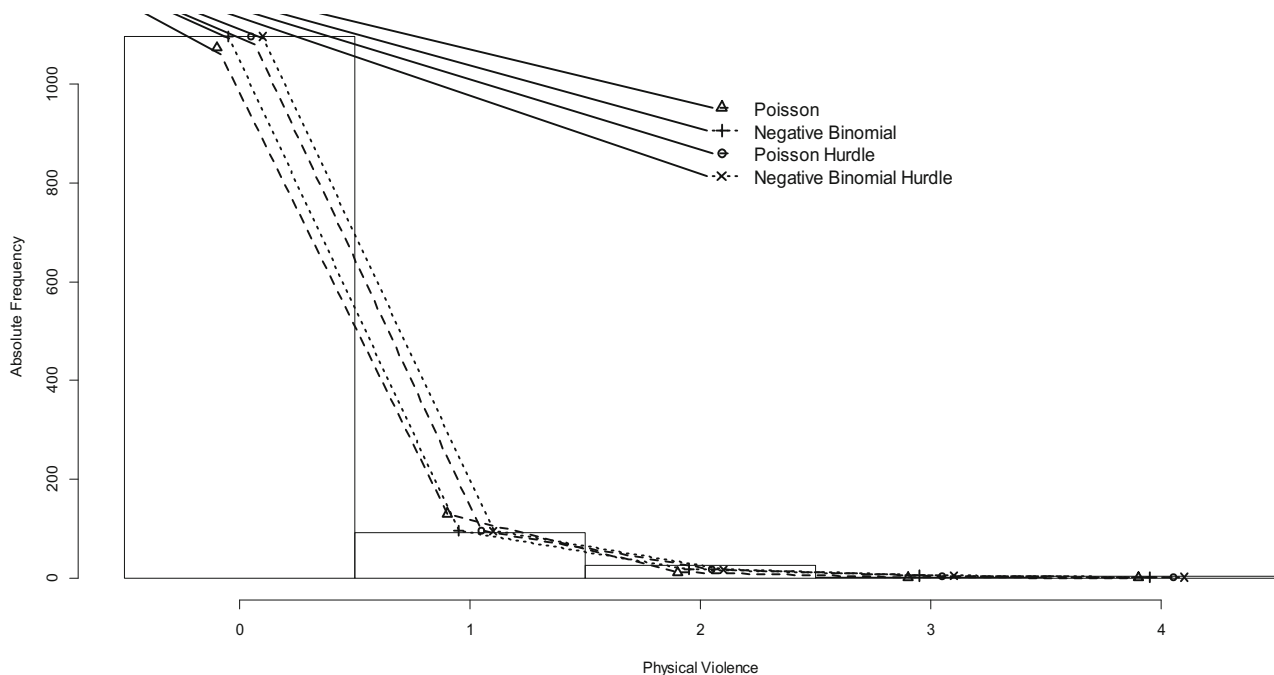
experienced more social support ( $RR=0.76$ , a 24 % decrease), and those who perceived their income as sufficient ( $RR=0.90$ , a 10 % decrease) reported less frequent acts of psychological IPV. To conclude, and partially in contrast to our hypothesis (H1b), men were more likely to report experiences with psychological IPV, but among the victims women and men reported psychological IPV equally frequent.

**IPV Victims’ Mental, Relational, and Sexual Well-Being**

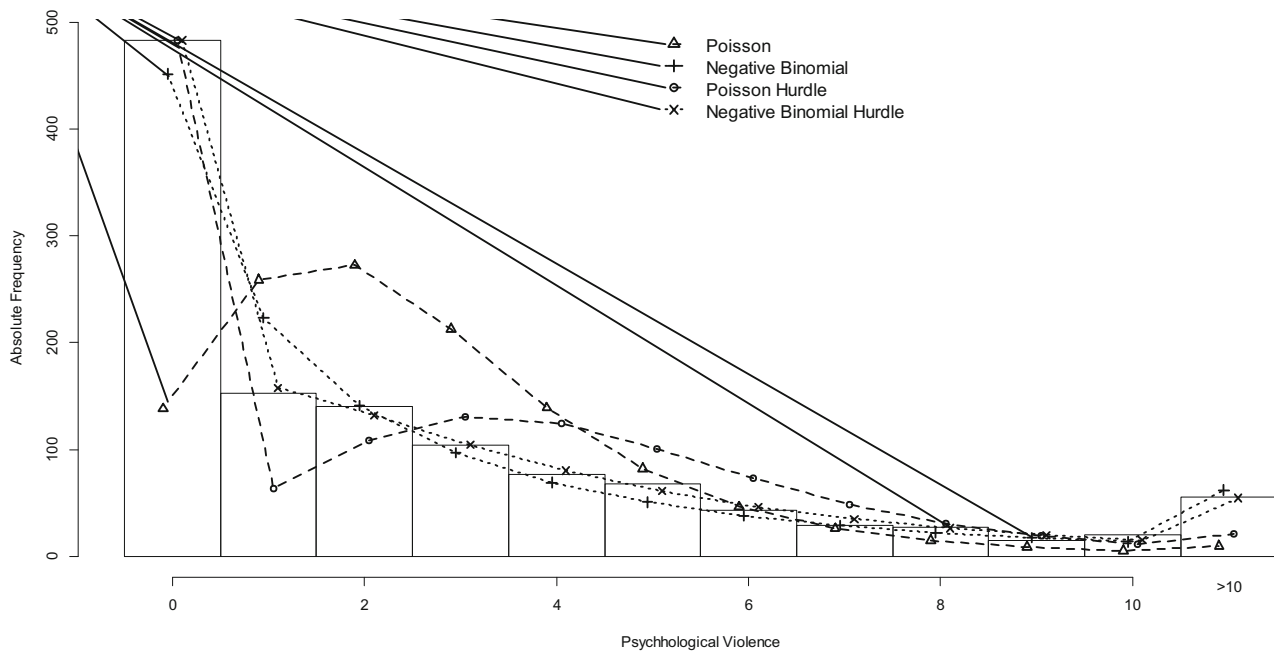
Multivariate analysis of variance (MANOVA) was used to test whether IPV victimization (i.e., independent variables) affects victims’ mental, relational, and sexual well-being. By including all continuous dependent variables (i.e., mental health, relationship dissatisfaction, attachment anxiety, attachment avoidance, sexual dissatisfaction, and sexual communication)

simultaneously, MANOVA accounts for the relationship between outcome variables and can detect whether the predictors differ along a set of outcomes. Prior to MANOVA, the outcome variables were standardized. Separate analyses were performed for physical and psychological IPV. The full models included the control variables gender, age, and education level followed by respondents’ scores on physical IPV or psychological IPV. Interaction terms with gender (i.e., Gender x Physical IPV, Gender x Psychological IPV) were entered to examine potential differences between female and male victims. To determine the nature of the interactions, Table 4 presents the effects of physical and psychological IPV on each of the six outcomes for men and women separately, and the difference in effects for both genders.

Lifetime physical IPV victimization is related to increased levels of relationship (H3a) dissatisfaction, sexual dissatisfaction



**Fig. 1** Histogram of physical IPV experiences with predicted frequencies from different types of count regressions



**Fig. 2** Histogram of psychological IPV experiences with predicted frequencies from different types of count regressions

**Table 3** Summary of main effects of the NB (physical IPV) and NBLH (psychological IPV) models testing gender differences and socio-demographic control variables

Variables	Physical IPV			
	<i>RR</i> ( $e^B$ )	95 % CI		
Gender <sup>a</sup>	1.09	[0.74, 1.60]		
Age	0.10	[0.98, 1.01]		
Education <sup>b</sup>	0.91	[0.60, 1.39]		
Romantic relationship <sup>c</sup>	0.67	[0.42, 1.07]		
Frequency contact friends	0.98	[0.84, 1.14]		
Frequency contact family	0.94	[0.82, 1.10]		
Social support	0.71**	[0.52, 0.98]		
Religion	1.12	[0.95, 1.33]		
Income	1.10	[0.66, 1.87]		
Perception income	0.80***	[0.70, 0.92]		
Variables	Psychological IPV			
	Zero-inflation part		Counts part	
	<i>OR</i> ( $e^B$ )	95 % CI	<i>RR</i> ( $e^B$ )	95 % CI
Gender <sup>a</sup>	0.74**	[0.58, 0.95]	1.03	[0.88, 1.21]
Age	0.98***	[0.97, 0.99]	0.10	[0.99, 1.00]
Education <sup>b</sup>	1.39**	[1.07, 1.81]	0.82**	[0.70, 0.96]
Romantic relationship <sup>c</sup>	0.73	[0.52, 1.03]	0.63***	[0.52, 0.75]
Frequency contact friends	1.08	[0.97, 1.20]	1.00	[0.94, 1.06]
Frequency contact family	0.92	[0.83, 1.01]	1.01	[0.95, 1.07]
Social support	0.62***	[0.49, 0.78]	0.76***	[0.66, 0.87]
Religion	0.96	[0.86, 1.07]	1.04	[0.97, 1.11]
Income	1.21	[0.87, 1.68]	1.01	[0.82, 1.23]
Perception income	0.87***	[0.78, 0.95]	0.90***	[0.85, 0.95]

*IPV* intimate partner violence, *OR* odds ratios, *RR* rate ratios, *CI* confidence interval

\*\*  $p < .01$ . \*\*\*  $p < .001$

<sup>a</sup> Reference category is male

<sup>b</sup> Education level was recoded into education level lower than high school degree (reference category) and a high school degree or above

<sup>c</sup> Reference category is not being in a romantic relationship



**Table 4** Summary of univariate analyses to predict men and women’s mental, relational, and sexual well-being from physical and psychological IPV victimization

Variables	Men			Women			Difference		
	<i>B</i>	<i>SE</i>	95 % CI	<i>B</i>	<i>SE</i>	95 % CI	<i>B</i>	<i>SE</i>	95 % CI
Physical IPV <sup>a</sup>									
Mental health	-.15	.13	[-.40, .11]	-.50***	.10	[-.69, -.32]	.36*	.16	[.04, .67]
Relationship dissatisfaction	.53***	.12	[.30, .77]	.86***	.09	[.69, 1.03]	-.33*	.15	[-.62, -.03]
Anxious attachment	.24	.13	[-.02, .50]	.29**	.10	[.10, .48]	-.05	.17	[-.37, .28]
Avoidant attachment	.35**	.13	[.09, .61]	.37***	.10	[.18, .56]	-.02	.17	[-.34, .30]
Sexual dissatisfaction	.32**	.13	[.07, .56]	.29***	.09	[.12, .47]	.03	.15	[-.28, .33]
Sexual communication	.16	.13	[-.10, .41]	.25**	.10	[.07, .44]	-.10	.16	[-.42, .22]
Psychological IPV <sup>b</sup>									
Mental health	-.04**	.02	[-.07, -.01]	-.09***	.01	[-.12, -.07]	.05**	.02	[.01, .09]
Relationship dissatisfaction	.13***	.01	[.11, .16]	.21***	.01	[.19, .23]	-.08***	.02	[-.11, -.05]
Anxious attachment	.06***	.02	[.03, .09]	.10***	.01	[.08, .13]	-.04*	.02	[-.08, .00]
Avoidant attachment	.10***	.01	[.07, .13]	.14***	.01	[.11, .16]	-.04*	.02	[-.07, .00]
Sexual dissatisfaction	.08***	.01	[.05, .11]	.09***	.01	[.06, .11]	-.01	.02	[-.04, .03]
Sexual communication	.08***	.01	[.05, .10]	.08***	.01	[.05, .10]	.00	.02	[-.04, .04]

*B* values are standardized regression coefficients. <sup>a</sup> Multivariate tests using Wilks’ $\Lambda$  revealed significant effects for gender,  $F(6, 910)=9.83, p<.001$ , education level,  $F(6, 910)=3.62, p<.001$ , age,  $F(6, 910)=28.69, p<.001$ , physical IPV,  $F(6, 910)=15.65, p<.001$ , and gender x physical IPV,  $F(6, 910)=.10, p<.05$ . <sup>b</sup> Multivariate tests using Wilks’ $\Lambda$  revealed significant effects for gender,  $F(6, 907)=5.23, p<.001$ , education level,  $F(6, 907)=3.77, p<.001$ , age,  $F(6, 907)=29.08, p<.001$ , psychological IPV,  $F(6, 907)=89.84, p<.001$ , and gender x psychological IPV,  $F(6, 907)=6.54, p<.001$

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

(H6a), and avoidant attachment (H5a) in both women and men. A gender difference was found for relationship dissatisfaction, indicating a more adverse outcome for women than for men. Furthermore, only female victims report decreased levels of mental health (H2a), more difficulties with sexual communication (H7a), and increased anxious attachment (H4a).

Confirming our hypotheses, lifetime experiences with psychological intimate violence correspond with decreased levels of mental health (H2b) more difficulties with sexual communication (H7b), and with increased levels of relationship dissatisfaction (H3b), insecure attachment orientations (H4b and 5b) and sexual dissatisfaction (H6b) in the current intimate relationship in both men and women. Furthermore, gender differences were found in the link between lifetime psychological IPV victimization and respondents’ mental health, relationship dissatisfaction, anxious attachment, and avoidant attachment, indicating significantly more adverse mental and relational outcomes for women than for men (Table 4).

Finally, two separate multinomial logistic regressions were performed to examine the effects of physical and psychological IPV victimization (i.e., the independent variables) on respondents’ sexual functioning (i.e., a three-level outcome variable). Results revealed no significant interaction terms with gender (Gender x Physical IPV,  $\chi^2(2)=.89, p=.64$ ; Gender x Psychological IPV,  $\chi^2(2)=4.91, p=.09$ ). In both analyses, a significant effect was found for the sociodemographics gender and age: Women and older respondents were more likely to

report sexual dysfunction with distress compared to men and younger respondents. Furthermore, results revealed that physical IPV victimization was positively associated with sexual dysfunctions,  $\chi^2(2)=11.70, p=.003$ : Whereas higher levels of physical violence did not increase the odds of sexual dysfunction without distress—compared to no dysfunction—it increased the odds of sexual dysfunctions with distress by a factor of 1.96 [95 % C.I. 1.32, 2.90]. Similarly, psychological IPV was positively associated with sexual dysfunctions,  $\chi^2(2)=26.36, p<.001$ . An increase of one unit of lifetime psychological IPV did not increase the odds of sexual dysfunction without distress—compared to no dysfunctions—but increased the odds of sexual dysfunctions with distress—compared to no dysfunctions—by a factor of 1.14 [95 % C.I. 1.08, 1.19]. As predicted, higher levels of physical (H8a) and psychological (H8b) IPV victimization were related to increased odds of sexual dysfunction with distress.

### Discussion

The current study examined the prevalence of lifetime physical and psychological IPV in a representative community sample of adult women and men and aimed to expand the IPV literature that addresses the harmful effects of lifetime IPV victimization. With regard to the latter objective, we gave special attention to the examination of IPV victims’ relational

and sexual well-being within their current intimate relationship because these forms of interpersonal well-being have—compared to IPV victims' mental well-being—not been extensively studied to date.

Our findings indicate that a substantial proportion of the population is confronted with some form of IPV during their lives. Our estimates show that 10.0 % of the adults experienced at least one incident of physical IPV and 56.7 % at least one incident of psychological IPV during their lives. Yet, the frequency with which one experienced acts of physical or psychological IPV tended to be low. Women and men reported equal levels of physical IPV victimization. More men than women reported psychological victimization but among the victims, there were no gender differences in the degree of psychological victimization. The findings that mainly mild forms of violence were reported and that no or only small gender differences were found in this community sample, plead for the conclusion that the present study—in line with Johnson's (1995) assumptions—predominantly measured common couple violence. Yet, this is only an assumption because, as is the case in most national surveys, no instruments measuring patterns of control were included to distinguish between the types of violence (Anderson 2002). Furthermore, our findings suggest that people of all ages run the risk of experiencing physical IPV. In addition, we found no association between the frequency of social contact with family and friends, romantic status, and the importance of religion on the one hand and the risk of experiencing physical IPV on the other hand. However, higher levels of lifetime physical and psychological violence were reported by those people perceiving their family income as insufficient, or those mentioning a lack of social support. Thus, while objective sociodemographic characteristics play no role or an inconsistent (i.e., education level) role in the understanding of IPV victimization, the way that people subjectively appraise these objective characteristics is related to experiencing IPV. Why are these findings important? They provide empirical evidence for the idea that the decision to leave or remain in an abusive relationship might depend on the *perception* of the income as being sufficient to become independent from the partner. Furthermore, they emphasize again how important a social network is. Other research has clearly demonstrated that elevated levels of social support reduce the risk of adverse mental outcomes among victims (Coker et al. 2002).

### Main Findings on IPV Victims' Mental, Relational, and Sexual Well-Being

The current findings indicate that experiences with physical and psychological intimate violence have detrimental effects on victims' current mental, relational, as well as sexual well-being. Associations between IPV victimization and a poor mental health are well documented in previous

studies. Conformingly, we found higher levels of psychological IPV victimization to be related to a poorer mental health status (e.g., Follingstad 2009). In addition, no gender differences were found, which indicates that our study does not support a gender perspective on psychological aggression as being more detrimental for women's mental well-being than it is for men's mental health. However, our findings are in line with the overall IPV literature demonstrating that physical IPV victimization is more harmful for women than it is for men.

Besides the effect on victims' mental health, the results of this study both replicate and extend prior work showing an association between IPV victimization and current relational well-being. As in previous studies (see Stith et al. 2008), IPV victimization was negatively related to relationship satisfaction. The latter authors argue that this association is in general stronger in clinical samples than in community samples. However, the current study adds to the findings of Williams and Frieze (2005) that even in the context of low violence, a strong association is found between people's victimization rates and their current relationship satisfaction. Furthermore, like Stith et al. (2008)—who clearly described a deficit in knowledge on male victims' relationship satisfaction—this study found both women and men to report lower levels of relationship satisfaction when having experienced psychological or physical IPV. Yet, the effect of lifetime IPV on relationship satisfaction was more pronounced among women than men in our study.

Importantly, given that there is limited research addressing the association between the receipt of violence and attachment, our results support the available evidence for higher levels of anxious and avoidant attachment orientations among IPV victims in non-clinical samples (e.g., Henderson et al. 2005; Weston 2008). The findings indicate that although both female and male victims reported more attachment anxiety and attachment avoidance, psychological IPV victimization was more detrimental for women's than for men's attachment orientations. With regard to physical victimization, both women and men reported more avoidant attachment orientations but only women were also more anxiously attached. How can the association between IPV victimization and attachment theoretically be understood? Attachment is considered as a cognitive and emotion regulation system that shapes relationship experiences via relationship schemes. Experiencing intimate violence may prompt negative emotions and relationship schemes, which are, in turn, likely to activate the attachment system, and insecure attachment strategies. Traditionally, attachment orientations were approached as static personality characteristics that remain stable across relationships (Bowlby 1969, 1982, 1973). Currently, researchers take a more dynamic approach, stating that attachment is not simply a trait but might be influenced by relationship experiences (e.g., Fraley et al. 2011). As discussed by other researchers (e.g., Allison et al. 2008; Mikulincer and Shaver 2007; Weston 2008), our

results suggest that insecure attachment orientations put people at risk to enter or remain in a violent relationship and/or that the involvement in a long-term violent relationship can trigger the development of insecure attachment orientations. As most studies, the current study is cross-sectional, and no definite conclusions can be drawn about these assumptions. Yet, a preliminary longitudinal study by Fraley et al. (2011) suggests that although attachment orientations are moderately stable over the lifespan, (negative) relationship experiences tend to influence and change people's attachment characteristics.

Last, our results clearly indicate that experienced violence negatively affects victims' sexual well-being. For instance, physical (only for women) and psychological IPV victimization were associated with an impairment of communication of sexual needs and wishes to the partner. The intimacy process model (Reis and Shaver 1988) offers an interesting framework to understand the link between experiences with intimate violence and sexual communication. According to this model, the everyday interactions between partners either support or decrease the degree of intimacy in a relationship. The expression and disclosure of feelings and thoughts by one partner will depend on the responses of the other partner. Thus, the effects of an individual's behavior on the relationship are determined by how these experiences are interpreted. Therefore, it could be that those people who experienced violence within a relationship—and are quite likely to have experiences with dysfunctional communication patterns (Cupach and Metts 1991)—have more concerns about the current partners' possible emotional and behavioral reactions on the disclosure of personal and sensitive information about him or herself. Furthermore, empirical evidence has been found that a lack of sexual communication might contribute to less sexual satisfaction and more sexual distress (MacNeil and Byers 2009).

Indeed, increased levels of physical and psychological IPV victimization were related to decreased levels of sexual satisfaction and to an increased probability of reporting sexual dysfunction *with* distress. In fact, that no association was found between IPV and sexual difficulties *as such* but only with sexual dysfunction with distress highlights the importance of the emotional aspect during sexual intimacy. These findings correspond with recent evolutions in sex research, which address the relational context as the main contributing factor for experiencing sexual dissatisfaction and sexual distress (Stephenson and Meston 2010). Being confronted with violence may lead victims to protect themselves from being further abused or controlled, which implies that they will be more likely to focus on self-protection and control during sex rather than on emotional intimacy with their partner (Metz and Epstein 2002).

Although women reported less sexual satisfaction and more sexual distress than men, our results revealed that physical and psychological IPV did not affect the sexual well-

being of female and male participants differently. These results contrasted our expectations because research has indicated that sexual intimacy has a different meaning for women and men. More specifically, men tend to be mainly motivated by the physical sexual pleasure. The sexual needs of women are more strongly associated with the relational context Bancroft et al. (2003); Birnbaum et al. 2006; Schachner and Shaver 2004; Traen and Skogerbo 2009). Therefore, we expected the female victims in our study to report less sexual satisfaction and more sexual dysfunction than the male victims. Otherwise, it is possible that gender differences are found only for less severe relationship problems, and not when serious problems such as violence are involved. In support of this, a study by McCabe (1997) has found that men only developed signs of sexual dysfunction within an intimate relationship with significantly disturbed levels of intimacy, whereas women already developed sexual dysfunction with moderated intimacy disturbances. Taken together, these results provide further evidence that IPV is associated with negative sexual outcomes, including impact upon people's sexual well-being within an intimate relationship.

### Limitations

This study is not without limitations. First, our study did not include acts of sexual IPV. As noted by Coker (2007), sexual violence has often been approached from a separate research line as it may or may not occur in an intimate relationship. Future research would benefit from including sexual violence by an intimate partner. Second, given the cross-sectional nature of this study, no definitive conclusions can be drawn in terms of causes and effects. In this respect, the identified effects of IPV on victims' mental, relational and sexual well-being should be interpreted as *associations*. For instance, it is quite likely that experiences with intimate violence makes people less willing to communicate openly about their inner self. Nonetheless, it could also be that couples with poor communication resort to IPV to resolve difficulties. A longitudinal design would help to clarify the causal directions of the findings. This brings us to a third caution that should be voiced concerning causal inferences in the present study. That is, we do not know for sure whether respondents report on violence in the current or the former relationship, or possibly both relationships. Therefore, no clear statements can be made whether the adverse mental, relational and sexual outcomes are a long-term consequence from violence in the previous relationship or whether they are directly related to IPV in the current relationship. In case respondents reported on violence in the current relationship and then the associations that were found are most probably bidirectional. That means that the adverse mental, relational, and sexual correlates simultaneously predict and are predicted by higher levels of IPV. Or, in case respondents reported on violence that occurred in the previous

relationship, it is logic to assume that the associations we found can be causally interpreted in view of the temporal order of our measurements (i.e., IPV in current/former relationship vs. relational and sexual well-being in the current relationship). Fourth, the present research design did not allow us to explore whether or not the IPV experienced was mutual. Just as relationship scholars frequently study both partners in an intimate relationship in order to grasp relational dynamics and outcomes, we believe that IPV researchers need to include both partners to obtain a comprehensive view of common couple IPV (Bartholomew and Cobb 2011; Winstok 2007). Fifth, our sample was selected from the general population. This suggests that our sampling technique elucidated only a part of the problem. As perpetrators who dominate and routinely hurt their partner physically (i.e., intimate terrorism) will probably forbid their partner to participate in surveys on sexual health and relationships, community samples mainly represent common couple violence (Anderson 2002; Johnson 1995). For that reason, both community and clinical samples (e.g., shelter studies) are necessary to grasp IPV in its entirety and to explore how minor as well as severe forms of violence affect victims' well-being. A final limitation concerns the weak internal consistency of the attachment subscales. For timesaving reasons, characteristic for large-scale representative studies as ours—a short version of the Experience in Close Relationships Scale was used. Although Wei et al. (2007) have argued that this short version of the ECR is a reliable and valid instrument to examine one's attachment orientation, the internal inconsistencies in the present study were lower than expected (especially for the attachment anxiety subscale). Despite this caveat, the use of this short version revealed results that are theoretically meaningful and in line with the overall literature. However, for future research, it would be better to consider using the full Experience in Close Relationships Scale.

Despite these weaknesses, our results broaden the empirical evidence that experiences with even low forms of violence are—besides their association with mental health—associated with victims' relational as well as sexual well-being within their intimate relationships. These findings emphasize the importance of future research and clinical practice on the interplay between adverse relationship experiences and relational as well as sexual interactions between partners.

**Acknowledgments** This research is the work of the “Sexpert Project” on sexual health in Flanders at the Ghent University, Ghent University Hospital and the University of Leuven (<http://www.sexpert-vlaanderen.be/>). We thank all participants, team members and promoters, and gratefully acknowledge the Agency for Innovation by Science and Technology in Flanders for supporting the project financially.

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