



Bidirectional Intimate Partner Violence During COVID-19 in Portugal: Prevalence and Psychosocial Correlates

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Abstract

Several studies demonstrated that intimate bidirectional violence (BV) is more common than unidirectional IPV. However, little is known about the phenomenon of BV during COVID-19 lockdowns. The present study focuses on BV during the second lockdown in Portugal to characterize the BV rates in an online sample from the community and identify the main psychosocial correlates associated with BV. Three hundred and thirty-six Portuguese adults, with a mean age of 35.02 years (SD = 11.67; 18–68 years), participated in this study. In addition to a sociodemographic questionnaire, IPV (victimization and perpetration), psychological distress, COVID-19-related anxiety, COVID-19 fear, and life satisfaction measures were used. BV (31.3%) emerged as the most reported pattern of violence. The BV group scored higher on psychological distress and depression than the nonviolence group. Being married/living in cohabitation, having a high level of education, working on the front line (during the COVID-19 pandemic), and having psychological distress emerged as important predictors of BV. Results emphasized the role of psychosocial dimensions, particularly marital status/cohabitation and educational levels, as relevant risk factors for BV during a worldwide crisis event. The assessment, prevention, and intervention of IPV should consider the possibility of BV, providing a response congruent with its specificities.

Keywords Bidirectional violence · COVID-19 · Intimate partner violence · Prevalence · Psychosocial correlates

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Introduction

The symmetry gender debate in intimate partner violence (IPV) revolves around the question of whether IPV is primarily a gendered phenomenon, with one gender (usually men) predominantly acting as the perpetrator and the other gender (usually women) predominantly experiencing victimization, or if IPV is a more symmetrical issue, with both men and women perpetrating violence at comparable rates (Hamby, 2017). As researchers from different conceptual paradigms generally use different measures and sampling techniques (e.g., Archer, 2000; Esquivel-Santoveña & Dixon, 2012; Hamby, 2017), this phenomenon has been surrounded with such theoretical and empirical controversy that has not, to date, gathered a unanimous perspective to explain, measure, or understand it (e.g., Dobash & Dobash, 2004; Graham-Kevan & Archer, 2009; Johnson, 1995).

The debate about the gender symmetry of IPV arose in the 1970s and has continued to this day (e.g., Hamby, 2017; Johnson, 2006; Melton & Sillito, 2012). The feminist movements influenced the studies on IPV, identifying men as primary perpetrators and women as the main victims (Dobash & Dobash, 2004; Felson, 2008). The feminist perspective states that IPV is a patriarchal model product and, thereby, a behavior exclusively masculine (Archer, 2000; Dobash & Dobash, 2004; Johnson, 1995), in which women are subordinated, dominated, and controlled by men. On the other hand, the proponents of the symmetrical perspective advocated that both men and women can be perpetrators or victims of IPV. Their interlocutors contemplate violence as feminine and masculine, emphasizing family dynamics and/or conjugality (Archer, 2000; Casimiro, 2008). Therefore, they argue that overlooking female-perpetrated violence can lead to an incomplete understanding of IPV, potentially hindering support and resources for male victims.

In this debate on gender symmetry, it is, however, important to consider that the lack of solid definitions of IPV and the different methodological specificities (type of sample, data collection techniques used, IPV, and directionality) significantly affect the results regarding the prevalence rates of IPV perpetrated by men and women (e.g., Breiding et al., 2008; Esquivel-Santoveña & Dixon, 2012). In addition, although it is widely recognized that both men and women can be perpetrators and victims of IPV (e.g., Dardis et al., 2015; Lysova et al., 2019; Tillyer & Wright, 2013), the proportions of violence are still under debate. For example, when crime statistics were used, women were the primary victims (e.g., Brogden & Nijhar, 2004; Internal Security System, 2023). However, studies with community samples find that men also experience significant levels of IPV (e.g., Archer, 2000; Douglas & Hines, 2011; Lysova et al., 2019; Machado & Matos, 2014; Walker et al., 2020). The symmetry gender debate highlights the importance of recognizing the complexities of IPV and the need for comprehensive research to inform effective prevention and intervention strategies that address the diverse experiences and dynamics of violence within intimate relationships.

As previously mentioned, despite research on IPV has focused primarily on male perpetration and female victimization (Langhinrichsen-Rohling et al., 2012; Renner & Whitney, 2010), prevalence studies have shown that most IPV is bidirectional (Bates, 2016; Langhinrichsen-Rohling et al., 2012; Renner & Whitney, 2010). Bidirectional violence (BV) has been associated with a higher risk of homicide within intimate relationships (Velopulos et al., 2019) and with serious mental health consequences (Bates, 2016; Rhodes et al., 2009). BV refers to the co-occurrence of violence between partners, who may assume the role of perpetrators, victims, or both, and occurs when both initiate and experience violence in the relationship (Palmetto et al., 2013; Ridings et al., 2018). BV relates to mutual violence perpetrated by both partners at some point in the intimate

relationship (Capaldi et al., 2018) and can be explained by an escalation of violence and mutual violence (Babcock et al., 2019; Dokkedahl & Elklit, 2019) or self-defense (Babcock et al., 2019).

Although IPV research has primarily focused on unidirectional and asymmetrical violence, Bates (2016) emphasizes the need to examine intimate BV in the context in which it occurs and to explore gender symmetry and asymmetry in the perpetration of violence and victimization, as BV is not the same as symmetrical gender-based violence (Capaldi et al., 2018; Langhinrichsen-Rohling et al., 2012).

Gender bias in IPV leads to mislabeling of perpetrators as aggressive men and victims as submissive women (Hine et al., 2022), which impacts assessment protocols and intervention guidelines (Bates, 2016; Langhinrichsen-Rohling et al., 2012) and does not reflect prevalence rates indicative of intimate BV (Carranza et al., 2022; Costa et al., 2015a, b; Holmes et al., 2022; Rhodes et al., 2009).

The COVID-19 pandemic has dramatically increased the risk of family violence and IPV (Arenas-Arroyo et al., 2021; Cunha et al., 2023; Ribeiro et al., 2022; Thiel et al., 2022; Wildman et al., 2021), primarily due to COVID-19 containment measures such as home confinement periods (Campbell, 2020), which increase vulnerability to victimization and the propensity for aggressive behaviors within intimate relationships. In this study, we will focus on the rates and psychosocial correlates of intimate BV during the second COVID-19 lockdown among an online sample recruited from the community, which is particularly relevant for promoting social and policy guidelines for assessment, prevention, and intervention in IPV situations.

Intimate Bidirectional Violence

A systematic review conducted by Machado et al. (2023) revealed that BV is the most reported type of IPV, highlighting psychological violence as the most reported type. Langhinrichsen-Rohling et al.'s (2012) systematic review of bidirectional vs. unidirectional violence rates showed that BV ranges from 39 to 72% in partnered individuals from a wide range of samples (from community to criminal-justice-related samples). Holmes et al. (2022), in a sample of undergraduate women from a public university, found results consistent with previous studies indicating higher rates of BV in almost all types of abuse, except for sexual abuse victimization only (6.3%): 17.3% reported bidirectional threats of physical abuse, 16.1% bidirectional physical abuse, 63.6% bidirectional psychological abuse, 16.6% bidirectional stalking, and 33.9% bidirectional cyberstalking behaviors. In a sample of battered women living in women's shelters, of 93% of women who experienced violence, only 5.3% reported non-bidirectional violence (Holmes et al., 2019). Intimate BV is also common among same-sex couples (Capinha et al., 2022; Messinger, 2018), with studies of gay and bisexual men describing high prevalence rates of BV (65%) (Stults et al., 2022).

Empirical prevalence data from a multicultural sample from six European countries found that 21.9% of men and women reported bidirectional physical violence, 8% described being perpetrators only, and 7.6% described victimization only (Costa et al., 2015a). More specifically, data from six European countries showed that intimate BV was described as the most common pattern of violence in all countries. 54.5% and 54.4% of men and women, respectively, reported psychological BV, and 12.5% and 9.7% of men and women, respectively, described bidirectional sexual coercion (Costa et al., 2015b). The same pattern of IPV was observed in college samples, with 23.9% and 21.7% reporting perpetration and victimization only, respectively, and 66.7% representing BV (Carranza et al., 2022). A study conducted in Portugal with a male sample found that 73.7% of the sample reported

being involved in BV. In comparison, 3.9% and 2.7% reported being perpetrators and victims only, respectively, in their intimate relationships (Machado et al., 2019). A recent study in Portugal found BV to be the most common pattern of intimate violence, with rates of 84.1% and 89.1% for non-heterosexual and heterosexual couples, respectively, focusing on psychological abuse (Capinha et al., 2022).

A study that assesses the association between lockdown conditions, mental health, and IPV during the COVID-19 pandemic conducted in Belgium, with a community sample, found similar prevalence frequencies, with intimate BV being the most common pattern of violence described (28.2%), followed by perpetrators only (5.2%; Glowacz et al., 2022). In addition, they found that men are more likely to physically assault their partners, while women are more likely to psychologically assault their partners during the pandemic crisis. Furthermore, depression and anxiety significantly mediated the relationship between intolerance of uncertainty and physical violence and psychological violence (Glowacz et al., 2022).

Two important approaches to explaining the dyadic nature of behavior in an intimate relationship contradict the notion of homogeneity between perpetrators and victims in intimate relationships (see Bates, 2016). The heterogeneity of BV is confirmed in Johnson's typology, in which he proposes two additional bidirectional categories with varying degrees of violence and control in addition to the control-based typologies of violence (intimate terrorism and situational violence) (Johnson, 2000): "violent resistance," which involves the use of non-controlling violence in response to a partner's controlling aggression; the consideration of violence against women in self-defense; and "violent mutual control," which involves a destructive relationship in which both partners are controlling (Johnson, 2006). Although these two types are fewer common forms of violence within couples, according to Johnson (2006), a further test of Johnson's typology (Hines & Douglas, 2019), using a population-based sample of men and a sample of male IPV victims, revealed that women were the primary perpetrators of intimate terrorism, while men primarily used violent resistance. Situational couple violence was more common in the population-based sample than in the male victims' sample, violent mutual control was just as common as intimate terrorism in the population-based sample, and intimate terrorism was more common than violent mutual resistance in the male victims' sample.

Langhinrichsen-Rohling (2010) defended the existence of three subtypes of BV between couples. The first involves control and coercion, where both partners engage in these behaviors. The second subtype is dyadic or reciprocal dysphoric dysregulation, which occurs when violence is used to regulate emotions and behavior. Conflict and aggression between partners vary depending on their level of interdependence. The third subtype includes less severe IPV, limited to the partners, with little evidence of personality disorders or psychopathology. This type may represent a form of retaliation for violence suffered by the other partner. Given the variety of typologies of BV, it is important to consider the risk factors to better frame the treatment of these typologies of IPV.

Psychosocial Correlates of Intimate Bidirectional Violence

Research on IPV perpetration and victimization has described several psychosocial correlates, with risk factors for IPV perpetration overlapping with consequences of IPV victimization, which is probably explained by the dynamics involved in intimate relationships or BV dynamics (Mennicke & Wilke, 2015).

Psychosocial correlates of BV (and general IPV) included substance use, history of violence, low self-esteem (Charles et al., 2011), cohabitation with an intimate partner, poor academic performance, and depression (Charles et al., 2011; Melander et al., 2010), childhood sexual abuse (Melander et al., 2010; Palmetto et al., 2013), low-income background, minority groups (Holmes et al., 2022), younger age, length of the relationship, and witnessing IPV in childhood (Palmetto et al., 2013). Severe mental health problems, such as major depression, PTSD symptoms, and suicidal ideation, were more common in men who reported BV than in men who reported IPV perpetration only or IPV victimization only (Rhodes et al., 2009). Similar results were found for women, with women in BV relationships reporting significantly more mental health problems than women in unidirectional violent relationships (both as victims and perpetrators) (Temple et al., 2010), demonstrating BV's significant mental health burden. Specifically, depressive symptoms and suicidal ideation and attempts were more common among individuals in BV relationships than among individuals in perpetrator-only, victim-only, and non-violent relationships (Ulloa & Hammett, 2016). BV has been strongly associated with poor mental health (Ulloa & Hammett, 2016), particularly among women (Temple et al., 2005). In contrast to previous empirical findings, Velopulos et al. (2019) found that mental illness was not a significant predictor of general IPV. The lack of correlation between mental illness and IPV may be due to the underdiagnosis of mental health problems in the community, suggesting that further studies are needed to establish the association between IPV and mental illness (Velopulos et al., 2019). Younger age, marriage or cohabitation with intimate partners, drug use, past IPV perpetration, history of violence, and mental illness have been described as risk factors for victimization (Capinha et al., 2022). Younger age and a history of IPV, violence, and mental illness have been identified as risk factors for perpetration (Capinha et al., 2022). In addition, older offenders tend to be more prone to injury-related and sexual IPV but not physical or psychological IPV (Renner & Whitney, 2010).

However, research comparing BV and unidirectional IPV perpetrators has shown differences between groups according to gender. For example, men tend to report engaging more in BV than women (Charles et al., 2011; Melander et al., 2010; Velopulos et al., 2019), while when women perpetrate IPV, the risk of becoming an IPV victim increases (Holmes et al., 2022). Mennicke and Wilke (2015), using data from the National Violence Against Women Survey, explored the role of gender and other demographic and historical factors that influence the use of threats or violence among a sample of IPV victims. They found that among male victims, marital status, income, employment status, and childhood victimization experiences significantly predicted female IPV. On the other hand, age, race, education, alcohol use, drug use, and posttraumatic stress disorder symptoms were not predictors of male and female IPV. A study by Renner and Whitney (2012) also found more common risk factors for bidirectional IPV than unidirectional IPV and few common risk factors across genders. For men, childhood sexual abuse was correlated with IPV perpetration and BV, and childhood neglect was associated with BV. Among women, childhood neglect was associated with IPV perpetration, IPV victimization, and BV, and childhood physical abuse was associated with BV. In addition, youth violence perpetration during adolescence is associated with IPV perpetration, IPV victimization, and BV among women, and low self-esteem is correlated with IPV victimization, perpetration, and BV among males. A history of suicide attempts predicted bidirectional IPV across genders. Being married and living with a partner predicted all three IPV outcomes for men and women (Renner & Whitney, 2012).

A brief review of studies of IPV during the COVID-19 pandemic identified psychosocial stressors such as unemployment, mental illness, COVID-19 infection, and low socioeconomic status as vulnerability factors (McNeil et al., 2022). Another study conducted

in Belgium (Schokkenbroek et al., 2021) found that women, younger adults, students, long-term unemployed or COVID-19 unemployed partners, and greater social isolation were risk factors for IPV, particularly verbal aggression. In addition, COVID-19 stress was associated with more frequent verbal IPV aggression during the lockout period, with rates exceeding 75% (Schokkenbroek et al., 2021).

Current Study

Evidence of the bi-directionality of IPV highlights the importance of considering the dyadic nature of IPV in assessment and intervention. However, in Portugal, research continues to focus on the unidirectional analysis of IPV, while a few studies focus on the bi-directionality of violence. As far as we know, only a few studies focus on BV in the Portuguese context (Capinha et al., 2022; Costa et al., 2015a; Machado et al., 2019). Moreover, to our knowledge, despite the extensive research on IPV during the COVID-19 pandemic (e.g., Ribeiro et al., 2022; Thiel et al., 2022; Wildman et al., 2021), only one study (Glowacz et al., 2022) included data on BV, and no studies examined the psychosocial predictors of BV. In this sense, the present study aims to contribute to the existing literature by focusing on intimate BV during the second lockdown in a community sample to characterize the phenomenon's rate and identify the main psychosocial risk factors associated with BV in an online sample from the community.

Method

Participants

The current study was a nonrandom Internet sample that included 336 Portuguese adults with a mean age of 35.02 years ($SD=11.67$; 18–68 years). Of the 336 adults, 52 were men (15.5%), and 280 were women (83.3%). Most participants were heterosexual ($n=288$; 85.7%) and single ($n=152$; 48.3%) or married/in cohabitation ($n=147$; 46.7%). The majority had a bachelor's degree ($n=120$; 35.7) or a master's degree ($n=124$; 36.9%). All participants were in an intimate relationship during the second lockdown, despite their civil/legal status. Detailed information on sociodemographic characteristics can be found in Table 1.

Procedures

This study is an online cross-sectional design using Qualtrics software. The study was disseminated by social networks (i.e., LinkedIn, Facebook, Instagram) and email (e.g., researcher's contacts, institutional mailing lists) between April and July 2021, as a survey on psychological symptoms and victimization experiences during the second official lockdown in Portugal. The second official lockdown in Portugal was under the state of emergency between January 15 and March 15, 2021, which required that schools remain closed, telework was mandatory, public and private businesses, including restaurants, gyms, and other social attractions, were mandatory closed, and people were advised to stay at home and avoid face-to-face contact. Only hospitals, pharmacies, police stations, and food stores were allowed to be open to the public. Adult individuals living in

Table 1 Sociodemographic characteristics of the sample

| Variable | Number | Percent |
|-------------------------|--------|---------|
| Sex | | |
| Male | 52 | 15.5 |
| Female | 280 | 83.3 |
| Other | 4 | 1.2 |
| Sexual orientation | | |
| Heterosexual | 288 | 85.7 |
| Gay/lesbian | 18 | 5.4 |
| Bisexual | 18 | 5.4 |
| Asexual | 4 | 1.2 |
| Other | 8 | 2.4 |
| Civil status | | |
| Married/in cohabitation | 147 | 46.7 |
| Single | 152 | 48.3 |
| Divorced/separated | 14 | 4.4 |
| Widower | 2 | 0.6 |
| Education | | |
| 3rd grade | 4 | 1.2 |
| High school | 28 | 8.3 |
| Degree | 120 | 35.7 |
| Master's degree | 124 | 36.9 |
| PhD | 60 | 17.9 |

Portugal during the second official lockdown were invited to fill out the questionnaires, which took about 20 to 25 min, and to report themselves to that specific period. Participants were informed about the study objectives and their voluntary and anonymous nature (i.e., no personal information was collected). All participants signed an electronic informed consent. No financial support or incentives were granted to the participants. Participants received information about crisis intervention lines available 24 h and free of charge, and free numbers for reporting any violent situation and receiving support in case of domestic violence.

The ethical principles defined in the Declaration of Helsinki (World Medical Association, 2013) were followed. The Institutional Review Board of the Lusófona University approved the study.

Measures

A sociodemographic questionnaire was used to collect information on age, sex, education, relationship status, front-line work or risk for COVID-19, infection, isolation/quarantine, and care of minors and/or elderly.

The Revised Conflict Tactics Scale (CTS2; Straus et al., 1996) is a 78-item self-report scale that assesses how couples resolve their conflicts. The scale consists of five scales (negotiation, psychological aggression, sexual assault, physical assault, and injury) that assess both victimization and perpetration. All subscales except negotiation can be divided into minor and severe subscales. Items are scored on an 8-point scale separately

for victimization and perpetration. For the present study, only the victimization and perpetration scales were used, and participants were instructed to answer the questionnaire by reference solely to the period of confinement. The original (Straus et al., 1996) and the Portuguese versions of the CTS2 (Paiva & Figueiredo, 2006) showed good reliability. In the present sample, internal consistency ranged from 0.71 (total IPV victimization) to 0.96 (total IPV perpetration).

The Depression, Anxiety, and Stress Scale—21 (DASS-21; Henry & Crawford, 2005) is a 21-item scale assessing symptoms of depression, anxiety, and stress. Items are rated on a 4-point Likert scale ranging from 0 (did not apply to me at all) to 3 (applied to me very much or most of the time). The total and subscale scores are the sum of the respective items, which are then multiplied by two. The total score ranges from 0 to 126, and the subscales from 0 to 42. The higher the score, the more severe the symptomatology or psychological distress. The original version of the DASS-21 showed good psychometric properties (Henry & Crawford, 2005), as did the Portuguese version (Pais-Ribeiro et al., 2004). The internal consistency for the current study was 0.93.

The Coronavirus Anxiety Scale (CAS; Lee, 2020) is a 5-item instrument assessing physiological responses of anxiety due to COVID-19 that are answered using a 5-point Likert scale ranging from 0 (not at all) to 4 (nearly every day). The total score is the sum of the items, with a total score ranging from 0 to 20. Higher scores on the total scale indicate greater levels of COVID-19 anxiety. Regarding psychometric properties, both the original version (Lee, 2020) and the Portuguese version (Magano et al., 2021) yielded good to excellent reliability and validity. The internal consistency for the current study was 0.80.

The Fear of COVID-19 Scale (FCV-19S; Ahorsu et al., 2022) is a 7-item measure assessing COVID-19 related, answered on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The total score is the sum of all items, ranging from 7 to 35, with higher scores on the scale indicating a severe level of fear of COVID-19. According to the original study (Ahorsu et al., 2022) and the Portuguese validation study (Magano et al., 2021), the scale holds good to excellent psychometric properties. The internal consistency for the current study was 0.79.

The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item instrument for assessing overall satisfaction with one's life, responded on a Likert scale of 7-points, ranging from 1 (Strongly disagree) to 7 (Strongly agree). The total score is the sum of the items, ranging from 5 to 40, and higher scores indicate better satisfaction with one's life. Regarding psychometric properties, the original (Diener et al., 1985) and the Portuguese version (Simões, 1992) have demonstrated good reliability and validity. The internal consistency for the current study was 0.86.

Data Analysis

IBM SPSS version 28.0 software was used for statistical data analysis and statistical procedures. Descriptive statistical analyses were performed to characterize the sample. To assess the prevalence of IPV, the frequency of responses for each type of violence (e.g., psychological violence, physical violence, sexual assault, and injury) was analyzed from the perspectives of the victim and the perpetrator. For this study's purpose, to calculate the prevalence of victimization and perpetration, items were recoded into a dichotomous variable assigned a value of 1 if one or more of the behaviors had been reported. The directionality of violence was determined by combining the prevalence of victimization and perpetration behaviors—perpetration only, victimization only, BV, and no violence. Nonetheless,

this calculation only allows us to identify the prevalence of BV, and not the severity of BV, the context, or the motives behind the use of violence (see the “Discussion” section for a reflection on the measurement limitations).

Given the small number of participants in the perpetration-only and victimization-only categories, only the differences between BV and no-violence groups were tested. *T*-tests were conducted to examine differences between the BV and no violence category on psychological variables (i.e., psychological distress, COVID-19 fear, coronavirus anxiety, and life satisfaction). Finally, a hierarchical regression analysis was performed to examine the factors associated with BV (vs. no violence).

Results

Intimate Partner Violence Perpetration and Victimization Prevalence

One hundred and eighteen (35.1%) individuals reported perpetrating at least one act of violence against their intimate partner during the second lockdown. The most common type of violence perpetrated was psychological aggression ($n=100$; 29.8%), followed by sexual coercion ($n=30$; 8.9%), physical assault ($n=18$; 5.4%), and injury ($n=6$; 1.8%).

Regarding victimization, 110 (32.7%) individuals reported that they had suffered at least one act of violence at the hands of their intimate partner during the second lockdown. Psychological aggression was the most common form of violence suffered ($n=90$; 26.8%), followed by sexual coercion ($n=44$; 13.1%), physical assault ($n=20$; 6.0%), and injury ($n=6$; 1.8%).

Directionality of Intimate Partner Violence

Results showed that most participants reported no violence during the second lockdown ($n=210$; 62.5%). BV ($n=105$; 31.3%) was the most frequently reported pattern of violence, followed by perpetration only ($n=13$; 3.9%) and victimization only ($n=8$; 2.4%).

Group Comparisons on SWLS, DASS, and its Subscales, CAS, and FCV-19S

When the group with BV was compared with the group without violence (see Table 2), there were statistically significant differences between the groups in psychological distress ($t(291) = -2.205$, $p=0.028$, $d=0.269$) and depression ($t(284) = -2.609$, $p=0.010$, $d=0.323$) with individuals in the BV group having the highest scores. No differences were found for the other variables.

Predictors of Bidirectional Intimate Partner Violence During the Second Lockdown

A hierarchical logistic regression analysis was performed to determine the predictors of BV during the second lockdown (see Table 3). In the first step, the sociodemographic variables (i.e., age, sex, sexual orientation, educational level, civil status, and professional status) yielded a statistically significant model ($\chi^2(6) = 34.782$, $p < 0.001$). The role of these variables resulted in a pseudo- R^2 ranging from 11.7% (Cox & Snell) to 16.1% (Nagelkerke). In addition, the model accurately classifies 67.7% of the cases. As shown in Table 3, civil

Table 2 Mean differences between the groups on psychological variables

| | Bidirectional violence M (SD) | Nonviolence M (SD) | <i>t</i> | <i>p</i> | 95% CI | <i>d</i> |
|------------------------|----------------------------------|-----------------------|----------|----------|--------------|----------|
| Fear COVID-19 | 16.45 (4.52) | 16.36 (4.74) | .214 | .870 | - 1.19, 1.01 | .020 |
| Coronavirus anxiety | 6.14 (2.61) | 5.97 (1.92) | -.629 | .530 | -.74, .41 | .076 |
| Psychological distress | 29.28 (24.66) | 23.44 (19.86) | -2.205 | .028 | - 5.52, -.31 | .269 |
| Depression | 9.10 (9.14) | 6.66 (6.62) | -2.609 | .010 | - 2.15, -.30 | .323 |
| Anxiety | 6.56 (9.56) | 5.18 (7.20) | -1.385 | .167 | - 1.67, .29 | .170 |
| Stress | 13.57 (9.62) | 11.74 (8.80) | -1.621 | .106 | - 2.02, .20 | .200 |
| Life satisfaction | 17.57 (4.57) | 18.55 (4.51) | 1.762 | .079 | -.11, 2.07 | .216 |

Table 3 Hierarchical regression analysis for bidirectional violence

| | Step 1 | | | Step 2 | | | Step 3 | | |
|-----------------------------|----------|------|--------|----------|------|--------|----------|------|--------|
| | <i>B</i> | SE | Exp(B) | <i>B</i> | SE | Exp(B) | <i>B</i> | SE | Exp(B) |
| Age | -.012 | .014 | .988 | -.019 | .015 | .981 | -.005 | .016 | .995 |
| Sex | -.264 | .395 | .768 | -.274 | .417 | .761 | .060 | .442 | 1.061 |
| Sexual orientation | .780 | .410 | 2.182 | .634 | .426 | 1.884 | -.068 | .476 | .934 |
| Civil status | 1.573*** | .331 | 4.823 | 1.636*** | .362 | 5.136 | 2.049*** | .399 | 7.764 |
| Education | 1.139 | .605 | 3.125 | 1.182 | .610 | 3.260 | 1.435* | .651 | 4.198 |
| Professional status | .270 | .520 | 1.310 | .454 | .543 | 1.574 | .432 | .575 | 1.541 |
| Children (cohabitation) | | | | -.146 | .351 | .864 | -.069 | .376 | .934 |
| Elderly (cohabitation) | | | | .672 | .546 | 1.958 | .208 | .617 | 1.232 |
| Isolation/quarantine period | | | | .085 | .432 | .919 | -.208 | .468 | .812 |
| COVID-19 infection | | | | .582 | .642 | 1.790 | .741 | .686 | 2.098 |
| Front line worker | | | | .896* | .368 | 2.451 | 1.182** | .401 | 3.260 |
| DASS | | | | | | | .066** | .020 | 1.068 |
| FCV-19S | | | | | | | -.030 | .040 | .970 |
| CAS | | | | | | | .004 | .078 | 1.004 |
| SWLS | | | | | | | -.069 | .038 | .933 |

Note. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Sex (women vs. men); civil status (single/divorced/widowed vs. married/in cohabitation); educational level (under 12 years vs. 13 years or more); sexual orientation (heterosexual vs. non-heterosexual); professional status (employed/students vs. unemployed/retired); children (no vs. yes); elderly (no vs. yes); isolation/quarantine period (no vs. yes); COVID-19 infection (no vs. yes); front line worker (no vs. yes)

DASS, Depression, Anxiety, and Stress Scale-21; FCV-19S, Fear of COVID-19 Scale; CAS, COVID-19 Anxiety Scale; SWLS, Satisfaction With Life Scale

status (OR = 4.823; 95% CI (2.521; 9.226)) emerged as a significant predictor of BV. Thus, being married or cohabitating puts individuals at 4.823 times greater odds of experiencing BV.

In the second step, when sociodemographic information related to the pandemic (i.e., having and cohabitating with children, cohabitation and taking care of an older person, having experienced an isolation/quarantine period due to COVID-19 infection, being infected with the SARS-CoV-2, and working in front line or risk for COVID-19) was

included, the model was not statistically significant ($\chi^2(5)=8.802, p=0.117$), but was the final model ($\chi^2(12)=43.583, p<0.001$). The contribution of these variables resulted in a pseudo- R^2 ranging between 14.5 (Cox & Snell) and 19.8% (Nagelkerke). This model accurately classified 69.2% of the cases. A separate analysis of the variables used for the prediction of BV revealed that civil status (OR=5.136; 95% CI (2.525; 10.446)) and working in the front line or risk for COVID-19 (OR=2.451; 95% CI (1.192; 5.038)) had a significant contribution to the model. Thus, being married or living in cohabitation and working in the front line or risk for COVID-19 puts individuals at 5.136 and 2.451 times greater odds of BV, respectively, compared to individuals who are not married or not living in cohabitation and individuals who are not working in the front line or risk for COVID-19, respectively.

Finally, in the third step, psychopathological variables (i.e., psychological distress, anxiety related to COVID-19, fear of COVID-19, and life satisfaction) were entered into the model. The model with these variables was statistically significant ($\chi^2(4)=21.459, p<0.001$) as was the final model ($\chi^2(15)=65.042, p<0.001$). This set of variables resulted in a pseudo- R^2 ranging between 20.8 (Cox & Snell) and 28.5% (Nagelkerke). The model correctly classifies 72.8% of the cases. Analyzing individually the variables, civil status (OR=7.764; 95% CI (3.555; 16.955)), educational level (OR=4.198; 95% CI (1.171; 15.053)), working in the front line or risk for COVID-19 (OR=3.260; 95% CI (1.487; 7.147)), and psychological distress (OR=1.068; 95% CI (1.027; 1.112)) were related with BV. Thus, being married or living in cohabitation, having more than 13 years of education, and working in the front line or at risk for COVID-19 put individuals at 7.764, 4.198, and 3.260 times greater odds of BV, respectively, when compared to individuals who are not married or not live in cohabitation, who had less than 13 years of education, and who did not work in the front line or risk for COVID-19, respectively. Besides, each unit increase in psychological distress score multiplies the odds of BV by 1.068.

Discussion

The present study aimed to analyze the rates of intimate BV during the second lockdown in Portugal in an online community sample and to identify the predictors of BV in that sample. Although a considerable number of studies conducted during COVID-19 lockdown periods focused on IPV prevalence, as far as we know, only one included data on the directionality of violence (Glowacz et al., 2022), and no studies examined the psychosocial predictors of BV. Since recent studies pointed to a high prevalence of BV and that COVID-19-related stressors, some of them also identified as IPV-related factors, often affected both partners, this study is of relevance in order to provide a better understanding of the dynamics and patterns of violence among individuals in intimate relationships, as well as risk factors for BV during periods of crisis and catastrophe.

The rates found in the current study were in line with previous research (e.g., Bates, 2016; Costa et al., 2015a; Glowacz et al., 2022; Holmes et al., 2022; Langhinrichsen-Rohling et al., 2012; Palmetto et al., 2013; Renner & Whitney, 2010) revealing a higher prevalence of BV when compared to perpetration only and victimization only. As expected, BV (Capaldi et al., 2018) was the most frequent type of violence during the second lockdown due to the COVID-19 pandemic in Portugal, followed by perpetration-only and victimization-only. It is worthy of notice that rates of BV from the current study were slightly higher (i.e., 31.3%) when compared to a previous multicultural study from several European countries (i.e., 21.9%; Costa et al., 2015a), but very similar to rates from a

study conducted during the pandemic time frame (i.e., 28.2%; Glowacz et al., 2022). Data regarding perpetration-only and victimization-only was slightly lower in the current study (i.e., 3.9% and 2.4%, respectively) compared to previous rates found (i.e., 8.0 and 7.6%, respectively; Costa et al., 2015a). The high prevalence of BV within intimate relationships might be explained by the seriously increased risk for IPV during the COVID-19 pandemic (Ribeiro et al., 2022; Thiel et al., 2022; Wildman et al., 2021), mainly due to lockdown periods, which were considered vulnerability factors for both victimization and perpetration of aggressive behaviors within intimate relationships (Campbell, 2020).

Consistent with previous systematic reviews (e.g., Machado et al., 2023), in the current study, the victims of IPV were more likely to suffer psychological violence, followed by physical assault and sexual coercion. Likewise, the perpetrators of IPV engage more frequently in psychological violence, followed by sexual coercion and physical assault. A recent study conducted in Portugal during the first wave of the COVID-19 pandemic found similar results, with psychological violence representing the most frequent type of violence exerted, followed by sexual and physical violence (Pérez et al., 2022). The current findings highlight the higher rates of psychological aggression within intimate relationships, which should be taken into account when programs for preventing violence are being developed.

It has been documented that BV was strongly associated with poor mental health (e.g., Ulloa & Hammett, 2016), with depression emerging as a major mental health problem associated with BV (Charles et al., 2011; Melander et al., 2010; Ulloa & Hammett, 2016). In the current study, when individuals involved in BV were compared with individuals with no history of violence, identical results were found, with individuals involved in BV reporting significantly more psychological distress and depressive symptomatology, with a small to medium effect size (Cohen, 1988). Although psychological distress and depression have been previously identified as risk factors for BV (e.g., Ulloa & Hammett, 2016), the current findings should consider the time frame of sample recruitment, particularly during the second lockdown due to the COVID-19 pandemic in Portugal. A wide range of empirical research has found an increase in psychological distress, depression, anxiety, and stress symptoms during the COVID-19 pandemic, particularly in home confinement periods (Canet-Juric et al., 2020; Mendes-Santos et al., 2020; Passos et al., 2020; Paulino et al., 2021; Silva-Moreira et al., 2021). It is possible that a complex and bidirectional effect occurred, with psychological distress and depression occurring as risk factors and a consequence of BV in the current sample. Further studies are needed, with longitudinal approaches, to deeply understand the complex interaction between mental health and BV.

Regarding the predictors of BV during the second lockdown due to the COVID-19 pandemic, the final hierarchical logistic regression model classified almost 73% of the total cases with being married or living in cohabitation, high schooling, experiencing greater levels of psychological distress, and working in the front line with greater risk for COVID-19 representing statistically significant sociodemographic predictors of BV. Individuals married or in cohabitation reported 4.20 more probability of engaging in BV when compared to single, divorced, widowed, or separated ones. Although research on sociodemographic predictors of mental health and well-being during the COVID-19 pandemic has pointed to living alone and being single or divorced as a major risk factor for poor mental health (Pedrosa et al., 2020) and decreased levels of well-being (Peixoto et al., 2022), in what concerns intimate related violence, being married or living in cohabitation constitutes a major risk factor for BV. This finding may be explained by the cohabitation factor, which propitiated disruptive interactions between intimate partners during home confinement and high rates of IPV (e.g., Arenas-Arroyo et al., 2021; Cunha et al., 2023). According to previous research, cohabitation and living together constitute a risk factor for IPV

(Manning et al., 2018), which corroborates current findings. However, other factors related to the COVID-19 pandemic than the cohabitation itself, such as less frequent contact with family and friends outside of the household, may also explain the high rates of IPV during this period (Morgan & Boxall, 2020).

Empirical studies on risk factors for mental health consequences of the COVID-19 pandemic have suggested lack of schooling as a significant risk factor, which was associated with more mental health problems during this time frame (Mascherini et al., 2021). In the current study, having more years of education constitutes a 4.198 increased probability of being in a relationship characterized by BV compared to less educated individuals. A recent study conducted in Portugal during the first wave of COVID-19 suggested that individuals well-educated in terms of school years completed engaged more frequently in less avoidant coping strategies to deal with pandemic-associated stressors, such as denial self-distraction, compared to individuals less educated in terms of school years completed (Morgado et al., 2022). We hypothesized that more confrontative coping strategies, such as aggression or hostility, may promote an escalation of IPV, which may justify this increased risk of BV among individuals well-educated in terms of school years completed. In addition, well-educated individuals may have more telework jobs (i.e., related to new technologies and high-paid white-collar jobs; Brussevich et al., 2022; Gaduena & Alcantara, 2021; Sostero et al., 2020), which increases the stress levels experienced due to work-life balance demands, which in turns promotes conflict in work-life balance (Galanti et al., 2021; Kuśnierz et al., 2022). Also, work-life demands and conflicts during telework increase emotional exhaustion (Abdel Hadi et al., 2021). Considering that stress is a risk factor for BV and IPV (Nelson et al., 2022), along with spending more time at home with the intimate partner and engaging in more confrontative coping strategies to deal with pandemic stress-related problems, these perhaps might help to explain the increased risk of being well-educated for BV. Besides, high-schooling individuals may be more aware of IPV and more easily identify different forms of IPV, especially psychological aggression, considering the high rates of psychological violence reported in our sample. Although it is well-documented that low educational attainment predicts IPV and physical IPV (e.g., Spencer et al., 2019), these results led us to question if low and high educational levels might be related to different types of violence (i.e., physical vs. psychological), as other studies found (e.g., Miller et al., 2016). However, this assumption needs further investigation. Considering that physical and more serious violence are more easily reported to authorities (e.g., Park & Ko, 2020) and that psychological violence constitutes a significant burden for mental health (e.g., Gibbs et al., 2018), a large group of victims might be underestimated and not receiving the specialized help needed.

As expected, psychological distress constitutes a significant predictor of BV, with individuals with more psychopathological symptoms being at an increased risk of engaging in BV. Psychological distress (Canet-Juric et al., 2020; Mendes-Santos et al., 2020; Passos et al., 2020; Paulino et al., 2021; Silva-Moreira et al., 2021) and having a mental illness (Epifanio et al., 2021; Rajukmar, 2020; Zhu et al., 2020) have been associated with negatively impacted well-being during COVID-19 pandemic. Mental health burden, along with impaired perceptions of life satisfaction and well-being, may help explain the increased risk for BV, as psychological distress has been identified as a mediator in the relationship between COVID-19-related anxiety and IPV perpetration (Cunha et al., 2023).

Being a health professional or having a higher risk of contracting an infection in the workplace constitutes a risk factor for BV, with an increased risk of 3.26, although with a significance threshold. Previous research has found being a health professional or having a higher risk of contracting an infection in the workplace as a risk factor for mental

health problems and decreased levels of well-being (Kang et al., 2020; Morgado et al., 2021; Pedrosa et al., 2020). Once again, it is possible that being at higher risk of contracting the SARS-CoV-2 and consequently disseminating and spreading the virus constitutes a stressor that negatively interferes with intimate violence.

Although the current study is one of the first attempts to examine BV and its psychosocial correlates, interpretation and generalization of the results should consider some limitations. In the current study, BV was measured according to the presence of perpetration and victimization IPV, without attending to the context (i.e., self-defense or retaliation) and without measuring the severity, the motives behind the use of violence, or the violent behavior consequences (e.g., Dobash & Dobash, 2004). This limitation is related to the use of the CTS, which, although a robust psychometric measure, captures acts of violence within intimate relationships without attending to the context (Jones et al., 2017). The CTS does not allow differentiation between violence perpetrated in self-defense or retaliation and violence initiated without provocation, which may lead to considering bidirectional violence situations where a partner only uses violence in self-defense (Babcock et al., 2019). Consequently, this limits the interpretation of the direction of violence, the underlying dynamics of violent behavior in intimate relationships, and its consequences (Jones et al., 2017). Assessing BV solely based on the CTS scores (i.e., the presence and/or frequency of a violent act) may overlook some nuances that shape the nature and consequences of the conflict and, therefore, are more likely to find gender symmetry (Dobash & Dobash, 2004). In this sense, future studies should be more intentional and provide a more specific context and motivations behind IPV to examine more reliably the rates of IPV victimization, perpetration, and BV among men and women. In addition, BV was only assessed based on the reports of one of the elements of the couple, and no comparisons were able to be made between the couples in terms of frequency of perpetration and/or victimization. Besides, this study uses a web approach, with an online sample collected through non-randomized methods. Consequently, it is a non-clinical sample that more probably identifies minor intimate violence, as suggested by the lower percentage of individuals reporting severe forms of violence (both perpetrated and as a victim) (Cunha et al., 2023; Woffordt et al., 1994). Future studies should include clinical and forensic samples to replicate the current findings. In addition, this study uses a retrospective approach, with data collected after the lockdown time frame and participants being invited to report themselves to that particular time frame. It is possible to have slight recall bias effects. Besides, the study relies on self-report measures, and social desirability was not controlled. This could also bias the results, given the possibility of some individuals providing their biased interpretation of the facts. The study uses a cross-sectional methodology; thus, no cause-effect interpretations can be acknowledged. Due to these limitations, finding generalizations should be made with some caution.

This study constitutes one of the first attempts to investigate psychosocial correlates and predictors of BV during COVID-19-related lockdowns. As expected, BV constitutes the most prevalent and significant form of IPV in our sample, with significantly higher rates compared to perpetration and victimization-only, with individuals reporting BV also experiencing more significant levels of psychological distress and depressive symptoms when compared to individuals within non-violent intimate relationships. Interestingly, the major psychosocial predictor of BV during this time frame was high educational levels, followed by marital/cohabitation status, psychological distress, and working in the front line or at greater risk for COVID-19. Considering the specific time frame and the particular conditions of home confinement, this study shed light on relevant psychosocial variables that constitute key risk factors for BV. Clinical and forensic professionals are recommended to

be aware, particularly of educational level and marital status, mental health problems and psychological distress, and being at risk for COVID-19 at work.

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Data Availability Not available.

Code Availability Not applicable.

Declarations

Ethics Approval The present research was approved by the Lusófona of Porto University Ethics Commission. All procedures were in accordance with the ethical standards of the institutional ethics commission and with the 1964 Helsinki declarations and its later amendments.

Consent to Participate All participants were informed about the content and aims of the study and were informed about their anonymity and voluntary participation. All participants signed an electronic informed consent.

Conflict of Interest The authors declare no competing interests.

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