

**Correlates of experiencing psychological violence during the initial COVID-19 lockdown:
A global analysis of 25 countries from the I-SHARE research consortium**

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Abstract

The COVID-19 pandemic impacted on all aspects of life. While there are reports on the effect of the pandemic on violence, few studies have examined its effect on psychological violence which often goes unnoticed in research and practice. This paper compares the prevalence of psychological violence three months prior to and during the COVID-19 pandemic. Correlates of psychological violence during the pandemic restrictions were also assessed. Data for this paper are from a cross-sectional online survey of 14,826 adults ages 18 and above from 25 of the 30 countries involved in the I-SHARE research consortium. A composite variable for psychological violence was derived from responses to questions that asked whether participants had experienced emotional abuse, financial abuse, and restricted contact with other three-months prior to and during the pandemic using validated survey instruments. Descriptive and multivariate analysis were conducted. Overall prevalence of psychological violence was higher before (23.2%) compared to during (18.6%) the COVID-19 restrictions. Living with a partner, age, gender, sexual orientation, income, stringency of lockdown, and perceived vulnerability were significant correlates of the experience of psychological violence during the COVID-19 restrictions. A considerable proportion of respondents experienced psychological violence during the restrictions although the prevalence was lower compared to 3-months prior to the restrictions. Interventions for violence prevention during crisis such as COVID-19 should specifically enquire about psychological violence so that it can be promptly addressed, especially as it can be a precursor to future experience of physical violence.

KEYWORDS: COVID-19, Psychological violence, lockdown, emotional violence

Introduction

Psychological violence is one of the least studied forms of violence and has been defined and measured in multiple ways [1]. The Council of Europe defines psychological violence as, “any intentional conduct that seriously impairs another person’s psychological integrity through coercion or threats” [2]. Other definitions include all forms of non-physical interpersonal violence that include emotional torture, verbal insults, intimidations, social embarrassments, financial control, and work restrictions [3]. Similar to other forms of violence, the prevalence of psychological violence varies within and across countries and regions. This is partly due to differences in the definition, the population studied, types of actions assessed and whether these are restricted to annual or life-time incidents. Lifetime prevalence rates ranging from 8.5% [4]

to as high as 60% [1] have been reported. Past year prevalence rates also vary widely ranging from 7% among men and 20% among women in Rwanda to 58.1% among intimate partners (regardless of gender) in six European countries [5]. Clark et al (2009) reported rates of more than 70% among women attending health facilities in Jordan [6].

Various factors have been associated with violence in general as well as psychological violence. The socio-ecological model (fig 1) for understanding violence describes four levels of influence – the individual, interpersonal/ relationship, community, and societal levels within which various factors interact and predispose or protect an individual from experience of violence [7]. Factors predisposing an individual to experiencing violence at the individual level include biological and social characteristics such as age, gender, marital status, living status, education, employment status; risk behaviours such as use of psychoactive substances and personal history e.g., history of witnessing or experiencing violence [8–10]. At the relationship/interpersonal level, marital instability, tension within intimate relationships and poor communication are factors associated with the experience of violence [7,11]. Community level factors include those factors that relate to social relationships within various settings in the community such as neighbourhoods, schools, offices, markets, etc[7]. Factors at the societal level include education, health, and economic policies that create an environment that predisposes or protects against violence[7].

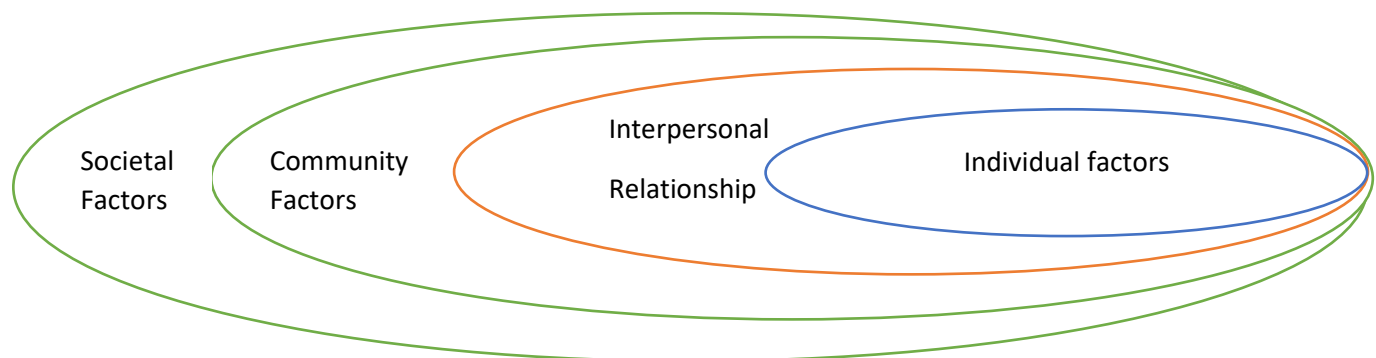


Figure1: *Socio-ecological model for violence*

The COVID-19 pandemic which impacted on all aspects of life also had marked influence on the factors that predispose to violence [9,12]. At the societal level, policies mandating global movement restrictions and changes in global and local government economic priorities had major effects on nations, families, and individuals and on the occurrence of various forms of violence [13,14]. At the level of the community, the movement restrictions resulted in closure

of businesses, offices, schools etc. Morbidity and mortality associated with COVID-19 also affected the available workforce in essential service units including facilities that respond to incidents of violence [15]. At the interpersonal level, the pandemic increased the likelihood of ‘circumstances that may make communication between intimate partners and other family members difficult’, thus increasing the possibility of psychological violence [16]. For instance, people were compelled to stay within their households where they were in close contact with perpetrators. For others, reduced household income could have strained relationships, increasing the likelihood of violence [17]. On the other hand, for those who had suffered violence from perpetrators outside of the home prior to the pandemic, movement restrictions would have limited their contact with these perpetrators, thus reducing potential for occurrences. At the individual level, the effect of the pandemic on livelihoods, changes in substance use, or anxiety or stress related to the uncertainty about the virus, livelihood, length of restrictions, etc., could have impacted on individuals thereby increasing the likelihood of violence victimization or perpetration. Movement restrictions also made it difficult for survivors to access help in person as response institutions were closed in many countries [13].

In general, a relative paucity of papers reporting on psychological violence prior to the COVID-19 pandemic compared to physical violence has been observed. Literature on psychological violence during the pandemic is similarly scant. The studies available have varied findings with many reporting an increase in psychological violence [12,18,19], while others reported no significant change in psychological violence during the pandemic [20,21]. Most studies also examined psychological violence as part of enquiries on domestic or intimate partner violence, thus making it difficult to identify factors predisposing to psychological violence as a distinct type of violence.

In this manuscript, we examine the prevalence of psychological violence before and during the COVID-19 lockdown among adults in 25 global cities. In addition, we examined correlates of psychological violence during the lockdown. Data are from the I-SHARE multi-country study conducted among adults in 30 global cities [22].

Methods

Study Design

The International Sexual Health and REproductive Health during COVID-19 (I-SHARE) Study was a cross-sectional global online survey conducted during the initial wave of COVID-19. The

study consortium comprised 30 countries that collaboratively developed the survey instrument. In each country, the I-SHARE investigators translated, and field tested the questionnaires. Field testing entailed getting feedback about translations and survey content from at least 10 participants in the respective countries. Each country survey had one to three rounds of field testing. Details are available in the protocol paper [23].

Participants and Procedures

Participants were at least 18 years or older (19-49 years in Sweden), residing in the country where the survey was being conducted, and could provide online informed consent. Given the sensitive nature of some survey questions, participants could skip any question, and at the end of the survey they were given a list of local resources for support. No identifiable information was collected. Participants were recruited through an online survey link that was distributed through the respective country research leads and investigators. Twenty-three countries used convenience sampling, six used online panels with participants selected based on age, ethnicity, gender, and location and two used population-representative sampling. The survey took no longer than 20 minutes to complete and data were collected through Open Data Kit software (version 1.16).

Ethical approvals were obtained from each country's ethical review committee before study launch. Ethical approval was obtained from Ghent University (BC-07988) and the University of North Carolina at Chapel Hill (295989) for secondary data analysis of data from multiple countries. The survey instrument included sections on socio-demographic characteristics, adherence to COVID-19 restrictions (e.g., physical distancing), couple and family relationships, sexual behaviours, access to contraceptives, access to maternal healthcare, abortion, intimate partner violence, and HIV/STI testing. The full survey instrument has been published in a previous paper[23].

Measures

Psychological violence was assessed using three variables (emotional abuse, restricted contact with others and financial abuse) that were adapted from the WHO multi-country survey on women's health and domestic violence against women (Supplementary Data 1) (Heise & Hossain, 2017). A composite variable that indicated experiencing any of the three forms of psychological violence was also generated. Given the cross-sectional nature of the study, participants were asked about IPV experiences in the three months prior to COVID-19

restrictions and since the introduction of COVID-19 restrictions. Answer options included the following: no; yes, once; yes, multiple times; and no intimate partner.

Individual-level variables included socio-demographic characteristics such as sex assigned at birth, age, sexual orientation, highest educational attainment, subjective income levels, perceived changes to one's economic situation because of COVID-19, having children at home, living arrangements with partners, and area of residence. These survey items were adapted from the WHO sexual and reproductive health survey [24].

For country- variables, the Oxford COVID-19 Government Response Tracker's (OxCGRT) stringency of lockdown index (1 being least stringent, to 100, most stringent) was used. A variable was generated to indicate the maximum stringency that a country had experienced during the initial COVID-19 restrictions [25]. Gender inequality index was also included as a measure of gender inequality [26].

Data Analysis

Stata 16.0 (StataCorp, College Station, USA) was used for analyses. Descriptive statistics were calculated for sample characteristics, overall incidence of psychological violence before and during COVID-19, as well as country-level data on psychological violence. Subsequently, bivariate, and multivariable analysis of socio-demographic and relevant variables chosen a priori using adaptive Gauss-Hermite quadrature [27] (AGHQ) was undertaken for each country. The model was subsequently run using random effects and including country-level variables. Given past evidence for varying dynamics based on cohabiting status [28], stratified analyses were conducted according to whether participants lived with their partner during COVID-19 restrictions. Sensitivity analyses were also conducted to include self-reported experiences of psychological violence pre-COVID to assess if the findings of this study remained robust even when considering baseline levels of violence (Supplemental Tables S1 and S2).

Results

Among all 16,329 respondents who were eligible to answer questions about psychological violence, 14,826 (90.8%) answered at least one question on experiencing any form of psychological violence. Of the 14,826 participants who answered the questions about experiencing psychological violence, the majority identified as female (68.2%), heterosexual (81.6%) and had at least some college or university education (72.5%). The average age of

participants was 35.3 years old ($SD = 12.5$). The majority experienced no economic change during the pandemic (63%) and were living with a partner (73.1%). These participants did not differ considerably from the total sample (Table 1).

<Table 1 to 3 about here>

Experience of psychological violence prior to and during the COVID-19 restrictions

Prior to COVID-19 restrictions, 18.1% of participants in HICs reported experiences of psychological violence, compared to 31.8% in UMICs and 33.7% in LMICs. A total of 14.5%, 25.8% and 18.6% of participants reported experiencing psychological violence during COVID-19 restrictions in HICs, UMICs, and LMICs, respectively (Table 3). The proportion of participants who experienced psychological violence before COVID-19 restrictions was higher than the proportion of participants who experienced psychological violence during COVID-19 restrictions across all three indicators. Emotional abuse was experienced by 20% of participants before COVID-19 restrictions and 15.9% during COVID-19 restrictions. Being restricted from contacting others was experienced by 6.4% before COVID-19 restrictions and 4.9% during COVID-19 restrictions. Financial abuse was experienced by 7.9% before COVID-19 restrictions and 6.5% during COVID-19 restrictions (Table 2).

<Tables 4 about here>

Correlates of psychological violence during the COVID-19 restrictions

The analysis suggested several correlates of psychological violence. Among participants living with their partners, there were lower odds of experiencing any psychological violence during COVID-19 restrictions for participants who were older (aOR = 0.98, 95% CI 0.98, 0.99), identified as lesbian relative to those who identified as being heterosexual (aOR = 0.46, 95% CI 0.24, 0.88), had a higher subjective income level (aOR = 0.96, 95% CI 0.93, 0.99), had overall good (aOR = 0.59, 95% CI 0.45, 0.78), very good (aOR = 0.46, 95% CI 0.34, 0.62), and excellent mental health (aOR = 0.36, 95% CI 0.24, 0.53) compared to those with poor mental health, and those who were living in settings with greater stringency index scores (aOR = 0.98, 95% CI 0.96, 1.00). **In contrast**, there were higher odds of experiencing psychological violence among participants who were assigned male sex at birth relative to females (aOR = 1.27, 95% CI 1.09, 1.49), identified as asexual relative to heterosexual (aOR = 1.59, 95% CI 1.03, 2.47), had experienced a worse economic situation relative to those who reported not experiencing

any changes (aOR = 1.45, 95% CI 1.26, 1.67), had children at home (aOR = 1.43, 95% CI 1.25, 1.64), had engaged in transactional sex (aOR = 4.22, 95% CI 3.02, 5.91), reported that they felt a little vulnerable (aOR = 1.64, 95% CI 1.35, 2.00), neutral (aOR = 1.49, 95% CI 1.24, 1.79), quite vulnerable (aOR = 2.20, 95% CI 1.62, 3.00), or very vulnerable (aOR = 1.90, 95% CI 1.14, 3.17) relative to those who were not vulnerable, those who reported sexual satisfaction as being somewhat satisfied (aOR = 1.70, 95% CI 1.44, 2.00), neutral (aOR = 3.73, 95% CI 1.08, 12.82), not very satisfied (aOR = 2.83, 95% CI 2.34, 3.42), and not at all satisfied (aOR = 4.22, 95% CI 3.26, 5.47) relative to those who were very satisfied, and those who were residing in settings with a higher level of gender inequality (aOR = 17.71, 95% CI 4.20, 74.61).

When exploring the factors associated with the different forms of psychological violence studied as standalone variables, some differences were observed compared to the composite psychological violence variable. Specifically, participants who identified as being gay relative to those who identified as being heterosexual were more likely to experience emotional abuse (aOR = 1.62, 95% CI 1.06, 2.47) and financial abuse during COVID-19 (aOR = 2.31, 95% CI 1.28, 4.15).

<Tables 5 about here>

Among participants not living with their partners, there were lower odds of experiencing any psychological violence during COVID-19 restrictions for participants who were older (aOR = 0.99, 95% CI 0.97, 1.00), had overall fair (aOR = 0.63, 95% CI 0.43, 0.93), very good (aOR = 0.37, 95% CI 0.23, 0.60), and excellent mental health (aOR = 0.33, 95% CI 0.16, 0.68) compared to those with poor mental health, and living in settings with greater stringency index scores (aOR = 0.95, 95% CI 0.92, 0.98). In contrast, there were higher odds of experiencing psychological violence among participants who were assigned male sex at birth relative to females (aOR = 1.68, 95% CI 1.27, 2.22), had children at home (aOR = 1.31, 95% CI 1.03, 1.66), had reported engaging in transactional sex during COVID-19 measures (aOR = 6.75, 95% CI 3.79, 12.03), reported that they felt a little vulnerable (aOR = 2.20, 95% CI 1.42, 3.43), neutral (aOR = 1.53, 95% CI 1.10, 2.13), and quite vulnerable (aOR = 3.04, 95% CI 1.98, 4.68) relative to those who were not vulnerable, those who reported sexual satisfaction as being somewhat satisfied (aOR = 1.73, 95% CI 1.24, 2.42) or not at all satisfied (aOR = 2.15, 95% CI 1.49, 3.12) relative to those who were very satisfied, and residing in countries with a higher gender inequality index (aOR = 10.08, 95% CI 1.07, 95.07).

Some differences were observed in the factors associated with each form of psychological violence as standalone variables, compared to the composite psychological violence variable. Specifically, those who identified as being asexual relative to those who identified as being heterosexual had higher odds of experiencing restricted contact with others (aOR = 2.87, 95% CI 1.01, 8.10) and financial abuse during COVID-19 (aOR = 4.08, 95% CI 1.62, 10.29).

We conducted sensitivity analyses that adjusted for baseline levels of violence, and these are reflected in Supplementary Tables 1 and 2. While the strength of associations in this analysis were largely attenuated compared to the models without adjustments for baseline violence, the general direction of associations was retained.

Discussion

The COVID-19 restrictions led to a fundamental change in the organisation of social and economic life in many countries, leading to concerns about the potential impact on psychological and emotional violence in intimate partnerships. This study assessed the prevalence of psychological violence in a sample of respondents from 25 countries as well as correlates of psychological violence during the implementation of the restrictions.

The analysis suggests a modest decrease in the proportion of the respondents reporting psychological, emotional, and financial violence during COVID-19 restrictions compared to during the three-month period prior to the introduction of COVID-19 measures. Current evidence in the literature regarding the impact of COVID-19 measures on rates of psychological violence is mixed. Few studies reported evidence of decreases in psychological violence during the early lockdown period [29], whereas others reported increases during the lockdown [30–32]. A growing body of literature suggests that decreases in violence may be due to lockdown separating perpetrators from those experiencing violence [32,33] or that lockdowns may have reduced the need to use violence to control a partner [34]. Assessing increases or decreases in violence, however, is complicated by issues around reporting of violence – especially emotional and psychological violence - how psychological violence is defined and measured in different studies, as well as the composition and selection of samples in studies undertaken during COVID-19 restrictions.

At the individual level, the analysis suggested that those assigned ‘male’ at birth had higher odds of experiencing psychological violence during COVID-19 measures for those living with, and separately to their partners. There is a growing body of literature that focuses on men as

victims of IPV, and in studies that compare prevalence and perpetration between genders, the evidence is mixed. A study undertaken in Belgium in 2021 found that while there was a higher prevalence of male physical assault perpetration and victimization, there was a higher prevalence of psychological aggression for women [35], echoing a pre-pandemic study in China, which found that women were more likely to perpetrate psychological violence while men more likely to be perpetrators of physical violence [36]. An online study in Portugal conducted during the COVID restrictions found no significant difference between men and women in IPV experience [37] and a study in Germany found an increase in male perpetration of psychological violence during the COVID-19 lockdown [38]. Notably, evidence in the literature points to the need for a more complex and nuanced understanding of all types of IPV within couples: for example, a substantial body of literature indicated that women commonly use violence in response to partner's violence, or that violence was bidirectional within a couple [4,39,40]. It is, of course, important to note that support services for male survivors of IPV should also receive adequate attention in times of crisis.

Analysis also showed lower odds of psychological violence among lesbians living with partners. Although most studies have reported higher prevalence of IPV among those who identify as Lesbians, Gay, Bisexual, Transgender, and Questioning (LGBTQ) as compared to heterosexuals, studies have also shown that this is significant in some groups as compared to others. For example, a pre-COVID study reported that IPV was significantly higher among bisexuals (in opposite sex relationships) and gay men [41]. Although other pre-COVID studies have also reported higher odds of emotional violence among respondents who are LGBTQ [42], it is important to note that some of these studies were either conducted in a period when tolerance for sexual orientation difference was low and there was high level of minority stress reported among homosexuals [43,44] Studies have reported association between minority stress (internalised homophobia) and the experience and perpetration of violence among LGBTQ participants [45]. The lockdown may have reduced the experience of minority stress among homosexuals and consequently their experience of psychological violence.

At the interpersonal and community levels, analysis showed higher odds of experiencing psychological violence if there were children at home, if in a worse economic situation, and if engaged in transactional sex. The data indicated that there are higher odds of experiencing psychological violence if children are at home, regardless of cohabitation status. This echoes findings in other studies conducted during COVID-19, having children at home is associated

with increased risk of IPV [29,46] during the pandemic. Studies have shown that social isolation during disasters could increase the stress levels in an already distressed family/relationship [47,48]. COVID-19 measures had its toll on individuals and increased stressors, having children at home may also have increased stress levels for individuals who were already stressed, resulting in the possibility of more violence. Having children at home during the lockdown may have increased/revealed existing gender inequality, increased the stress of caring for another's emotional needs while dealing with one's own emotional needs. Children have also been reported to be used by partners in perpetrating violence [49].

The results showed that people whose economic situation worsened while cohabitating during the pandemic had higher odds of experiencing psychological violence whereas people who were cohabitating had lower odds of experiencing psychological violence if their situation did not worsen. The COVID-19 pandemic had a major impact on the economic situation of many households and communities. Economic strain has been found to be associated with experiencing IPV in the literature [50]. The family stress model can help to understand the relationship between worsening economic situations and psychological violence, where a worsening economic situation because of loss of employment during the pandemic is a relationship level stressor [51].

Transactional sex was found to increase the odds of experiencing psychological violence regardless of cohabitation status. Transactional sex has been identified as a correlate of IPV in other studies [52] however, more attention is paid to other forms of IPV than to psychological violence. Some individuals, primarily women, engage in transactional sex for survival purposes, to gain access to material goods, or to support dependents. One potential pathway is that people who engage in transactional sex may be more dependent on their partners, which put them at a higher risk of psychological violence as well as other forms of violence within their relationship [52].

At the societal level, the stringency level and gender inequality index were factors associated with the experience of psychological violence. The results indicate that there were lower odds of psychological violence among people regardless of cohabitation status in countries with high lockdown stringency during the early lockdowns. The association between COVID-19 lockdown stringencies and IPV have been mixed in the literature [53], although the most common narrative is that IPV increases with lockdown stringencies [54,55]. However, countries who implemented higher lockdown stringency early in the pandemic may also have

implemented other social protections alongside lockdown measures. The OxCGRT does not capture the effects of multiple COVID-19 social protection responses, and so more research on this complex relationship between lockdown policies and other COVID-19 related policies on IPV needs to be explored.

Regardless of cohabitation status, there were higher odds of experiencing psychological violence among people living in countries with more gender inequality. Data are consistent with gendered understandings of IPV where gendered social norms influence relationships between men and women [56]. Literature around gender inequality and violence have also found this direction of association: for example, [57] found that states in the United States with higher GII scores, indicating more inequality, also reported higher rates of IPV. It is important to note that most research has generally been focused on gender inequality and IPV overall, without always disaggregating the subtypes of violence. Findings from this study support this overall association and find that psychological violence is an important subtype that is impacted by gender inequality.

Conclusion and implications.

This study generally reports a decrease in the experience of psychological violence during the COVID-19 restrictions as compared to three-months prior to the pandemic. It is however important to note that the conceptualisation of intimate partner violence is generally better understood outside the experience of crisis such as the COVID-19 pandemic that forced people to stay indoors and reduced human contact. Therefore, a more complex and nuanced understanding of psychological violence within events of global level crisis such as COVID-19 is needed to aid better comparison of the period. Although, psychological violence was reduced during the pandemic, as found in this study, the prevalence of violence in this period is not negligent, therefore, it is expedient that during such crisis, existing structures for the mitigation of intimate partner violence be strengthened. This study has also reported different factors that can predispose individuals to psychological violence during crisis such as COVID-19. Paying attention to these can help in the development of interventions and prevention plans during crisis.

References

- 1 European Union Agency for Fundamental Rights. Violence against women: an EU-wide survey Main results Violence against women: an EU-wide survey. Luxembourg: 2015. doi:10.2811/62230
- 2 Council of Europe. Convention on Preventing and Combating Violence against Women and Domestic Violence and its Explanatory report. 2011.
- 3 Ramiro LS, Hassan F, Peedicayil A. Risk markers of severe psychological violence against women: a WorldSAFE multi-country study. *Inj Control Saf Promot* 2004;**11**:131–7. doi:10.1080/15660970412331292360
- 4 Lysova A, Salas J. Domestic homicide involving female perpetrators and male victims. In: *Preventing Domestic Homicides: Lessons Learned from Tragedies*. Elsevier 2020. 257–79. doi:10.1016/B978-0-12-819463-8.00012-5
- 5 Dias S, Gama A, Loos J, *et al*. The role of mobility in sexual risk behaviour and HIV acquisition among sub-Saharan African migrants residing in two European cities. *PLoS One* 2020;**15**:e0228584. doi:10.1371/journal.pone.0228584
- 6 Clark CJ, Bloom DE, Hill AG, *et al*. Prevalence estimate of intimate partner violence in Jordan. *Eastern Mediterranean Health Journal* 2009;**15**:880–9. doi:10.26719/2009.15.4.880
- 7 Krug E, Dawlberg L, Mercy J. World report on violence and health. Geneva, Switzerland: 2002.
- 8 Krug EG, Dahlberg LL, Mercy JA, *et al*. World report on violence and health Edited by. 2002.
- 9 Augusti EM, Sætren SS, Hafstad GS. Violence and abuse experiences and associated risk factors during the COVID-19 outbreak in a population-based sample of Norwegian adolescents. *Child Abuse Negl* 2021;**118**. doi:10.1016/J.CHIABU.2021.105156
- 10 Onanubi KA, Olumide AO, Owoaje ET, *et al*. Prevalence and Predictors of Intimate Partner Violence Among Female Youth in an Urban Low-Income Neighborhood in Ibadan, South-West Nigeria. *Sage Open* 2017;**7**. doi:10.1177/2158244017715673
- 11 Heise LL. Violence against women: an integrated, ecological framework. *Violence Against Women* 1998;**4**:262–90. doi:10.1177/1077801298004003002
- 12 Sediri S, Zgueb Y, Ouanes S, *et al*. Women’s mental health: acute impact of COVID-19 pandemic on domestic violence. *Arch Womens Ment Health* 2020;**23**:749–56. doi:10.1007/S00737-020-01082-4
- 13 Bradbury-Jones C, Isham L. The pandemic paradox: The consequences of COVID-19 on domestic violence. *J Clin Nurs* 2020;**29**:2047–9. doi:10.1111/JOCN.15296
- 14 Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International Reports* 2020;**2**:100089. doi:10.1016/J.FSIR.2020.100089
- 15 Pak A, Adegboye OA, Adekunle AI, *et al*. Economic Consequences of the COVID-19 Outbreak: the Need for Epidemic Preparedness. *Front Public Health* 2020;**8**:241. doi:10.3389/FPUBH.2020.00241/BIBTEX

- 16 Sifat RI. Impact of the COVID-19 pandemic on domestic violence in Bangladesh. *Asian J Psychiatr* 2020;**53**:102393. doi:10.1016/J.AJP.2020.102393
- 17 Sacco MA, Caputo F, Ricci P, *et al.* The impact of the Covid-19 pandemic on domestic violence: The dark side of home isolation during quarantine. *Med Leg J* 2020;**88**:71–3. doi:10.1177/0025817220930553
- 18 Stewart SL, Toohey A, Celebre A, *et al.* Abuse, Mental State, and Health Factors Pre and during the COVID-19 Pandemic: A Comparison among Clinically Referred Adolescents in Ontario, Canada. *Int J Environ Res Public Health* 2021;**18**. doi:10.3390/IJERPH181910184
- 19 Bhandari D, Ozaki A, Suzuki T, *et al.* Physical and verbal abuse amid COVID-19: a nationwide cross-sectional survey in Japan. *BMJ Open* 2022;**12**:e054915. doi:10.1136/BMJOPEN-2021-054915
- 20 Ribeiro R, Almeida I, Saavedra R, *et al.* The Different Contexts of Domestic Violence Before and During the COVID-19 Pandemic: A Portuguese Overview. <https://doi.org/10.1080/1556488620222052214> Published Online First: 2022. doi:10.1080/15564886.2022.2052214
- 21 Tripathi P, Dwivedi P, Sharma S. Domestic Violence against Women during the Covid-19: A Case Study of Bihar (India). *J Int Womens Stud* 2022;**24**.<https://vc.bridgew.edu/jiws/vol24/iss5/5> (accessed 19 Oct 2022).
- 22 Toller Erasquin J, Tan RKJ, Uhlich M, *et al.* The International Sexual Health And REproductive Health during COVID-19 (I-SHARE) Study: A Multicountry Analysis of Adults from 30 Countries Prior to and During the Initial Coronavirus Disease 2019 Wave. *Clin Infect Dis* 2022;**75**:e991–9. doi:10.1093/CID/CIAC102
- 23 Michielsen K, Larrson EC, Kågesten A, *et al.* International Sexual Health And REproductive health (I-SHARE) survey during COVID-19: study protocol for online national surveys and global comparative analyses. *Sex Transm Infect* 2021;**97**:88–92. doi:10.1136/SEXTRANS-2020-054664
- 24 Kpokiri neyi E, Wu D, Srinivas ML, *et al.* Development of an international sexual and reproductive health survey instrument: results from a pilot WHO/HRP consultative Delphi process. *Sex Transm Infect* 2022;**98**:38–43. doi:10.1136/SEXTRANS-2020-054822
- 25 Hale T, Angrist N, Goldszmidt R, *et al.* A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker). *Nat Hum Behav* 2021;**5**:529–38. doi:10.1038/S41562-021-01079-8
- 26 United Nations Development Programme. Human Development Report 2021-22. 2022.
- 27 Bolker BM, Brooks ME, Clark CJ, *et al.* Generalized linear mixed models: a practical guide for ecology and evolution. *Trends Ecol Evol* 2009;**24**:127–35. doi:10.1016/J.TREE.2008.10.008
- 28 Alsandria CO, Yong Loo H, McDaid L, *et al.* Intimate partner violence before and during the COVID-19 lockdown: findings from a cross-sectional study in Singapore. *Sex Health* 2022;**19**:192–201. doi:10.1071/SH21229
- 29 Ojeahere MI, Kumswa SK, Adiukwu F, *et al.* Intimate Partner Violence and its Mental Health Implications Amid COVID-19 Lockdown: Findings Among Nigerian Couples. *J Interpers Violence* 2022;**37**:NP15434–54. doi:10.1177/08862605211015213

- 30 Perez-Vincent S, Carreras E, Gibbons MA, *et al.* COVID-19 Lockdowns and Domestic Violence: Evidence from Two Studies in Argentina. *Working Papers* Published Online First: 2020.<https://ideas.repec.org/p/sad/wpaper/143.html> (accessed 24 Oct 2022).
- 31 El-Nimr NA, Mamdouh HM, Ramadan A, *et al.* Intimate partner violence among Arab women before and during the COVID-19 lockdown. *Journal of the Egyptian Public Health Association* 2021;**96**:1–8. doi:10.1186/S42506-021-00077-Y/TABLES/5
- 32 Romito P, Pellegrini M, Saurel-Cubizolles MJ. Intimate Partner Violence Against Women During the COVID-19 Lockdown in Italy: A Multicenter Survey Involving Anti-Violence Centers. <https://doi.org/10.1177/10778012221079374> 2022;**28**:2186–203. doi:10.1177/10778012221079374
- 33 Vives-Cases C, Parra-Casado D la, Briones-Vozmediano E, *et al.* Coping with intimate partner violence and the COVID-19 lockdown: The perspectives of service professionals in Spain. *PLoS One* 2021;**16**:e0258865. doi:10.1371/JOURNAL.PONE.0258865
- 34 Arenas-Arroyo E, Fernandez-Kranz D, Nollenberger N. Intimate partner violence under forced cohabitation and economic stress: Evidence from the COVID-19 pandemic. *J Public Econ* 2021;**194**:104350. doi:10.1016/J.JPUBECO.2020.104350
- 35 Glowacz F, Dziewa A, Schmits E. Intimate Partner Violence and Mental Health during Lockdown of the COVID-19 Pandemic. *Int J Environ Res Public Health* 2022;**19**. doi:10.3390/IJERPH19052535
- 36 Breckenridge J, Yang T, Poon AWC. Is gender important? Victimisation and perpetration of intimate partner violence in mainland China. *Health Soc Care Community* 2019;**27**:31–42. doi:10.1111/HSC.12572
- 37 Gama A, Pedro AR, de Carvalho MJL, *et al.* Domestic Violence during the COVID-19 Pandemic in Portugal. *Portuguese Journal of Public Health* 2020;**38**:32–40. doi:10.1159/000514341
- 38 Kliem S, Baier D, Kröger C. Domestic Violence Before and During the COVID-19 Pandemic—A Comparison of Two Representative Population Surveys. *Dtsch Arztebl Int* 2021;**118**:483–4. doi:10.3238/ARZTEBL.M2021.0267
- 39 Bair-Merritt MH, Crowne SS, Thompson DA, *et al.* Why do women use intimate partner violence? A systematic review of women’s motivations. *Trauma Violence Abuse* 2010;**11**:178–89. doi:10.1177/1524838010379003
- 40 Kolbe V, Büttner A. Domestic Violence Against Men—Prevalence and Risk Factors. *Dtsch Arztebl Int* 2020;**117**:534. doi:10.3238/ARZTEBL.2020.0534
- 41 Goldberg NG, Meyer IH. Sexual Orientation Disparities in History of Intimate Partner Violence. <http://dx.doi.org/10.1177/0886260512459384> 2012;**28**:1109–18. doi:10.1177/0886260512459384
- 42 Whitfield DL, Coulter RWS, Langenderfer-Magruder L, *et al.* Experiences of Intimate Partner Violence Among Lesbian, Gay, Bisexual, and Transgender College Students: The Intersection of Gender, Race, and Sexual Orientation. *J Interpers Violence* 2021;**36**:NP6040–64. doi:10.1177/0886260518812071

- 43 Puckett JA, Newcomb ME, Ryan DT, *et al.* Internalized Homophobia and Perceived Stigma: A Validation Study of Stigma Measures in a Sample of Young Men who Have Sex with Men. *Sex Res Social Policy* 2017;**14**:1. doi:10.1007/S13178-016-0258-5
- 44 Salerno JP, Devadas J, Pease M, *et al.* Sexual and Gender Minority Stress Amid the COVID-19 Pandemic: Implications for LGBTQ Young Persons' Mental Health and Well-Being. *Public Health Reports* 2020;**135**:721. doi:10.1177/0033354920954511
- 45 Ayhan Balik CH, Bilgin H. Experiences of Minority Stress and Intimate Partner Violence Among Homosexual Women in Turkey. *J Interpers Violence* 2021;**36**. doi:10.1177/0886260519864371
- 46 O'Hara CA, Tan RKJ. Intimate partner violence before and during the COVID-19 lockdown: findings from a cross-sectional study in Singapore. *Sex Health* 2022;**19**:192–201. doi:10.1071/SH21229
- 47 Serrata J v. Understanding the Impact of Hurricane Harvey on Family Violence Survivors in Texas and Those Who Serve Them. Texas: 2019.
- 48 Abramson A. How COVID-19 may increase domestic violence and child abuse. American Psychological Association. 2020.<https://www.apa.org/topics/covid-19/domestic-violence-child-abuse> (accessed 20 Oct 2022).
- 49 Sullivan CM, Sprecher M, Guerrero M, *et al.* The Use of Children as a Tactic of Intimate Partner Violence and its Impact on Survivors' Mental Health and Well-being Over Time. *Journal of Family Violence* 2022;**1**–11. doi:10.1007/S10896-022-00483-6
- 50 Evans DP. COVID-19 and violence: a research call to action. *BMC Womens Health* 2020;**20**:1–3. doi:10.1186/S12905-020-01115-1/PEER-REVIEW
- 51 Zheng L, Xu X, Xu T, *et al.* Financial Strain and Intimate Partner Violence Against Married Women in Postreform China: Evidence From Chengdu. <https://doi.org/10.1177/0886260519853406> 2019;**36**:NP9175–96. doi:10.1177/0886260519853406
- 52 Fielding-Miller R, Dunkle K. Constrained relationship agency as the risk factor for intimate partner violence in different models of transactional sex. <https://doi.org/10.2989/1608590620171345768> 2017;**16**:283–93. doi:10.2989/16085906.2017.1345768
- 53 Peterman A, O'donnell M. COVID-19 and Violence against Women and Children A Second Research Round Up. 2020. <https://www.cgdev.org/sites/default/files/covid-19-and-violence-against-women-and-children-second-research-round.pdf> (accessed 24 Oct 2022).
- 54 Emandi R, Encarnacion J, Seck P, *et al.* VIOLENCE AGAINST WOMEN DURING COVID19 MEASURING THE SHADOW PANDEMIC: 2. 2021. <https://data.unwomen.org/publications/vaw-rga> (accessed 24 Oct 2022).
- 55 Peitzmeier SM, Fedina L, Ashwell L, *et al.* Increases in Intimate Partner Violence During COVID-19: Prevalence and Correlates. *J Interpers Violence* 2022;**37**. doi:10.1177/08862605211052586
- 56 Heise LL, Kotsadam A. Cross-national and multilevel correlates of partner violence: an analysis of data from population-based surveys. *Lancet Glob Health* 2015;**3**:e332–40. doi:10.1016/S2214-109X(15)00013-3

- 57 Willie TC, Kershaw TS. An ecological analysis of gender inequality and intimate partner violence in the United States. *Prev Med (Baltim)* 2019;**118**:257–63.
doi:10.1016/J.YPMED.2018.10.019

Table 1. Sociodemographic characteristics of the sample and cross-tabulation of socio-demographics with responses to the psychological violence questions (during the COVID-19 restrictions).

Variable		Total Sample		Emotional abuse during COVID-19		Restricted contact with others during COVID-19		Financial abuse during COVID-19	
		N	Column %	N	Row %	N	Row %	N	Row %
Sex	Male	15371	66.7	1552	63.0	328	43.3	537	54.9
	Female	7631	33.1	904	36.7	424	56.0	434	44.3
	Another sex	53	0.2	7	0.3	5	0.7	8	0.8
Sexual Orientation	Heterosexual	16771	77.7	1602	75.7	309	67.2	481	69.7
	Bisexual	1856	8.6	200	9.5	41	8.9	57	8.3
	Gay	850	3.9	96	4.5	33	7.2	41	5.9
	Lesbian	321	1.5	29	1.4	5	1.1	7	1.0
	Question/Others/Unsure	815	3.8	76	3.6	20	4.4	31	4.5
	Asexual	643	3.0	69	3.3	43	9.4	60	8.7
	Pansexual	316	1.5	44	2.1	9	2.0	13	1.9
Education	No Formal Education	102	0.4	24	1.0	18	2.4	20	2.1
	Some/Completed Primary Education	946	4.1	101	4.1	67	8.9	61	6.2
	Some/Completed Secondary Education	4742	20.6	454	18.5	162	21.4	216	22.1
	Some/Completed College or University	16363	71.2	1780	72.3	496	65.6	646	66.1
	Other	821	3.6	102	4.1	13	1.7	34	3.5
Change of Economic Situation	Worse	7366	32.2	1006	40.9	327	43.3	459	46.9
	Same	14231	62.1	1292	52.6	352	46.6	438	44.8
	Better	1316	5.7	159	6.5	76	10.1	81	8.3
Overall Mental Health	Poor	1660	7.7	234	9.8	67	9.0	87	9.1
	Fair	5853	27.1	788	32.9	221	29.8	287	30.1
	Good	7831	36.3	878	36.6	271	36.5	353	37.0
	Very Good	4702	21.8	400	16.7	139	18.7	167	17.5

	Excellent	1522	7.1	97	4.1	44	5.9	61	6.4
Children at home during lockdown	Yes	11881	51.5	1562	63.4	584	77.2	732	74.8
	No	11186	48.5	901	36.6	173	22.9	247	25.2
Engaged in transactional sex	Yes	765	3.7	285	12.6	236	40.6	249	31.2
	No	20188	96.4	1970	87.4	345	59.4	549	68.8
Perceived vulnerability	Not vulnerable	15049	66.9	1292	53.3	305	40.8	488	50.0
	Little vulnerable	2693	12.0	456	18.8	158	21.2	175	17.9
	Neutral	3356	14.9	432	17.8	188	25.2	211	21.6
	Quite vulnerable	1038	4.6	189	7.8	69	9.2	85	8.7
	Very vulnerable	375	1.7	55	2.3	27	3.6	18	1.8
Sexual satisfaction	Very satisfied	5569	26.7	478	21.2	124	21.4	176	22.1
	Somewhat satisfied	6840	32.8	800	35.6	190	32.8	274	34.4
	Neutral	202	1.0	44	2.0	41	7.1	41	5.2
	Not very satisfied	4854	23.3	598	26.6	150	25.9	184	23.1
	Not at all satisfied	3400	16.3	330	14.7	74	12.8	121	15.2
Area where you live	Urban	17920	78.3	2004	82.1	618	82.0	803	82.4
	Rural	4957	21.7	438	17.9	136	18.0	171	17.6
	Mean (SD)	Min	Max	Mean (SD)	Range	Mean (SD)	Range	Mean (SD)	Range
Age	34.2 (12.75)	18.0	97.0	33.0 (10.43)	18.0-75.0	30.8 (9.39)	18.0-80.0	33.1 (10.49)	18.0-80.0
Income Scale	5.3 (2.18)	1.0	10.0	5.3 (2.26)	1.0-10.0	5.0 (2.38)	1.0-10.0	4.9 (2.35)	1.0-10.0
Stringency index at height of lockdown	82.7 (8.79)	64.8	100.0	82.1 (9.30)	64.8-100.0	78.9 (8.78)	64.8-100.0	80.5 (8.71)	64.8-100.0
Gender inequality index	0.2 (0.15)	0.0	0.5	0.2 (0.15)	0.0-0.5	0.2 (0.13)	0.0-0.5	0.2 (0.14)	0.0-0.5

Table 2. Descriptive statistics of psychological violence pre-COVID and during COVID restrictions.

Variable	Before COVID-19		During COVID-19	
	Frequency	Column %	Frequency	Column %
Any psychological violence				
No	12590	76.8	12723	81.4
Yes	3795	23.2	2908	18.6
Emotional abuse				
No	13016	80.0	13066	84.1
Yes, Once	1826	11.2	1382	8.9
Yes, Multiple	1438	8.8	1081	7.0
Restricted contact with others				
No	15192	93.6	14756	95.1
Yes, Once	589	3.6	401	2.6
Yes, Multiple	456	2.8	356	2.3
Financial abuse				
No	14391	92.1	14012	93.5
Yes, Once	584	3.7	495	3.3
Yes, Multiple	648	4.2	484	3.2

Table 3. Descriptive statistics of composite violence by World Bank country income level.

Psychological violence experience in the three months before COVID-19 restrictions			
Country income level	No (Row %)	Yes once/multiple times (Row %)	Total (Row%)
Low or low-middle income country	299 (66.3)	152 (33.7)	451 (100.0)
Upper-middle income country	3786 (68.2)	1762 (31.8)	5548 (100.0)
High-income country	8505 (81.9)	1881 (18.1)	10386 (100.0)
Total	12590 (76.8)	3795 (23.2)	16385 (100.0)
Psychological violence during COVID-19 restrictions			
Country income level	No (Row %)	Yes once/multiple times (Row %)	Total (Row %)
Low or low-middle income country	303 (71.8)	2908 (18.6)	422 (100.0)
Upper-middle income country	3831 (74.2)	1333 (25.8)	5164 (100.0)
High-income country	8589 (85.5)	1456 (14.5)	10045 (100.0)
Total	12723 (81.4)	2908 (18.6)	15631 (100.0)

Note: High income countries include Australia, Canada, Czech Republic, Denmark, France, Germany, Italy, Latvia, Luxembourg, Portugal, Singapore, Spain, Sweden, Uruguay, and the United States; Upper-middle income countries include Argentina, Botswana, China, Colombia, Lebanon, Malaysia, Mexico, Moldova, Panama and South Africa; Low or low-middle income countries include Egypt, Kenya, Mozambique, Nigeria and Uganda

Variable	Composite Psychological Violence		Emotional abuse during COVID-19		Restricted contact with others during COVID-19		Financial abuse during COVID-19	
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex assigned at birth (Ref: Female)								
Male	1.27**	1.09, 1.49	1.22*	1.03, 1.44	2.30***	1.64, 3.22	1.03	0.79, 1.35
Other	0.65	0.11, 4.01	0.86	0.14, 5.07	5.06	0.46, 56.05	1.73	0.23, 12.82
Age (Centered)	0.98***	0.98, 0.99	0.98***	0.98, 0.99	0.98**	0.96, 0.99	0.99	0.98, 1.01
Sexual orientation (Ref: Straight)								
Bisexual	1.16	0.90, 1.51	1.23	0.94, 1.60	0.93	0.51, 1.69	1.02	0.65, 1.61
Gay	1.36	0.89, 2.06	1.62*	1.06, 2.47	1.10	0.50, 2.42	2.31**	1.28, 4.15
Lesbian	0.46*	0.24, 0.88	0.48*	0.25, 0.94	0.32	0.04, 2.52	0.37	0.09, 1.63
Questioning, unsure or another	1.07	0.73, 1.56	1.08	0.73, 1.60	0.82	0.36, 1.85	0.97	0.51, 1.83
Asexual	1.59*	1.03, 2.47	1.33	0.83, 2.12	2.33*	1.18, 4.59	2.81***	1.65, 4.80
Pansexual	1.08	0.65, 1.77	1.19	0.72, 1.97	0.90	0.35, 2.32	1.18	0.55, 2.52
No formal education – secondary education (Ref: Some college-university)								
	1.03	0.86, 1.24	0.97	0.8, 1.17	1.04	0.71, 1.51	1.27	0.94, 1.73
Economic situation (Ref: Stayed the same)								
Worse economic situation	1.45***	1.26, 1.67	1.33***	1.15, 1.55	1.56**	1.14, 2.14	1.61***	1.26, 2.06
Better economic situation	0.87	0.65, 1.17	0.84	0.61, 1.14	0.72	0.34, 1.54	1.02	0.59, 1.77
Income (Centered)	0.96*	0.93, 0.99	0.97	0.93, 1.00	0.96	0.90, 1.03	0.91**	0.86, 0.96
Overall Mental Health (Ref: Poor)								
Fair	0.85	0.65, 1.11	0.84	0.64, 1.10	0.71	0.42, 1.23	0.71	0.46, 1.09
Good	0.59***	0.45, 0.78	0.55***	0.42, 0.72	0.68	0.40, 1.15	0.53**	0.35, 0.82
Very Good	0.46***	0.34, 0.62	0.41***	0.30, 0.56	0.42**	0.23, 0.77	0.58*	0.36, 0.92
Excellent	0.36***	0.24, 0.53	0.35***	0.23, 0.53	0.28**	0.12, 0.65	0.55*	0.30, 0.99
Child at home (Ref: No child at home)								
	1.43***	1.25, 1.64	1.46***	1.27, 1.69	1.49*	1.08, 2.06	1.52**	1.19, 1.96
Engaged in transactional sex	4.22***	3.02, 5.91	4.45***	3.17, 6.25	7.32***	4.71, 11.38	7.66***	5.17, 11.34
Perceived vulnerability (Ref: Not vulnerable)								
Little vulnerable	1.64***	1.35, 2.00	1.73***	1.41, 2.13	2.70***	1.74, 4.20	1.44*	1.00, 2.05
Neutral	1.49***	1.24, 1.79	1.52***	1.26, 1.85	2.46***	1.67, 3.63	1.67**	1.22, 2.30
Quite vulnerable	2.20***	1.62, 3.00	2.41***	1.76, 3.29	3.01***	1.62, 5.60	1.76*	1.06, 2.91
Very vulnerable	1.90*	1.14, 3.17	2.05**	1.22, 3.44	9.44***	4.53, 19.71	1.52	0.69, 3.37

Sexual satisfaction (Ref: Very satisfied)								
Somewhat satisfied	1.70***	1.44, 2.00	1.73***	1.45, 2.06	1.15	0.77, 1.70	1.49*	1.09, 2.02
Neutral	3.73*	1.08, 12.82	3.82	0.98, 14.87	2.20	0.25, 19.22	4.12	0.48, 35.55
Not very satisfied	2.83***	2.34, 3.42	2.83***	2.32, 3.46	2.03**	1.32, 3.12	2.35***	1.67, 3.29
Not at all satisfied	4.22***	3.26, 5.47	4.35***	3.33, 5.69	3.93***	2.36, 6.54	3.94***	2.59, 5.97
(Semi-)Urban area (Ref: (Semi-)Rural area)	1.13	0.94, 1.36	1.07	0.88, 1.30	1.18	0.77, 1.82	1.20	0.86, 1.69
Gender inequality index	17.71***	4.20, 74.61	12.87**	2.88, 57.6	2.85	0.08, 103.95	55.88**	5.17, 604.00
Stringency at height of lockdown (Centered)	0.98*	0.96, 1.00	0.98	0.96, 1.00	0.97	0.92, 1.02	0.96*	0.93, 0.99

Table 5. Binomial logistic regression coefficients associated with experience of psychological violence among participants in the I-SHARE study, 2020-2021 (Partner not living with them)								
Variable	Composite Psychological Violence		Emotional abuse during COVID-19		Restricted contact with others during COVID-19		Financial abuse during COVID-19	
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex assigned at birth (Ref: Female)								
Male	1.68***	1.27, 2.22	1.67**	1.24, 2.24	2.11**	1.22, 3.63	1.78*	1.04, 3.05
Other	2.24	0.02, 222.93	2.84	0.04, 186.19	7.95	0, 17327.97	20.6	0.00, 172658.2
Age (Centered)	0.99*	0.97, 1.00	0.97**	0.96, 0.99	0.98	0.96, 1.01	1.03	1, 1.05
Sexual orientation (Ref: Straight)								
Bisexual	0.69	0.47, 1.02	0.74	0.49, 1.11	0.47	0.19, 1.12	0.42	0.17, 1.06
Gay	0.96	0.58, 1.59	0.97	0.57, 1.65	1.81	0.77, 4.26	0.73	0.27, 1.97
Lesbian	1.27	0.44, 3.63	1.56	0.54, 4.48	3.73	0.86, 16.1	0.70	0.04, 10.90
Questioning, unsure or another	1.07	0.53, 2.18	0.87	0.40, 1.88	1.05	0.30, 3.72	1.05	0.28, 4.02
Asexual	2.04	0.99, 4.22	1.72	0.80, 3.74	2.87*	1.01, 8.10	4.08**	1.62, 10.29
Pansexual	0.70	0.31, 1.62	0.71	0.30, 1.69	0.86	0.17, 4.31	0.41	0.04, 3.74
No formal education – secondary education (Ref: Some college-university)								
	1.13	0.85, 1.49	1.19	0.89, 1.59	1.03	0.60, 1.75	1.29	0.73, 2.28
Economic situation (Ref: Stayed the same)								
Worse economic situation	1.22	0.95, 1.56	1.22	0.94, 1.59	0.99	0.59, 1.67	1.93*	1.14, 3.26
Better economic situation	0.99	0.59, 1.67	1.09	0.63, 1.87	0.82	0.27, 2.51	0.83	0.22, 3.11
Income (Centered)	0.99	0.93, 1.06	1.00	0.94, 1.07	1.01	0.90, 1.15	0.91	0.80, 1.04
Overall Mental Health (Ref: Poor)								
Fair	0.63*	0.43, 0.93	0.6*	0.40, 0.89	0.54	0.25, 1.19	1.05	0.45, 2.47
Good	0.68	0.46, 1.00	0.62*	0.42, 0.94	0.74	0.34, 1.59	1.06	0.45, 2.49
Very Good	0.37***	0.23, 0.60	0.32***	0.19, 0.54	0.71	0.29, 1.76	0.37	0.12, 1.18
Excellent	0.33**	0.16, 0.68	0.29**	0.13, 0.65	0.13	0.01, 1.40	1.37	0.40, 4.63
Child at home (Ref: No child at home)								
	1.31*	1.03, 1.66	1.31*	1.02, 1.68	1.43	0.87, 2.33	1.37	0.82, 2.28
Engaged in transactional sex	6.75***	3.79, 12.03	5.81***	3.28, 10.27	12.02***	6.02, 24.00	17.33***	8.75, 34.31
Perceived vulnerability (Ref: Not vulnerable)								
Little vulnerable	2.52***	1.85, 3.44	2.47***	1.78, 3.41	4.04***	2.14, 7.63	2.96**	1.50, 5.83
Neutral	1.53*	1.10, 2.13	1.37	0.96, 1.95	3.47***	1.86, 6.45	3.49***	1.90, 6.41
Quite vulnerable	3.04***	1.98, 4.68	3.02***	1.94, 4.71	3.92**	1.6, 9.63	1.03	0.33, 3.25
Very vulnerable	1.36	0.58, 3.17	0.86	0.31, 2.42	3.91	0.89, 17.13	2.37	0.49, 11.48

Sexual satisfaction (Ref: Very satisfied)								
Somewhat satisfied	1.73**	1.24, 2.42	1.68**	1.18, 2.39	2.38*	1.16, 4.88	1.95	0.97, 3.89
Neutral	-	-	-	-	-	-	-	-
Not very satisfied	1.32	0.94, 1.87	1.24	0.86, 1.78	1.87	0.89, 3.91	0.79	0.36, 1.74
Not at all satisfied	2.15***	1.49, 3.12	2.14***	1.44, 3.17	1.66	0.70, 3.91	3.05**	1.44, 6.47
(Semi-)Urban area (Ref: (Semi-)Rural area)	0.98	0.70, 1.38	1.02	0.71, 1.47	0.87	0.47, 1.61	1.30	0.64, 2.65
Gender inequality index	10.08*	1.07, 95.07	7.21	0.97, 53.78	2.22	0.35, 14.27	415.03***	40.63, 4239.62
Stringency at height of lockdown (Centered)	0.95**	0.92, 0.98	0.94***	0.92, 0.97	0.94***	0.91, 0.97	0.90***	0.87, 0.94

Table S1. Binomial logistic regression coefficients associated with experience of psychological violence among participants in the I-SHARE study, 2020-2021 (Partner lived with them, with baseline violence adjusted)								
Variable	Composite Psychological Violence		Emotional abuse during COVID-19		Restricted contact with others during COVID-19		Financial abuse during COVID-19	
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex assigned at birth (Ref: Female)								
Male	1.04	0.82, 1.31	0.94	0.73, 1.2	1.84**	1.19, 2.83	1.01	0.69, 1.49
Other	0.15	0.02, 1.04	0.21	0.02, 2.15	1.50	0.12, 18.84	7.21	0.64, 80.7
Age (Centered)	0.98***	0.97, 0.99	0.98**	0.97, 0.99	0.99	0.97, 1.01	1.01	0.99, 1.03
Sexual orientation (Ref: Straight)								
Bisexual	1.12	0.76, 1.66	1.29	0.86, 1.95	0.68	0.29, 1.58	1.16	0.59, 2.28
Gay	0.97	0.51, 1.86	1.40	0.7, 2.8	0.42	0.15, 1.18	3.21**	1.36, 7.57
Lesbian	0.46	0.19, 1.15	0.43	0.17, 1.08	0.24	0.02, 3.15	0.58	0.08, 4.38
Questioning, unsure or another	1.46	0.83, 2.57	1.54	0.85, 2.8	1.58	0.58, 4.29	0.77	0.28, 2.14
Asexual	0.85	0.44, 1.63	1.17	0.57, 2.4	1.07	0.36, 3.18	2.04	0.91, 4.57
Pansexual	1.09	0.51, 2.34	1.16	0.53, 2.54	0.84	0.18, 4.01	0.86	0.25, 3
No formal education – secondary education (Ref: Some college-university)	0.92	0.71, 1.19	0.81	0.61, 1.07	1.11	0.67, 1.83	1.12	0.75, 1.66
Economic situation (Ref: Stayed the same)								
Worse economic situation	1.30*	1.05, 1.60	1.16	0.92, 1.46	1.51*	1.01, 2.27	1.50*	1.05, 2.14
Better economic situation	0.88	0.57, 1.37	0.85	0.53, 1.34	0.82	0.30, 2.2	1.42	0.68, 2.97
Income (Centered)	1.01	0.96, 1.06	1.00	0.94, 1.05	1.01	0.92, 1.12	0.88**	0.82, 0.96
Overall Mental Health (Ref: Poor)								
Fair	1.02	0.67, 1.54	0.92	0.60, 1.41	1.19	0.58, 2.42	0.72	0.38, 1.37
Good	0.83	0.55, 1.25	0.76	0.50, 1.17	0.90	0.45, 1.81	0.52	0.28, 1
Very Good	0.87	0.56, 1.37	0.78	0.49, 1.24	0.55	0.24, 1.23	0.95	0.47, 1.9
Excellent	0.50*	0.28, 0.88	0.66	0.36, 1.22	0.35	0.11, 1.11	0.67	0.28, 1.65
Child at home (Ref: No child at home)	1.12	0.92, 1.38	1.10	0.89, 1.37	1.61*	1.06, 2.43	1.31	0.92, 1.87
Engaged in transactional sex	1.63	0.96, 2.77	1.76*	1.02, 3.06	2.19*	1.07, 4.46	5.17***	2.76, 9.68
Perceived vulnerability (Ref: Not vulnerable)								
Little vulnerable	1.55**	1.14, 2.11	1.72**	1.25, 2.36	2.06*	1.16, 3.66	1.08	0.62, 1.86
Neutral	1.18	0.89, 1.56	1.26	0.94, 1.69	1.51	0.90, 2.51	0.70	0.43, 1.15
Quite vulnerable	2.02**	1.24, 3.29	2.11**	1.27, 3.52	1.46	0.57, 3.76	1.00	0.46, 2.19
Very vulnerable	1.39	0.65, 2.98	2.35*	1.07, 5.17	4.96**	1.78, 13.8	1.65	0.45, 6.07

Sexual satisfaction (Ref: Very satisfied)								
Somewhat satisfied	1.41**	1.11, 1.80	1.41**	1.09, 1.83	1.07	0.64, 1.78	1.52*	0.98, 2.34
Neutral	3.22	0.46, 22.53	3.95	0.43, 36.43	3.92	0.45, 34.02	2.31	0.06, 96.41
Not very satisfied	2.44***	1.83, 3.25	2.58***	1.90, 3.49	1.80*	1.02, 3.16	2.29**	1.39, 3.77
Not at all satisfied	3.05***	2.04, 4.56	3.10***	2.03, 4.72	3.29***	1.69, 6.43	2.47**	1.30, 4.67
(Semi-)Urban area (Ref: (Semi-)Rural area)	1.13	0.87, 1.47	0.99	0.75, 1.31	0.97	0.56, 1.67	1.19	0.75, 1.88
Gender inequality index	3.24	0.9, 11.69	1.95	0.49, 7.71	0.74	0.01, 41.28	6.70*	1.44, 31.08
Stringency at height of lockdown (Centered)	0.98*	0.97, 1.00	0.99	0.97, 1.01	0.96	0.91, 1.01	0.97*	0.95, 0.99
Respective forms of violence before lockdown	88.72***	72.23, 108.99	101.62***	81.47, 126.75	114.27***	72.63, 179.8	179.85***	125.18, 258.39

Table S2. Binomial logistic regression coefficients predicting experience of psychological violence among participants in the I-SHARE study, 2020-2021 (Partner not living with them, baseline violence adjusted)

Variable	Composite Psychological Violence		Emotional abuse during COVID-19		Restricted contact with others during COVID-19		Financial abuse during COVID-19	
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex assigned at birth (Ref: Female)								
Male	1.28	0.86, 1.9	1.59*	1.04, 2.41	1.56	0.74, 3.28	1.17	0.49, 2.78
Other	0.29	0.01, 13.47	0.25	0.00, 13.47	1.24	0.00, 1635.79	3.3	0, 1.25E+23
Age (Centered)	0.98	0.97, 1	0.99	0.96, 1.01	0.97	0.93, 1.01	0.98	0.94, 1.02
Sexual orientation (Ref: Straight)								
Bisexual	0.98	0.57, 1.68	1.26	0.73, 2.19	0.38	0.12, 1.24	0.31	0.07, 1.41
Gay	0.99	0.45, 2.17	0.76	0.33, 1.75	2.59	0.77, 8.66	4.92*	1.28, 18.98
Lesbian	0.76	0.18, 3.16	0.86	0.2, 3.72	7.46*	1.52, 36.6	0.51	0.02, 15.54
Questioning, unsure or another	1.28	0.51, 3.26	1.45	0.55, 3.84	1.03	0.13, 7.86	1.56	0.24, 10.07
Asexual	1.89	0.68, 5.28	2.38	0.8, 7.09	0.87	0.13, 5.84	12.59**	2.78, 57.09
Pansexual	0.82	0.24, 2.85	0.71	0.2, 2.51	1.88	0.22, 15.67	0.37	0, 46.46
No formal education – secondary education (Ref: Some college-university)	1.20	0.81, 1.79	1.26	0.83, 1.91	1.70	0.82, 3.52	1.00	0.4, 2.51
Economic situation (Ref: Stayed the same)								
Worse economic situation	0.86	0.61, 1.22	0.97	0.68, 1.41	0.60	0.29, 1.24	1.68	0.76, 3.68
Better economic situation	0.78	0.37, 1.64	0.81	0.38, 1.76	0.60	0.14, 2.69	0.69	0.08, 6.2
Income (Centered)	1.05	0.96, 1.14	1.06	0.97, 1.16	1.10	0.94, 1.3	1.00	0.82, 1.23
Overall Mental Health (Ref: Poor)								
Fair	1.15	0.66, 2.00	0.94	0.53, 1.67	0.76	0.26, 2.24	4.35*	1.08, 17.5
Good	1.05	0.6, 1.85	0.94	0.53, 1.7	0.7	0.24, 2.09	2.3	0.57, 9.34
Very Good	0.67	0.34, 1.33	0.49	0.24, 1.02	1.06	0.3, 3.69	0.19	0.03, 1.19
Excellent	0.52	0.2, 1.38	0.46	0.16, 1.31	0.06	0, 1.55	2.75	0.36, 20.78
Child at home (Ref: No child at home)	1.18	0.85, 1.65	1.29	0.90, 1.84	1.34	0.7, 2.56	0.58	0.25, 1.37
Engaged in transactional sex	4.05**	1.75, 9.36	3.73**	1.66, 8.37	5.83**	1.85, 18.37	15.3	4.73, 49.51
Perceived vulnerability (Ref: Not vulnerable)								
Little vulnerable	2.20***	1.42, 3.43	2.05**	1.29, 3.27	3.53**	1.59, 7.82	1.32	0.47, 3.68
Neutral	0.75	0.48, 1.19	0.74	0.46, 1.22	1.35	0.56, 3.24	1.37	0.49, 3.83
Quite vulnerable	1.81	0.99, 3.33	1.42	0.76, 2.68	1.74	0.46, 6.61	0.28	0.05, 1.65
Very vulnerable	0.77	0.24, 2.42	0.34	0.08, 1.37	3.97	0.63, 25.15	0.24	0.02, 2.98

Sexual satisfaction (Ref: Very satisfied)								
Somewhat satisfied	1.63*	1.02, 2.59	1.48	0.91, 2.41	1.77	0.71, 4.43	2.88	0.87, 9.57
Neutral	-	-	-	-	-	-	-	-
Not very satisfied	1.15	0.72, 1.85	0.99	0.6, 1.64	1.62	0.63, 4.17	0.63	0.17, 2.32
Not at all satisfied	2.06**	1.23, 3.43	1.66	0.96, 2.87	1.34	0.44, 4.07	1.97	0.53, 7.29
(Semi-)Urban area (Ref: (Semi-)Rural area)	0.88	0.57, 1.38	0.94	0.59, 1.52	0.68	0.31, 1.53	1.94	0.69, 5.47
Gender inequality index	1.21	0.09, 15.79	0.82	0.07, 9.56	0.14	0, 13.59	95.84*	2.89, 3177.34
Stringency at height of lockdown (Centered)	0.96*	0.92, 1.00	0.96*	0.92, 0.99	0.97	0.9, 1.04	0.92*	0.87, 0.98
Respective forms of violence before lockdown	52.82***	37.41, 74.58	57.79***	39.85, 83.8	98.67***	44.39, 219.3	458.48***	162.01, 1297.48