Intimate partner violence during COVID-19 restrictions: A study of 30 countries from the I-SHARE consortium

Abstract

Intimate partner violence (IPV) causes substantial physical and psychological trauma. Restrictions introduced in response to the COVID-19 pandemic, including lockdowns and movement restrictions, may exacerbate IPV risk and reduce access to IPV support services. This cross-sectional study examines IPV during COVID-19 restrictions in 30 countries from the International Sexual HeAlth and REproductive Health (I-SHARE) study conducted from 20th July 2020 to 15th February 2021. IPV was a primary outcome measure adapted from a World Health Organization multi-country survey. Mixed effects modelling was used to determine IPV correlates among participants stratified by cohabitation status. The sample included 23,067 participants in 30 countries. A total of 1,070/15,336 (7.0%) participants stated that they experienced IPV during COVID-19 restrictions. A total of 1,486/15,336 (9.2%) participants stated that they had experienced either physical or sexual partner violence before COVID-19 restrictions, which decreased to 1,070 (7.0%) after COVID-19 restrictions. In general, identifying as a sexual minority and experiencing greater economic vulnerability were associated with higher odds of experiencing IPV during COVID-19 restrictions, which were accentuated among participants who were living with their partners. Greater stringency of COVID-19 restrictions and living in urban or semi-urban areas was associated with lower odds of experiencing IPV in some settings. The I-SHARE data suggests a substantial burden of IPV during COVID-19 restrictions. However, COVID-19 restrictions were correlated with reduced IPV in some settings. There is a need for investing in specific support systems for survivors of IPV during the implementation of restrictions designed to contain infectious disease outbreaks.

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Introduction

Intimate partner violence (IPV), defined as behaviour from an intimate partner or ex-partner that causes physical, sexual, or psychological harm (World Health Organization, 2021), is a profound violation of human rights (World Health Organization, 2021). Prior to the COVID-19 pandemic, an article analysing 366 eligible studies from 161 countries and areas estimated that 27% ([UI] 23–31%) of ever-partnered women aged 15–49 years had experienced physical and/or sexual IPV (Sardinha, Maheu-Giroux, Stöckl, Meyer, & García-Moreno, 2022). There remains a paucity of evidence on men's experience of IPV; one recent study of IPV in six European cities found male victimization of psychological aggression ranged from 48.8% to 71.8%, of sexual coercion from 5.4 and 8.9%, and of physical assault from 8.5% to 9.7% (Costa et al., 2015). Results from a study among university students in 22 countries in Africa, Asia and the Americas indicated that 15.4% of the men and 17.2% of the women reported physical and/or sexual IPV, with variations between types of IPV (Pengpid & Peltzer, 2016). IPV remains a serious public health issue, affecting survivors' mental, physical, and sexual health (Ellsberg, Jansen, Heise, Watts, & Garcia-Moreno, 2008).

When countries around the globe began enforcing restrictions to social contact in order to interrupt transmission of the novel SARS-COV-2 virus, concerns were raised that many COVID-19 restrictions may inadvertently increase the risk of IPV (Boserup, McKenney, & Elkbuli, 2020; Bradbury-Jones & Isham, 2020): stay-at-home orders, travel restrictions and fragmented services may trap IPV survivors in the same accommodation as their perpetrator, with limited access to social support networks or essential services (Boserup et al., 2020;

Bradbury-Jones & Isham, 2020; Hall & Tucker, 2020). Stress and anxiety due to the pandemic, as well as from economic losses resulting from the implementation of restrictions, could furthermore compromise coping strategies and serve as triggers for violence (Esther Arenas-Arroyo, Fernandez-Kranz, & Nollenberger, 2021; Bradbury-Jones & Isham, 2020; Gresham, Peters, Karantzas, Cameron, & Simpson, 2021). Conversely, COVID-19 restrictions such as travel bans could forcibly distance survivors from perpetrators of violence if they live separately (Vives-Cases et al., 2021).

In the context of COVID-19, there is no clear, universal definition of what lockdown entails (N. Haider et al., 2020). COVID-19 restrictions are heterogeneous and may include stay-at-home orders, geographic containment, limitations on gatherings and business closures (Najmul Haider et al., 2020). Whilst a growing body of literature has examined changes in IPV since the implementation of COVID-19 restrictions in various countries (Agüero, 2021; Esther Arenas-Arroyo et al., 2021; Barbara et al., 2020; Fawole, Okedare, & Reed, 2021; Gosangi et al., 2021; Gresham et al., 2021), studies that assess the potential impact of initial COVID-19 restrictions on IPV have had mixed results. Several settings reported an increase in reports of IPV, including police reports and hotline calls (Brink, Cullen, Beek, & Peters, 2021; Nesset, Gudde, Mentzoni, & Palmstierna, 2021). However, other studies have suggested that COVID-19 restrictions may have decreased or not affected IPV burden (Erausquin et al., 2022; McNeil, Hicks, Yalcinoz-Ucan, & Browne, 2022; O'Hara & Tan, 2022). Some studies suggest that COVID-19 restrictions may have increased disparities in IPV, with subsets of marginalized people having an increased risk (Peitzmeier, Fedina, Ashwell, Herrenkohl, & Tolman, 2021). Decreases in official IPV reports may have been related to fewer reporting mechanisms, weakened surveillance, and fewer facility-based

services (Evans, Lindauer, & Farrell, 2020). It is therefore important to better understand the impact of COVID-19 restrictions on IPV in order to inform future epidemic-related activities.

Current Study

Few studies have examined IPV in a multi-country context. The WHO, UNFPA, and many other organizations have turned to online research in the past two years to obtain behavioural data during COVID-19 restrictions (International Centre for Reproductive Health Belgium, 2022; World Health Organisation, 2020). In response to the COVID-19 pandemic, the International Sexual Health and REproductive Health (I-SHARE) multi-country cross-sectional study was established to examine sexual and reproductive health during COVID-19 restrictions. The I-SHARE study protocol pre-specified IPV as one of the primary outcomes (Michielsen et al., 2020). We hypothesized that COVID-19 restrictions would increase the risk of IPV, especially among people co-habiting with partners. Drawing on data from 30 countries, this manuscript addressed the following research questions in order to determine correlates of intimate partner physical violence, intimate partner sexual coercion, and intimate partner sexual assault during COVID-19 restrictions among those who participated in the I-SHARE survey: This study aims to 1) compare recollected experiences of IPV prior to COVID-19 restrictions to current IPV experiences during COVID-19 restrictions in 30 countries, 2) and examine correlates of IPV during COVID-19 restrictions.

Methods

Study Development

Survey development was a collaborative effort among research teams in 30 countries whereby potential items were proposed and discussed for inclusion in the survey. The WHO IPV scale was suggested for inclusion because it is a widely used scale and has been used in many diverse settings. A short form of the items included in the WHO IPV scale was selected.

Respondents were assured that they could leave these items blank. Each country was required to include details of country-specific organisations and IPV resources at the end of the survey. In each country, the in-country lead organized translation into relevant local languages, field testing, and ethical approval. Field testing included providing the survey instrument in print form to at least 10 individuals who provided feedback about translation and sensitive topics. Further field testing in digital form among 5-10 volunteers per country was used to iteratively examine errors in skip logic. Each country survey had one to three rounds of field testing. More details are found in the protocol manuscript (Michielsen et al., 2020).

Participants and Procedures

Participants in each country were recruited through an online survey link that was distributed through local, regional and national networks chosen by the in-country research lead, including email listservs, sexual and reproductive health networks, and social media groups. Twenty-three countries used convenience sampling (Australia, Canada, Colombia, China, Czech Republic, Egypt, France, Germany, Italy, Latvia, Panama, Portugal, Luxembourg, Mexico, Malaysia, Moldova, Mozambique, Nigeria, Singapore, South Africa, Spain, Uruguay, USA), six used online panels with participants selected based on age, ethnicity, gender and location (Sweden, Botswana, Uganda, Lebanon, Kenya, Argentina) and two used population-representative sampling (Denmark, Czech Republic). The survey took approximately 15-20 minutes to complete. Open Data Kit software (version 1.16) was used to collect data from participants on personal devices.

Inclusion criteria for the survey included being a minimum of 18 years or older (19-49 years in Sweden), current resident in the country where the survey was being conducted, and able to provide online informed consent. Participant safety was also considered in the consent process

and given the sensitive nature of questions asked, participants were allowed to stop the survey at any point and leave out items that they did not wish to answer. No identifiable information was collected. In addition to country-specific IPV resources at the end of the survey, some countries provided warnings, social support, and IPV services as part of the informed consent process.

Data for each country were only accessible by in-country leads who made final decisions regarding data use. Data sharing agreements were signed between participating country institutions for multi-country analyses. 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. Researchers from each country were invited to join working groups focused on analysing multi-country data: this manuscript is the main paper from the intimate partner violence working group. Survey data were only collected that met the following criteria: institutional review board approval, description of sampling methodology, and field tested. 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 (Michielsen et al., 2020).

Measures: Dependent Variables

Six items were used to measure IPV, adapted from the WHO multi-country survey on women's health and domestic violence against women (Supplementary Data 1) (Heise & Hossain, 2017). This paper reports on three of these items measuring physical and sexual IPV.

The first item related to physical violence, including being slapped, hit, pushed, kicked, choked or had something thrown at them by an intimate partner. Two items related to sexual violence, including being forced to have sex when they did not want to, which we subsequently referred to as intimate partner sexual assault (Bagwell-Gray, Messing, & Baldwin-White, 2015), and made to have sex because they were afraid of what their partner would do if they didn't have sex (subsequently referred to as intimate partner sexual coercion (Bagwell-Gray et al., 2015). We focused on physical and sexual IPV to facilitate comparison with other studies (Bagwell-Gray et al., 2015; Devries et al., 2013; García-Moreno et al., 2013) and because these are associated with greater morbidity and mortality (Devries et al., 2013; García-Moreno et al., 2013). 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 partner.

Measures: Independent Variables and Covariates

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 as a result of COVID-19, having children at home, living arrangements with partners, and area of residence. These survey items were based on a WHO sexual and reproductive health survey (Kpokiri et al., 2021).

In terms of country-level variables, the stringency of lockdown index from the Oxford COVID-19 Government Response Tracker was included as a quantitative measurement of lockdown stringency ranging from 1, least stringent, to 100, most stringent. Each country's maximum stringency measure was included (Hale et al., 2020). The gender inequality index

was also used as a measure of country-level gender inequality (United Nations Development Programme, 2021).

Data Analysis

Socio-demographic characteristics were summarized using descriptive statistics and cross-tabulated with responses to the physical and sexual violence items (Table 1). We also examined IPV stratified by geography, using low and lower middle-income countries (LMICs), upper-middle income countries (UMICs) and high-income countries (HICs) based on World Bank categories (HAMADEH N., VAN ROMPAEY C., & METREAU E., 2021). The self-reported proportion of participants experiencing IPV prior to the introduction of restrictions was compared to the proportion of participants experiencing IPV during the restrictions (Table 2). Subsequently, bivariate and multivariable analysis of socio-demographic and relevant variables chosen a priori was undertaken for each country using adaptive Gauss-Hermite quadrature (Bolker et al., 2009) (AGHQ). The model was subsequently run using random effects and including country-level variables. Given past evidence for varying dynamics based on cohabiting status,(Tan, O'Hara, & Kumar, 2021) stratified analyses were conducted according to whether participants lived with their partner during COVID-19 restrictions. The proportion of participants reporting IPV during COVID-19 restrictions was examined. Sensitivity analyses were conducted using the same models while excluding data from countries with fewer than 200 participants (Supplemental Tables 1-4b). Stata 16.0 (StataCorp, College Station, USA) was used for primary analyses and MLwiN 2.34 (University of Bristol, Bristol, UK) was used for sensitivity analyses.

Given the relatively small number of respondents reporting IPV in this sample, a composite IPV variable was created where a participant answered yes to experiencing any one of the

three physical or sexual violence items. A composite sexual violence variable was also created where a participant answered yes to either of the sexual violence items. The sexual violence items were also analysed separately because there are important differences and other IPV research has differentiated these constructs as unique subtypes of sexual violence (Bagwell-Gray et al., 2015; Bouffard & Goodson, 2017). Intimate partner sexual coercion is more common and may be less likely to be recognised by legal systems (Bagwell-Gray et al., 2015; Bouffard & Goodson, 2017).

Since both bivariate and multi-variate analysis returned high odds ratios and confidence intervals for the pre-covid violence variable, which can be common in multilevel modelling (Ensoy, Rakhmawati, Faes, & Aerts, 2015; Ju, Lin, Chu, Cheng, & Xu, 2020), Firth logistic regression was explored which returned smaller odds ratios (between 4 and 6) for experiencing violence during COVID-19 if a participant had experienced violence before COVID-19 restrictions. The mixed-effects models were then re-run using penalized quasi-likelihood (PQL) and Bayes estimation (Supplemental Tables 7 and 8) (Benedetti, Platt, & Atherton, 2014; Bolker et al., 2009; Breslow & Clayton, 1993; Ju et al., 2020). Given that there were few differences in results between these and the AGHQ models, the AGHQ models were retained. We furthermore ran the models without the pre-COVID variable (Supplemental Tables 6a and 6b).

Results

Among all participants, 15,336/16,329 (93.9%) answered questions about physical and sexual violence. Of the 15,336 participants who answered the questions about experiencing physical and sexual violence, the majority identified as female (68.4%), heterosexual (81.7%) 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 (63.2%). These participants did not differ considerably from the total sample (Table 1).

<center>**\<Table 1 to 3 about here\>**</center>

Prior to COVID-19 restrictions, 7% of participants in HICs reported experiences of physical and sexual violence, compared to 13% in UMICs and 14% in LMICs. A total of 4.9%, 10.5% and 12.5% of participants reported experiencing physical and sexual violence during COVID-19 restrictions in HICs, UMICs, and LMICs, respectively (Table 3). The proportion of participants who experienced physical and sexual violence before COVID-19 restrictions was higher than the proportion of participants who experienced physical and violence during COVID-19 restrictions across all three indicators. Physical violence was experienced by 6.3% of participants before COVID-19 restrictions and 5.0% during COVID-19 restrictions. Intimate partner sexual assault was experienced by 5.7% before COVID-19 restrictions and 4.5% during COVID-19 restrictions. Intimate partner sexual coercion was experienced by 5.0% before COVID-19 restrictions and 4.2% during COVID-19 restrictions (Table 2). Participants who had experienced any type of violence prior to the introduction of the COVID-19 restrictions had higher odds of experiencing violence during COVID-19 restrictions (Tables 4 and 5).

<center>**\<Tables 4 and 5 about here\>**</center>

The analysis suggested several correlates of physical intimate partner violence. Among participants living with their partners, there were higher odds of experiencing violence during COVID-19 restrictions for participants who were male at birth (aOR = 1.71, 95% CI 1.16, 2.51) compared to those who were assigned female at birth. Participants who identified as gay had higher odds of experiencing physical violence (aOR = 2.68, 95% CI 1.04, 6.88) compared to those who identified as heterosexual. There were also higher odds of experiencing physical

partner violence for those who stated their economic situation had worsened during COVID-19 restrictions (aOR = 1.64, 95% CI 1.13, 2.39) compared to those who experienced no change or an improvement in their economic situation during the pandemic. Among participants who were not living with their partners, there were higher odds of experiencing such violence during COVID-19 restrictions for participants who were male at birth (aOR = 2.27, 95% CI 1.08, 4.77).

Regarding intimate partner sexual coercion, among participants living with their partners, there were higher odds of experiencing violence during the COVID-19 restrictions for participants who identified as gay (aOR = 4.82, 95% CI 1.70, 13.67), asexual (aOR = 2.93, 95% CI 1.14, 7.53), or pansexual (aOR = 4.05, 95% CI 1.04, 15.87), relative to those who identified as heterosexual. There were also higher odds of experiencing intimate partner sexual coercion for those who stated their economic situation had worsened during COVID-19 restrictions (aOR = 1.93, 95% CI 1.19, 3.14) compared to those who experienced no change or an improvement in their economic situation during the pandemic. There were slightly lower odds of experiencing such violence during COVID-19 restrictions for those who were residing in countries with a higher stringency index score (aOR = 0.93, 95% CI 0.89, 0.98). Among participants who were not living with their partners, there were higher odds of experiencing such violence during the COVID-19 restrictions for participants who identified as asexual (aOR = 6.92, 95% CI 1.55, 30.97), but lower odds for those who identified as questioning, unsure or another (aOR = 0.05, 95% CI 0.01, 0.49), relative to those who identified as heterosexual. There were also lower odds of experiencing such violence for participants residing in urban and semi-urban areas (aOR = 0.34, 95% CI 0.13, 0.90) compared to those in rural or semi-rural areas, as well as for those residing in countries with a higher stringency index score (aOR = 0.89, 95% CI 0.84, 0.94).

Regarding intimate partner sexual assault, the model indicated that among participants living with their partner, there were higher odds of experiencing sexual violence during COVID-19 restrictions for those who were male at birth (aOR = 1.58, 95%CI 1.01, 2.49) or of other sex (aOR = 18.41, 95% CI 1.75, 193.62), people who identified as asexual (aOR = 3.29, 95% CI 1.35, 8.00), and people who identified as pansexual (aOR = 6.09, 95% CI 1.84, 20.13). Among participants who were not living with their partners, there were higher odds of experiencing such violence during COVID-19 restrictions for participants who were male at birth (aOR = 2.50, 95% CI 1.26, 4.98). There were also lower odds of experiencing such violence for participants residing in countries with a higher stringency index score (aOR = 0.89, 95% CI 0.86, 0.93).

Our sensitivity analyses suggest that our main findings were robust when we disaggregated data based on sampling strategy, study population, and geographic region (Erausquin et al., 2022). Data from mixed-effects models using penalized quasi-likelihood and Bayes estimation were similar to the primary analyses. There were few differences in results between these and the AGHQ models. The AGHQ models were retained and are additionally presented without adjustment for pre-COVID violence (Supplemental Tables 6 and 7). Overall, adjusting for pre-COVID violence attenuated the estimates for factors that would have predisposed individuals to any form of IPV regardless of COVID, including having children at home, and measures of socioeconomic status such as years of schooling and subjective income levels. Our findings with adjusted pre-COVID violence therefore robustly capture the factors that exacerbated violence during COVID-19 restrictions.

Discussion

This study examined IPV during COVID-19 restrictions in thirty countries using data from online surveys. The data suggest a substantial burden of intimate partner violence during COVID-19 restrictions. However, many people perceived their experience of IPV to be less common during COVID-19 restrictions compared to their experience before COVID-19. Additionally, more stringent COVID-19 restrictions were associated with less intimate partner sexual coercion. This study expands the literature by organizing a large multi-country survey in which IPV was a primary outcome, including analyses of country-level predictors such as stringency of COVID-19 restrictions. This study also highlights the potential for online methods to supplement and enrich emergency response research. While many in-person methods were restricted, behavioural research was able to adapt to diverse COVID-19 settings.

The analysis suggests a modest decrease in the proportion of participants reporting IPV during COVID-19 restrictions compared to the three months prior to COVID-19 restrictions. Current evidence regarding the impact of COVID-19 restrictions on IPV is mixed. A substantial number of studies indicate increased rates of IPV or IPV-related assistance-seeking during COVID-19 restrictions (Agüero, 2021; Fawole et al., 2021; Gosangi et al., 2021; Rhodes, Petersen, Lunsford, & Biswas, 2020) while a smaller number of studies found decreases (Barbara et al., 2020; Gosangi et al., 2021; Ravindran & Shah, 2020). Increases in assistance-seeking and calls to helplines may be due to an increase in severity of IPV rather than increased rates, as well as greater willingness of survivors to seek help when confined in the home(Stripe, 2020). Decreases in violence may be due to lockdowns curtailing the need to use violence as a control mechanism within a relationship (Esther Arenas-Arroyo et al., 2021) or to lockdown forcibly separating survivors from perpetrators (Vives-Cases et al., 2021).

This study found higher odds of physical violence for those whose economic situation worsened as a result of COVID-19 restrictions. This is consistent with other research on COVID-19, poverty and IPV risk (E. Arenas-Arroyo, Fernandez-Kranz, & Nollenberger, 2020; Das, Roy, & Roy, 2021; Fawole et al., 2021; Gresham et al., 2021; Perez-Vincent, Carreras, Gibbons, Murphy, & Rossi, 2020). Lockdowns have caused widespread economic problems which can generate stress and impact both IPV victimisation and perpetration(Perez-Vincent et al., 2020). One COVID-19 study found that IPV occurred when both partners experienced economic stress during COVID-19 restrictions(E. Arenas-Arroyo et al., 2020). Similarly, other COVID-19 studies in the US, Nigeria and India have also found anxiety about finances or economic stress to be associated with IPV risk.(Das et al., 2021; Fawole et al., 2021; Gresham et al., 2021) This underlines the importance of public sector financial support in response to pandemics.

When examining country-level factors, residents of countries with more stringent COVID-19 restrictions had slightly lower odds of experiencing intimate partner sexual coercion. This finding contrasts with trends observed in single-country studies from India and Argentina (Perez-Vincent et al., 2020; Ravindran & Shah, 2020). More stringent COVID-19 restrictions may have inadvertently protected participants from some forms of sexual violence. This may be due to enforced distance between survivors and perpetrators.

This study found that sexual minorities had higher odds of experiencing physical and sexual violence during COVID-19 restrictions. These findings are consistent with other studies of physical and sexual violence among sexual minorities during COVID-19 restrictions (Stephenson et al., 2021; Swiatlo, Kahn, & Halpern, 2020). Previous studies have suggested that COVID-19 restrictions increased stress and stigmatization among sexual minorities (Gibb

et al., 2020). Sexual minority stress may exacerbate IPV risk during COVID-19 restrictions. Minority stress related to stigmatisation and homonegativity has well-known links to adverse health outcomes (DiPlacido, 1998; Salerno, Devadas, Pease, Nketia, & Fish, 2020). In some settings, sexual minorities have been blamed for worsening the COVID-19 pandemic or targeted by punitive COVID-19 laws and regulations (Gibb et al., 2020; Salerno et al., 2020). This may further marginalize a subpopulation already at heightened risk of IPV.

This study has several limitations. First, there was heterogeneity in sampling methods, including convenience samples, online panels, and population-representative samples. Nevertheless, several strategies were undertaken to improve to comparability of our results for participants across varying samples and country contexts. We adopted a multilevel modelling approach which allowed us to account for country-level attributes. This allowed us to better estimate standard errors and capture differences in countries. Furthermore, while convenience sampling was used in many countries, we also had several countries that used population-representative sampling or online panels, which allowed us to stratify our main findings based on sampling methodology that showed similar findings between groups (Erausquin et al., 2022). We also conducted sensitivity analyses (see supplementary materials) where countries with less than 200 participants were removed from analyses. Finally, we ensured that our analyses adjusted for measures of pre-COVID intimate partner violence (IPV) (i.e., self-reported experiences with intimate partner violence among participants prior to COVID-19). To address these potential limitations, further details on our sensitivity analyses without the inclusion of these pre-COVID IPV measures have been included in our supplementary materials.

Second, online surveys have inherent selection bias because only willing individuals with internet access participate. At the same time, we used the following strategies to decrease potential bias: including population-based sampling strategies and online panels in order to compare to convenience samples; piloting and tailoring the online surveys to facilitate local implementation; leveraging relationships with national and global organizations to enhance recruitment; pre-specifying analyses plans (Hlatshwako et al., 2021). Third, response bias may have impacted the results. IPV underreporting is common and survivors who were living with their perpetrators may have been unable to report IPV (Esther Arenas-Arroyo et al., 2021). This article's survey instrument used established methods and each survey provided a list of local IPV resources. Fourth, this study focused on cross-sectional data collected from July 2020 to February 2021. As a result, the longitudinal effects of COVID-19 restrictions on IPV were not captured. Fifth, retrospective self-reports were used which instructed participants to indicate the frequency of a certain behaviour during the three months before COVID-19. However, these assessments are an important source of data in the context of IPV where clinical ascertainment of outcomes is often not possible. Sixth, many adolescents experience IPV (World Health Organization, 2021) but this study focused on adults. Finally, in the absence of relevant national or local data from all study settings involved in this survey, we were not able to comparatively establish the representative accuracy of our respective samples.

This study has implications for policy, practice, and research. From a COVID-19 policy perspective, stringent lockdowns may have protected some individuals from experiencing some types of sexual violence. Nevertheless, such restrictions have potentially placed individuals such as sexual minorities, and those who had experienced worse economic situations, at greater risk of IPV. Policy makers may consider ensuring that services are made

available to such populations at greater risk for IPV. From a practice perspective, our findings indicated a substantial burden of IPV experienced during COVID-19, and therefore recommend that telepsychiatry and psychology services be strengthened and re-oriented towards IPV detection, prevention, and responses. Further research and action are needed to ensure the safety of people who experience IPV during COVID-19. Specifically, more research is needed to understand how new work/home arrangements may impact IPV risk.

REFERENCES

Agüero, J. M. (2021). COVID-19 and the rise of intimate partner violence. *World development, 137*, 105217-105217. doi:10.1016/j.worlddev.2020.105217

Arenas-Arroyo, E., Fernandez-Kranz, D., & Nollenberger, N. (2020). *Can't Leave You Now! Intimate Partner Violence under Forced Coexistence and Economic Uncertainty*. Retrieved from https://ftp.iza.org/dp13570.pdf

Arenas-Arroyo, E., Fernandez-Kranz, D., & Nollenberger, N. (2021). Intimate partner violence under forced cohabitation and economic stress: Evidence from the COVID-19 pandemic. *Journal of Public Economics, 194*, 104350. doi:https://doi.org/10.1016/j.jpubeco.2020.104350

Bagwell-Gray, M. E., Messing, J. T., & Baldwin-White, A. (2015). Intimate Partner Sexual Violence:A Review of Terms, Definitions, and Prevalence. *Trauma, Violence, & Abuse, 16*(3), 316-335. doi:10.1177/1524838014557290

Barbara, G., Facchin, F., Micci, L., Rendiniello, M., Giulini, P., Cattaneo, C., . . . Kustermann, A. (2020). COVID-19, Lockdown, and Intimate Partner Violence: Some Data from an Italian Service and Suggestions for Future Approaches. *J Womens Health (Larchmt), 29*(10), 1239-1242. doi:10.1089/jwh.2020.8590

Benedetti, A., Platt, R., & Atherton, J. (2014). Generalized linear mixed models for binary data: are matching results from penalized quasi-likelihood and numerical integration less biased? *PLoS One, 9*(1), e84601. doi:10.1371/journal.pone.0084601

Bolker, B. M., Brooks, M. E., Clark, C. J., Geange, S. W., Poulsen, J. R., Stevens, M. H. H., & White, J.-S. S. (2009). Generalized linear mixed models: a practical guide for ecology and evolution. *Trends in Ecology & Evolution, 24*(3), 127-135. doi:https://doi.org/10.1016/j.tree.2008.10.008

Boserup, B., McKenney, M., & Elkbuli, A. (2020). Alarming trends in US domestic violence during the COVID-19 pandemic. *Am J Emerg Med, 38*(12), 2753-2755. doi:10.1016/j.ajem.2020.04.077

Bouffard, L., & Goodson, A. (2017). Sexual coercion, sexual aggression, or sexual assault: How measurement impacts our understanding of sexual violence. *Journal of Aggression, Conflict and Peace Research, 9*(4), 269-278. doi:10.1108/JACPR-05-2017-0292

Bradbury-Jones, C., & Isham, L. (2020). The pandemic paradox: The consequences of COVID-19 on domestic violence. *J Clin Nurs, 29*(13-14), 2047-2049. doi:10.1111/jocn.15296

Breslow, N. E., & Clayton, D. G. (1993). Approximate Inference in Generalized Linear Mixed Models. *Journal of the American Statistical Association, 88*(421), 9-25. doi:10.1080/01621459.1993.10594284

Brink, J., Cullen, P., Beek, K., & Peters, S. A. E. (2021). Intimate partner violence during the COVID-19 pandemic in Western and Southern European countries. *Eur J Public Health, 31*(5), 1058-1063. doi:10.1093/eurpub/ckab093

Costa, D., Soares, J., Lindert, J., Hatzidimitriadou, E., Sundin, Ö., Toth, O., . . . Barros, H. (2015). Intimate partner violence: a study in men and women from six European countries. *International Journal of Public Health, 60*(4), 467-478. doi:10.1007/s00038-015-0663-1

Das, T., Roy, T. B., & Roy, R. (2021). Reintegration with family and intimate partner violence (IPV) against women among the returnee migrant worker's family during COVID-19 induced lockdown: A Block-level analysis using multinomial logistic regression model. *Children and Youth Services Review, 130*, 106226. doi:https://doi.org/10.1016/j.childyouth.2021.106226

Devries, K. M., Mak, J. Y. T., García-Moreno, C., Petzold, M., Child, J. C., Falder, G., . . .
Watts, C. H. (2013). The Global Prevalence of Intimate Partner Violence Against
Women. *Science, 340*(6140), 1527-1528. doi:doi:10.1126/science.1240937

DiPlacido, J. (1998). Minority stress among lesbians, gay men, and bisexuals: A consequence
of heterosexism, homophobia, and stigmatization. In *Stigma and sexual orientation:
Understanding prejudice against lesbians, gay men, and bisexuals.* (pp. 138-159).
Thousand Oaks, CA, US: Sage Publications, Inc.

Ellsberg, M., Jansen, H. A. F. M., Heise, L., Watts, C. H., & Garcia-Moreno, C. (2008).
Intimate partner violence and women's physical and mental health in the WHO multi-
country study on women's health and domestic violence: an observational study. *The
Lancet, 371*(9619), 1165-1172. doi:https://doi.org/10.1016/S0140-6736(08)60522-X

Ensoy, C., Rakhmawati, T., Faes, C., & Aerts, M. (2015). Separation Issues and Possible
Solutions: Part I – Systematic Literature Review on Logistic Models - Part II –
Comparison of different methods for separation in logistic regression. *EFSA
Supporting Publications, 12*(9), 869E. doi:https://doi.org/10.2903/sp.efsa.2015.EN-
869

Erausquin, J. T., Tan, R. K. J., Uhlich, M., Francis, J. M., Kumar, N., Campbell, L., . . .
consortium, I.-S. r. (2022). The International Sexual Health And Reproductive Health
Survey (I-SHARE-1): A Multi-Country Analysis of Adults from 30 Countries Prior to
and During the Initial COVID-19 Wave. *Clinical Infectious Diseases*.
doi:10.1093/cid/ciac102

Evans, M. L., Lindauer, M., & Farrell, M. E. (2020). A Pandemic within a Pandemic —
Intimate Partner Violence during Covid-19. *New England Journal of Medicine,
383*(24), 2302-2304. doi:10.1056/NEJMp2024046

Fawole, O. I., Okedare, O. O., & Reed, E. (2021). Home was not a safe haven: women's experiences of intimate partner violence during the COVID-19 lockdown in Nigeria. *BMC Women's Health, 21*(1), 32. doi:10.1186/s12905-021-01177-9

García-Moreno, C., Pallitto, C., Devries, K., Stöckl, H., Watts, C., & Abrahams, N. (2013). *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence.* . Retrieved from Geneva:

Gibb, J. K., DuBois, L. Z., Williams, S., McKerracher, L., Juster, R.-P., & Fields, J. (2020). Sexual and gender minority health vulnerabilities during the COVID-19 health crisis. *American Journal of Human Biology, 32*(5), e23499. doi:https://doi.org/10.1002/ajhb.23499

Gosangi, B., Park, H., Thomas, R., Gujrathi, R., Bay, C. P., Raja, A. S., . . . Khurana, B. (2021). Exacerbation of Physical Intimate Partner Violence during COVID-19 Pandemic. *Radiology, 298*(1), E38-E45. doi:10.1148/radiol.2020202866

Gresham, A. M., Peters, B. J., Karantzas, G., Cameron, L. D., & Simpson, J. A. (2021). Examining associations between COVID-19 stressors, intimate partner violence, health, and health behaviors. *Journal of Social and Personal Relationships, 38*(8), 2291-2307. doi:10.1177/02654075211012098

Haider, N., Osman, A. Y., Gadzekpo, A., Akipede, G. O., Asogun, D., Ansumana, R., . . . McCoy, D. (2020). Lockdown measures in response to COVID-19 in nine sub-Saharan African countries. *BMJ Global Health, 5*(10), e003319. doi:10.1136/bmjgh-2020-003319

Haider, N., Osman, A. Y., Gadzekpo, A., Akipede, G. O., Asogun, D., Ansumana, R., . . . McCoy, D. (2020). Lockdown measures in response to COVID-19 in nine sub-Saharan African countries. *BMJ Glob Health, 5*(10). doi:10.1136/bmjgh-2020-003319

Hale, T., Angrist, N., Cameron-Blake, E., Hallas, L., Beatriz, K., Majumdar, S., . . . Webster,
S. (2020). Oxford Coronavirus Government Response Tracker Retrieved from
https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-
response-tracker

Hall, B. J., & Tucker, J. D. (2020). Surviving in place: The coronavirus domestic violence
syndemic. *Asian J Psychiatr, 53*, 102179. doi:10.1016/j.ajp.2020.102179

HAMADEH N., VAN ROMPAEY C., & METREAU E. (2021). New World Bank country
classifications by income level: 2021-2022. *World Bank Blogs* Retrieved from
https://blogs.worldbank.org/opendata/new-world-bank-country-classifications-
income-level-2021-
2022#:~:text=The%20World%20Bank%20assigns%20the,i.e.%202020%20in%20this
%20case).

Heise, L., & Hossain, M. (2017). *Measuring intimate partner violence* Retrieved from
http://strive.lshtm.ac.uk/system/files/attachments/STRIVE%20Intimate%20Partner%2
0Violence%20Measurement%20Brief.pdf

Hlatshwako, T. G., Shah, S. J., Kosana, P., Adebayo, E., Hendriks, J., Larsson, E. C., . . .
Tucker, J. D. (2021). Online health survey research during COVID-19. *Lancet Digit
Health, 3*(2), e76-e77. doi:10.1016/s2589-7500(21)00002-9

International Centre for Reproductive Health Belgium. (2022). Leaving no one behind
(LNOB): Access to contraceptive methods for vulnerable women in Eastern Europe
and Central Asia. Retrieved from https://www.icrhb.org/en/projects/leaving-no-one-
behind-lnob-access-to-contraceptive-methods-for-vulnerable-women-in-eastern-
europe-and-central-asia

Ju, K., Lin, L., Chu, H., Cheng, L.-L., & Xu, C. (2020). Laplace approximation, penalized
quasi-likelihood, and adaptive Gauss–Hermite quadrature for generalized linear mixed

models: towards meta-analysis of binary outcome with sparse data. *BMC Medical Research Methodology, 20*(1), 152. doi:10.1186/s12874-020-01035-6

Kpokiri, E. E., Wu, D., Srinivas, M. L., Anderson, J., Say, L., Kontula, O., . . . Tucker, J. D. (2021). Development of an international sexual and reproductive health survey instrument: results from a pilot WHO/HRP consultative Delphi process. *Sex Transm Infect*. doi:10.1136/sextrans-2020-054822

McNeil, A., Hicks, L., Yalcinoz-Ucan, B., & Browne, D. T. (2022). Prevalence & Correlates of Intimate Partner Violence During COVID-19: A Rapid Review. *Journal of Family Violence*. doi:10.1007/s10896-022-00386-6

Michielsen, K., Larrson, E. C., Kagesten, A., Erausquin, J. T., Griffin, S., Van de Velde, S., . . . Team, I. S. (2020). 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*. doi:10.1136/sextrans-2020-054664

Nesset, M. B., Gudde, C. B., Mentzoni, G. E., & Palmstierna, T. (2021). Intimate partner violence during COVID-19 lockdown in Norway: the increase of police reports. *BMC Public Health, 21*(1), 2292. doi:10.1186/s12889-021-12408-x

O'Hara, C. A., & Tan, R. K. J. (2022). Intimate partner violence before and during the COVID-19 lockdown: findings from a cross-sectional study in Singapore. *Sex Health, 19*(3), 192-201. doi:10.1071/sh21229

Peitzmeier, S. M., Fedina, L., Ashwell, L., Herrenkohl, T. I., & Tolman, R. (2021). Increases in Intimate Partner Violence During COVID-19: Prevalence and Correlates. *J Interpers Violence*, 8862605211052586. doi:10.1177/08862605211052586

Pengpid, S., & Peltzer, K. (2016). Intimate partner violence victimization and associated factors among male and female university students in 22 countries in Africa, Asia and

the Americas : original research. *African Journal of Reproductive Health, 20*(1), 29-39. doi:doi:10.10520/EJC189240

Perez-Vincent, S., Carreras, E., Gibbons, M. A., Murphy, T. E., & Rossi, M. (2020). *COVID-19 Lockdowns and Domestic Violence: Evidence from Two Studies in Argentina*. Retrieved from https://ideas.repec.org/p/sad/wpaper/143.html

Ravindran, S., & Shah, M. (2020). Unintended Consequences of Lockdowns: Covid-19 and the Shadow Pandemic. *MedRN: Interdisciplinary Coronavirus & Infectious Disease Related Research (Topic)*. Retrieved from

https://www.nber.org/system/files/working_papers/w27562/w27562.pdf

Rhodes, H. X., Petersen, K., Lunsford, L., & Biswas, S. (2020). COVID-19 Resilience for Survival: Occurrence of Domestic Violence During Lockdown at a Rural American College of Surgeons Verified Level One Trauma Center. *Cureus, 12*(8), e10059. doi:10.7759/cureus.10059

Salerno, J. P., Devadas, J., Pease, M., Nketia, B., & Fish, J. N. (2020). Sexual and Gender Minority Stress Amid the COVID-19 Pandemic: Implications for LGBTQ Young Persons' Mental Health and Well-Being. *Public Health Reports, 135*(6), 721-727. doi:10.1177/0033354920954511

Sardinha, L., Maheu-Giroux, M., Stöckl, H., Meyer, S. R., & García-Moreno, C. (2022). Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet, 399*(10327), 803-813. doi:10.1016/S0140-6736(21)02664-7

Stephenson, R., Chavanduka, T. M. D., Rosso, M. T., Sullivan, S. P., Pitter, R. A., Hunter, A. S., & Rogers, E. (2021). COVID-19 and the Risk for Increased Intimate Partner Violence Among Gay, Bisexual and Other Men Who Have Sex With Men in the

United States. *J Interpers Violence*, 886260521997454.

doi:10.1177/0886260521997454

Stripe, N. (2020). *Domestic abuse during the coronavirus (COVID-19) pandemic, England and Wales: November 2020*. Retrieved from London: https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/articles/domesticabuseduringthecoronaviruscovid19pandemicenglandandwales/november2020

Swiatlo, A. D., Kahn, N. F., & Halpern, C. T. (2020). Intimate Partner Violence Perpetration and Victimization Among Young Adult Sexual Minorities. *Perspectives on Sexual and Reproductive Health, 52*(2), 97-105. doi:https://doi.org/10.1363/psrh.12138

Tan, R. K. J., O'Hara, C. A., & Kumar, N. (2021). Partnership status, living arrangements, and changes in sexual behaviour and satisfaction during the COVID-19 lockdown: insights from an observational, cross-sectional online survey in Singapore. *Sexual Health, 18*(5), 366-377. doi:https://doi.org/10.1071/SH21077

United Nations Development Programme. (2021). Human development report. Retrieved from https://hdr.undp.org/en/content/gender-inequality-index-gii

Vives-Cases, C., La Parra-Casado, D., Briones-Vozmediano, E., March, S., María García-Navas, A., Carrasco, J. M., . . . Sanz-Barbero, B. (2021). Coping with intimate partner violence and the COVID-19 lockdown: The perspectives of service professionals in Spain. *PLoS One, 16*(10), e0258865. doi:10.1371/journal.pone.0258865

World Health Organisation. (2020). *Survey tool and guidance, rapid, simple, flexible behavioural insights on COVID-19: Monitoring knowledge, risk perceptions, preventive behaviours and trust to inform pandemic outbreak response*. Retrieved from Copenhagen Ø, Denmark: https://apps.who.int/iris/bitstream/handle/10665/333549/WHO-EURO-2020-696-40431-54222-eng.pdf?sequence=1&isAllowed=y

World Health Organization. (2021). Violence against women. Retrieved from

https://www.who.int/news-room/fact-sheets/detail/violence-against-women

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

Variable			Total Sample		Physical violence during COVID-19		Intimate sexual during C
			N	Column %	N	Row %	N
Sex		Male	7631	33.1	400	5.2	360
		Female	15371	66.7	361	2.3	282
		Another sex	53	0.2	7	13.2	6
Sexual Orientation		Heterosexual	16771	77.7	335	2.0	199
		Gay	850	3.9	35	4.1	38
		Lesbian	321	1.5	8	2.5	4
		Bisexual	1856	8.6	40	2.2	45
		Pansexual	316	1.5	14	4.4	13
		Asexual	643	3	38	5.9	38
		Questioning/Unsure	453	2.1	14	3.1	10
		Other	362	1.7	7	1.9	9
Education		No Formal Education	102	0.4	19	18.6	18
		Some/Completed Primary Education	946	4.1	64	6.8	62
		Some/Completed Secondary Education	4742	20.6	155	3.3	143
		Some/Completed College or University	16363	71.2	497	3.0	413
		Other	821	3.6	33	4.0	12
Change of Economic Situation		Worse	7366	32.2	349	4.7	291
		Same	14231	61.1	351	2.5	302
		Better	1316	5.7	67	5.1	55
Children at home during lockdown		Yes	11881	51.5	590	5.0	513
		No	11186	48.5	178	1.6	135
Area where you live		Urban	16575	76.8	501	3.0	403
		Rural	4752	22.0	125	2.6	104
		Other	243	1.1	17	7.0	17
Minority Status		Ethnic Minority	1712	12.9	61	3.6	45
		Ethnic Majority	11605	87.1	F503	4.3	465
	Mean (SD)		**Min**	**Max**	**Mean (SD)**	**Range**	**Mean (SD)**
Age	34.3 (12.8)		18	97	30.9 (9.1)	18-84	30.5 (9.2)
Income Scale	5.3 (2.2)		1	10	4.86 (2.3)	1-10	4.7 (2.3)
Stringency index at height of lockdown*	82.7 (8.8)		64.8	100	80.3 (8.6)	64.8-100	79.2 (8.4)
Gender inequality index*	0.2 (0.2)		0.04	0.54	0.2 (0.1)	0-0.5	0.2 (0.1)

Note: N total = 23067; Numbers that do not add up to the total represent missing cases.

Table 2. Descriptive statistics of physical, sexual, and composite violence pre-COVID and during COVID restrictions.

Variable	Before COVID-19		During COVID-19	
	Frequency	**Column %**	**Frequency**	**Column %**
Physical Violence				
No	15196	93.7%	14694	95.0%
Yes, Once	639	3.9%	477	3.1%
Yes, Multiple	389	2.4%	291	1.9%
Intimate Partner Sexual Assault				
No	15319	94.3%	14787	95.6%
Yes, Once	531	3.3%	405	2.6%
Yes, Multiple	386	2.4%	283	1.8%
Intimate Partner Sexual Coercion				
No	15439	95.1%	14833	95.8%
Yes, Once	477	2.9%	396	2.6%
Yes, Multiple	327	2.0%	252	1.6%

Note: N total = 23067; Numbers that do not add up to the total represent missing cases.

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

IPV 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	382 (86.0)	62 (14.0)	444 (100.0)
Upper-middle income country	4,717 (87.1)	697 (12.9)	5,414 (100.0)
High-income country	9,504 (92.9)	727 (7.1)	10,231 (100.0)
Total	14,603 (90.8)	1,486 (9.2)	16,089 (100.0)
IPV experience during COVID-19 restrictions			
Country income level	**No (Row %)**	**Yes once/multiple times (Row %)**	**Total (Row %)**
Low or low-middle income country	365 (87.5)	52 (12.5)	417 (100.0)
Upper-middle income country	4,520 (89.5)	532 (10.5)	5,052 (100.0)
High-income country	9,381 (95.1)	486 (4.9)	9,867 (100.0)
Total	14,266 (93.0)	1,070 (7.0)	15,336 (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

Table 4. Binomial logistic regression coefficients predicting experience of composite violence among participants in the I-SHARE study, 2020-2021 (Partner lived with them)										
Variable	**Intimate partner physical violence**		**Intimate partner sexual coercion**		**Intimate partner sexual assault**		**Composite Sexual Violence**		**Composite All Violence**	
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex (Ref: Female)										
Male	**1.71****	**1.16, 2.51**	1.01	0.61, 1.67	**1.58***	**1.01, 2.49**	1.28	0.83, 1.98	**1.60****	**1.14, 2.23**
Other	5.56	0.32, 96.11	1.50	0.05, 46	**18.41***	**1.75, 193.62**	**21.28***	**1.95, 231.62**	4.11	0.24, 71.54
Age (Centered)	**0.97****	**0.96, 0.99**	0.98	0.96, 1.01	0.99	0.97, 1.01	0.99	0.97, 1.00	**0.98****	**0.96, 0.99**
Sexual Orientation (Ref: Heterosexual)										
Bisexual	0.88	0.45, 1.72	1.47	0.68, 3.19	1.11	0.55, 2.23	1.45	0.75, 2.79	1.17	0.68, 2.03
Gay	**2.68***	**1.04, 6.88**	**4.82****	**1.7, 13.67**	2.52	0.89, 7.13	2.33	0.87, 6.24	1.77	0.79, 3.97
Lesbian	0.94	0.2, 4.48	1.81	0.24, 13.36	0.71	0.04, 12.55	1.75	0.25, 12.43	0.84	0.21, 3.32
Questioning, unsure or another	1.87	0.68, 5.17	1.61	0.53, 4.91	1.97	0.71, 5.47	1.06	0.4, 2.81	1.15	0.48, 2.74
Asexual	1.99	0.86, 4.63	**2.93***	**1.14, 7.53**	**3.29****	**1.35, 8.00**	**2.54***	**1.05, 6.14**	**2.38***	**1.14, 5.00**
Pansexual	2.75	0.81, 9.3	**4.05***	**1.04, 15.87**	**6.09****	**1.84, 20.13**	**6.09****	**1.82, 20.36**	**3.25***	**1.06, 9.97**
No formal education – secondary education (Ref: Some college-university)	0.65	0.41, 1.01	0.95	0.55, 1.64	0.93	0.57, 1.54	1.03	0.65, 1.65	0.85	0.59, 1.24
Income (Centered)	1.00	0.91, 1.08	0.92	0.82, 1.02	0.94	0.85, 1.04	0.96	0.87, 1.05	1.00	0.93, 1.07
Economic situation (Ref: Stayed the same)										
Worse economic situation	**1.64***	**1.13, 2.39**	**1.93****	**1.19, 3.14**	1.19	0.77, 1.86	1.32	0.87, 2.01	**1.50***	**1.09, 2.08**
Better economic situation	0.72	0.3, 1.72	0.43	0.14, 1.36	0.86	0.31, 2.43	0.74	0.3, 1.85	0.60	0.29, 1.24
Child at home (Ref: No child at home)	1.25	0.86, 1.83	0.95	0.58, 1.54	1.24	0.8, 1.91	1.25	0.83, 1.88	1.19	0.87, 1.64
Urban area (Ref: Rural area)	0.91	0.56, 1.5	0.80	0.44, 1.45	0.82	0.48, 1.40	0.76	0.46, 1.27	0.83	0.55, 1.25
Respective forms of violence before lockdown	**233.59*****	**159.08, 342.98**	**313.71*****	**192, 512.56**	**260.56*****	**166.72, 407.21**	**293.83*****	**193.4, 446.43**	**183.28*****	**132.15, 254.21**
Gender inequality index	1.35	0.13, 13.95	6.82	0.34, 138.68	2.69	0.16, 44.94	5.43	0.4, 74.36	2.20	0.25, 19.05
Stringency at height of lockdown (Centered)	0.98	0.95, 1.02	**0.93****	**0.89, 0.98**	0.98	0.94, 1.02	**0.96***	**0.93, 1.00**	0.98	0.95, 1.02

Variable	Intimate partner physical violence		Intimate partner sexual coercion		Intimate partner sexual assault		Composite Sexual Violence		Composite All Violence	
Table 5. Binomial logistic regression coefficients predicting experience of composite violence among participants in the I-SHARE study, 2020-2021 (Partner not living with them)										
	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI	aOR	95%CI
Sex (Ref: Female)										
Male	**2.27***	**1.08, 4.77**	1.40	0.58, 3.37	**2.50****	**1.26, 4.98**	1.68	0.87, 3.22	**2.15****	**1.24, 3.73**
Other	12.45	0.01, 30057.68	-	-	-	-	-	-	-	-
Age (Centered)	0.98	0.95, 1.02	1.00	0.96, 1.04	1.01	0.98, 1.04	1.01	0.98, 1.03	1.01	0.98, 1.03
Sexual Orientation (Ref: Heterosexual)										
Bisexual	0.86	0.29, 2.5	1.32	0.46, 3.82	1.23	0.49, 3.11	1.22	0.54, 2.75	1.06	0.51, 2.20
Gay	1.74	0.45, 6.72	1.98	0.34, 11.51	2.20	0.62, 7.88	2.42	0.68, 8.55	1.13	0.40, 3.16
Lesbian	4.64	0.51, 41.91	0.30	0.01, 8.15	4.76	0.57, 39.94	1.98	0.24, 16.33	2.31	0.38, 14.25
Questioning, unsure or another	1.27	0.2, 7.92	**0.05***	**0.01, 0.49**	0.49	0.08, 2.89	0.20	0.04, 1.09	0.49	0.11, 2.18
Asexual	1.8	0.44, 7.31	**6.92***	**1.55, 30.97**	2.30	0.61, 8.67	1.70	0.45, 6.45	1.24	0.39, 3.95
Pansexual	2.35	0.27, 20.24	1.61	0.09, 27.69	2.12	0.39, 11.65	1.60	0.29, 8.95	2.13	0.49, 9.16
No formal education – secondary education (Ref: Some college-university)	1.62	0.76, 3.44	1.83	0.75, 4.47	1.90	0.95, 3.77	1.53	0.80, 2.95	1.44	0.82, 2.52
Income (Centered)	0.94	0.79, 1.13	0.91	0.73, 1.12	1.00	0.85, 1.18	0.97	0.84, 1.13	0.96	0.84, 1.09
Economic situation (Ref: Stayed the same)										
Worse economic situation	1.06	0.51, 2.18	1.13	0.50, 2.59	0.84	0.41, 1.69	0.70	0.37, 1.34	0.9	0.53, 1.54
Better economic situation	0.91	0.22, 3.76	0.37	0.05, 2.58	0.43	0.10, 1.89	0.41	0.10, 1.67	0.42	0.13, 1.36
Child at home (Ref: No child at home)	1.56	0.78, 3.13	1.26	0.57, 2.80	1.27	0.67, 2.43	1.13	0.62, 2.05	1.08	0.65, 1.79
Urban area (Ref: Rural area)	1.02	0.45, 2.32	**0.34***	**0.13, 0.90**	0.54	0.26, 1.15	**0.45***	**0.22, 0.91**	0.72	0.39, 1.32
Respective forms of violence before lockdown	**133.93*****	**65.38, 274.34**	**428.27*****	**169.94, 1079.29**	**104.51*****	**52.04, 209.9**	**153.32*****	**80.03, 293.69**	**92.93*****	**54.47, 158.55**
Gender inequality index	0.4	0.03, 5.72	13.53	0.55, 335.27	34.75**	2.53, 478.13	30.26**	2.81, 325.8	5.46	0.76, 39.05
Stringency at height of lockdown (Centered)	0.96	0.92, 1.01	**0.89*****	**0.84, 0.94**	**0.89*****	**0.86, 0.93**	**0.90*****	**0.87, 0.94**	**0.93*****	**0.90, 0.96**