

American Women's Experiences With Intimate Partner Violence during the Start of the COVID-19 Pandemic: Risk Factors and Mental Health Implications

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Abstract

In an online survey, women self-reported high prevalence of intimate partner violence during the early days of the pandemic. Risk factors for experiencing intimate partner violence (IPV) included having a child under the age of 18, being a sexual minority, living in a rural community, and stressors related to healthcare access, income/employment stress, and COVID-19 exposure or illness. Women who worked during the pandemic and were older were less likely to experience IPV. Women who reported IPV also reported increased anxiety and depression. The results are discussed in terms of clinical and policy implications for supporting women who are victims of IPV.

Keywords

COVID-19 pandemic, intimate partner violence, domestic violence, women's mental health

In early 2020, the world experienced the first major pandemic in over 100 years with the development of the novel COVID-19 virus. In addition to the health concerns of the COVID-19 virus, there were also early reports of increased intimate partner violence (IPV) experienced by women worldwide (Bettinger-Lopez & Bro, 2020; Tadesse et al., 2020) as well as in the United States (Boserup et al., 2020; Kofman & Garfin,

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2020). Researchers, health professionals, and those who work with IPV survivors warned that the COVID-19 pandemic could result in an amplification of IPV experienced by women (Anurudran et al., 2020; Bouillon-Minois et al., 2020; Campbell, 2020; Goh et al., 2020; Sharma & Borah, 2020).

Numerous aspects of the pandemic signaled potential concern for IPV amplification. During the early weeks and months of the pandemic, “stay-at-home” orders, while enacted to prevent the spread of COVID-19, potentially resulted in women sheltering-in-place with their abusers providing little break from each other (Anurudran et al. 2020; Bradbury-Jones & Isham, 2020; Kofman & Garfin, 2020; Sharma & Borah, 2020). Furthermore, social distancing guidelines that restricted public gatherings and encouraged people to stay at home increased social isolation and reduced contact with social support networks. Alcohol sales and self-reported alcohol drinking during the COVID-19 pandemic increased, which is concerning given that alcohol use is strongly associated with domestic violence and IPV (Finlay & Gilmore, 2020; Pollard et al., 2020; Tadesse et al., 2020). The ongoing pandemic made seeking outside help more difficult as obtaining medical assistance for injuries likely increased exposure to and risk of contracting COVID-19. Finally, many shelters for victims of IPV were functioning at partial capacity, which resulted in fewer alternatives for women who needed to leave their home for safety reasons (Kluger, 2021). Thus, the circumstance around stay-at-home orders during the early months of the pandemic may have created a context that increased the frequency of IPV against women.

IPV is often referred to as a hidden epidemic because, despite the high prevalence rates, it happens in the home and others are not necessarily aware of the violence. Prior to the COVID-19 pandemic, in the United States, one in three women experience IPV in their lifetime, with an estimated 18.3% of women experiencing sexual violence, 20.6% experiencing physical aggression, and 35.4% experiencing psychological aggression from an intimate partner (Smith et al., 2018). Within the first month of the pandemic and subsequent stay-at-home orders, nine large U.S. metropolitan cities reported an increase (ranging from 10% to 62%) in calls for domestic violence services compared to the prior year (Boserup et al., 2020; Kofman & Garfin, 2020). Calls to the Atlanta Police Department spiked in the month following stay-at-home-orders and only leveled off once the restrictions were lifted (Evans et al., 2021). As worldwide evidence (United Nations Entity for Gender Equality and the Empowerment of Women [UNWomen], 2021; Usta et al., 2021) emerged with reports of increased levels of IPV during COVID-19 pandemic, the United Nations declared IPV a “shadow pandemic” (Vaeza, 2020). Furthermore, although IPV is generally considered to be underreported, this may have been especially true during the early months of the COVID-19 pandemic as initial research indicated that IPV victims were hesitant to seek assistance because doing so may have increased their likelihood of being exposed to COVID-19 and out of concern of further burdening medical professionals who were caring for COVID-19 patients (Ertan et al., 2020).

Research on natural disasters provides insight into circumstances that may increase IPV against women during times of community stress and crisis (Enarson, 1999; Jenkins & Phillips, 2008; Parkinson, 2019; Schumacher et al., 2010). Following Hurricane Katrina, a population-based representative sample of married or cohabitating

adults in the impacted area reported an increase in both psychological and physical IPV against women (Schumacher et al., 2010). Women who experienced more hurricane-related stressors, were younger, married (compared to cohabitating not married), had less than a high school education, and had pre-Hurricane IPV experiences were more likely to experience an increase in IPV in the six months following the hurricane (Schumacher et al., 2010). There were multiple community-based crisis factors during and after Hurricane Katrina that may have increased IPV against women: the loss of housing, the inability of temporary housing shelters to protect women and their children from an abuser, separation of women from their social support networks or relocation to places where they had no social support, the lack of health and social services resulting in health and law enforcement agencies being unable to meet women's needs post-hurricane, as well as enactment of government policies for receiving disaster relief that resulted in necessary contact between women and their abusers (Jenkins & Phillips, 2008). Research in Australia following widespread fires found that women informally reported experiencing increased IPV; however, formal reporting did not occur if women felt the violence would be excused or justified (Parkinson, 2019). Thus, during community-wide crisis situations, formal reporting of IPV may vary depending on the level of perceived community support and resources available for victims.

COVID-19 Stressors and IPV

The vulnerability-stress-adaptation framework, as applied to IPV (Langer et al., 2008; Schreiber & Salivar, 2021), proposes that IPV can stem from preexisting vulnerabilities that make a couple more prone to violence (e.g., personality traits or preexisting stable risk factors such as childhood adversity or chronic low socioeconomic status) as well as stressors that are largely due to chance (e.g., job loss or illness). Couples may deal with these vulnerabilities and stressors through either adaptive or maladaptive processes. Maladaptive processes to deal with stressors include behaviors such as withdrawing from social support, isolating oneself, or using alcohol and/or drugs. The current COVID-19 pandemic, including the associated stay-at-home orders and social distancing restrictions, appear to be creating a confluence of stressors that may be risk factors for increases in IPV.

Given that no one had natural immunity to the novel and highly contagious virus at the start of the pandemic, an ever-growing number of individuals became infected and experienced symptoms ranging from mild to death. As the pandemic continued, increasingly more people experienced the stress and trauma of either becoming ill themselves or having a loved one becoming seriously ill or dying due to complications of COVID-19. Furthermore, the COVID-19 pandemic exacerbated health-related social disparities in the United States; Black, Indigenous, and other People of Color (BIPOC) have had higher rates of COVID-19 illness, health complications, and death than their white counterparts (Centers for Disease Control and Prevention [CDC], 2020; Mein, 2020).

Food insecurity and shortages of essential living items may have potentially increased COVID-related stress. Due to consumer anxiety and hoarding, stores ran

out of high demand items such as toilet paper, food staples (e.g., rice and pasta), and cleaning products targeted toward virus control. These shortages were likely more stressful for lower income individuals who may live in neighborhoods with limited access to large grocery stores or lacked resources to pay the increased prices, buy in bulk, or order from online vendors.

The immediate pandemic response of closing businesses resulted in increased unemployment and decreased salaries for employees who continued their jobs but experienced furloughs or reduced employment hours. Economic stress is associated with perpetration of IPV and is likely to be an important factor during the COVID-19 pandemic (Sharma & Borah, 2020). Financial strain, which has been previously found to be a stress-related risk factor for IPV (Roberts et al., 2011), became a nation-wide issue as unemployment rose to 14.7% by April 2020 (Long & Van Dam, 2020). Furthermore, unemployment during COVID-19 was not evenly distributed across all groups. In the month following the start of the pandemic, men's unemployment rose to 13.5%; however, 16.2% of women were unemployed. This was partially due to women's over-representation in service industries (e.g., restaurants, hospitality services, and childcare), which were more likely to close during this phase of the pandemic (Rho et al., 2020). Women's unemployment and working fewer hours are associated with their increased risk of IPV experiences (Schumacher et al., 2001), and when women's wages, relative to men's wages, decrease, there is an associated increase in women's reports of IPV (Aizer, 2010). Although, to date, there is limited research on IPV during the COVID-19 pandemic, preliminary research evidence from data in Taiwan found that the number of people unemployed was positively associated with domestic violence reported by the police departments (Goh et al., 2020).

Some employment areas were deemed essential, and therefore, healthcare, grocery store, and warehouse workers, among others, were not able to work remotely. Furthermore, many healthcare positions required direct contact with COVID-patients, which put the employees at increased exposure to COVID-19. This stressor was especially salient during the early stages of the pandemic when there was a shortage of personal protective equipment (PPE). Furthermore, BIPOC, individuals at lower socio-economic status, immigrants, and women were over-represented as frontline workers in these employment areas (Rho et al., 2020) and were more likely to experience heightened pandemic-related stressors at work.

Daycare center and school closures resulted in parents needing to find safe places for their children while they worked. Parental social support for childcare may have diminished as babysitters or grandparents were not available during the early months of the pandemic as they violated social distancing guidelines and put older family members at increased risk of exposure. Furthermore, parents who were working remotely were now attempting to conduct their jobs while simultaneously supervising their children. Finally, during the early stages of the pandemic schools shifted to remote learning. As this was done with little notice, families often did not have the necessary resources (e.g., computer or internet) to help their children successfully learn from home. Specifically, for younger children and children with special education needs, parents often had to play a large role in assisting children with their schoolwork. Preliminary

research suggest that parent perceived stress and cumulative COVID-related stressors were significantly and positively associated with greater anxiety and depressive symptoms in the early days of the COVID-19 pandemic (Brown et al., 2020).

Pre-existing Vulnerabilities for IPV as Exacerbated by COVID

In addition to the stressors that are unique to the COVID-19 pandemic, some groups of people tend to be particularly at risk for experiencing IPV (Caetano et al., 2008). For example, prior to the COVID-19 pandemic, women in lower socio-economic groups experienced higher prevalence of IPV than women with higher economic resources (Campbell, 2002). The COVID-19 pandemic might put an extra burden on individuals who have fewer financial resources as they will likely have greater difficulty accessing health care and struggle more to obtain living essentials in face of shortages in stores than will people with more financial resources. In pre-pandemic times, women who identify as bisexual or lesbian experienced higher levels of IPV than did heterosexual women (Chen et al., 2020; Edwards et al., 2015). Women living in rural communities have increased risk factors such as limited access to medical and social services, relatively lower education and higher poverty, and increased social isolation than people living in more populated areas (Logan et al., 2003). In contrast, older women are less likely to be victims of IPV than are younger women (Caetano et al., 2008). Black and Hispanic couples also report higher levels of IPV than White couples (Caetano et al., 2008). Given that these demographic characteristics represent vulnerability risk factors of IPV in pre-pandemic research, we considered ethnicity, family income, sexual orientation, age, and home community type (i.e., rural, urban, or suburban) as risk factors for IPV during the early days of the pandemic.

Ramifications of IPV

IPV can have severe immediate and long-term physical and mental health consequences (Campbell, 2002; Devries et al., 2013; Dutton et al., 2006). These include physical injuries resulting from the assaults as well as physical symptoms such as chronic pain, gastrointestinal symptoms that are associated with stress (e.g., eating disorders or chronic irritable bowel syndrome), vaginal infections, and sexually transmitted diseases (Campbell, 2002). Furthermore, the immediate trauma of IPV can result in post-traumatic stress disorder, depression, anxiety, suicidal tendencies, and insomnia (Campbell, 2002). After hurricanes (Schumacher et al., 2010) and Australian bushfires (Parkinson, 2019), experiences of IPV were associated with poorer mental health. Given that there is emerging evidence of an increased prevalence of self-reported mental health conditions during the COVID-19 pandemic (McKnight-Eily et al., 2021), the additional trauma of IPV may have significant negative implications for victims' mental health.

Study Goals

The goal of this study is to investigate American women's experiences with IPV (i.e., psychological, physical, and sexual) in the early months of the COVID-19 pandemic.

The data were collected from an online sample of women during May and June 2020, when much of the United States was under some form of social distancing guidelines or stay-at-home orders. Specifically, we sought to understand how COVID-19 specific stress factors were associated with women's IPV experiences while accounting for vulnerability risk factors for IPV (e.g., socioeconomic status, community type, and sexual orientation). We hypothesized that the COVID-19-specific stress factors would predict women's experiences with all forms of IPV, above and beyond the other demographic risk factors. Finally, we investigated how psychological, physical, and sexual IPV experiences that occurred during the early months of the pandemic were associated with women's mental health. We hypothesized that women who experienced psychological, physical, and/or sexual IPV would report higher levels of depression and anxiety than women who did not have any IPV experiences during the early months of the pandemic.

Methods

Procedure

The data presented here were collected as a part of a larger survey on Americans' experiences during the COVID-19 pandemic (Kaugars et al., 2021). The study was approved by the institutional review board at the authors' institution. Data collection utilized two strategies. The study was advertised via the U.S. Mechanical Turk (MTurk), Amazon's crowdsourcing platform, during May 2020, and participants received payment (\$1.00). Links to the study were also disseminated via social media, university announcements, community listservs, national organization websites for studies on families, and snowball sampling in June 2020. Upon accessing the online survey, an information sheet was provided to participants that reviewed the study information for participants to provide informed consent. Participants indicated agreement to participate in the survey and that they met the study inclusion criteria. Participant names were not provided to maintain survey anonymity. Upon the completion of the survey, all participants were provided with online mental health and IPV resources.

Participants

Study inclusion criteria required being 18 years of age or older, residing in a U.S. state or territory, and English language fluency. There were $N = 1,168$ respondents (MTurk sample: $n = 903$; additional online sources: $n = 265$) who responded that they met the inclusion criteria and continued to the survey questions. Data were eliminated for respondents who evidenced insufficient effort responding (e.g., unreasonably fast survey completion time, illogical or repetitive answers to an open-ended question, or inconsistent responses to similar items that were reverse scored; Huang et al., 2011). From the resulting sample of $n = 942$, there were $n = 677$ women. Of these, 432 women indicated that they either lived with another adult or were in a relationship with someone and are included in the sample analyzed for this paper. The majority

(81.5%; $n = 352$) of the women identified as White, 6.7% ($n = 29$) identified as Black/African American, 6.9% ($n = 30$) identified as Hispanic/Latina, 5.8% ($n = 25$) identified as Asian American, and 3.5% ($n = 15$) identified as other ethnic minority (individuals could indicate multiple ethnicities). The mean age was 37.93 years ($SD = 12.04$, median = 36) with ages ranging from 18 to 77. The majority (55.8%; $n = 241$.) reported having at least one child under the age of 18 (with a median number of 1 child under age 18). The majority identified as heterosexual (85.9%, $n = 371$), 13.5% ($n = 58$) indicated a sexual minority identification, and three participants did not provide a response. Three hundred forty-nine women (80.8%) reported that they resided with a partner, spouse, or significant other, and the others either lived with friends/roommates (4.9%; $n = 21$), alone (3.9%; $n = 17$) or other living arrangement (10.4%; $n = 45$). One hundred eighty-five (42.8%) live in an urban community, 52 (12%) live in a rural community, and 195 (45.1%) live in a suburban community.

Measures

COVID Stressors. To assess COVID-19-specific stressors, we selected items from the COVID-19 Exposures and Family Impact Survey (Kazak et al., 2021). This scale asks respondents about 25 experiences during the COVID-19 pandemic, and all items were answered with a *yes* or *no* response option. For the purposes of this paper, we selected the items that reflected COVID-related stressors that could be associated with increases in IPV, as outlined in the Introduction. Specifically, *essential worker status* was assessed with two items (i.e., “someone in the family kept working outside the home [essential personnel]” and “someone in the family is a healthcare provider/first responder providing direct care”). If a person indicated *yes* to either item, they were coded as having an essential worker in the family. *Childcare/education disruption* was assessed with two items (i.e., “our schools/child-care centers were closed” and “our child/ren’s education was disrupted”), and if a person indicated *yes* to either item, they were coded as having childcare/education disruption as a stress factor. *Pandemic daily living challenges* were assessed with three items (i.e., “we had difficulty getting food”; “we had difficulty getting other essentials”; and “we had to move out of our home”), and a person was coded as having this stressor if they indicated *yes* to one of the items. *Health care challenges* were assessed with three items (i.e., “we had difficulty getting health care when we needed it”; “we had difficulty getting medicine”; and “we lost health insurance/benefits”), and a person was coded as having this stressor if they indicated *yes* to one of these items. *Family job or income loss* was assessed with four items (i.e., “our family income decreased”; “a member of the family had to cut back hours at work”; “a member of the family was required to stop working (expect to be called back)”; and “a member of the family lost their job permanently”) and was coded as a stressor if at least one item was checked *yes*. Finally, *COVID-19 health stressors* were assessed with five items (i.e., “someone in the family was exposed to someone with

COVID-19”; “someone in the family had symptoms or was diagnosed with COVID-19”; “someone in the family was hospitalized for COVID-19”; “someone in the family was in the Intensive Care Unit [ICU] for COVID-19”; and “someone in the family died from COVID-19”), and indicating *yes* to one of these items was coded as having that stressor.

Experiences with IPV. We were specifically interested in incidents of sexual, physical, and psychological IPV during the first months of the pandemic. To assess experiences with IPV, questions from the World Health Organization Multi-Country Study on Women’s Health and Domestic Violence Against Women (Garcia-Moreno et al., 2005) were used with slight modifications. Participants were given the instructions to “list how many times each of the behaviors happened to you with someone you lived with, or are in a relationship with, *during the pandemic*.” The response options included *never happened*, *happened once or twice*, *happened a few times*, and *happened many times*. The survey includes six items that assess physical IPV (e.g., “Pushed you or shoved you?” “Hit you with their fist or something else that could hurt you?”), three items that assess sexual IPV (e.g., “Were you physically forced to have sexual intercourse when you did not want to?”), and four items that assess psychological IPV (e.g., “Threatened to hurt someone you care about?” “Did things to scare or intimidate you on purpose?”). Due to the highly skewed distributions, the three IPV scales (i.e., physical, sexual, and psychological) were scored so that a respondent was coded as having experienced that form of IPV if they indicated that at least one of the behaviors had happened to them at least one time during the pandemic.

Depression. The PHQ-9 (Kroenke et al., 2001) was used to assess depression symptoms. Participants were asked how frequently they were bothered by nine symptoms (e.g., “little interest or pleasure in doing things”; “poor appetite or overeating”) over the last two weeks. Four response options were offered (i.e., 0 = *Not at all*, 1 = *Several days*, 2 = *More than half the days*, and 3 = *Nearly every day*). The scale had excellent internal consistency ($\alpha = 0.93$). PHQ-9 scores ≥ 10 indicate moderate or more severe depression.

Anxiety. Symptoms of generalized anxiety disorder were assessed using the seven-item GAD-7 (Spitzer et al., 2006). Participants indicated how frequently they have been bothered by each symptom in the last two weeks (i.e., 0 = *Not at all*, 1 = *Several days*, 2 = *More than half the days*, and 3 = *Nearly every day*). The scale had excellent internal consistency ($\alpha = 0.93$). A score ≥ 10 is considered a clinical cut off for identifying cases of generalized anxiety disorder.

Demographics. The final survey included questions to assess demographic characteristics including race/ethnicity, age, number of children, gender, sexual orientation, cohabitation status, education, community type, and family/household annual income.

Results

Preliminary Analyses

COVID-19 pandemic-related stressors were experienced frequently. In our sample, nearly everyone (96.5% of respondents) reported that childcare centers and schools had closed (i.e., only 15 people (0.03%) reported they did not experience closures). Two hundred and sixteen respondents (50.0%) reported assisting a child with remote learning, 246 (57.9%) had at least one family member who was an essential worker, 181 (42.3%) experienced at least one daily living stressor, 140 (32.7%) experienced at least one stressor related to health care, 275 (64.3%) experienced at least one income/unemployment stress, and 140 (32.6%) experienced at least one COVID-19 exposure or illness stress.

In this sample of women, 174 women (40.3%) experienced IPV. One hundred and one (23.4%) women reported having at least one experience with physical IPV (scores ranged from 0 to 16, mean = 2.06, SD = 4.34). Eighty-six women (19.9%) reported having at least one experience with sexual IPV (scores ranged from 0 to 9, mean = 0.97, SD = 2.12). One hundred sixty-eight women (38.9%) reported at least one experience with psychological IPV (scores ranged from 0 to 12, mean = 1.78, SD = 3.00). Co-occurrence of the different forms of IPV was common. Specifically, 83 women (19.2%) reported experiencing both physical and sexual IPV. Ninety-seven women (22.5%) reported experiencing physical and psychological IPV. Eighty-three women (19.2%) reported experiencing both sexual and psychological IPV. Eighty-two women (18.9%) experienced all three forms of IPV.

Risk Factors Predicting IPV

To analyze the risk factors predicting IPV, we conducted three binary logistic regressions (i.e., one for each form of IPV). The predictor variables included participant age, if the participant had at least one child under the age of 18 (1 = *yes* and 0 = *no*), sexual orientation (0 = *heterosexual* and 1 = *sexual minority*), ethnicity (1 = *white* and 0 = *BIPOC*), family income, community type (dummy coded where *rural* = 1 and *suburban* = 0; *urban* = 1 and *suburban* = 0), and employment status during COVID (1 = *employed either full or part time* and 0 = *unemployed*). COVID-19 stressors were all coded to be dichotomous with 1 = *experienced the stressor* and 0 = *did not experience the stressor* for five of the COVID-19-specific stressors. As nearly all the participants (96.5%) experienced childcare centers/schools closing, there was not enough variability to include this variable in the regression models.

The logistic regression model predicting women's experiences with physical IPV was significant, $\chi^2(13) = 194.78, p < .001, -2LL = 249.52, \text{Cox \& Snell } R^2 = 0.38, \text{Nagelkerke } R^2 = 0.58, \text{percentage correctly classified } 87.9\%$. Among the variables in the model, age, $B = -0.05$, and employment status, $B = -1.37$, were significantly, $p < .05$, associated with lower odds of physical IPV. However, sexual minority identity, $B = 0.94$; having a child under the age of 18, $B = 1.50$; living in a rural (vs. suburban)

community, $B = 1.14$; experiencing a health care stressor, $B = 1.40$; experiencing income decrease/job loss, $B = 1.37$; and exposure to COVID-19 stressors, $B = 1.35$ were associated with increased odds of experiencing physical IPV (see Table 1).

The logistic regression model predicting women's experiences with sexual IPV was significant, $\chi^2(13) = 217.98$, $p < .001$, $-2LL = 192.24$, Cox & Snell $R^2 = 0.42$, Nagelkerke $R^2 = 0.66$, percentage correctly classified 91%. Among the variables in the model, employment status, $B = -1.33$, was significantly, $p < .05$, associated with lower odds of sexual IPV. However, sexual minority identification, $B = 1.27$; living in a rural (vs. suburban) community, $B = 2.40$, and urban (vs. suburban) community, $B = 2.02$; having a child under the age of 18, $B = 1.73$; experiencing a health care stressor, $B = 1.69$; and exposure to COVID-19 stressors, $B = 1.73$ were associated with increased odds of experiencing sexual IPV (see Table 2).

The logistic regression model predicting women's experiences with psychological IPV was significant, $\chi^2(13) = 124.95$, $p < .001$, $-2LL = 412.20$, Cox & Snell $R^2 = 0.26$, Nagelkerke $R^2 = 0.36$, percentage correctly classified 76%. Sexual minority identification, $B = 0.75$; experiencing a health care stressor, $B = 1.60$; and exposure to COVID-19 stressors, $B = 0.78$ were associated with increased odds of experiencing psychological IPV (see Table 3).

IPV and Mental Health

In our sample, the mean anxiety score was 6.39 (SD = 5.86, range 0 to 21), and 29% ($n = 124$) of our sample had clinically significant symptoms of anxiety. The mean depression score was 6.88 (SD = 7.09, range 0–27), and 31% ($n = 131$) had clinically significant symptoms of depression. To understand the association between IPV and women's mental health, we conducted two regressions: one to predict depression and the second for anxiety. The models included participant age,

Table 1. Logistic Regression Predicting Physical IPV.

	B	S.E.	Wald	p	Odds ratio (Exp(B))
Ethnicity	-0.11	0.41	0.07	.79	0.90
Age	-0.05	0.02	6.96	<.01	0.95
Sexual identity	0.94	0.45	4.35	.04	2.56
Rural community	1.14	0.51	5.01	.03	3.12
Urban community	0.49	0.40	1.55	.21	1.64
Family income	-0.08	0.07	1.18	.28	0.93
Employed during pandemic	-1.37	0.45	9.29	<.01	0.25
Parent of child < 18 years	1.50	0.37	16.14	<.01	4.48
Essential worker stressor	-0.36	0.39	0.84	.36	0.70
Daily life stressor	0.19	0.39	0.23	.63	1.20
Healthcare stressor	1.40	0.39	13.08	<.01	4.04
Employment/income stressor	1.37	0.46	8.88	<.01	3.92
COVID-19 exposure/illness stressor	1.35	0.36	13.82	<.01	3.85

Table 2. Logistic Regression Predicting Sexual IPV.

	B	S.E.	Wald	p	Odds ratio (Exp(B))
Ethnicity	0.38	0.46	0.66	.42	1.45
Age	-0.02	0.02	1.11	.29	0.98
Sexual identity	1.27	0.49	6.63	.01	3.56
Rural community	2.40	0.64	13.84	<.01	11.00
Urban community	2.02	0.56	13.00	<.01	7.55
Family income	-0.08	0.08	1.04	.31	0.92
Employed during pandemic	-1.33	0.53	6.20	.01	0.27
Parent of child < 18 years	1.73	0.44	15.34	<.01	5.65
Essential worker stressor	-0.14	0.47	0.08	.77	0.87
Daily life stressor	0.40	0.45	0.78	.38	1.49
Healthcare stressor	1.69	0.45	14.12	<.01	5.40
Employment/income stressor	0.77	0.56	1.94	.16	2.17
COVID-19 exposure/illness stressor	1.73	0.43	16.66	<.01	5.66

Table 3. Logistic Regression Predicting Psychological IPV.

	B	S.E.	Wald	p	Odds ratio (Exp(B))
Ethnicity	-0.25	0.30	0.72	.40	0.78
Age	-0.01	0.01	0.31	.58	0.99
Sexual identity	0.75	0.37	4.05	.04	2.12
Rural community	0.35	0.41	0.74	.39	1.42
Urban community	-0.22	0.28	0.62	.43	0.80
Family income	-0.04	0.05	0.57	.45	0.97
Employed during pandemic	-0.09	0.29	0.10	.76	0.92
Parent of child < 18 years	0.46	0.26	3.22	.07	1.59
Essential worker stressor	0.13	0.27	0.23	.63	1.14
Daily life stressor	0.36	0.28	1.67	.20	1.44
Healthcare stressor	1.60	0.30	28.64	<.01	4.95
Employment/income stressor	0.21	0.28	0.53	.47	1.29
COVID-19 exposure/illness stressor	0.78	0.29	7.53	<.01	2.19

family/household annual income, sexual orientation, ethnicity, and experiences with physical, sexual, and psychological IPV (coded 0 = *no experience* and 1 = *experience*).

The multiple regression for depression was significant, $F(7, 397) = 58.66, p < .01, R^2 = 0.51$, with depression being negatively associated with age, $\beta = -0.10, p < .01$, and family income, $\beta = -0.11, p < .01$, and positively associated sexual identity, $\beta = 0.10, p < .01$. As expected, women’s experiences with physical IPV, $\beta = 0.24, p < .01$; sexual IPV, $\beta = 0.32, p < .01$; and psychological IPV, $\beta = 0.12, p = .01$ were all associated with more symptoms of depression, even after controlling for the demographic variables.

Likewise, the model for anxiety was significant, $F(7, 397) = 34.85, p < .01, R^2 = 0.38$, with anxiety being negatively associated with age, $\beta = -0.12, p < .01$, and family income, $\beta = -0.14, p < .01$, but positively associated with sexual identity, $\beta = 0.10, p = .02$. Experiences with sexual IPV, $\beta = 0.28, p < .01$; physical IPV, $\beta = 0.16, p = .06$; and psychological IPV, $\beta = 0.28, p = .03$ also predicted more symptoms of anxiety above and beyond the demographic variables.

Discussion

The women in this online survey sample experienced a concerning level of IPV during the first two months of the COVID-19 pandemic. In this sample, 23.4% of women reported experiencing physical IPV, 19.9% reported experiencing sexual IPV, and 38.9% reported experiencing psychological IPV during the pandemic. Many women experienced more than one form of IPV. Direct comparisons of IPV prevalence with other samples both prior to and during the COVID-19 pandemic are complicated by the use of different assessment methods and variability of sample composition. However, the IPV reported in this sample for the early pandemic months is much higher than the pre-pandemic IPV estimates provided by the CDC (Smith et al., 2018, Table 9). According to the CDC data, estimates of IPV for the previous 12 months are that 2.4% of women will experience sexual violence, and 2.9% will experience physical violence. Our findings are also higher than pre-pandemic reports of IPV using the WHO scale. Costa and Barros (2016) summarized prevalence rates for women's experiences with IPV in the last year using the WHO measure and reported that 15.9% reported physical violence, 32.2% reported psychological violence, and 9.3% of women reported sexual violence. Our findings from the current study are also consistent with experts' warnings of increased IPV (Anurudran et al., 2020; Bouillon-Minois et al., 2020; Campbell, 2020; Goh et al., 2020; Sharma & Borah, 2020) as well as emerging data that are reporting increased rates of IPV (Boserup et al., 2020; Evans et al., 2021; Kofman & Garfin, 2020; UNWomen, 2021) during the early days of the pandemic when much of the country experienced some type of stay-at-home orders or other restrictions.

Consistent with the vulnerability-stress-adaptation model, both pre-existing vulnerabilities as well as COVID-19 specific stressors were risk factors for women's IPV experiences. Specifically, women who identify as a sexual minority were 3.56 times more likely to experience sexual IPV, 2.5 times more likely to experience physical IPV, and 2.12 times more likely to experience psychological IPV than were women who identified as heterosexual. Community type also mattered, and women in an urban community were 7.5 times more likely to experience sexual IPV than women in a suburban community. However, women in rural areas appear to be especially vulnerable to IPV. Women who live in a rural community were 11 times more likely to experience sexual IPV, 3 times more likely to experience physical IPV, and 1.4 times more likely to experience psychological IPV than were women in suburban communities. This highlights the concern that isolation and limited access to health care

and social services would be especially problematic for women in rural communities during a pandemic (Danzi et al., 2022; Logan et al., 2003).

In contrast, women who are older were less likely to experience IPV, which is consistent with previous research that finds IPV decreases with age and was associated with lower IPV during the pandemic (e.g., Caetano et al., 2008; Schokkenbroek et al., 2021; Schreiber & Salivar, 2021). The COVID-19 restrictions and closure of schools and daycares were particularly challenging for mothers of young children who had to simultaneously care for children and assist with their remote schooling, while attempting to maintain their employment (Kaugars et al., 2021). This confluence of multiple stressors likely contributed to increased stress and the higher levels of IPV for younger women compared to their older counterparts.

Being a mother to a child under the age of 18 was an especially strong predictor of IPV during the pandemic. Women with at least one child under the age of 18 were 4.5 times more likely to experience physical IPV, 5.6 times more likely to experience sexual IPV, and 1.6 times more likely to experience psychological IPV than were women who do not have a child. This is consistent with previous research, which has found that IPV is more common among couples with children than without children (DeMaris et al., 2003; McDonald et al., 2006) as well as emerging research during the pandemic (Schokkenbroek, et al., 2021). Given the additional stressors of being a parent during the pandemic (including lack of childcare and remote schooling), this result may not be surprising; however, it is alarming. Although the present study did not assess children's exposure to violence or the incidence of child abuse and/or neglect, given the stay-at-home orders and quarantine circumstances, it is likely that children of mothers in the present study were exposed to the IPV directed toward their mothers or were victims of abuse themselves. Exposure to interparental violence can have a range of negative implications for children and adolescents, including internalizing, externalizing, and total behavior problems (e.g., McFarlane et al., 2003), impact on psychological, physical, and social development (e.g., Howell et al., 2016), and precocious transitions to adulthood (i.e., higher risk of engaging in early sex and dropping out of high school; Adhia et al., 2019). Furthermore, while there has been a decrease in reported violence against children during the pandemic (Campbell, 2020), this might largely be due the closing of schools and subsequently children's lack of in-person interaction with mandatory reporters such as teachers and school personnel.

COVID-19-specific stressors were also associated with increased IPV above and beyond the vulnerability risk factors. Specifically, women who reported they experienced healthcare-related stressors (such as having difficulty accessing health care and medicine) were four to five times more likely to experience all forms of IPV than women who did not report experiencing a health care stressor. Similarly, women who experienced COVID-19 exposure/illness stressors were 5.6 times more likely to experience sexual IPV, 3.8 times more likely to experience physical IPV, and two times more likely to experience psychological IPV than women who did not report that stressor. These findings are consistent with an online study conducted in Belgium where COVID-19 pandemic stressors significantly predicted verbal partner violence (Schokkenbroek et al., 2021).

The pandemic has increased financial strain for many individuals, and the data in the current study support it as an important stress factor that is associated with women's IPV experiences. Women who reported employment or income stress (e.g., family member losing a job or decreased family income) were 3.9 times more likely to experience physical IPV and two times more likely to experience sexual violence than were women who did not report this stressor. However, one important protective factor against IPV was women's maintaining employment during COVID-19. Women who maintained either full- or part-time employment had significantly lower odds of sexual and physical IPV than women who were unemployed. This is consistent with previous research that has found that women's employment is a significant protective factor against IPV (Aizer, 2010; Schumacher et al., 2001). Not only do employed women maintain an income that can decrease financial stress and strain, but employment increases their relative power in the relationship and provides additional resources, which can reduce their victimization. However, it is also important to note that the research on women's IPV experiences and employment is complex. For example, women who experience IPV are more likely to have job loss or employment instability as a result of their IPV experiences (Browne et al., 1999; Crowne et al., 2011, Kimerling et al., 2009; Showalter, 2016). Furthermore, some older research suggests that women who have higher occupational status or income than their male partner are at a greater risk of IPV (Anderson, 1997; Hornung et al., 1981) than women in a relationship that is more gender traditional in regard to employment and income.

We did not find significant relationships between essential worker stressors (e.g., family member front line worker or medical professional) or the daily life stressors (e.g., access to food and living essentials) and women's experiences with IPV. While these are real stressors that many people faced, it seems that in the context of the other stressors they were not as predictive of IPV.

While psychological IPV was the most frequently experienced IPV by women in our study, there were relatively fewer significant predictors of psychological IPV. Psychological IPV may be exacerbated by pandemic-related stress and decreased frustration tolerance. A study conducted in March 2020 found that a majority of parents (61%) shouted, yelled, or screamed at their children in the past two weeks and that this was an increase over their usual behavior (Lee & Ward, 2020). Research conducted in Belgium also reported that women's experiences with verbal partner violence increased during the lockdown phase of the pandemic (Schokkenbroek et al., 2021). They found that parents of children under the age of 18, women with higher levels of COVID-19 pandemic stress, and younger women were at higher risk for experiencing verbal partner aggression.

Not surprisingly, IPV appears to be taking a toll on women's mental health. All three forms of IPV were associated with women reporting higher levels of anxiety and depression. While rates of mental health problems, particularly anxiety and depression, are increasing during the COVID-19 pandemic (CDC, 2021), women who experience IPV might be especially vulnerable to mental health concerns. Furthermore, women in rural communities appear to be at increased risk for IPV; however, clinical services are often limited in rural areas (Fullen et al., 2020; Logan et al., 2003).

Recommendations

The COVID-19 pandemic has highlighted that coordinated efforts among local, national, and international governments and organizations are necessary to address increased IPV during this time of community stress and crisis (UN Women, 2021). The failure of health and government officials to prepare for this “shadow pandemic” during the COVID-19 pandemic highlights that support for IPV victims needs to be integrated into disaster planning *before* the disaster happens so that structural supports are in place and integrated with medical and other community resources (Enarson, 1999).

Women who experience IPV need to be able to access necessary services. This will require funding, appropriate staff to provide resources, secure communication mechanisms for victims to seek support, additional locations to provide safe stays for victims and their children, and necessary security and privacy protocols (Ertan et al., 2020). Media and social media can be used to raise awareness and provide information about local resources including helplines, psychosocial support, and online counseling (including utilization of texting, M-Health apps, and online tools) for IPV victims (Boserup et al., 2020; Ertan et al., 2020; Mlambo-Ngcuka, 2020). Furthermore, posting paper flyers in neighborhoods, workplace IPV education, and implementation of code-word systems may reach more people (Jarneck & Flanagan, 2020).

It is necessary to build the capacity of key service providers to improve the quality of response to IPV (UN Women, 2021). Screening for IPV is important for identifying women who are being victimized and offer them access to available resources and necessary support. This is particularly important because victims of IPV often do not want to report a loved one as a perpetrator of violence (Sharma & Borah, 2020). IPV screening tools should be provided to first responders, medical professionals, mental health professionals, and integrated with the expansion telehealth services that provide screenings via video conferencing during home isolation/quarantine (Chandan et al., 2020; Goh et al., 2020). It is possible to normalize screening for IPV using standardized questionnaires and offering resources to all patients—regardless of IPV disclosure (Evans et al., 2020).

Findings from the present study highlight the need to provide adequate mental health treatment for victims of IPV given that post-traumatic stress disorder, stress, and anxiety along with other physical health concerns are commonly experienced effects of IPV (Kofman & Garfin, 2020). Adequately addressing these psychological and physical health needs is likely to be a challenge during the pandemic. Telepsychology and technology-based services are becoming more common and encouraged during the pandemic to minimize the spread of COVID-19 virus (Emezue, 2020; Pierce et al., 2021; Su et al., 2021). Specifically, technology-based interventions can be cost-effectively tailored for target audiences, and they can eliminate barriers such as money needed for transportation and time (Su et al., 2021). However, the ability to conduct telepsychology sessions privately and securely while at home, potentially with the abuser in the home, is a challenge (Ragavan et al., 2020). Moreover, prior to the pandemic, psychologists practicing in rural

areas were less likely to use telepsychology (Pierce et al., 2020); thus victims of IPV living in rural areas may continue to struggle to access appropriate resources. Increasing access of broadband Internet services could expand opportunities for accessing telehealth and IPV resources services, as well as help victims of IPV maintain essential social connections (Evans et al., 2020).

It is particularly important to address the impact of immigration, acculturation, and other social determinants of health when addressing IPV among Indigenous, racialized, and migrant women (Stockman et al., 2015). Cultural dimensions may impact willingness to seek care, discuss abuse with healthcare providers, and engage in interventions. Thus, mental and physical health prevention and treatment strategies should be tailored for different subgroups.

Limitations

The results of this study provide empirical evidence for reports of increased IPV experienced by women during the early months of the U.S. pandemic. The results further suggest that COVID-19-specific stressors are predictive of women's risks for experiencing IPV. However, one should be cautious in making generalizations from these results as they are not based on a randomly selected sample. While the sample is fairly large and diverse, it is not necessarily representative of the U.S. population. Furthermore, this study included any woman living in the United States and territories with the exception of women who did not have English proficiency. Thus, we cannot speak to issues of how citizenship and immigration status might be associated with IPV.

IPV was assessed with the WHO survey (Garcia-Moreno et al., 2005), which has been used extensively around the world and is a relatively brief measure of physical, sexual, and psychological IPV (Costa & Barros, 2016). This measurement strategy was chosen to enable participants to answer questions about frequency of events in recent months. The nature of the questions in the WHO survey asks a limited number of questions about commonly occurring acts in violent partnerships rather than asking participants to identify themselves as battered or abused (Garcia-Moreno et al., 2005). We hoped that by utilizing a widely-used measure, the results could be compared with other data collected during the pandemic. Thus, our data provide us with a snapshot women's experiences with IPV during that time span and allow us to understand which factors were associated with experiencing the different forms of IPV. However, this measurement strategy is not without limitations (Follingstad & Rogers, 2013) as we were not able to assess the larger context of the IPV, if there was mutual partner violence, level of severity, or whether this is new or ongoing IPV. Women also self-reported their IPV experiences, and thus, they might have been influenced by a variety of factors including memory biases, limited privacy of their responses while answering the survey, and susceptibility to responding in a socially desirable manner. Finally, while the directionality of the effects cannot be confirmed due to the nature of the study design, the pre-existence of characteristics prior to

the pandemic (e.g., residence location, age, and sexual orientation) suggests that these characteristics may increase one's vulnerability to IPV experiences.

Conclusions

Although the urgent warning during the early days of the COVID-19 pandemic with government issued orders to “stay at home” and public health recommendations that people are “safer at home” were well placed to minimize the spread of the novel COVID-19 virus, policy makers and public health officials must also be mindful that “safer at home” is not the case for people who are experiencing IPV. In fact, without immediate outreach encouraging victims of IPV to seek safe shelter and providing the necessary resources to IPV victims, there is the very good likelihood that IPV will increase during times of community stress such as the COVID-19 pandemic.


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