

Prevalence and factors associated with intimate partner violence during Covid-19 pandemic in rural Samarahan, Sarawak

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ABSTRACT

The prevalence of intimate partner violence (IPV) has increased since the onset of COVID-19 pandemic. A total of 336 married women were randomly selected and interviewed face-to-face using a structured questionnaire adapted from the World Health Organisation (WHO) multi-country questionnaire. The main objective was to determine the prevalence and associated factors of IPV during the COVID-19 pandemic. The analysis found an increase in IPV prevalence from 10.7% before Movement Control Order (MCO) to 14.9% during MCO. Multivariate analysis (MVA) revealed unemployed partners (AOR = 10.70), smoking partners (AOR = 5.36), partners' previous experience of violence (AOR = 1.05), partners' positive controlling behaviour (AOR = 0.95), and informal social control (AOR = 0.97) appeared to be significant predictors of IPV before MCO. However, the unemployed partners were 15.59 times more likely to perpetrate IPV during MCO. The probability of partners' previous experience of violence, partners' positive controlling behaviour, and informal social control was almost the same as before MCO. The increase in IPV prevalence during the COVID-19 pandemic had an unintended impact, especially in gender-based violence, which requires a comprehensive programme to mitigate the aforementioned situation.

Key words:

intimate partner violence; violence against women; risk factors; COVID-19

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INTRODUCTION

Violence against women is a significant global health issue, where the commonest type is intimate partner violence (IPV)¹. IPV is any behaviour within a personal relationship that can cause harm either physically, sexually, or psychologically^{1,2}. Globally, one in three women experienced physical violence by an intimate partner, with or without sexual violence¹. In Malaysia, the IPV prevalence ranges between 4.94% and 35.9%³. The most common type of violence in Malaysia is psychological violence, followed by physical and sexual violence. Overall, 30% of women in a relationship had experienced physical or sexual violence at least once in their lives^{3,4}. Since the COVID-19 pandemic, countries worldwide have implemented social isolation, physical distancing, and stay-at-home policy. Since then, many countries have reported a rise in IPV cases, amounting to a 20% – 40% rise in calls to domestic violence hotlines in Spain and 40% in Brazil⁵⁻⁷. In Peru, Aguero⁸ estimated a 48% increase in IPV cases since the implementation of the stay-at-home policy. Other than the surge of IPV cases, the severity of violence has also heightened during the pandemic⁶. During the first phase of MCO in Malaysia, a 14% increase in IPV cases was reported through a domestic violence hotline called '*Talian Kasih*,'^{9,10}.

The intergenerational pathway of IPV results from interactions between multiple factors at various levels of life¹¹. Researchers are increasingly adapting the social-ecological approach in understanding the interaction between IPV factors at the individual, relationship, community, and societal levels¹²⁻¹⁴. Substance abuse like alcohol consumption, illicit drugs, and smoking is frequently associated with IPV^{12, 15,16}. Alcohol consumption and drug use can cause

impaired judgement and cognitive function of an individual, thus, increasing the likelihood of perpetration¹⁵⁻¹⁷. Women from lower socioeconomic households were more likely to be victims due to financial scarcity¹⁸. During the pandemic, the prevalence of IPV continues to rise due to disruption in the family economy during lockdown¹⁹. Apart from social and functional isolation, economic instability increases the stress in the relationship during the pandemic. Sharma and Borah²⁰ have proven that high-stress relationships increase IPV risks by three times compared with low-stress relationships. Moreover, economic uncertainty and social instability also increase alcohol and drug abuse, resulting in a higher risk of perpetration^{5, 7, 21, 22}. IPV is considered a sensitive issue in Malaysia. The social stigma of reporting violence in an intimate relationship that is deemed to bring shame and social repercussions has silenced the victims. Furthermore, most IPV studies in Malaysia did not include Sabah and Sarawak. Thus, the prevalence of IPV among women in Sarawak remains unknown. Therefore, this study focuses on the IPV prevalence before and during MCO and its associated factors.

METHODS

Setting, sampling, instrument

A cross-sectional, household-based interview was conducted in ten villages in the rural Samarahan, Sarawak, where the study had taken place from October 2020 until August 2021. Only married women aged 18 years and above were included in the study. We excluded those who do not understand English or Bahasa Malaysia, are mentally unsound, divorcees, or separated. The sample size was estimated using the formula $n = (Np(1-p))/(d^2/z^2*(N-1)+p(1-p)) \times NR$, where "N" represents the number of registered married women, "p" represents the estimated prevalence of IPV

in the household setting, and “Z” represents the critical value for 95% confidence level. The required sample was 308; thus, with a 20% non-response rate, the estimated sample was 370. The sampling method follows the probability sampling technique, consisting of simple random and systematic random sampling (Figure 1). This sampling method was done by meeting with the head of villages and obtaining the household lists. Based on the household list, we systematically selected the households. Only one eligible respondent from each household was randomly selected. A female interviewer interviewed the respondent without the presence of their

partner. The interview was also conducted out of their houses, away from their partners.

We adapted the WHO multi-country questionnaire on women’s health and domestic violence against women ²³. Then, we conducted a pilot test at *Rumah Boniface*, a longhouse in Kanowit, Sibuluan division, a non-sample area. We compared the frequency of violence before MCO (March 2019 to February 2020) and during MCO (March 2020 to February 2021). The reliability coefficient of the questionnaire ranged from .6 to .9. Therefore, the questionnaire was considered reliable based on the reliability coefficient of .6 to .7 ²⁴.

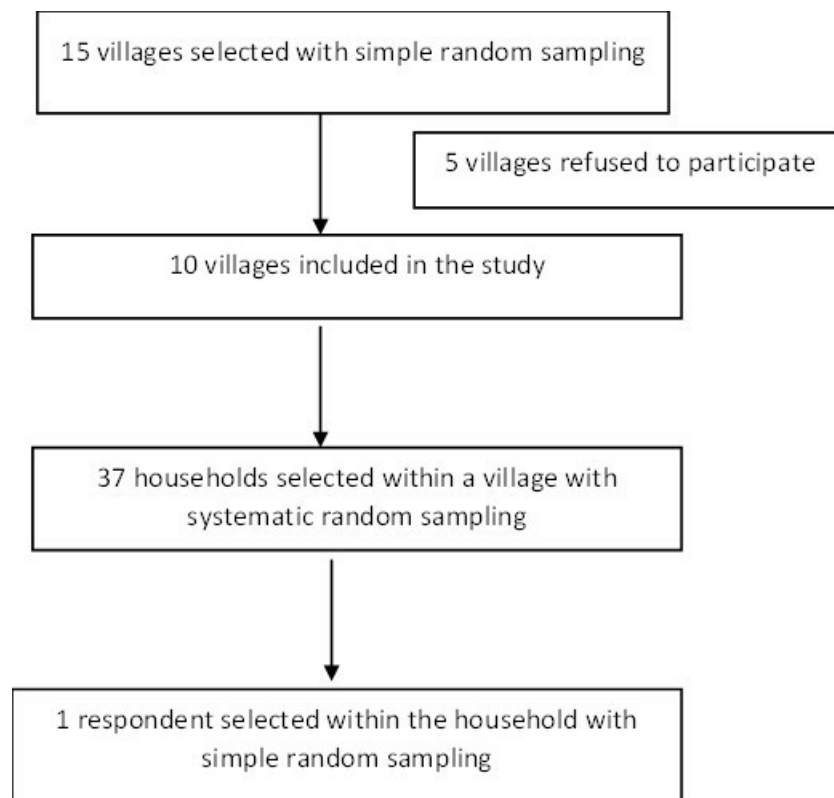


Figure 1 Schematic diagram of sampling procedure

Measurements

The demographic construct included age, race, religion, education level, and employment status of respondents and partners. Living status, marital duration, family income, and the

number of children were also included in this section. The individual factors were partners’ smoking status, alcohol consumption, and drug use. Partners’ previous experience of violence either during childhood or adulthood and

partners' controlling behaviours were measured at the relationship level. The community's informal social control and social cohesion were measured with four questions about the respondents' neighbours and how well respondents know their neighbours. These factors were measured with "yes", "no", or "don't know" responses. At the societal level, we measured respondents' violence perception and acceptance with a five-point Likert scale from 'strongly agree' to 'strongly disagree'. In the next section, the measurement of violence was divided into physical violence, psychological violence, and sexual violence. Each item required a "yes" or "no" answer. In physical violence, the items were: kicking, slapping, dragging, throwing things at the victims, pushing, pulling hair, choking, shoving the victims, and hitting with a fist. In psychological violence, the items were: verbal insult, humiliation, intimidation, and verbal threat. Finally, sexual violence included: forceful sexual intercourse, sexual intercourse due to fear, humiliating and degrading sexual acts. The response of "yes" also required the respondents to specify its frequency. In this study, intimate partner violence is defined as any physical, psychological, or sexual violence between a legally married couple.

Statistical analysis

We performed all statistical analyses with IBM SPSS version 27²⁵. Prevalence was analysed with descriptive statistics. The bivariate analysis included was the Pearson Chi-square test for factors at the individual level and the Mann-Whitney U test for factors at the relationship, community, and societal levels. The Cramer's V followed the Chi-square test to measure the strength of association. We also reported the effect

size. A small effect size value indicated that the significant predictors were only partially dependent on intimate partner violence²⁶. Multivariate analysis of binary logistic regression included all independent variables that were significant at $p < .05$ in bivariate analysis.

Ethics consideration

Before conducting the research, we obtained ethics approval from Institutional Review Board (Ref # FME/21/17). Informed consent was obtained from the district office of Samarahan, heads of the villages, and the respondents before data collection. The respondents were informed about the objectives, the absolute confidentiality and anonymity of information obtained, and the right to withdraw from the study at any time without affecting the respondent's current situation. The contact information of the governmental and non-governmental organisations offered assistance for intimate partner violence victims.

RESULTS

Prevalence of IPV

A total of 336 respondents completed the interview, with a 96.8% household response rate. Out of 336 respondents, 51 experienced some form of violence at least once, either before or during MCO. Overall, the prevalence of IPV during MCO increased to 14.9% compared to 10.7% before MCO. Before MCO, the prevalence of psychological violence was highest at 10.1% and increased to 13.1% during MCO. The percentage of physical violence increased to 5.1%, whereas sexual violence increased to 4.8% during MCO from 1.2% before MCO (Figure 2).

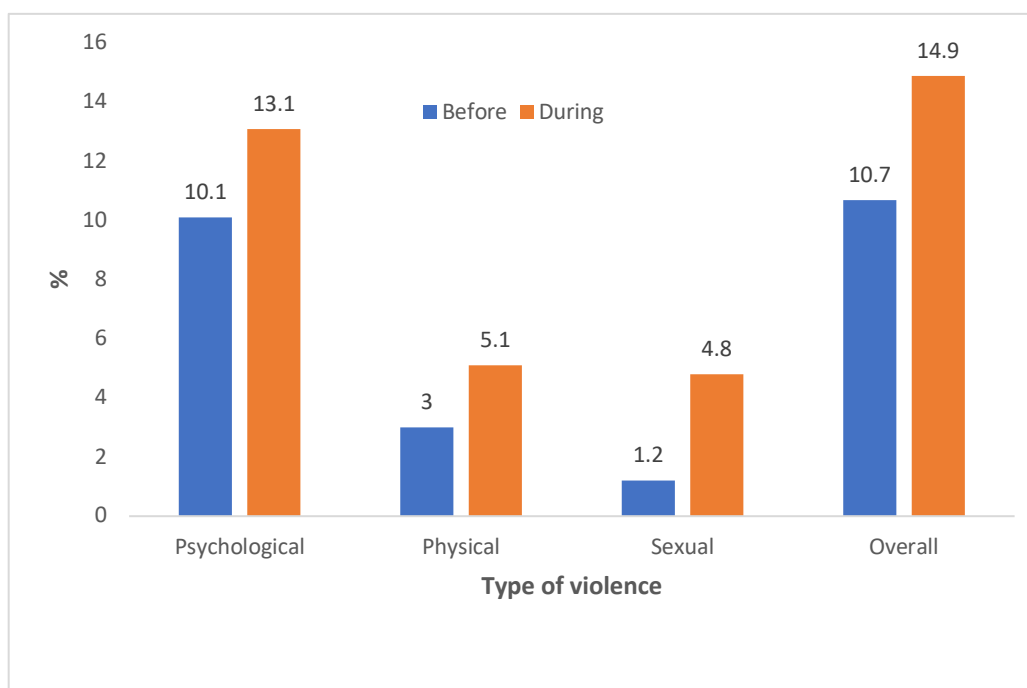


Figure 2 Prevalence of different intimate partner violence (N=336)

Factors associated with intimate partner violence: Bivariate analysis

Before MCO, respondents' employment status [$\chi^2(df) = 5.320(1)$; $p = .021$, Phi coefficient = 0.126] and family income [$\chi^2(df) = 12.152(4)$; $p = .016$, Cramer's $V = 0.190$] were significant predictors of intimate partner violence ($p < .05$). During MCO, respondents' employment status [$\chi^2(df) = 4.278(1)$; $p = .039$, Phi coefficient = 0.113] remained significant predictors with the addition of marital duration [$\chi^2(df) = 12.751(3)$; $p = .005$, Cramer's $V = 0.195$] and age [$\chi^2(df) = 10.242(4)$; $p = .037$, Cramer's $V = 0.175$]. Before MCO, employed women experienced more violence (14.7%) than unemployed women (6.9%). The prevalence continued to rise during MCO, with 19% among the employed and 11% among the unemployed. Before MCO, the family income of MYR 3001–4000 had the

highest prevalence (17.4%), followed by 14.5% among families with MYR 2001–3000. Family income of $\leq$ MYR 1000 had the lowest prevalence (1.8%). Nevertheless, there was no significant association between income and intimate partner violence during MCO. During MCO, the prevalence of IPV was 22.4% in 35 to 44-year-olds, followed by 25 to 34-year-olds (15.3%). The lowest proportion of IPV was found among 45 to 54-year-olds (4.0%). The following predictor was the marital duration ($p < .05$). During MCO, marital duration of 5–9 years had the highest IPV prevalence with 24.5%. The lowest prevalence was among those with a marital duration of ≥ 15 years, at 6.0%. However, spousal age difference, current marital status, respondents' race, religion, level of education, living status, and the number of children did not affect intimate partner violence ($p > .05$) (Table 1).

Table 1. Sociodemographic factors associated with intimate partner violence before and during MCO by respondents' characteristics: bivariate analysis (N=336)

Characteristics	IPV (Before)					IPV (during)				
	n	No	Yes	p-value	Effect size	n	No	Yes	p-value	Effect size
Age in years										
< 25	27	96.3	3.7	.053	.167	27	88.9	11.1	.037	.175
25 - 34	137	89.1	10.9			137	84.7	15.3		
35 - 44	98	82.7	17.3			98	77.6	22.4		
45 - 54	50	96.0	4.0			50	96.0	4.0		
≥55	24	95.8	4.2			24	91.7	8.3		
Spousal age difference										
No diff	77	89.6	10.4	.990	.008	77	85.7	14.3	.847	.031
Younger	48	89.6	10.4			48	87.5	12.5		
Older	211	89.1	10.9			211	84.4	15.6		
Marital duration (years)										
< 5	103	89.3	10.7	.098	.137	103	85.4	14.6	.005	.195
5 - 9	98	83.7	16.3			98	75.5	24.5		
10 - 14	52	90.4	9.6			52	88.5	11.5		
≥15	83	95.2	4.8			83	94.0	6.0		
Race										
Malay	190	90.0	10.0	.405	.093	190	86.8	13.2	.222	.114
Iban	112	88.4	11.6			112	82.1	17.9		
Other bumi	22	81.8	18.2			22	77.3	22.7		
Others	12	100.0	.0			12	100.0	.0		
Living status										
Husband and wife	34	85.3	14.7	.727	.044	34	79.4	20.6	.152	.152
Husband, wife, children	183	89.6	10.4			183	88.5	11.5		
Husband, wife, others	119	89.9	10.1			119	81.5	18.5		
Employment status										
Employed	163	85.3	14.7	.021	.126	163	81.0	19.0	.039	.113
Unemployed	173	93.1	6.9			173	89.0	11.0		
Family income (MYR)										
≤1000	56	98.2	1.8	.016	.190	56	89.3	10.7	.173	.138
1001 - 2000	80	87.5	12.5			80	86.3	13.8		
2001 - 3000	76	85.5	14.5			76	80.3	19.7		
3001 - 4000	69	82.6	17.4			69	79.7	20.3		
≥4001	55	96.4	3.6			55	92.7	7.3		
No of children										
0	52	88.5	11.5	.927	.021	52	82.7	17.3	.863	.030
1-3	206	89.8	10.2			206	85.4	14.6		
≥4	78	88.5	11.5			78	85.9	14.1		
Religion										
Islam	212	90.6	9.4	.601	.055	212	87.3	12.7	.285	.086
Christian	115	87.0	13.0			115	80.9	19.1		
Others	9	88.9	11.1			9	88.9	11.1		
Education level										
No formal	28	82.1	17.9	.294	.121	28	78.6	21.4	.404	.109
Primary	37	97.3	2.7			37	94.6	5.4		
Secondary	150	87.3	12.7			150	83.3	16.7		
Diploma	85	90.6	9.4			85	85.9	14.1		
Degree	36	91.7	8.3			36	86.1	13.9		

p-value obtained from Pearson's chi-square test of independence

p*<.05, *p*<.01, ****p*<.001; Effect size Small=0 .1, Medium=0 .3, Large=0 .5 and above

In terms of the partners' characteristics, the significant variable during MCO was the partner's employment status [$\chi^2(df) = 8.141(1)$; $p = .004$, Phi coefficient = 0.156]. Other variables like age, race, religion and education level were not statistically significant ($p > .05$). During the MCO, most women experienced violence from unemployed partners (32.3%). Similarly, before the MCO, most women experienced violence from unemployed partners (19.4%). However, before the MCO, this result was not statistically significant ($p > .05$). Next, before the MCO, partners' alcohol consumption, [$\chi^2(df) = 14.744(1)$; $p < .001$, Phi coefficient = 0.209], partners who smoked, [$\chi^2(df) = 9.842(1)$; $p = .002$, Phi coefficient = 0.171] and partners with drug use, [$\chi^2(df) = 6.354(1)$; $p = .012$, Phi

coefficient = 0.166] were associated with IPV. Similarly during the MCO, partners' alcohol consumption, [$\chi^2(df) = 9.638(1)$; $p = .002$, Phi coefficient = 0.169] and partners who smoked, [$\chi^2(df) = 9.121(1)$; $p = .003$, Phi coefficient = 0.169] remained significant predictors of IPV. However, drug use did not significantly influence IPV during the MCO ($p > .05$). Partners who consumed alcohol have a higher tendency to violence with 21.6% than non-alcohol consumption, 6.9%. The same pattern was observed during MCO, increasing to 25% violence among partners who consumed alcohol. In addition, the IPV prevalence was also highest among smoking partners, with 16% before the MCO and 20.7% during the MCO. Meanwhile, for drug use, the prevalence of IPV before and during MCO was the same at 40%. Nevertheless, the effect size for partners' employment status, alcohol consumption, smoking, and drugs used were small (Table 2).

Table 2. Sociodemographic factors associated with intimate partner violence before and during MCO by partners' characteristics: bivariate analysis (N=336)

Characteristics	IPV (Before)					IPV (during)				
	n	No	Yes	p-value	Effect size	n	No	Yes	p-value	Effect size
Age in years										
< 30	69	85.5	14.5	.509	.099	69	82.6	17.4	.613	.089
30 - 39	141	90.1	9.9			141	83.7	16.3		
40 - 49	66	87.9	12.1			66	84.8	15.2		
50 - 59	44	90.9	9.1			44	90.9	9.1		
60+	16	100.0	0.0			16	93.8	6.3		
Race										
Malay	193	91.2	8.8	.200	.117	193	88.1	11.9	.052	.152
Iban	104	85.6	14.4			104	79.8	20.2		
Other Bumi	25	84.0	16.0			25	76.0	24.0		
Others (Indian, Chinese)	14	100.0	0.0			14	100.0	0.0		
Religion										
Islam	212	90.6	9.4	.601	.055	212	87.3	12.7	.285	.086
Christian	115	87.0	13.0			115	80.9	19.1		
Others	9	88.9	11.1			9	88.9	11.1		
Education										
No formal	15	73.3	26.7	.075	.159	15	73.3	26.7	.269	.124
Primary	40	97.5	2.5			40	90.0	10.0		
Secondary	130	86.9	13.1			130	83.1	16.9		
Diploma	116	89.7	10.3			116	84.5	15.5		
Degree	35	94.3	5.7			35	94.3	5.7		
Employment										

Characteristics	IPV (Before)					IPV (during)				
	n	No	Yes	p-value	Effect size	n	No	Yes	p-value	Effect size
Employed	305	90.2	9.8	.103	.089	305	86.9	13.1	.004	.156
Unemployed	31	80.6	19.4			31	67.7	32.3		
Alcohol consumption										
Yes	88	78.4	21.6	.000	.209	88	75.0	25.0	.002	.169
No	248	93.1	6.9			248	88.7	11.3		
Smoking										
Yes	169	84.0	16.0	.002	.171	169	79.3	20.7	.003	.165
No	167	94.6	5.4			167	91.0	9.0		
Drugs used										
Yes	10	60.0	40.0	.012	.166	10	60.0	40.0	.070	.124
No	326	90.2	9.8			326	85.9	14.1		

p-value obtained from Pearson's chi-square test of independence

p<.05, **p<.01, *p<.001*

Effect size Small= 0.1, Medium=0.3, Large= 0.5 and above

The relationships, community, and societal factors were continuous variables but not normally distributed; thus, we conducted a non-parametric Mann-Whitney U test. The table presented the mean, standard deviation, median, inter-quartile, minimum, and maximum values for easy understanding (Table 3). The previous history of violence was scored based on: the partners' childhood history of violence, the partners' history of witnessing IPV in the family, and physical fights with others. The summation of these scores was converted into a percentage. Three-quarters of respondents with IPV before and during MCO reported a 66.7% (Q3) score on the domain of their partners' previous history of violence. Positive controlling behaviour

indicated that the partners did not exert unnecessary control and trusted their spouses. Respondents with positive controlling behaviour partners also experienced IPV before and during MCO. The informal social control in the community translated into the neighbourhood's ability to intervene when witnessing violence. High informal social control was a protective factor for IPV. Before and during MCO, half the respondents with IPV scored 50.0% (Q2) in informal social control. Finally, the social cohesion in the community was measured in terms of neighbourhood trust and mutual help. Half of the respondents with IPV scored 100.0% (Q2) in social cohesion during MCO (Table 3).

Table 3. Association of the relationship, community, and societal factors with intimate partner violence

Variables	Before MCO									During MCO								
	N	Mean	SD	Min	Max	Q1	Q2	Q3	P value	N	Mean	SD	Min	Max	Q1	Q2	Q3	P value
Previous experience of violence	36	35.2	32.8	.0	100.0	33.3	33.3	66.7	.001	50	27.3	32.1	.0	100.0	0.0	16.7	66.7	.001
Positive controlling behaviour	36	58.3	34.6	.0	100.0	16.7	58.3	96.8	.001	50	64.3	33.5	.0	100.0	33.3	75.0	100.0	.001
Informal social control	36	58.3	36.8	.0	100.0	50.0	50.0	100.0	.004	50	60.0	35.0	.0	100.0	50.0	50.0	100.0	.001
Social cohesion	36	70.8	36.6	.0	100.0	50.0	100.0	100.0	.059	50	73.0	33.8	.0	100.0	50.0	100.0	100.0	.043
Violence perception	36	65.1	12.1	40.0	90.0	56.7	66.7	73.3	.092	50	64.5	11.8	40.0	93.3	53.3	63.3	73.3	.152
Violence acceptance	36	85.7	18.6	20.0	100.0	80.0	93.3	100.0	.998	50	86.8	16.7	20.0	100.0	80.0	93.3	100.0	.991

p-value reached from Mann-whiney U test (non-parametric)

Factors associated with intimate partner violence: Multivariate analysis

In the binary logistic regression, unemployed partners were 10.70 times more likely to perpetrate violence before MCO, increasing to 15.59 times during MCO (before MCO, AOR = 10.70, 95% CI: 1.27, 90.41, $p < .001$, during MCO, AOR = 15.59, 95% CI: 3.01, 80.47, $p < .001$). The analysis also showed that smokers were 5.36 times more likely to be perpetrators before MCO (AOR = 5.36, 95% CI: 1.34, 21.67, $p < .05$). However, we did not find any significant relationship between smoking and IPV during MCO. A one per cent increase of partners' previous experience of violence increases the IPV by 1.05 times before MCO (AOR = 1.05, 95% CI: 1.02, 1.08, $p < .01$) and 1.04 times during MCO (AOR = 1.04, 95% CI: 1.01,

1.07; $p < .01$). In contrast, positive controlling behaviour and informal social control had decreased IPV where a one per cent increase of positive controlling behaviour decreased the IPV by 5% before MCO (AOR = 0.95, 95% CI: 0.93, 0.98, $p < .01$) and during MCO (AOR = 0.95, 95% CI: 0.92, 0.97; $p < .01$). Similar results were observed for informal social control. With one per cent increase in informal social control, the IPV decreased by 3% before MCO and 2% during MCO (AOR = 0.97, 95% CI: 0.95, 0.99, $p < .01$ for before MCO and during MCO, AOR = 0.98, 95% CI: 0.96, 0.99; $p < .01$). The age and employment status of the respondents, marital duration, family income, partners' alcohol consumption, drug use, and social cohesion did not impact intimate partner violence ($p > .05$) (Table 4).

Table 4. Factors affecting intimate partner violence before and during MCO: Multivariate analysis (N=336).

Variables	Before MCO			During MCO		
	AOR	LL	UL	AOR	LL	UL
Age in years	0.99	0.88	1.11	0.97	0.90	1.06
Family income						
≤1000	0.13	0.01	3.42	0.92	0.13	6.40
1001 - 2000	1.94	0.26	14.53	0.83	0.15	4.46
2001 - 3000	1.12	0.15	8.58	1.36	0.30	6.17
3001 - 4000	1.28	0.19	8.70	0.98	0.21	4.57
Marital duration (years)						
5 - 9	0.64	0.13	3.18	1.72	0.54	5.53
10 - 14	1.60	0.19	13.35	1.04	0.20	5.19
≥15	1.55	0.08	28.74	0.60	0.07	5.04
Unemployment (respondent)	0.29	0.07	1.20	0.46	0.14	1.42
Unemployment (partner)	10.70***	1.27	90.41	15.59***	3.01	80.47
Alcohol	1.64	0.39	6.87	0.64	0.18	2.17
Smoking	5.36*	1.34	21.67	2.68	0.93	7.76
Drug used	3.60	0.13	100.01	0.38	0.01	8.29
Reduced income	1.05	0.31	3.65	2.68	0.99	7.19
Previous experience of violence	1.05**	1.02	1.08	1.04**	1.01	1.07
Positive controlling behaviour	0.95**	0.93	0.98	0.95***	0.92	0.97
Informal social control	0.97**	0.95	0.99	0.98**	0.96	0.99
Social cohesion	1.00	0.98	1.02	0.004	0.99	1.01
Constant	5.55			31.87		

* $p < .05$, ** $p < .01$, *** $p < .001$ AOR = Adjusted odds ratio LL = Lower limit of 95% Confidence interval

UL= Upper limit of 95% Confidence interval MCO= Movement Control Order

DISCUSSION

The significant factors occur at all levels of the ecological model, except at the societal level. In bivariate analysis, employed women experienced more violence than unemployed ($p < .05$). The findings contradicted previous studies^{27, 28}, which found that unemployed women were at a higher risk of IPV than employed. The Nordic paradox could explain the higher prevalence of IPV among employed women in this study. Even though women were actively involved in the economy and participated in the labour force, it did not reduce the IPV prevalence²⁹. Similarly, women empowerment was considered reasonable in Malaysia, with the Malaysia Gender Gap Index score of 0.709, indicating 70.9% gender equality³⁰. Nonetheless, the prevalence of IPV among employed women was still higher than those among unemployed women. The paradox may be attributed to the various social factors influencing victimisation, proving that IPV has a complex social context²⁹.

On the contrary, the likelihood of unemployed partners becoming perpetrators was higher than employed, similar to other studies^{12, 14, 31}. The pandemic had caused an increase in unemployment rates, pushing the family into a financial crisis. Loss of jobs and financial stressors indirectly influenced the risk of IPV perpetration³². Addiction did not cause violence directly, but it might impair individual judgement, heighten couples' conflicts, impair communication, and exacerbate violence^{16, 17}. Partners who smoked have an increased odds of violence by five times compared to non-smoker partners. Furthermore, partners' early exposure to violence during childhood, whether witnessed or experienced, increases the odds of perpetration in adulthood³³. The childhood experience of violence at home reinforces the normative

violence nature and acceptance leading to a higher likelihood of perpetration^{14, 31}. The finding was also similar to studies from Ethiopia and among Hispanics.

A positive controlling behaviour was identified as a protective factor of IPV. The majority of the respondents did not have controlling partners. These partners were deemed to have positive controlling behaviours as they did not exert unnecessary control over their spouses. In the regression model, the positive controlling behaviour was inversely related to IPV. Globally, negative behaviours were consistently associated with IPV in India³⁴, Ethiopia^{13, 35}, Malaysia¹⁶, and Uganda³⁶. Informal social control elicited in this study was constructed on the ability of the neighbourhood to intervene when witnessing violence³⁷. The inverse relationship of informal social control with IPV was similar to studies in Saudi Arabia and Hispanics^{37, 38}.

There are several limitations to this study. The cross-sectional design did not ascertain the causality of IPV. This study was also susceptible to non-response and recall bias as it only included respondents who understood Bahasa Malaysia or English. Hence, this study might have failed to include those who are indeed abused but did not understand the language. Besides that, the prevalence of IPV was measured, excluding the degree and severity of violence which were equally important, especially during MCO. Finally, due to the ongoing MCO in Sarawak, sample collection was only done in Samarahan. Thus, the findings cannot be generalised to other rural populations in Sarawak. Further studies with a larger sample size can be conducted to improve the generalizability of the results and the representativeness of the population.

CONCLUSION

The rising prevalence of IPV, especially during the COVID-19 pandemic, provides an insight into the hidden pandemic and the need for intervention from policymakers and health authorities. The significant factors associated with IPV include unemployed partners, smoking partners, partners' previous history of violence, partners' positive controlling behaviour, and informal social control in the community. These factors occur at multiple levels; hence, strategies to reduce IPV should address all individuals, relationships, and community levels. However, the results should be viewed cautiously when applying to public health practice due to sampling limitations.

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REFERENCES

1. World Health Organization. Violence against women. 2017.
2. Ahmad NA, Silim UA, Rosman A, Mohamed M, Chan YY, Mohd Kasim N, et al. Postnatal depression and intimate partner violence: a nationwide clinic-based cross-sectional study in Malaysia. *BMJ Open*. 2018;8(5).
3. Kadir Shahar H, Jafri F, Mohd Zulkefli NA, Ahmad N. Prevalence of intimate partner violence in Malaysia and its associated factors: a systematic review. *BMC Public Health*. 2020;20(9):1550.
4. Shuib R, Endut N, Ali SH, Osman I, Abdullah S, Oon SW, et al. Domestic Violence and Women's Well-being in Malaysia: Issues and Challenges Conducting a National Study Using the WHO Multi-country Questionnaire on Women's Health and Domestic Violence Against Women. *Procedia - Social and Behavioral Sciences*. 2013;91:475-88.
5. Kaukinen C. When Stay-at-Home Orders Leave Victims Unsafe at Home: Exploring the Risk and Consequences of Intimate Partner Violence during the COVID-19 Pandemic. *Am J Crim Justice*. 2020:1-12.
6. Gosangi B, Park H, Thomas R, Gujrathi R, Bay CP, Raja AS, et al. Exacerbation of Physical Intimate Partner Violence during COVID-19 pandemic. *Radiology*. 2021; 298(1):38-45.
7. Bright CF, Burton C, Kosky M. Considerations of the Impacts of COVID-19 on Domestic Violence in the United States. *SSHO*. 2020;2:100069.
8. Agüero JM. COVID-19 and the rise of intimate partner violence. *World Dev*. 2020;137:105217.
9. Adam A. Ministry: Over 30,000 SMEs have shutdown since start of MCO. *Malay Mail*. 2020.
10. Ministry of Women. Kementerian Pembangunan Wanita, Keluarga dan Masyarakat: Family and Community Development [Internet]. 2020. Available from: <https://www.kpwkm.gov.my/kpwkm/index.php?portal/full&id=NGtVYXZIMjRqM3diWmV2K005Mm9Hdz09/files/300/index.html>.
11. Centers for Disease Control and Prevention. The Social-Ecological Model: A Framework for Prevention USA: Centers for Disease Control and Prevention, USA [Internet]. 2020. Available from: <https://www.cdc.gov/violenceprevention/publichealthissue/social-ecologicalmodel.html/files/342/social-ecologicalmodel.html>.
12. Fageeh WMK. Factors associated with domestic violence: a cross-sectional survey among women in Jeddah, Saudi Arabia. *BMJ Open*. 2014;4(2):1-8.
13. Ler P, Sivakami M, Monárrez-Espino J. Prevalence and Factors Associated With Intimate Partner Violence Among Young Women Aged 15 to 24 Years in India: A

- Social-Ecological Approach. *J Interpers Violence*. 2020;35(19-20):4083-116.
14. Semahegn A, Torpey K, Manu A, Assefa N, Tesfaye G, Ankomah A. Are interventions focused on gender-norms effective in preventing domestic violence against women in low and lower-middle income countries? A systematic review and meta-analysis. *Reproductive Health*. 2019;16.
 15. Abeya SG, Afework MF, Yalew AW. Intimate partner violence against women in western Ethiopia: prevalence, patterns, and associated factors. *BMC Public Health*. 2011;11(1):913.
 16. Chan YY, Rosman A, Ahmad NA, Mohamad Kasim N, Abd Razak MA, Omar M, et al. Prevalence and factors associated with intimate partner violence among postpartum women attending government primary health care clinics in Malaysia. *JOFV*. 2019;34(2):81-92.
 17. Castro RJ, Cerellino LP, Rivera R. Risk Factors of Violence against Women in Peru. *JPFV*. 2017;32(8):807-15.
 18. Othman S, Yuen CW, Mohd Zain N, Abdul Samad A. Exploring Intimate Partner Violence Among Women Attending Malaysian Primary Care Clinics. *J Interpers Violence*. 2019;1-22.
 19. Moreira DN, Pinto da Costa M. The impact of the Covid-19 pandemic in the precipitation of intimate partner violence. *Int J Law Psychiatry*. 2020;71(101606):9.
 20. Sharma A, Borah SB. Covid-19 and Domestic Violence: an Indirect Path to Social and Economic Crisis. *JOFV*. 2020;1-7.
 21. Barbara G, Facchin F, Micci L, Rendiniello M, Giulini P, Cattaneo C, et al. COVID-19, Lockdown, and Intimate Partner Violence: Some Data from an Italian Service and Suggestions for Future Approaches. *J Womens Health*. 2020;29(10):1239-42.
 22. Sacco MA, Caputo F, Ricci P, Sicilia F, De Aloe L, Bonetta CF, et al. The impact of the Covid-19 pandemic on domestic violence: The dark side of home isolation during quarantine. *Med Leg J*. 2020;88(2):71-3.
 23. Henrica AFMJ, Charlotte W, Claudia G-M, Mary E, Lori H. WHO Multi-country Questionnaire on Women's health and Domestic Violence Against Women. World Health Organization; 2015.
 24. Oden C. Project Topics [Internet]. 2019. Available from: <https://www.projecttopics.org/validity-and-reliability-of-questionnaires-how-to-check.html>.
 25. IBM SPSS. IBM SPSS Statistics for Windows. 27 ed. Armonk, NY, USA: IBM SPSS; 2020.
 26. McHugh ML. The Chi-square test of independence. *Biochem Med (Zagreb)*. 2013;23(2):143-9.
 27. Gebrewahd GT, Gebremeskel GG, Tadesse DB. Intimate partner violence against reproductive age women during COVID-19 pandemic in northern Ethiopia 2020: a community-based cross-sectional study. *Reproductive Health*. 2020;17(1):152.
 28. Istihak R, Khaleda A. Prevalence and associated factors of intimate partner violence (IPV) against women in Bangladesh amid COVID-19 pandemic. *Heliyon*. 2021;7(3):9.
 29. Gracia E, Merlo J. Intimate partner violence against women and the Nordic paradox. *Social Science & Medicine*. 2016;157:27-30.
 30. Department of Statistics Malaysia. Statistics On Women Empowerment In Selected Domains, Malaysia, 2020. 2020.
 31. Cummings AM, Gonzalez-Guarda RM, Sandoval MF. Intimate Partner Violence Among Hispanics: A Review of the Literature. *JOFV*. 2013;28(2):153-71.
 32. Lyons M, Brewer G. Experiences of Intimate Partner Violence during Lockdown and the COVID-19 Pandemic. *JOFV*. 2021;1(1):1-9.
 33. Clare C. Intergenerational Intimate Partner Violence: Pathways of Genetic and Environmental Interactions. *Inquiries Journal*. 2020;12(09):1.
 34. Mukherjee R, Joshi RK. Controlling Behavior and Intimate Partner Violence: A Cross-Sectional Study in an Urban Area of Delhi, India. *J Interpers Violence*. 2019;1-12.
 35. Fulu E, Jewkes R, Roselli T, Garcia-Moreno C. Prevalence of and factors associated with male perpetration of intimate partner violence: findings from the UN Multi-country Cross-sectional Study on Men and Violence in Asia and the Pacific. *Lancet Glob Health*. 2013;1(4):e187-207.

36. Gubi D, Nansubuga E, Wandera SO. Correlates of intimate partner violence among married women in Uganda: a cross-sectional survey. *BMC Public Health*. 2020;20(1):1008.
37. Daoud N, Sergienko R, O'Campo P, Shoham-Vardi I. Disorganization Theory, Neighborhood Social Capital, and Ethnic Inequalities in Intimate Partner Violence between Arab and Jewish Women Citizens of Israel. *J Urban Health*. 2017;94(5):648-65.
38. Frye V, Blaney S, Cerda M, Vlahov D, Galea S, Ompad DC. Neighborhood characteristics and sexual intimate partner violence against women among low-income, drug-involved New York City residents: results from the IMPACT Studies. *Violence Against Women*. 2014;20(7):799-824.