

# Intimate Partner Violence Against Women Before, During, and After Pregnancy: A Meta-Analysis

TRAUMA, VIOLENCE, & ABUSE  
1–13  
© The Author(s) 2024  
Article reuse guidelines:  
sagepub.com/journals-permissions  
DOI: 10.1177/15248380241226631  
journals.sagepub.com/home/tva



Xiao-Yan Chen<sup>1</sup>, Camilla Kin Ming Lo<sup>1</sup>, Qiqi Chen<sup>1</sup>, Shuling Gao<sup>2</sup>,  
Frederick K. Ho<sup>3</sup>, Douglas Austin Brownridge<sup>4</sup>, Wing Cheong Leung<sup>5</sup>,  
Patrick Ip<sup>6</sup>, and Ko Ling Chan<sup>1</sup>

## Abstract

Intimate partner violence (IPV) against pregnant women negatively impacts women's and infants' health. Yet inconsistent results have been found regarding whether pregnancy increases or decreases the risk of IPV. To answer this question, we systematically searched for studies that provided data on IPV against women before pregnancy, during pregnancy, and after childbirth. Nineteen studies met our selection criteria. We meta-analyzed the nineteen studies for the pooled prevalence of IPV across the three periods and examined study characteristics that moderate the prevalence. Results showed the pooled prevalence estimates of IPV were 21.2% before pregnancy, 12.8% during pregnancy and 14.7% after childbirth. Although these findings suggest a reduction in IPV during pregnancy, our closer evaluation of the prevalence of IPV after childbirth revealed that the reduction does not appear to persist. The prevalence of IPV increased from 12.8% within the first year after childbirth to 24.0% beyond the first year. Taken together, we should not assume pregnancy protects women from IPV, as IPV tends to persist across a longer-term period. Future studies are needed to investigate if IPV transits into other less obvious types of violence during pregnancy. Moderator analyses showed the prevalence estimates significantly varied across countries by income levels and regions.

## Keywords

pregnancy, violence against women, prevalence, meta-analysis

## Introduction

Intimate partner violence (IPV), defined as physical, psychological, and sexual violence by a current or former intimate partner, is a prevalent public health problem affecting 27% of women aged 15 to 49 years around the world (Sardinha et al., 2022; World Health Organization, 2018). Drawing on the life course perspective which emphasizes contextual factors that influence individuals' life trajectories (Elder & Shanahan, 2007), significant life events may have an effect on the nature and course of IPV (Tenkorang & Owusu, 2018). For instance, women who were exposed to adverse childhood experiences were more likely to experience severe IPV (Chen, Lo et al., 2022). For many women, while pregnancy is one of the most important stages in life, the physical and hormonal changes associated with pregnancy can also make them vulnerable. A meta-analysis found that 5.5%–18.7% of women around the globe experienced some form of IPV during pregnancy (Román-Gálvez et al., 2021). IPV is a particularly serious problem when experienced by pregnant women because of its potential adverse impacts on both the mother and the infant (Tran

et al., 2022). A review found that IPV during pregnancy increased the odds of maternal antenatal and post-natal depression by 1.69 to 3.76 and 1.46 to 7.04, respectively (Halim et al., 2018). Another meta-analysis revealed that IPV against women during pregnancy negatively affects infant attachment security (McIntosh et al., 2021), which is strongly associated with children's future social and emotional development. Furthermore, a longitudinal population-based study found that IPV during pregnancy spills over to the next generation, resulting in child maltreatment perpetrated by the mother and the partner (Chan et al., 2012).

<sup>1</sup>The Hong Kong Polytechnic University, Hung Hom, Hong Kong

<sup>2</sup>Shanghai University, China

<sup>3</sup>University of Glasgow, UK

<sup>4</sup>University of Manitoba, Winnipeg, Canada

<sup>5</sup>Kwong Wah Hospital, Kowloon, Hong Kong

<sup>6</sup>The University of Hong Kong, Pokfulam, Hong Kong

## Corresponding Author:

Ko Ling Chan, Department of Applied Social Sciences, The Hong Kong Polytechnic University, Hung Hom, 999077, Hong Kong.  
Email: koling.chan@polyu.edu.hk

Although the associations between IPV during pregnancy and its adverse outcomes have been well-established, the evidence regarding whether pregnancy increases or decreases the risk of IPV is less conclusive. Some studies have found that IPV decreases from the pre-pregnancy to the pregnancy period (Jackson et al., 2015), possibly because pregnancy might be related to a better marital relationship and increased partner support, thereby reducing the risk of IPV (Islam et al., 2018). Other studies have shown that pregnancy is a stimulus for IPV (Burch & Gallup, 2004), potentially because pregnancy provokes stress and triggers the onset of IPV (Silva et al., 2011). Making the transition to parenthood and taking up childcare responsibilities can be stressful for women and the family, which might elevate the risk of IPV (Cizmeli et al., 2018; Shoffner, 2008). To answer the question about whether pregnancy increases or decreases the risk of IPV, studies have examined IPV prevalence from pre-pregnancy to postpartum, but the results are inconsistent. For example, using a longitudinal design with a sample of 1,083 pregnant women in Hong Kong, researchers found an overall decline in IPV from pre-pregnancy to after childbirth (Chan et al., 2021). However, another study showed that IPV increased after childbirth (Serpeloni et al., 2019).

Several reviews have attempted to summarize current evidence regarding the changes of IPV around the pregnancy period. For example, in their review, Taillieu and Brownridge (2010) summarized that the prevalence of violence during pregnancy is consistently lower than violence occurring before pregnancy across studies (Taillieu & Brownridge, 2010). A recent review of IPV found that most of the included studies reported lower overall prevalence for IPV postpartum compared to pregnancy (Mojahed et al., 2021). These reviews provide important evidence about how IPV changes; however, they only compare limited time periods (i.e., before pregnancy vs. during pregnancy or during pregnancy vs. after childbirth). To provide a better answer to the aforementioned question (i.e., whether IPV increases or decreases during pregnancy), it is imperative to compare IPV data across different time periods, including pre-pregnancy, during pregnancy, and after childbirth. An extended investigation into IPV changes over the perinatal period is crucial for accurately estimating its prevalence (Chan et al., 2021). Without such comparisons, we cannot ascertain whether IPV prevalence was already higher before pregnancy or after childbirth, potentially leading to inaccurate conclusions about this debate.

Several factors can affect IPV around pregnancy. For example, the timeframe of IPV measurements may affect the IPV prevalence. The literature has reported the prevalence of IPV pre-pregnancy at different points, such as within past 12 months (Chan et al., 2012) or lifetime (Salazar et al., 2009). IPV prevalence also varies by different follow-up time points after childbirth. For example, some studies followed women for more than 6 months (Hatcher et al., 2021), whereas others were relatively short term, such as about 1-month postpartum (Chan et al., 2021). Moreover, a country's income level may

also affect IPV prevalence estimates. For example, one meta-analysis showed a higher prevalence of IPV during pregnancy in low- and middle-income countries than in high-income countries (Devries et al., 2010). Hence, a meta-analysis is required to clarify the association between these potential factors and IPV prevalence.

The objectives of this meta-analysis were to quantitatively summarize IPV prevalence across the period from pre-pregnancy to after childbirth. We further explored whether the IPV prevalence was affected by moderators. The results could provide evidence for evaluating IPV prevalence across different periods and developing prevention and intervention programs for reducing IPV.

## Methods

### Study Selection

This meta-analysis adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to report the findings. The protocol was registered in the PROSPERO international prospective register for review protocols (registration number CRD42022365470).

Three electronic databases were used to search publications: PubMed, PsycINFO, and Medline. Relevant articles were systematically searched in titles, keywords, and abstracts using the following list of keywords based on previous review work: (a) partner violence, domestic violence; (b) trajectory, pattern, path, latent class, typology, change, course, before, during, after; and (c) pregnant, antenatal, prenatal, gestation, postnatal, postpartum, postpartal, perinatal, puerperium, puerperal, childbirth. These three groups of keywords were combined with the Boolean "AND," and the synonymous terms were combined with the Boolean "OR." The search strategy for PsycINFO can be found in Supplemental Appendix A. Publications published up to March 2023 were searched. Two trained researchers carried out the search and screening process independently on the basis of the inclusion and exclusion criteria. Gray literature was searched for in Google Scholar using a combination of the following keywords: violence, change, before, pregnant, and postpartum. The first 10 pages of the search results were reviewed as a previous study did (Lo et al., 2023) and no additional publications were identified. For potentially relevant articles, we reviewed the full texts. We contacted the authors or inquired from the library if the full text could not be accessed. Finally, we searched the reference lists of the systematic and meta-analytic reviews of similar topics for relevant studies, and no additional studies meeting the inclusion criteria of this study were obtained.

### Inclusion and Exclusion Criteria

Studies were included if they provided sufficient data on the prevalence or rate of IPV among women at three periods

(i.e., before, during, and after pregnancy). Studies were excluded if they were non-English studies and did not include an analysis of the three periods of IPV.

### Quality Assessment

The Joanna Briggs Institute Critical Appraisal Checklist for Prevalence Studies was employed to evaluate the methodological quality of each eligible study. This checklist offers a structured framework for evaluating factors such as sample size, data collection methods, and statistical analysis, which play a pivotal role in determining the accuracy and generalizability of prevalence estimates. Each study was assessed by nine items. Each item was rated either 1 (information present), 0.5 (information present, but with limitation), or 0 (information absent). An overall score ranged from 0 to 9. This checklist has been used by some previous meta-analyses investigating prevalence (James et al., 2022). Two researchers reviewed each study independently. We calculated the intraclass correlation coefficient (ICC) to test for the degree of agreement between the two reviewers' ratings on the quality of the study. There was a high level of agreement between the two raters (ICC=0.966; 95% CI [0.899, 0.988]). Disagreements were resolved by discussing the issues.

### Data Extraction

A standardized coding sheet was used to extract study characteristics and information on IPV. Specifically, basic publication information (e.g., year of publication and country), methodological characteristics (e.g., sample type), participants' characteristics (e.g., age), exposure measurements (e.g., type and measurements of IPV), and periods of measurement (i.e., period of IPV measurement before pregnancy: lifetime or within 12 months; period of IPV measurement after childbirth:  $\leq 12$  months or  $> 12$  months).

### Data Analysis

Firstly, the pooled prevalence of IPV across the pre-pregnancy, pregnancy, and after childbirth period was computed from the raw proportions or percentages reported in the included studies. For studies without sufficient data to estimate the prevalence, we contacted the authors for additional data. Considering our included studies featured heterogeneity in their methodologies, analytic strategies, and sample sizes, we selected the random-effects model instead of the fixed-effects model (Borenstein et al., 2010).

Secondly,  $Q$  statistics and  $I^2$  statistics were used to estimate heterogeneity. A significant  $p$ -value in  $Q$  results suggests that it is necessary to explore moderators because of the significant between-study variation. The  $I^2$  statistic represents the proportions of the total variation of the included studies (values of 25%, 50%, and 75% indicate low, medium, and high heterogeneity, respectively; Higgins et al., 2003).

We further used a one-study removed sensitivity analysis to assess the impact of each study on the findings. This method recalculates the results after removing one study at a time to explore the influence of any single study on the main outcomes. Specifically, this approach allows us to scrutinize how the results change and determine whether any single study significantly impacts the overall conclusion (McKay et al., 2021). If the results remain consistent even after the exclusion of a specific study, it indicates robust findings that are not unduly influenced by any individual study. This sensitivity analysis is particularly valuable when there is substantial heterogeneity or variability among the included studies. By identifying potential studies that may disproportionately affect the overall results, we can gain a more comprehensive understanding of the strength and reliability of the findings.

Thirdly, subgroup analyses were conducted to examine potential moderators that may influence the prevalence. Moderators were categorized by WHO region (i.e., Western Pacific region, region of the Americas, African region, European region, Southeast Asia region, Eastern Mediterranean region), World Bank income (high income and low and middle income), sample type (clinical and community), period of measurement before pregnancy (lifetime, within 12 months, and unspecified period), and period of measurement after childbirth ( $\leq 12$  months and  $> 12$  months).

Finally, potential publication bias was evaluated by the Egger test and a funnel plot. An asymmetric funnel plot and statistical significance of the Egger test indicate possible publication bias (Egger et al., 1997). All the analyses were conducted using the software *Comprehensive Meta-analysis 3.0* (Biostat Inc., Englewood, NJ, USA). A  $p$ -value  $< .05$  was considered statistically significant.

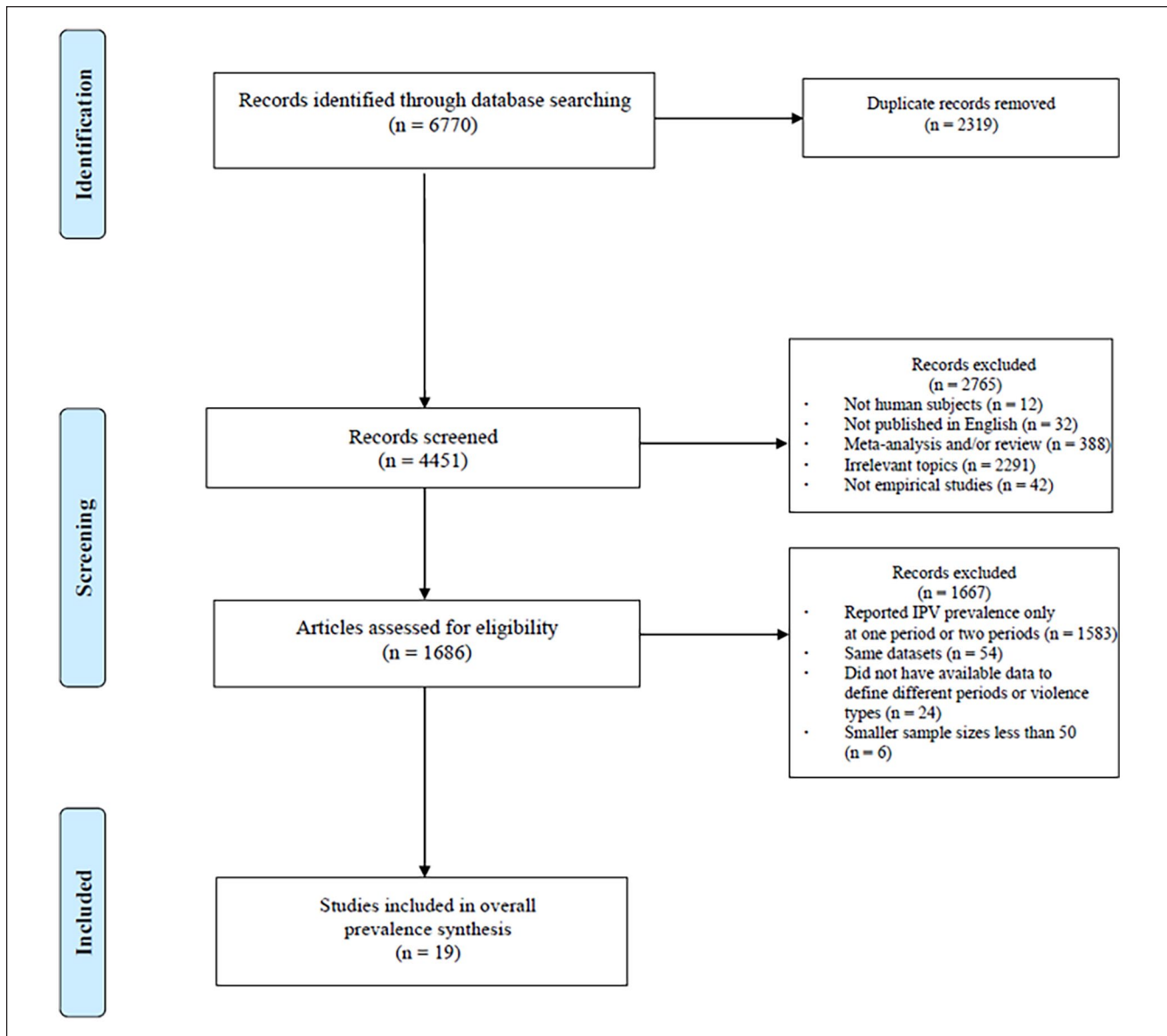
## Results

### Study Characteristics and Participants

The present study identified 6,770 records. After the removal of duplicate entries, 4,451 articles remained. We excluded review articles and publications of irrelevant topics. Studies that did not provide three periods of IPV were also excluded. Finally, 19 articles meeting the study eligibility criteria were included in the meta-analysis. Figure 1 presents the details of the article selection procedures. Respectively, 36,655, 36,704, and 36,624 women provided data before, during, and after pregnancy. Table 1 presents the characteristics of the study, participants, and exposure. Most of the studies were conducted in the region of the Americas ( $n=9$ ). Of the selected studies, 10 recruited clinical samples.

### Quality Assessment

The outcomes of the quality assessment indicated that the majority of studies exhibited relatively high quality in their



**Figure 1.** Study identification and selection process according to PRISMA guidelines.

evaluation of various aspects, including detailed subject descriptions and data analysis, along with the employment of appropriate statistical methods. In this review, the study quality assessment scores ranged from 5 to 9 (Supplemental Appendix B). It is noteworthy that some studies were constrained by their small sample sizes.

### Pooled Prevalence of IPV Across Three Periods

The pooled prevalence of IPV was 21.2%, 95% CI [0.143, 0.303] before pregnancy; 12.8%, 95% CI [0.077, 0.205] during pregnancy; and 14.7%, 95% CI [0.104, 0.203] after childbirth (see Figures 2a–c for details). The effects of the individual studies showed a high level of heterogeneity

( $p < .001$ ). Sensitivity analyses showed that removing studies did not alter the pooled prevalence. We further examined IPV prevalence after childbirth, the results showed that the prevalence of IPV increased from 12.8% within the first year after childbirth to 24.0% beyond the first year. Figure 3 shows the tendency of IPV change across time.

### Subgroup Analyses

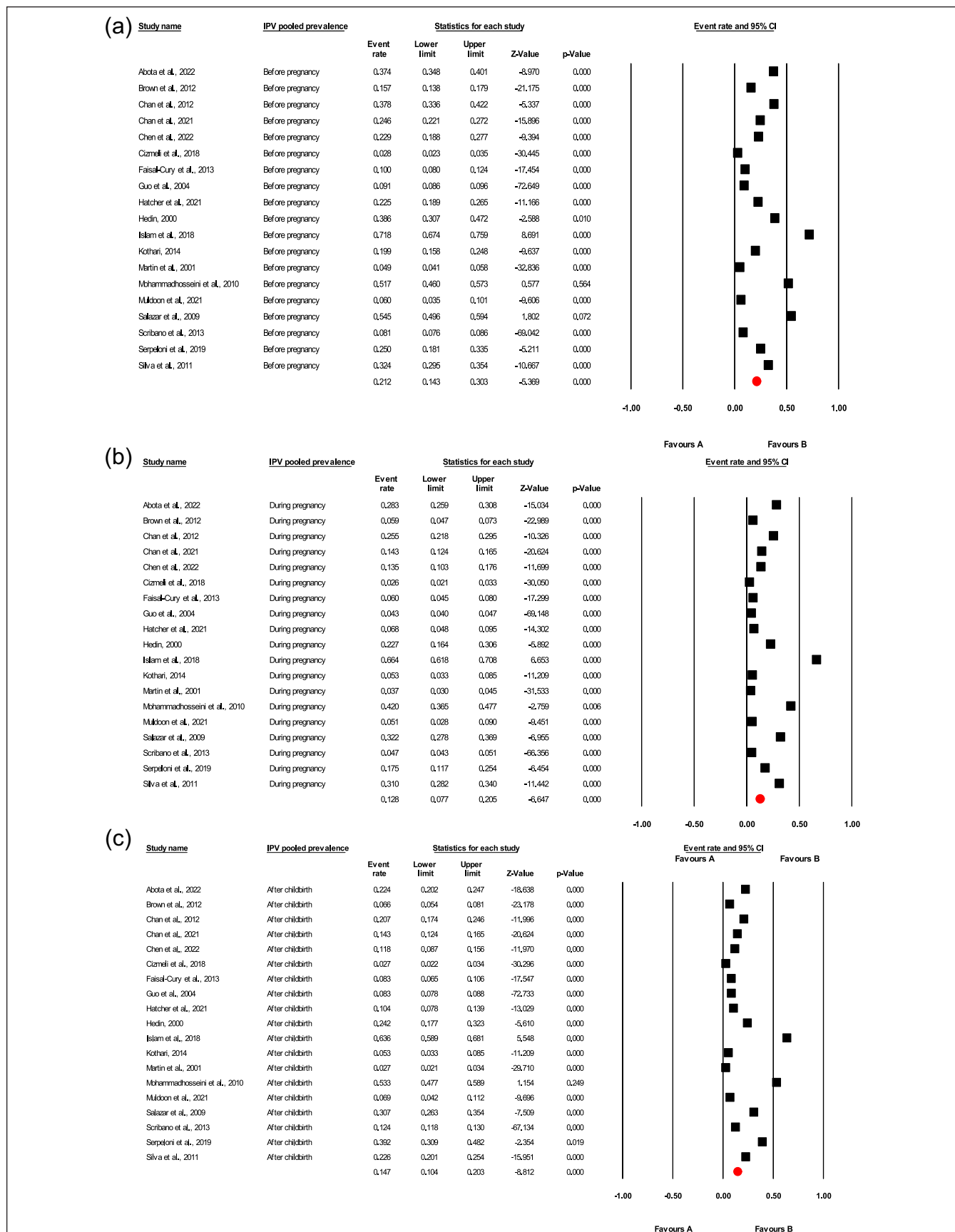
We explored factors that may affect the pooled prevalence of IPV using subgroup analyses. As presented in Table 2, low- and middle-income countries had higher IPV estimates than high-income countries ( $Q = 5.089$ ,  $p = .024$ ). Similarly, the South-East Asia region and the Eastern Mediterranean region

**Table 1.** Characteristics of the Included Studies.

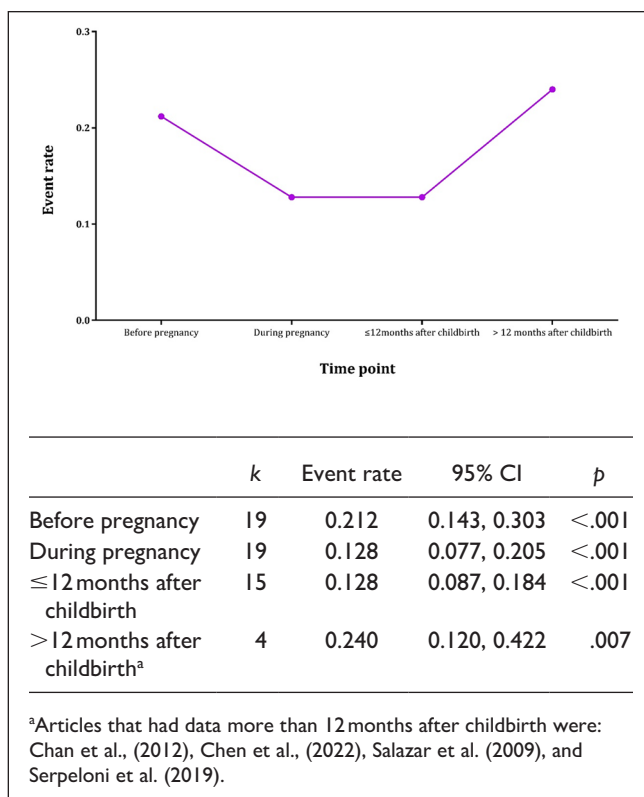
Study	Country	WHO Region	WB Income Classification	Sample Type	Sampling Method	Age Range	IPV Types	IPV Measurement	Period of Measurement Before Pregnancy (e.g., 12 months, Lifetime)	Period of Measurement After Childbirth (months)
Abota et al. (2022)	Ethiopia	AFR	Low income	Community	Random sampling	Mean age: 28.8 years	Physical, emotional, and sexual violence	WHO standardized questionnaire	12 months	1.5 months (within 6 weeks)
Brown et al. (2012)	Australia	WPR	High income	Clinical	Non-random sampling	≥ 18 years	Afraid of a partner or former partner	Report on whether participants were afraid of a partner or former partner	Unspecified	6–12 months
Chan et al. (2012)	Hong Kong, China	WPR	High income	Clinical	Non-random sampling	≥ 18 years	Emotional and physical violence	AAS	12 months	36 months (3 years)
Chan et al. (2021)	Hong Kong, China	WPR	High income	Clinical	Non-random sampling	≥ 18 years	Physical, emotional, and sexual violence	AAS	Lifetime	1 month (4 weeks)
Chen, Lo et al. (2022)	Hong Kong, China	WPR	High income	Clinical	Non-random sampling	≥ 18 years	Physical, emotional, and sexual violence	AAS	Lifetime	3 years
Czmel et al. (2018)	USA	AMR	High income	Community	Non-random sampling	≥ 18 years	Physical and sexual violence	AAS	6 months	About 11 months (43 weeks)
Faisal-Cury et al. (2013)	Brazil	AMR	Upper middle income	Clinical	Non-random sampling	≥ 16 years	Emotional violence	WHO Violence Against Women study instrument	Unspecified	About 12 months
Guo et al. (2004)	China	WPR	Upper middle income	Community	Random sampling	≥ 18 years	Physical, emotional, and sexual violence	Unspecified	12 months	6–18 months (Mean: 11 months)
Hatcher et al. (2021)	South Africa	AFR	Upper middle income	Clinical	Non-random sampling	≥ 18 years	Physical, emotional, and sexual violence	WHO multi-country instrument	12 months	12 months
Hedin (2000)	Sweden	EUR	High income	Clinical	Random sampling	Mean age of women abused during pregnancy: 27 years	Threats, physical and sexual violence	The Severity of Violence Against Women Scale	12 months	2 months (8 weeks)
Islam et al. (2018)	Bangladesh	SEAR	Lower middle income	Community	Random sampling	15–49 years	Physical, emotional, and sexual violence	Module from the WHO's demographic health survey questionnaire	12 months	6 months
Kothari (2014)	USA	AMR	High income	Clinical	Non-random sampling	Mean age: 27.3 years	Emotional violence	Adapted from the computer-based IPV questionnaire and the domestic violence initiative screening question	Unspecified	2 months
Martin et al. (2001)	USA	AMR	High income	Community	Random sampling	≤ 19 years: 15%	Physical violence	Unspecified	12 months	3.6 months
Mohammadhosseini et al. (2010)	Iran	EMR	Lower middle income	Clinical	Random sampling	≥ 18 years	Physical, emotional, and sexual violence	Unspecified	12 months	6–18 months
Muldoon et al. (2021)	Canada	AMR	High income	Clinical	Non-random sampling	≥ 16 years	Physical, emotional, and sexual violence	WHO multi-country instrument	12 months	2–3 months (Mean age of infants: 76 days)
Salazar et al. (2009)	Nicaragua	AMR	Lower middle income	Community	Random sampling	≥ 18 years	Physical, emotional, and sexual violence	WHO multi-country instrument	Lifetime	36 months (3 years)
Scribano et al. (2013)	USA	AMR	High income	Community	Random sampling	Mean age: 19.9 years	Physical violence	AAS	12 months	12 months
Serpeloni et al. (2019)	Brazil	AMR	Upper middle income	Community	Non-random sampling	Mean age: 37.9 years	Severe combined abuse, physical violence, and emotional violence, and harassment	Composite abuse scale	Lifetime	> 12 months (Mean age of children: 13.1 years)
Silva et al. (2011)	Brazil	AMR	Upper middle income	Community	Non-random sampling	≥ 18 years	Physical, emotional, and sexual violence	WHO multi-country instrument	Unspecified	< 12 months

Note. AAS = Abuse Assessment Screen; AFR = African region; AMR = region of the Americas; EMR = Eastern Mediterranean region; EUR = European region; IPV = Intimate partner violence SEAR = South-East Asia region; WB = World Bank; WPR = Western Pacific region. WHO region source: <https://www.who.int/countries>. WB income classification source: <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>.





**Figure 2.** Forest plot of intimate partner violence prevalence before (a), during (b), and after (c) pregnancy.



**Figure 3.** Intimate partner violence prevalence from before pregnancy to after childbirth.

had higher IPV prevalence ( $Q=12.690$ ,  $p=.026$ ). As for the specific measurement period, studies with a longer follow-up (i.e., >12 months) tended to have a higher prevalence than those with a follow-up of less than 12 months.

### Publication Bias

We used a funnel plot and Egger's tests to examine the publication bias. The funnel plot in Figure 4a–c was symmetrical, indicating publication bias is unlikely. The Egger's tests did not show publication bias (all  $p > .05$ ).

### Discussion

This meta-analysis provides comprehensive evidence of the pooled prevalence of IPV from pre-pregnancy to after childbirth. Our findings showed that the IPV rate decreased from pre-pregnancy (21.2%) to during pregnancy (12.8%) and then increased from pregnancy to after childbirth (14.7%). Furthermore, studies following up more than 12-month postpartum tended to have higher IPV prevalence than studies with a follow-up period of less than 12 months. Regarding country income level, low- and middle-income countries had higher IPV estimates than high-income countries.

The prevalence of IPV during pregnancy was 12.8% in the present study. This figure falls within the range of IPV

prevalence found in previous meta-analyses, from 7.7% in China (Wang et al., 2017) to 25.0% globally (Román-Gálvez et al., 2021). The discrepancy in the pooled prevalence across meta-analyses may be partly attributed to the fact that we selected articles that examined IPV against women over three periods (i.e., from pre-pregnancy to postpartum), which is necessary as the nature of IPV can change depending on different periods (Islam et al., 2018). Efforts documenting the continuity of IPV before, during, and after pregnancy are critical to the accurate estimation of IPV (Chan et al., 2021). By including articles that reported these three phases, we found a reduction in IPV during pregnancy compared to its prevalence before and after pregnancy. This seems to be consistent with studies showing that pregnant women report violence less frequently than women who are not pregnant (Chan et al., 2021; Daoud et al., 2012). However, it should be noted that IPV may not end during pregnancy. Rather, although physical manifestations of IPV may attenuate during pregnancy, other less visible forms, such as emotional IPV, may persist (Islam et al., 2018). This transition may be explained by the fact that physical and sexual violence may harm the baby and thus partners may use less (physical and sexual) violence (Van Parys, Deschepper et al., 2014). Empirical evidence has indicated that during pregnancy, emotional IPV is more prevalent and physical violence decreases (Silva et al., 2011). Although no obvious signs such as physical violence exist, emotional violence results in several serious consequences, such as breastfeeding avoidance (Martin de las Heras et al., 2019). In addition, IPV could include other less obvious types of violence, such as controlling behaviors (Garcia-Moreno et al., 2006), which have been reported by pregnant women (McKelvie et al., 2020). Therefore, further studies investigating the stability of, and change in, different types of IPV from pre-pregnancy to postpartum are needed to provide a comprehensive picture of the development of IPV.

Another noteworthy point is that not all pregnant women experience similar changes in IPV over time. A growing number of studies have explored individual changes in IPV (Chen, Lo et al., 2022; Islam et al., 2018). For example, a longitudinal study in Hong Kong found that about 13.2% of pregnant women experienced persistent IPV exposure before, during, and after pregnancy. These women had more severe maternal depression, lower levels of partner involvement, and poorer social support (Chan et al., 2021). Exploring the individual changes in IPV across different periods is beyond the scope of the current paper, and we recommend future work to contribute to this area as it is important for targeted intervention and prevention for the most vulnerable women.

Understanding the correlates of IPV among pregnant women is critical to developing effective interventions, even though this falls beyond the scope of our current work. For instance, a review has identified related risk factors such as physical and nutritional concerns, trauma, discrimination,

**Table 2.** Moderators of Maternal IPV Prevalence Rates through Subgroup Analyses.

Moderator	Random Effect Size Estimate				Heterogeneity Analysis			
	No. of Studies	Event Rate	95% CI	<i>p</i>	<i>Q</i>	<i>df</i>	<i>p</i>	<i>I</i> <sup>2</sup>
WHO region, <i>Q</i> (5) = 12.690, <i>p</i> = .026								
AFR	2	0.191	0.060, 0.465	.030	43.370	1	.000	97.694
AMR	9	0.105	0.059, 0.179	<.001	913.032	8	.000	99.124
EMR	1	0.490	0.132, 0.858	.965	0.000	0	1.000	<0.001
EUR	1	0.281	0.057, 0.716	.322	0.000	0	1.000	<0.001
SEAR	1	0.674	0.248, 0.928	.438	0.000	0	1.000	<0.001
WPR	5	0.137	0.065, 0.265	<.001	327.027	4	.000	98.777
WB income, <i>Q</i> (1) = 5.089, <i>p</i> = .024								
High income	10	0.100	0.054, 0.179	<.001	533.141	9	<.001	98.312
Low and/or middle income	9	0.255	0.144, 0.409	.003	1,799.103	8	<.001	99.555
Sample type, <i>Q</i> (1) = 0.039, <i>p</i> = .843								
Clinical	10	0.153	0.085, 0.260	<.001	350.087	9	<.001	97.429
Community	9	0.166	0.090, 0.286	<.001	2,203.379	8	<.001	99.637
Period of measurement before pregnancy (explaining the pooled IPV prevalence before pregnancy), <i>Q</i> (2) = 1.142, <i>p</i> = .565								
Lifetime	4	0.308	0.136, 0.557	.126	128.063	3	<.001	97.657
Within 12 months	11	0.194	0.114, 0.311	<.001	2,623.422	10	<.001	99.619
Unspecified	4	0.183	0.073, 0.386	.005	140.996	3	<.001	97.872
Period of measurement after childbirth (explaining the pooled IPV prevalence after childbirth), <i>Q</i> (1) = 2.524, <i>p</i> = .112 <sup>a</sup>								
≤12 months	15	0.128	0.087, 0.184	<.001	1,794.260	14	<.001	99.220
>12 months	4	0.240	0.120, 0.422	.007	53.098	3	<.001	94.350

Note. AFR = African region; AMR = region of the Americas; EMR = Eastern Mediterranean region; EUR = European region; IPV = Intimate partner violence; SEAR = South-East Asia region; WB = World Bank; WPR = Western Pacific region.

<sup>a</sup>We grouped Mohammadhosseini et al. (2010) into "≤12 months" as the overall tendency did not change so much.

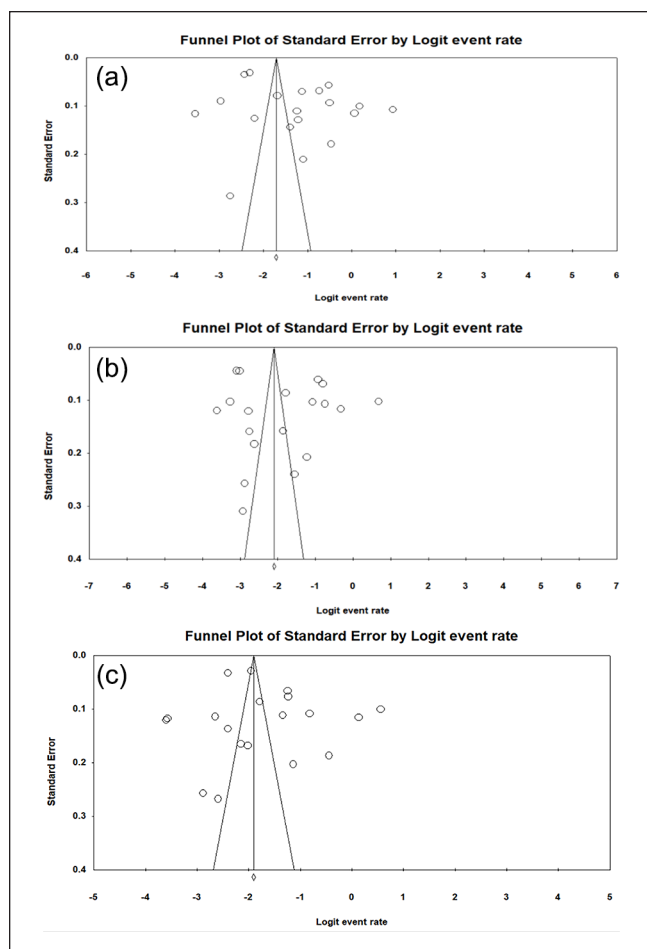
and adverse childhood events (Blount et al., 2021). Another review has summarized the need for individual protective factors (e.g., strong coping skills and high self-esteem), relationship factors (e.g., having a supportive partner, effective communication skills, and healthy conflict-resolution skills), and community and societal factors (e.g., strong social support networks, accessible healthcare, and comprehensive IPV prevention programs) to address IPV (Agarwal et al., 2023). Moreover, the literature has shown that IPV during pregnancy can significantly impact maternal and child health outcomes (Tran et al., 2022). For instance, a national longitudinal study found that mothers exposed to IPV during pregnancy were more likely to experience depressive symptoms when their children reached the age of 3. Furthermore, maternal depression symptoms were found to be directly associated with children's depressive symptoms at the age of 15 (Chen, Cheung et al., 2022). Additionally, IPV during pregnancy has been linked to telomere length shortening in newborns (Chan, Lo, et al., 2019).

Distinguishing a more nuanced timeframe of reported IPV is critical for accurate and effective prevention and intervention. On the one hand, in terms of pre-pregnancy IPV assessments, we differentiated between lifetime and past-year assessments. We found that lifetime IPV tends to be higher than past-year IPV, which echoes some previous

studies. One study interviewed 5,727 women at 6 to 16 weeks postpartum and found that the lifetime prevalence of any form of IPV was higher than the past-year prevalence of IPV (Chan, Rosman et al., 2019). A similar result was found in a Bangladesh sample (Stake et al., 2020). Indeed, the experience of violence from a partner is an ongoing stressor and is sufficient to be remembered with great clarity even if it happened long ago (Xu et al., 2005). Meanwhile, past-year prevalence is considered to be a more accurate period for IPV assessment because of the assumption of less recall bias (Xu et al., 2005). On the other hand, IPV resurfaces gradually after childbirth, particularly in the late postpartum period (i.e., more than 12 months). In fact, IPV can last for a decade after childbirth, and it is associated with compromised maternal mental health outcomes, as shown in a prospective cohort study (Brown et al., 2020). However, compared with IPV during pregnancy, postpartum IPV has been less studied (Navarrete et al., 2021). This lack of information and awareness renders it difficult to provide precise IPV prevention and intervention programs for women (Navarrete et al., 2021). Thus, multi-wave longitudinal studies are needed to verify the long-term impacts of IPV.

Our moderator analyses found that the prevalence of IPV was higher in low- and middle-income countries than in high-income countries. This reflects the difference in the prevalence





**Figure 4.** Funnel plots of publication bias: (a) Before pregnancy, (b) During pregnancy, and (c) After childbirth.

of IPV based on the different socioeconomic levels of countries. Antenatal care is an important window for pregnant women to ask professionals for help and to receive timely resources to resist violence. Pregnant women in high-income countries are more likely to access mental health treatments from psychiatrists, nurses, psychologists, and social workers (White et al., 2023). Thus, efforts to enhance services and their availability in low- and middle-income countries are needed.

## Limitations

The first limitation of this study is that we did not have sufficient data on IPV prevalence to compare different trimesters during pregnancy. Future studies with available data are suggested to further explore this topic. Second, IPV types may change over time. For example, a survey of female residents of three Iowa counties found that women in the “No IPV” class pre-pregnancy were more likely to have “Physical IPV Only” status rather than “Predominantly Sexual IPV” status during pregnancy (Cizmeli et al., 2018). However, this study was limited in its cross-sectional design and only

examined physical and sexual IPV. Future longitudinal studies are needed to investigate changes in IPV types comprehensively. Third, our subsets of articles in some subgroups in the moderator analyses were very small. This small number of articles may lead to insufficient power to detect group differences. Fourth, it should be cautious when interpreting our current findings regarding the increase in prevalence for a longer period, as we did not have paired data after childbirth. Fifth, the articles we included predominantly relied on convenience samples. Therefore, the prevalence we calculated can only be used for comparisons across different life stages. Future population-based studies are needed to yield more robust findings. Lastly, only studies published in English were included. The lack of work in other languages may reduce the generalizability of the findings.

## Implications

Our findings provide important implications for future research, policy, and practice. Based on our synthesized findings, IPV may decrease during pregnancy compared to before pregnancy. However, it increases gradually after childbirth, particularly over the long term. Therefore, screening for violence should occur before, during, and after pregnancy and should not be confined to current pregnancy given the risk of recurrence (Daoud et al., 2012).

Future research is suggested to test whether IPV types change during pregnancy. This is beyond the scope of our current findings but it helps us better understand different types of IPV change, which might provide us with deeper insights into the decreased prevalence of IPV during pregnancy as above discussed. The literature has mixed findings regarding the dominant type of IPV during pregnancy. For example, one study found that emotional and verbal violence is the most common type (Garg et al., 2019). However, others found that physical violence is the most typical form of IPV among pregnant women in Ethiopia (Yohannes et al., 2019). A very limited number of studies have comprehensively tested the change of IPV types from pre-pregnancy to after childbirth. In addition, our results highlight that IPV does not diminish over time but rather seems to increase over a longer term (i.e., more than 12 months after childbirth in the present study). This suggests that merely evaluating short-term IPV after childbirth is insufficient and even provides misleading information that IPV decreases during and after pregnancy. Our findings showed that IPV might be severe after a longer term, which could negatively impact mothers and children. Some cohort studies have indicated that IPV over the long term postpartum is negatively associated with maternal mental health, such as posttraumatic stress symptoms (Brown et al., 2020), and child outcomes, such as probable psychiatric diagnosis and emotional/behavioral difficulties (Gartland et al., 2021). Therefore, longer follow-up studies are critical to comprehensively explore the prevalence and impacts of IPV.

Pregnancy is an opportune time for identifying women exposed to violence, and prenatal care is an important venue to screen for IPV (Cizmeli et al., 2018). Healthcare providers are well-positioned to screen women at the highest risk of IPV. We suggest that screening should be comprehensive, covering the history of violence each trimester and over the short- and longer-term postpartum periods, as some women may experience chronic violence from pre-pregnancy to after childbirth (Chan et al., 2021; Chen, Lo et al., 2022). Additionally, multiple evidence-based strategies exist for preventing, screening, and treating IPV among women during the perinatal period. Trauma-informed care (TIC) is a comprehensive and multilevel approach that helps service providers and clients understand the influence of traumatic events on health outcomes (Substance Abuse & Mental Health Services Administration, 2014). Obstetrical providers are well-positioned to provide TIC (Drexler et al., 2022). Programmatic examples of TIC have shown promising results in maternity care settings (Gerber, 2019). In addition, home visiting and behavioral counseling interventions may be of benefit in addressing multiple risk factors and may lead to reduced IPV among pregnant or postpartum women. Although these interventions show promise, there remains a significant gap in evidence regarding the effectiveness of interventions aimed at preventing IPV during the perinatal period (Van Parys, Verhamme et al., 2014). Notably, interventions in this area are currently scarce, with a predominant focus on crisis intervention approaches among pregnant women exposed to IPV (Howell et al., 2017). Furthermore, various barriers exist when implementing such interventions. For instance, a review of interventions designed to reduce or prevent IPV during pregnancy underscores the importance of culturally sensitive adaptations and the necessity for healthcare professionals to be attuned to cultural sensitivity when communicating with pregnant women (Henriksen et al., 2023). Consequently, it is evident that more studies are warranted to establish the benefits of existing intervention programs (Feltner et al., 2018).

The findings from the current study indicate that policy-makers must take violence experienced by pregnant women seriously. It is suggested that agencies and communities foster collaborative relationships to provide comprehensive health and safety services for women (Macy et al., 2007). In addition, continuing IPV education programs should be provided to first-line health providers (e.g., nurses) as such programs could motivate them to provide better prevention and intervention programs (Abujilban et al., 2022).

## Conclusion

This meta-analysis quantitatively synthesized the literature on IPV prevalence pre-pregnancy, during pregnancy, and after childbirth. Our findings reveal that IPV decreases during pregnancy compared to before pregnancy. However, to what extent it continues to manifest in less visible forms

remains uncertain. In addition, the rate of IPV increases gradually after a longer term postpartum. Women in low- and middle-income countries report higher IPV than women in high-income countries. Therefore, inquiries into the history of IPV experiences are necessary for prenatal care providers to understand how IPV can change over time. Moreover, investigating how different types of IPV change across an extended period is suggested to explore the complexity of IPV. Lastly, multiple waves of studies are needed to provide a longer-term observation of IPV development.

## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The work described in this paper was supported by a fellowship award from the Research Grants Council of the Hong Kong Special Administrative Region, China (Project No. PolyU/SRFS2223-5H01) and the funding for Projects of Strategic Importance of the Hong Kong Polytechnic University (Project Code : 1-ZE1R).

## ORCID iDs


Xiao-Yan Chen  <https://orcid.org/0000-0003-0729-3785>

Camilla Kin Ming Lo  <https://orcid.org/0000-0002-4381-9361>

Shuling Gao  <https://orcid.org/0000-0003-0170-1362>

Douglas Austin Brownridge  <https://orcid.org/0000-0002-9880-4669>

Patrick Ip  <https://orcid.org/0000-0002-6797-6898>

Ko Ling Chan  <https://orcid.org/0000-0001-8508-9224>

## Supplemental Material

Supplemental material for this article is available online.

## References

- Abota, T. L., Gashe, F. E., & Deyessa, N. (2022). Multilevel analysis of factors associated with perinatal intimate partner violence among postpartum population in Southern Ethiopia. *Scientific Reports*, 12(1), 19013. <https://doi.org/10.1038/s41598-022-23645-4>
- Abujilban, S., Mrayan, L., Al-Modallal, H., & Damra, J. K. (2022). Physical intimate partner violence and maternal outcomes in a hospital-based sample of pregnant women in Jordan. *Florence Nightingale Journal of Nursing*, 30(3), 245–252. <https://doi.org/10.5152/FNJJN.2022.20072>
- Agarwal, S., Prasad, R., Mantri, S., Chandrakar, R., Gupta, S., Babhulkar, V., Srivastav, S., Jaiswal, A., & Wanjari, M. B. (2023). A comprehensive review of intimate partner violence during pregnancy and its adverse effects on maternal and fetal health. *Cureus*, 15(5): e39262. <https://doi.org/10.7759/cureus.39262>
- Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2010). A basic introduction to fixed-effect and random-effects

- models for meta-analysis. *Research Synthesis Methods*, 1(2), 97–111. <https://doi.org/10.1002/jrsm.12>
- Blount, A. J., Adams, C. R., Anderson-Berry, A. L., Hanson, C., Schneider, K., & Pendyala, G. (2021). Biopsychosocial factors during the perinatal period: Risks, preventative factors, and implications for healthcare professionals. *International Journal of Environmental Research and Public Health*, 18(15), 8206. <https://doi.org/10.3390/ijerph18158206>
- Brown, S. J., Gartland, D., Donath, S., & MacArthur, C. (2012). Fecal incontinence during the first 12 months postpartum: Complex causal pathways and implications for clinical practice. *Obstetrics and Gynecology*, 119(2 Pt 1), 240–249. <https://doi.org/10.1097/AOG.0b013e318242b1f7>
- Brown, S. J., Mensah, F., Giallo, R., Woolhouse, H., Hegarty, K., Nicholson, J. M., & Gartland, D. (2020). Intimate partner violence and maternal mental health ten years after a first birth: An Australian prospective cohort study of first-time mothers. *Journal of Affective Disorders*, 262, 247–257. <https://doi.org/10.1016/j.jad.2019.11.015>
- Burch, R. L., & Gallup, G. G. (2004). Pregnancy as a stimulus for domestic violence. *Journal of Family Violence*, 19, 243–247. <https://doi.org/10.1023/B:JOFV.0000032634.40840.48>
- Chan, K. L., Brownridge, D. A., Fong, D. Y., Tiwari, A., Leung, W. C., & Ho, P. C. (2012). Violence against pregnant women can increase the risk of child abuse: A longitudinal study. *Child Abuse & Neglect*, 36(4), 275–284. <https://doi.org/10.1016/j.chiabu.2011.12.003>
- Chan, K. L., Lo, C. K., Ho, F. K., Leung, W. C., Yee, B. K., & Ip, P. (2019). The association between intimate partner violence against women and newborn telomere length. *Translational Psychiatry*, 9(1), 239. <https://doi.org/10.1038/s41398-019-0575-6>
- Chan, K. L., Lo, C. K. M., Lu, Y., Ho, F. K., Leung, W. C., & Ip, P. (2021). Intimate partner violence before pregnancy, during pregnancy, and after childbirth: A new conceptualization highlighting individual changes in violence against pregnant women over time. *Journal of Interpersonal Violence*, 37(13–14), NP12111–NP12132. <https://doi.org/10.1177/0886260521997451>
- Chan, Y. Y., Rosman, A., Ahmad, N. A., Mohamad Kasim, N., Abd Razak, M. A., Omar, M., Abdul Aziz, F. A., Awaluddin, S. M., Yusof, M., Jamaluddin, R., Ab Wahab, N. A., & Rosli, N. H. (2019). Prevalence and factors associated with intimate partner violence among postpartum women attending government primary health care clinics in Malaysia. *Journal of Family Violence*, 34(2), 81–92. <https://doi.org/10.1007/s10896-018-0014-0>
- Chen, Y., Cheung, S., & Huang, C. C. (2022). Intimate partner violence during pregnancy: Effects of maternal depression symptoms and parenting on teen depression symptoms. *Journal of Interpersonal Violence*, 37(9–10), NP7034–NP7056. <https://doi.org/10.1177/0886260520967754>
- Chen, X. Y., Lo, C. K. M., Ho, F. K., Leung, W. C., Ip, P., & Chan, K. L. (2022). Changing patterns of intimate partner violence against pregnant women: A three-year longitudinal study. *International Journal of Environmental Research and Public Health*, 19(21), 14397. <https://doi.org/10.3390/ijerph192114397>
- Cizmeli, C., Lobel, M., Harland, K. K., & Saftlas, A. (2018). Stability and change in types of intimate partner violence across pre-pregnancy, pregnancy, and the postpartum period. *Women's Reproductive Health (Phila)*, 5(3), 153–169. <https://doi.org/10.1080/23293691.2018.1490084>
- Daoud, N., Urquia, M. L., O'Campo, P., Heaman, M., Janssen, P. A., Smylie, J., & Thiessen, K. (2012). Prevalence of abuse and violence before, during, and after pregnancy in a national sample of Canadian women. *American Journal of Public Health*, 102(10), 1893–1901. <https://doi.org/10.2105/AJPH.2012.300843>
- Devries, K. M., Kishor, S., Johnson, H., Stockl, H., Bacchus, L. J., Garcia-Moreno, C., & Watts, C. (2010). Intimate partner violence during pregnancy: Analysis of prevalence data from 19 countries. *Reproductive Health Matters*, 18(36), 158–170. [https://doi.org/10.1016/S0968-8080\(10\)36533-5](https://doi.org/10.1016/S0968-8080(10)36533-5)
- Drexler, K. A., Quist-Nelson, J., & Weil, A. B. (2022). Intimate partner violence and trauma-informed care in pregnancy. *American Journal of Obstetrics & Gynecology MFM*, 4(2), 100542. <https://doi.org/10.1016/j.ajogmf.2021.100542>
- Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, 315(7109), 629–634.
- Elder, Jr., G. H., & Shanahan, M. J. (2007). The life course and human development. In *Handbook of child psychology* (vol. 1). John Wiley & Sons, Inc.
- Faisal-Cury, A., Menezes, P. R., d'Oliveira, A. F. P. L., Schraiber, L. B., & Lopes, C. S. (2013). Temporal relationship between intimate partner violence and postpartum depression in a sample of low income women. *Maternal and Child Health Journal*, 17(7), 1297–1303. <https://doi.org/10.1007/s10995-012-1127-3>
- Feltner, C., Wallace, I., Berkman, N., Kistler, C. E., Middleton, J. C., Barclay, C., Higginbotham, L., Green, J. T., & Jonas, D. E. (2018). Screening for intimate partner violence, elder abuse, and abuse of vulnerable adults: Evidence report and systematic review for the US preventive services task force. *JAMA*, 320(16), 1688–1701. <https://doi.org/10.1001/jama.2018.13212>
- Garcia-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., Watts, C. H. Health, & WHO Multi-country Study on Women's Health and Domestic Violence against Women Study Team. (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *Lancet*, 368(9543), 1260–1269. [https://doi.org/10.1016/S0140-6736\(06\)69523-8](https://doi.org/10.1016/S0140-6736(06)69523-8)
- Garg, S., Singh, M. M., Rustagi, R., Engtipi, K., & Bala, I. (2019). Magnitude of domestic violence and its socio-demographic correlates among pregnant women in Delhi. *Journal of Family Medicine and Primary Care*, 8(11), 3634–3639. [https://doi.org/10.4103/jfmpc.jfmpc\\_597\\_19](https://doi.org/10.4103/jfmpc.jfmpc_597_19)
- Gartland, D., Conway, L. J., Giallo, R., Mensah, F. K., Cook, F., Hegarty, K., Herrman, H., Nicholson, J., Reilly, S., Hiscock, H., Sciberras, E., & Brown, S. J. (2021). Intimate partner violence and child outcomes at age 10: A pregnancy cohort. *Archives of Disease in Childhood*, 106(11), 1066–1074. <https://doi.org/10.1136/archdischild-2020-320321>
- Gerber, M. R. (2019). *Trauma-informed healthcare approaches: A guide for primary care*. Springer.
- Guo, S. F., Wu, J. L., Qu, C. Y., & Yan, R. Y. (2004). Domestic abuse on women in China before, during, and after pregnancy. *Chinese Medical Journal (English)*, 117(3), 331–336.
- Halim, N., Beard, J., Mesic, A., Patel, A., Henderson, D., & Hibberd, P. (2018). Intimate partner violence during pregnancy and perinatal mental disorders in low and lower middle income countries: A systematic review of literature, 1990–2017. *Clinical Psychology Review*, 66, 117–135. <https://doi.org/10.1016/j.cpr.2017.11.004>



- Hatcher, A. M., Brittain, K., Phillips, T. K., Zerbe, A., Abrams, E. J., & Myer, L. (2021). Longitudinal association between intimate partner violence and viral suppression during pregnancy and postpartum in South African women. *AIDS*, 35(5), 791–799. <https://doi.org/10.1097/qad.0000000000002796>
- Hedin, L. W. (2000). Postpartum, also a risk period for domestic violence. *European Journal of Obstetrics, Gynecology, and Reproductive Biology*, 89(1), 41–45. [https://doi.org/10.1016/s0301-2115\(99\)00164-5](https://doi.org/10.1016/s0301-2115(99)00164-5)
- Henriksen, L., Kisa, S., Lukasse, M., Flaathen, E. M., Mortensen, B., Karlsen, E., & Garnweidner-Holme, L. (2023). Cultural sensitivity in interventions aiming to reduce or prevent intimate partner violence during pregnancy: A scoping review. *Trauma, Violence, & Abuse*, 24(1), 97–109. <https://doi.org/10.1177/152483802110217>
- Higgins, J. P., Thompson, S. G., Deeks, J. J., & Altman, D. G. (2003). Measuring inconsistency in meta-analyses. *BMJ*, 327, 557–560. <https://doi.org/10.1136/bmj.327.7414.557>
- Howell, K. H., Miller-Graff, L. E., Hasselle, A. J., & Scraftford, K. E. (2017). The unique needs of pregnant, violence-exposed women: A systematic review of current interventions and directions for translational research. *Aggression and Violent Behavior*, 34, 128–138. <https://doi.org/10.1016/j.avb.2017.01.021>
- Islam, M. J., Broidy, L., Mazerolle, P., Baird, K., & Mazumder, N. (2018). Exploring intimate partner violence before, during, and after pregnancy in Bangladesh. *Journal of Interpersonal Violence*, 36(7–8), 3584–3612. <https://doi.org/10.1177/0886260518775753>
- Jackson, C. L., Ciciolla, L., Crnic, K. A., Luecken, L. J., Gonzales, N. A., & Conrod, D. V. (2015). Intimate partner violence before and during pregnancy: Related demographic and psychosocial factors and postpartum depressive symptoms among Mexican American women. *Journal of Interpersonal Violence*, 30(4), 659–679. <https://doi.org/10.1177/0886260514535262>
- James, P. B., Renzaho, A. M. N., Mwanri, L., Miller, I., Wardle, J., Gatwiri, K., & Lauche, R. (2022). The prevalence of anxiety, depression, and post-traumatic stress disorder among African migrants: A systematic review and meta-analysis. *Psychiatry Research*, 317, 114899. <https://doi.org/10.1016/j.psychres.2022.114899>
- Kothari, C. L. (2014). *The intersection of depression, partner violence and poverty during the perinatal period*. APA PsycInfo®. <http://ezproxy.lb.polyu.edu.hk/login?url=https://www.proquest.com/dissertations-theses/intersection-depression-partner-violence-poverty/docview/1671624905/section2?accountid=16210>
- Lo, C. K. M., Chan, K. L., Yu, L., Chui, W. W. H., & Ip, P. (2023). Long-term effects of psychosocial interventions on internet-related disorders: A meta-analysis. *Computers in Human Behavior*, 138. <https://doi.org/10.1016/j.chb.2022.107465>
- Macy, R. J., Martin, S. L., Kupper, L. L., Casanueva, C., & Guo, S. (2007). Partner violence among women before, during, and after pregnancy: Multiple opportunities for intervention. *Women's Health Issues*, 17(5), 290–299. <https://doi.org/10.1016/j.whi.2007.03.006>
- Martin, S. L., Mackie, L., Kupper, L. L., Buescher, P. A., & Moracco, K. E. (2001). Physical abuse of women before, during, and after pregnancy. *JAMA*, 285(12), 1581–1584. <https://doi.org/10.1001/jama.285.12.1581>
- Martin de las Heras, S., Velasco, C., Luna-Del-Castillo, J. D., & Khan, K. S. (2019). Breastfeeding avoidance following psychological intimate partner violence during pregnancy: A cohort study and multivariate analysis. *BJOG*, 126(6), 778–783. <https://doi.org/10.1111/1471-0528.15592>
- McIntosh, J. E., Tan, E. S., Levendosky, A. A., & Holtzworth-Munroe, A. (2021). Mothers' experience of intimate partner violence and subsequent offspring attachment security ages 1–5 years: A meta-analysis. *Trauma, Violence, & Abuse*, 22(4), 885–899. <https://doi.org/10.1177/1524838019888560>
- McKay, M. T., Cannon, M., Chambers, D., Conroy, R. M., Coughlan, H., Dodd, P., Healy, C., O'Donnell, L., & Clarke, M. C. (2021). Childhood trauma and adult mental disorder: A systematic review and meta-analysis of longitudinal cohort studies. *Acta Psychiatrica Scandinavica*, 143(3), 189–205. <https://doi.org/10.1111/acps.13268>
- McKelvie, S., Leodoro, B., Sala, T., Tran, T., & Fisher, J. (2020). Prevalence, patterns, and determinants of intimate partner violence experienced by women who are pregnant in Sanma Province, Vanuatu. *Journal of Interpersonal Violence*, 37(9–10), NP7632–NP7653. <https://doi.org/10.1177/0886260520969235>
- Mohammadhosseini, E., Sahraean, L., & Bahrami, T. (2010). Domestic abuse before, during and after pregnancy in Jahrom, Islamic Republic of Iran. *East Mediterranean Health Journal*, 16(7), 752–758.
- Mojahed, A., Alaidarous, N., Kopp, M., Pogarell, A., Thiel, F., & Garthus-Niegel, S. (2021). Prevalence of intimate partner violence among intimate partners during the perinatal period: A narrative literature review. *Frontiers in Psychiatry*, 12, 601236. <https://doi.org/10.3389/fpsy.2021.601236>
- Muldoon, K. A., Denize, K. M., Talarico, R., Boisvert, C., Frank, O., Harvey, A. L. J., Rennicks White, R., Fell, D. B., O'Hare-Gordon, M. A., Guo, Y., Murphy, M. S. Q., Corsi, D. J., Sampsel, K., Wen, S. W., Walker, M. C., & El-Chaar, D. (2021). COVID-19 and perinatal intimate partner violence: A cross-sectional survey of pregnant and postpartum individuals in the early stages of the COVID-19 pandemic. *BMJ Open*, 11(5), e049295. <https://doi.org/10.1136/bmjopen-2021-049295>
- Navarrete, L., Nieto, L., & Lara, M. A. (2021). Intimate partner violence and perinatal depression and anxiety: Social support as moderator among Mexican women. *Sexual & Reproductive Healthcare*, 27, 100569. <https://doi.org/10.1016/j.srhc.2020.100569>
- Román-Gálvez, R. M., Martín-Peláez, S., Fernández-Félix, B. M., Zamora, J., Khan, K. S., & Bueno-Cavanillas, A. (2021). Worldwide prevalence of intimate partner violence in pregnancy. A systematic review and meta-analysis. *Frontiers in Public Health*, 9, 738459. <https://doi.org/10.3389/fpubh.2021.738459>
- Salazar, M., Valladares, E., Ohman, A., & Högberg, U. (2009). Ending intimate partner violence after pregnancy: Findings from a community-based longitudinal study in Nicaragua. *BMC Public Health*, 9, 350. <https://doi.org/10.1186/1471-2458-9-350>
- Sardinha, L., Maheu-Giroux, M., Stockl, H., Meyer, S. R., & Garcia-Moreno, C. (2022). Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *Lancet*, 399(10327), 803–813. [https://doi.org/10.1016/S0140-6736\(21\)02664-7](https://doi.org/10.1016/S0140-6736(21)02664-7)

- Scribano, P. V., Stevens, J., & Kaizar, E. (2013). The effects of intimate partner violence before, during, and after pregnancy in nurse visited first time mothers. *Maternal and Child Health Journal*, 17(2), 307–318. <https://doi.org/10.1007/s10995-012-0986-y>
- Serpeloni, F., Radtke, K. M., Hecker, T., Sill, J., Vukojevic, V., de Assis, S. G., Schauer, M., Elbert, T., & Nätt, D. (2019). Does prenatal stress shape postnatal resilience?—An epigenome-wide study on violence and mental health in humans. *Frontiers in Genetics*, 10, 269. <https://doi.org/10.3389/fgene.2019.00269>
- Shoffner, D. H. (2008). We don't like to think about it: Intimate partner violence during pregnancy and postpartum. *The Journal of Perinatal & Neonatal Nursing*, 22(1), 39–48. <https://doi.org/10.1097/01.JPN.0000311874.30828.4e>
- Silva, E. P., Ludermir, A. B., Araújo, T. V. B. D., & Valongueiro, S. A. (2011). Frequency and pattern of intimate partner violence before, during and after pregnancy. *Revista de Saude Publica*, 45(6), 1044–1053. <https://doi.org/10.1590/s0034-89102011005000074>
- Stake, S., Ahmed, S., Tol, W., Ahmed, S., Begum, N., Khanam, R., Harrison, M., & Baqui, A. H. (2020). Prevalence, associated factors, and disclosure of intimate partner violence among mothers in rural Bangladesh. *Journal of Health, Population and Nutrition*, 39(1), 14. <https://doi.org/10.1186/s41043-020-00223-w>
- Substance Abuse & Mental Health Services Administration. (2014). *SAMHSA's concept of trauma and guidance for a trauma-informed approach* (HHS Publication No. (SMA) 14-4884). <https://store.samhsa.gov/sites/default/files/d7/priv/sma14-4884.pdf>
- Taillieu, T. L., & Brownridge, D. A. (2010). Violence against pregnant women: Prevalence, patterns, risk factors, theories, and directions for future research. *Aggression and Violent Behavior*, 15(1), 14–35. <https://doi.org/10.1016/j.avb.2009.07.013>
- Tenkorang, E. Y., & Owusu, A. Y. (2018). A life course understanding of domestic and intimate partner violence in Ghana. *Child Abuse & Neglect*, 79, 384–394. <https://doi.org/10.1016/j.chiabu.2018.02.027>
- Tran, D. T. T., Murray, L., & Van Vo, T. (2022). Intimate partner violence during pregnancy and maternal and child health outcomes: A scoping review of the literature from low-and-middle income countries from 2016–2021. *BMC Pregnancy and Childbirth*, 22(1), 315. <https://doi.org/10.1186/s12884-022-04604-3>
- Van Parys, A. S., Deschepper, E., Michielsens, K., Temmerman, M., & Verstraelen, H. (2014). Prevalence and evolution of intimate partner violence before and during pregnancy: A cross-sectional study. *BMC Pregnancy and Childbirth*, 14, 294. <https://doi.org/10.1186/1471-2393-14-294>
- Van Parys, A. S., Verhamme, A., Temmerman, M., & Verstraelen, H. (2014). Intimate partner violence and pregnancy: A systematic review of interventions. *PloS One*, 9(1), e85084. <https://doi.org/10.1371/journal.pone.0085084>
- Wang, T., Liu, Y., Li, Z., Liu, K., Xu, Y., Shi, W., & Chen, L. (2017). Prevalence of intimate partner violence (IPV) during pregnancy in China: A systematic review and meta-analysis. *PLoS One*, 12(10), e0175108. <https://doi.org/10.1371/journal.pone.0175108>
- World Health Organization. (2018). *Violence against women prevalence estimates*. <https://apps.who.int/iris/bitstream/handle/10665/341337/9789240022256-eng.pdf?sequence=1>
- White, S. J., Sin, J., Sweeney, A., Salisbury, T., Wahlich, C., Montesinos Guevara, C. M., Gillard, S., Brett, E., Allwright, L., Iqbal, N., Khan, A., Perot, C., Marks, J., & Mantovani, N. (2023). Global prevalence and mental health outcomes of intimate partner violence among women: A systematic review and meta-analysis. *Trauma, Violence, & Abuse*. <https://doi.org/10.1177/15248380231155529>
- Xu, X., Zhu, F., O'Campo, P., Koenig, M. A., Mock, V., & Campbell, J. (2005). Prevalence of and risk factors for intimate partner violence in China. *American Journal of Public Health*, 95(1), 78–85. <https://doi.org/10.2105/AJPH.2003.023978>
- Yohannes, K., Abebe, L., Kisi, T., Demeke, W., Yimer, S., Feyiso, M., & Ayano, G. (2019). The prevalence and predictors of domestic violence among pregnant women in Southeast Oromia, Ethiopia. *Reproductive Health*, 16(1), 37. <https://doi.org/10.1186/s12978-019-0694-9>

## Author Biographies

**Xiao-Yan Chen** is a PhD candidate in the Department of Applied Social Sciences, the Hong Kong Polytechnic University. Her research interests include family violence and health outcomes of victims exposed to adversity.

**Camilla Kin Ming Lo** is an assistant professor in the Department of Applied Social Sciences, the Hong Kong Polytechnic University. She is a registered social worker. Her research work focuses on child maltreatment, addiction, and attachment and close relationships across the lifespan.

**Qiqi Chen** is an assistant professor at the Department of Applied Social Sciences, the Hong Kong Polytechnic University. Her research interests encompass child and family polyvictimization, cyberbullying, and health correlates.

**Shuling Gao** is an assistant professor at the School of Sociology and Political Science, Shanghai University, China. She is interested in child and adolescent development. More specifically, her work focuses on child maltreatment, school bullying, mental health, and juvenile delinquency.

**Frederick K. Ho** is a lecturer in public health at the School of Health and Well-being, University of Glasgow. He is trained as a medical statistician and epidemiologist, with a research focus on extracting insight from complex data on topics like violence prevention and cardiovascular health.

**Douglas A. Brownridge** is a professor in the Department of Community Health Sciences at the University of Manitoba. His research and teaching focus on the epidemiology of family violence. He has conducted research on various aspects of different forms of family violence, including child abuse, intimate partner violence, and elder abuse.

**Wing Cheong Leung** is a consultant obstetrician in the Department of Obstetrics and Gynecology at Kwong Wah Hospital, Hong Kong. He is specialized in research with the health of pregnant women.

**Patrick Ip** is a clinical associate professor in the Department of Pediatrics and Adolescent Medicine, University of Hong Kong. He is an experienced pediatrician who specializes in community child health and child protection.

**Ko Ling Chan** is a professor in the Department of Applied Social Sciences, the Hong Kong Polytechnic University. He specializes in research and practice with family violence and child and family polyvictimization.