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Experiences of intimate partner violence among partners during the perinatal period and the COVID-19 pandemic

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1. General introduction

1.1 Relevance

Intimate partner violence (IPV) is not only considered a serious public health issue and a cause of human suffering (National Center for Injury Prevention of the Centers for Disease Control and Prevention, 2015), IPV can be a barrier to utilization of care in vital life phases (Bonomi et al, 2009; Snow Jones et al, 2006), and a determinant of many serious negative health outcomes for affected individuals and their families (Silverman et al, 2020). IPV, a major contributor to health, social and economic inequalities, threatens family cohesion and crosses socio-economic boundaries (Rhodes, 2012).

Among those individuals who suffer serious to fatal implications as direct effects of IPV, research has only recently considered the perinatal phase to be of special consideration and is exceptionally scarce (World Health Organization [WHO], 2011). More so it is the case, as (expectant) parents IPV exposure is further complicated by societal crises such as natural disasters and pandemics, where the threat of violence and its health-related consequences may be elevated (Yehuda et al, 2008).

Violence does not only have health implications and social consequences for the concerned victims and their families, it also entails high economic costs for society. These costs cover a variety of aspects, including expenses related to police operations and investigations, court proceedings, legal aid, the penal system, probation, medical treatments, victim therapy, women's shelters, counseling centers, programs for offenders, as well as support measures for affected children and adolescents. Next to the immediate costs caused by violence, indirect costs also have to be taken into consideration. For example, such costs result in a loss of work income and productive working hours, and consequently compromise the general productivity of society (Frauenhauskoordination e. V, 2023).

In addition, IPV leads to increased health care costs not only for women who are currently experiencing abuse, but also for those who have experienced such abuse in the past, as noted by Jones et al. (2006). In a 3-year longitudinal study from the USA where costs were compared in a non-poor, privately insured sample, average health care costs for each woman who reported physical, sexual, and/or emotional abuse exceeded those of never abused women by 1,700 Dollar over the study period. Studies on Austrian and Swiss estimates concluded that the annual costs amount to 78 million Euro (Brigitt &

Evelyn, 2006), and 262 million Euro (Alberto & Yodanis, 1998), respectively. In Germany, the overall costs amount to at least 3,8 billion Euro every year (Sacco, 2017). Thus, considering the complex and unique exposure factors that can further exacerbate the risks of IPV on individual health is crucial for response efforts aimed at potentially reducing healthcare costs among other social consequences.

1.2 Exposure to IPV during the perinatal period

Increasing evidence indicates that self-reported IPV during pregnancy and the perinatal period (i.e., during the time frame from 1 year before to 18 or 24 months after the birth of the child: Helfer, 1987) is associated with poor health outcomes for the mother and her offspring (Boy & Salihu, 2004; Coker et al, 2004; Cokkinides et al, 1999; Rosen et al, 2007; Sarker, 2008). Exposure to violence during the perinatal period increases the likelihood of critical risk factors, including a fourfold increase in the risk of antepartum hemorrhage, a condition that poses a serious threat to the unborn child (Han & Stewart, 2014; Janssen et al, 2003). There is also a well-established increased risk of low birth weight (Lipsky et al, 2003; Silverman et al, 2006), intrauterine growth restriction (Janssen et al, 2003), and preterm delivery (Lipsky et al, 2003; Sarkar, 2008).

Psychological implications of IPV during the perinatal period are of equal importance to somatic symptoms because they may also bear adverse consequences for the child-bearing parent, the child, and the entire family. The placenta, for example, produces 11beta-hydroxysteroid dehydrogenase type 2, an enzyme that breaks down cortisol to an inactive form, protecting the developing fetus from excessive maternal cortisol concentrations and its harmful effects (Mueller & Tronick, 2019). When the mother is exposed to high-stress levels during different vulnerable periods of lengths from early to late gestation due to acute stress situations like her exposure to IPV, the placental barrier is corrupted, thus exposing the fetus to disproportionately high fluctuations in maternal cortisol and affecting its neurohormonal chemistry (Rakers et al, 2017).

High-stress contexts increase maternal cortisol and can cross the placenta into the fetal compartment and result in more cortisol reaching the fetus. This exposure can induce long-lasting if not permanent changes in the postnatal activity of the fetal hypothalamic-pituitary-adrenal axis (HPAA), which can lead to changes in behavioral development and cognitive alterations for the child later in life (Conradt et al, 2013; O'Donnell et al, 2009; Ramborger et al, 2018).

Post-traumatic stress disorder (PTSD) and depression are the most common psychological consequences for (expectant) women living under present adverse life conditions, such as IPV, during the perinatal period (Rose et al, 2010). Like the exposure to maternal stress, maternal PTSD during pregnancy and after childbirth could also impact the offspring's HPA regulation (Yehuda et al, 2008), and could result in psychological disorders such as anxiety, eating disorders, and externalizing problems during childhood and later in life (Schury et al, 2017). Perinatal maternal depression is associated with an increased risk for the offsprings' future depression (Plant et al, 2015), autism, schizophrenia (Klengel et al, 2016), and bears an adverse impact on their social-emotional development (Jung et al, 2017).

Perinatal depression coincides with a period of substantial brain development during which infants are entirely dependent on their primary caregivers for physical care, security, and emotional regulation. Therefore, it is hard not to imagine how these psychological implications could have further impact on the mother-child bond and interaction (Devries et al, 2013). A negative mother-infant relationship in the early years of the child's life can have long lasting negative consequences emotionally, socially, and cognitively (Mueller & Tronick, 2019).

IPV during pregnancy also predicts unhealthy maternal behaviors, such as alcohol, illicit drug, or tobacco use, and late or inconsistent prenatal care (Devries et al, 2010). Moreover, several studies found that maternal injury is a leading cause of maternal mortality, where 54.3% of pregnancy-associated suicides involved intimate partner conflict, and 45.3% of pregnancy-related murders of women were associated with pre-existing IPV victimization (Campbell et al, 2007; Palladino et al, 2011). However, uni-directional IPV (i.e., violence perpetrated against a partner with no reciprocity from the affected individual) is increasingly researched and documented during the perinatal period and empirical findings on IPV, where both parents are engaging (known as bi-directional IPV) is still scarce.

Similar to women, studies found that affected men reported significantly poorer mental health: such as PTSD, depression, anxiety, and suicidal ideation (Chan et al, 2008; Hines & Douglas, 2010; Kaura & Lohman, 2007; Machado et al, 2017; Nybergh et al, 2016; Tilbrook et al, 2010). Some men cope with stress and trauma through externalizing behaviors such as drug use, alcohol consumption, smoking, and antisocial behavior, all of which can negatively affect their health and well-being (Carbone-López et al, 2006; Entilli & Cipolletta, 2017; Nybergh et al, 2016), where they could be giving up

hobbies, missing work, losing employment, and withdrawing from family as a further consequence of IPV (Hines et al, 2015; Carbone-López, 2006).

Not to mention children's exposure to interparental IPV (e.g., witnessing, hearing, and intervening) that could result in a wide range of detrimental consequences (Haselschwerdt, 2014). Children exposed to interparental IPV are consistently at an elevated risk for total behavioral problems (Kernic et al, 2003); internalizing behaviors including post-traumatic stress symptoms (PTSS) and a PTSD diagnosis (Moylan et al, 2010; Zinzow et al, 2009), lowered self-esteem, anxiety and dissociation (Luthra et al, 2009); maladaptive externalizing behaviors including partaking in antisocial and delinquent behaviors (Moylan, 2010; Zinzow, 2009; Bayarri Fernández et al, 2011); deficits in cognitive domains, including reading, phonological awareness, and verbal ability (Blackburn, 2008; Graham-Bermann et al, 2010); dating violence perpetration (Irland & Smith, 2009; Jourile et al, 2012); and dating violence victimization (Levendosky et al, 2002).

Exposure to chronic or frequent interparental IPV worsened the negative impact (Haselschwerdt, 2014). In comparison to children exposed to less severe or mild IPV, children exposed to severe IPV were significantly more likely to perpetrate IPV against a dating partner (Jouriles 2012); have less attachment security (Levendosky, 2002); have less positive and fewer interactions with their mother (Levendosky et al, 2003); higher acceptance of violence against women; and more loneliness and conflictual peer interactions (Herrera & McCloskey, 2001).

At a minimum, the perinatal period may present victimized partners with more barriers to leaving their abusive partners. Thus, the perinatal period presents a unique and critical opportunity for IPV identification and intervention. In the case of (expectant) women, the perinatal period is therefore unique because it may be the only time that some of them have the opportunity to participate in regular health care. This may be particularly the case for women who are experiencing more severe forms of IPV (Cha & Masho, 2014).

1.3 Exposure to IPV during the COVID-19 pandemic

In general, research suggests that IPV, and overall violence, increases during humanitarian emergencies and crises (WHO, 2020). According to the Secretary-General of the United Nations, the stay-at-home orders during the COVID-19 pandemic have led to

a “horrifying global surge” in IPV (UN Women, 2020). Worldwide, the incidents of violence against women and IPV have mostly increased (Zero & Geary, 2020). There may be various explanations for not only the rise of IPV, but also the severity of it during the pandemic (Thiel et al, 2022).

On the one hand, social isolation was an actively promoted tactic to prevent the transmission of the coronavirus. However, this preventive measure inadvertently resulted in reduced opportunities for victims to seek help since they were confined to their homes (Évans, 2020). On the other hand, it is important to recognize that social isolation is often used by abusive partners to exert control, and it is regarded as a risk factor for victimization also under normal circumstances and without the context of a worldwide pandemic. Consequently, the implementation of social isolation measures during the COVID-19 pandemic has the potential to exacerbate abusive tactics, specifically concerning the threat and risk of infection (Pfitzner et al, 2022; Peterman et al, 2020).

This amplified burden can be better understood by conceptualizing the COVID-19 pandemic and IPV as a syndemic (see *section 1.4.2.3*). By viewing these interconnected phenomena through a syndemic lens, we gain a deeper understanding of the complex and mutually reinforcing effects they have on each other.

Another factor that might have increased the risks for IPV during the pandemic was the fact that the new policies had resulted in a lack of the usual support systems and existing aid to help victims of IPV or domestic violence were partially disrupted or no longer available (Kaukinen, 2020; Tierolf et al, 2021). A recent study found that in many cases where women experienced violence during this period, their ability to seek help decreased while the complexity of their needs, e.g., financial needs and parenting responsibilities, and the means to support those needs increased. Some victims may have felt compelled to prioritize their immediate safety and basic needs over seeking help, and may have chosen to remain in abusive relationships in order to meet these needs (Lausi et al, 2021). This complexity has made it difficult for practitioners and support organizations to effectively assess risk and develop safety plans tailored to the specific needs of victims during the COVID-19 restrictions (Pfitzner et al, 2022).

1.4 Current knowledge

1.4.1 Definitions and prevalence estimates

Distinguishing family disputes or quarrels, family conflicts, and domestic violence (DV) or IPV is not easy in practice. However, it is important to shortly elaborate on certain distinguishing features. Family quarrels and conflicts are mainly accompanied by verbal assaults and sometimes physical assaults, whereby there is no power imbalance that dominates the relationship between those involved. Individual acts of violence (e.g. shouting, pushing away) and one-off acts of violence are often not classified as domestic violence and are considered situational (also known as situational couple violence), unless they are experienced by the victim as *threatening, frightening, or violent* (Kapella et al, 2011; Schröttle & Ansorge, 2008). However, threatening, frightening, and violent ongoing conflicts between partners, whether one-sided or reciprocal, can endanger those involved, including the well-being of children (Federal Office for Gender Equality [EBG], 2020).

IPV can manifest itself in subtle forms of psychological violence and controlling behaviors, such as targeted or persistent devaluation, intimidation, and/or threatening or cutting off social contacts. These acts of violence, which may not appear serious on their own, often do not occur in isolation but are part of a pattern of action. This very pattern could be also known as coercive control, or intimate terrorism (Johnson, 2008). For an assessment of whether IPV is present, which distinguishes it from "ordinary" disputes and conflicts, the severity of IPV, the behavioral patterns of the person perpetrating the violence, the subjective experience of violence by the person concerned, and the immediate and long-term consequences of the violence on the person concerned must be considered (Gloor & Meier, 2012; Kapella 2011; Watson & Parsons, 2005).

IPV is a complex and multifaceted issue. It takes place in different relationship contexts and constellations of victims and perpetrators. It affects individuals from various ethnic, economic, or religious backgrounds and is defined as "any act or behavior that causes physical, psychological, or sexual harm". These behaviors may pertain to [1] acts of physical violence (e.g., hitting, kicking, beating); [2] sexual violence (e.g., forced sexual intercourse, sexual coercion); [3] psychological (emotional) violence (e.g., insults, humiliation, intimidation, threats of harm); [4] controlling behavior (e.g., isolation from family and friends, monitoring movements, restricting access to financial resources, employment, education, medical care) (Garcia-Moreno et al, 2006). These behaviors can

occur individually or together. The forms and combinations differ depending on the relationship constellation, the gender, and the age of the people involved. The various forms of violence can be threatened or exercised. They can occur while living together or apart.

In research on violence and IPV, there is no uniform or universal categorization of forms and acts of violence. In general, a distinction is made between physical, sexual, and psychological violence. Depending on the focus, other forms of violence are defined within these categories or in addition to these categories, e.g. controlling behaviors, sexual harassment, social violence, or economic violence. For this dissertation, the term *intimate partner violence* is selected as the primary term with which to discuss the problem of violence between partners within marriages or other intimate relationships. This term was chosen as the best option to maintain objectivity and avoid implicit agreement with any particular theoretical framework; it avoids openly endorsing either a feminist or a family violence perspective, rather focuses the discussion on the intimate relationship as the specific unit of analysis.

Current literature recognizes that one in four women worldwide is estimated to be subjected to physical and/or sexual violence by an intimate partner at least once in her lifetime (WHO, 2021). Although representative data for male victimization are lacking, men seem to be significantly less likely than women to experience physical or sexual IPV (Coker et al, 2002). In Germany, lifetime prevalence for women was estimated at 22% for physical and/or sexual IPV. IPV that ended in murder was mainly directed against women (81%) (European Union Agency for Fundamental Rights [FRA], 2014).

Recent prevalence reports of physical IPV in women during pregnancy and before the pandemic ranged from 1% in Japan to 28% in Peru, with most sites reporting between 4 and 12% (Garcia-Moreno et al, 2006). An analysis of Demographic and Health Surveys and the International Violence against Women Survey found prevalence rates for IPV during pregnancy between 2% in Australia, Denmark, Cambodia, and the Philippines to 13.5% in Uganda, with the majority ranging between 4 and 9% (Devries et al, 2013). Samples of pregnant women from clinical settings show the highest prevalence in Egypt at 32%, followed by India (28%), Saudi Arabia (21%) and Mexico (11%) (Devries et al, 2010). Furthermore, a prospective study of postpartum IPV suggests that IPV may progress or increase, or even occur for the first time as women progress through the postpartum period (Agrawal et al, 2014). It is important to keep in mind that the

postpartum period is a long time in an individual's life, during which so many factors and complexities could determine an individual's experience of IPV.

In our most recent data synthesis conducted during the COVID-19 pandemic, we found evidence indicating a significant increase in the severity of all types of IPV. This increase was observed among female individuals as well as individuals belonging to the LGBTIQ+ communities (Thiel et al, 2022). Additionally, in Australia, there was a notable 42% rise in reported incidences of first-time family violence (Pfitzner et al, 2022). However, the evidence on changes in prevalence rates during the pandemic remains inconclusive (Thiel et al, 2022). Further research is needed to gain a clearer understanding of possible changes in these areas.

1.4.2 Theoretical approaches

Over the past four decades, there has been a significant increase in scholarly and public discussions surrounding abuse and violence within intimate relationships. What was once regarded as a private matter between two individuals has now been recognized as a multifaceted sociocultural issue and a public health crisis (Kelly, 2011). This persistent social problem is a robust contributor to a wide range of physical, social, and mental health problems among its victims and children, as well as to the reproduction of IPV itself, and violence in other relationship contexts, across generations to come.

As a result, activists and scholars from various fields continue to develop deeper understandings of the underlying causes of IPV. By connecting the values of health promotion and social justice, there is potential to enhance the emerging understanding of IPV's risk factors and consequences, which are rooted in social disadvantages among different populations. These disadvantages can lead to adverse health outcomes for victims and their families (Buffarini et al, 2021). Through social and political mobilization, IPV has accumulated significant political and intellectual capital. Its growing influence challenges the long-standing social and cultural norms that, for centuries, have tolerated or even facilitated the abuse of intimate partners.

This dissertation is an attempt to generate knowledge with the intention of advancing contextualized practice that prevents and intervenes to prevent further violence. It presents integrative ecological and intersectionist analyses through empirical data and qualitative reviews. In the following, we provide three summaries of major theoretical approaches to researching IPV, which we utilized.

1.4.2.1 Ecological framework

While IPV is widespread, it is not universal (Counts et al, 1992; Levinson, 1989). According to the WHO, “*the most widely used model for understanding violence is the ecological model, which proposes that violence is a result of factors operating at four levels: individual, relationship or family, community and societal. Some risk factors are consistently identified across studies from many different countries, while others are context specific and vary among and within countries (e.g., between rural and urban settings). It is also important to note that, at the individual level, some factors are associated with perpetration, some with victimization, and some with both*” (WHO, 2012) [p. 3]. In a more comprehensive breakdown, the structure of the framework can be outlined as follows:

- (a) The innermost circle corresponds to the individual level and includes the biological and personal history of both the victim and the perpetrator.
- (b) The second innermost circle, known as the family level or microsystem, represents the immediate context in which the abuse occurs.
- (c) The third circle, referred to as the community level or exosystem, refers to factors associated with formal or informal social institutions or structures that influence violent relationships.
- (d) The fourth and outermost circle, referred to as the societal level or macrosystem, encompasses the broader structures that influence IPV, such as religious or cultural belief systems and economic or social policies (Heise et al, 2002).

The *integrative* aspect of the framework was emphasized by Heise already in 1998 as an update to the ecological framework (Heise, 1998), is employed for the explicit introduction of the gender-based factors that contribute to the complexity and diverse realities of IPV. As a result, it allows improvement of certain specific articulations of IPV that relates to structural factors of society, regardless of which setting or country we situate it in.

1.4.2.2 Intersectional framework

Intersectionality is made up of three basic building blocks: social identities, systems of oppression, and the ways in which they intersect (Baker & Etherington, 2023). The

social identities of those affected by IPV and what could put them at (higher) risk is essential to explore. In order to explain this framework, I will illustrate a number of examples where intersectionality and its impact could be captured (Crenshaw, 1989; Crenshaw, 1991):

For example, a system may have an older white woman as a client. Due to her skin color, she experiences privileges, but her age and the prevailing social structures affecting older individuals subject her to oppressions. Throughout her life, she may have consistently felt privileged, but now finds it challenging to comprehend the reasons behind her sense of exclusion and feeling like an outsider. Or, the system may be working with a woman of color who has come from an economically privileged background. She may exhibit many characteristics of that economic privilege she may be prejudiced about people who are less economically advantaged – but because of her skin color, she has also experienced the oppression of racism. To see her only as privileged because of her economic privilege denies her intersectional reality and means missing identifying and responding to the oppression of racism that is part of who she is. The same could be applied for any gender.

Social or cultural identity can both facilitate and impede an individual's access to services related to the abuse they have suffered. Sometimes this access is limited by internal factors. For example, a woman of high social status may feel ashamed and reluctant to seek services for fear of exposing the abuse to others. Alternatively, external factors may play a role; for example, a woman living in a rural community may not have access to a nearby shelter, while an indigenous or immigrant woman of color may fear systemic racism if she involves the police in her situation.

Therefore, social identities, systems of oppression, and the ways in which they intersect affect the trauma they experience as a result of their partner's abuse. The same could be for their resiliency, too. Hence, instead of viewing factors or characteristics such as age, socioeconomic status, class, gender, or race individually or as parts of an individual (Collins, 2002), intersectionality views the influence of these factors or characteristics as a process within a structural context of overlapping and interlocking identities. This structural context could be identified by, for example, the individual's compounding experiences of violence and the individual's own resilience. Realizing these contexts with all their complexities could generate the change needed to prevent the victimization of IPV.

1.4.2.3 The COVID-19-IPV syndemic framework

As illustrated by the COVID-19 pandemic, in the absence of widespread vaccination and effective pharmacological treatment, governments had implemented ad-hoc stay-at-home orders and regional lockdowns. Recent studies say that the barriers to healthcare and social services combined with lockdowns could have culminated in inadequate protections for women and girls, as well as elevated levels of domestic and intimate partner violence (Arenas-Arroyo, et al, 2020; Jones et al, 2020).

The relationship between COVID-19 and IPV in particular is not uni-directional. On the one hand, prolonged stay-at-home orders and regional lockdowns during COVID-19 raised household economic precarity and stress (Hammett et al, 2022), which are known risk factors for domestic and intimate partner violence. On the other hand, IPV increased the risk for sustained community transmission of infectious diseases, such as the Ebola virus (Kapur, 2020; Thorson et al, 2016), the Zika virus (Aguilar et al, 2021; Bond, 2017), and COVID-19 (Kaukinen, 2020).

Further, recent studies indicated that abusers were employing the uncertainty and fear associated with the COVID-19 pandemic to further assert power and control by engaging in distinct forms of psychological IPV: by threatening to infect the victim, reducing access to hygiene supplies, and limiting access to testing and vaccination (Kaukinen, 2020; Sabri et al, 2020). Not only that, these forms could also relate to isolation, where some partners use the threat of the COVID-19 exposure as a way to (further) restrict the other's movement, gain access to their homes if they usually reside separately, or coerce them away from seeking any necessary counselling, medical, or psychological treatment that could be needed for them (Pfitzner, et al, 2020).

Hence, this highlights the mutually reinforcing and bi-directional or syndemic relationship between COVID-19 and IPV. The failure to recognize it leaves at-risk individuals, as in the case of (expectant) parents, vulnerable to infectious disease, as well as to IPV. In fact, the failure to act on previous evidence of the syndemic risk pathways between infectious disease and IPV, such as from the Ebola and Zika viruses, to safeguard the rights and health of those individuals *is* a form of structural violence (Meinhart et al, 2021), that could lead to more vulnerabilities and violence on the individual level.

For instance, during the Ebola outbreak, it became apparent that the disease not only posed a direct health threat but also had indirect consequences on interpersonal violence within households and communities. The stress and disruption caused by the epidemic, including quarantines, economic strain, and social dislocation, heightened tensions and contributed to an increase in IPV incidents (Thorson et al, 2016). Similarly, with the Zika virus outbreak, studies indicated a correlation between the virus and an elevated risk of IPV due to increased stress, fear, and societal disruptions (Aguilar et al, 2021).

1.4.3 Knowledge gaps

Despite great advances in researching IPV, still, little is known about how victimization experiences may be patterned over the perinatal period. Even though prevalence of IPV against women alone is increasingly researched and documented during the perinatal period, reported evidence on bi-directional IPV prevalence, and against the non-child bearing partner is still scarce. Therefore, it appears to be important to not only investigate prevalence estimates and the associated factors of IPV perpetrated against women alone, but to also improve our understanding of bi-directional IPV during this period in order to inform the ongoing process of developing effective screening and interventions for women and their families.

Moreover, risk factors for IPV are magnified during infectious disease outbreaks (Meinhart et al, 2021). In light of the COVID-19 pandemic's many preventive restrictions, social isolation, a risk factor of IPV, and a preventive measure taken during the pandemic, came in as a factor that could foster increased victimization experiences for partners. Therefore, social isolation could indeed be a key concept for understanding IPV in this very context. And by the time of working on the dissertation, there arose a timely need to generate this evidence based on prior-pandemic studies.

In addition, the reality of living during a pandemic that was once ongoing could both facilitate and exacerbate the kind of vulnerability that perinatal parents would be experiencing. In Germany, initial findings suggested that during the first COVID-19 lockdown, both women and men experienced increased anger and aggression (Jung et al, 2020). Women reported to predominantly spend their time with household chores and cooking, while male partners mainly reported watching movies/TV and going to work (Jung et al, 2020). This increased burden seen in the imbalanced distribution of childcare

and household responsibilities, and the increased anger and aggression could amplify conflict and put more strain on family life.

It is important to note that there is a significant lack of studies worldwide reporting on male victimization, not only during the pandemic but in relation to IPV in general (Thiel et al, 2022). This knowledge gap emphasized the need for comprehensive research that explores the victimization experiences of both men and women. Given the importance of understanding the experiences of male victims, as well as female victims, we found it was imperative to empirically investigate their victimization experiences. By filling this research gap, we could gain a more comprehensive understanding of the dynamics and impacts of IPV, especially during the pandemic.

2. Objectives

The objective of this cumulative dissertation was to address the knowledge gaps pertaining to IPV in the perinatal period and during the COVID-19 pandemic outlined under *1.4.3 Knowledge gaps*.

More specifically, we wanted to:

1. explore uni- and bi-directional prevalence estimates and the associated factors of IPV during the perinatal period. The factors were situated in the individual, family, community, and societal related of an integrative ecological model, then were discussed through an intersectional lens (Paper I).
2. investigate a broader range of pre-pandemic contexts of social and geographical isolation and their associations with IPV, as well as to provide reliable, preliminary knowledge of their potential impact during the COVID-19 pandemic (Paper II).
3. explore the 12-month prevalence of psychological, physical, and sexual IPV within an existing cohort, which consists of women and men, as well as to detect any possible changes during the COVID-19 pandemic in the experienced IPV behaviors as opposed to the pre-pandemic times (Paper III).
4. explore factors measured during the COVID-19 pandemic that could prospectively predict IPV victimization (Paper III).

3. Publications

3.1 Paper I

Mojahed A, Alaidarous N, Kopp M, Pogarell A, Thiel F, Garthus-Niegel S. 2021a. Prevalence of Intimate Partner Violence Among Intimate Partners During the Perinatal Period: A Narrative Literature Review. *Front. Psychiatry* 12:601236. doi: 10.3389/fpsyt.2021.601236.

3.2 Paper II

Mojahed A, Brym S, Hense H, Grafe B, Helfferich C, Lindert J and Garthus-Niegel S. 2021b. Rapid review on the associations of social and geographical isolation and intimate partner violence: Implications for the ongoing COVID-19 pandemic. *Front. Psychiatry* 12:578150. doi: 10.3389/fpsyt.2021.578150.

3.3 Paper III

Mojahed A, Mack J, Staudt A, Weise V, Shiva L, Chandra P, Garthus-Niegel S. 2023. Prevalence and predictors of intimate partner violence during the COVID-19 pandemic: Results from the population-based study DREAM_{CORONA}. [In Review].

4. Discussion

Understanding the experiences of women and men exposed to IPV in the perinatal period and during the COVID-19 pandemic is critical to improving their health care experiences and health.

4.1 Key findings

4.1.1 Paper I

Paper I was designed as a literature review. Data were collected and synthesized from 86 peer-reviewed observational studies. The majority of the studies were cross-sectional ($n = 75$) and few used longitudinal designs ($n = 11$). The studies originated from 35 countries and were published in English. They involved 90,895 women. The included studies were from various countries like e.g., Brazil, Ethiopia, Iran, Israel, Japan, Jordan, Nigeria, Pakistan, Portugal, the USA, and Turkey. Eighty of the included studies investigated uni-directional violence against women where the perpetrator was their current or former intimate partner. Six studies explored bi-directional perpetration of IPV. There, women's perpetration as well as their victimization experiences were explored. Three terms were used to describe the violence, i.e., IPV, GBV, and DV. We excluded studies that reported perpetrators other than intimate partners, such as other family members (Mojahed et al, 2021a).

A qualitative approach was employed in synthesizing the results. Since prevalence studies of IPV tend to be highly heterogeneous and violence definitions tend to vary among research settings, we were not able to conduct any quantitative analyses for this review. Prevalence estimates of IPV among intimate partners, as well as associated factors relevant for IPV during the perinatal period were investigated. For each paper, we extracted and systematized the following information: author and year of publication; recruitment setting (e.g., agency¹ or general survey samples); study design; sample size (e.g., final sample, response rate); the directionality of IPV (i.e., uni-, or bi-directional); overall IPV prevalence estimates (i.e., during pregnancy, postpartum, or both); and its types (i.e., physical, sexual, psychological, economic, etc.).

¹ refers to data collected and maintained by child protective service (CPS) agencies or other designated organizations responsible for handling child welfare cases (Haselschwerd, 2014).

In addition, we considered population characteristics and associated factors significant to IPV prevalence when available, using the multi-level ecological model explained under *section 1.4.2.1*. An intersectional approach (explained under *section 1.4.2.2*) was employed to recognize and address the complex interplay of factors, including ethnic and/or religious identities, that contribute to the experience of violence. By incorporating an intersectional lens, we aimed to capture the nuanced ways in which multiple identities intersect and shape individuals' experiences within the context of IPV.

In *Paper I*, we set forth to advance the understanding of IPV during the perinatal period by summarizing and describing the prevalence of uni-, and bi-directional violence and the associations to experiencing/perpetrating IPV. To narrate the findings related to prevalence estimates, we divided the perinatal period into three time periods: before, during, and after giving birth. Here are our main findings:

- 1. Uni-directional IPV:** Prevalence estimates were assessed in three sub-periods of the perinatal period—during pregnancy, postpartum, and both pregnancy and postpartum. Overall, during pregnancy, IPV ranged from 1.5% to 66.9%, with psychological violence being the most prevalent (ranging from 1% to 81%). Postpartum, overall IPV ranged from 2% to 58%. Studies that reported prevalence estimates during pregnancy and at follow-ups during the postpartum period provided comparable estimates before and after childbirth. More than half of the studies indicated a decrease in IPV after childbirth compared to during pregnancy. However, psychological IPV was reported to either increase or remain the same. A few studies reported an increase in IPV after childbirth.
- 2. Bi-directional IPV:** Prevalence estimates were also assessed in three sub-periods of the perinatal period—during pregnancy, postpartum, and both pregnancy and postpartum. These estimates focused on victimization and perpetration for the child-bearing partner only. Perpetration estimates were consistently higher than victimization estimates across all sub-periods.

Moreover, we employed a qualitative synthesis of the data and organized the findings related to associated factors of uni- and bi-directional IPV using an ecological framework. We further analyzed their interconnectedness through an intersectional lens. Here are our main findings:

- 1. Uni-directional IPV:**

- Individual level: Risk factors included socio-economic status, drug and alcohol use during pregnancy for both victims and perpetrators. For female victims, risk factors included insufficient utilization of prenatal care services, reduced decision-making ability, and low self-esteem.
- Family level: Risk factors included unplanned and undesired pregnancy, and having more than one child.
- Community level: Lack of support and living in rural areas were associated factors.
- Societal level: Risk factors included possessing specific social or ethnic identities, such as being Jewish women of Sephardic descent, being non-Caucasian, with an immigrant status, being HIV-positive and having an HIV-positive child, or belonging to a certain religion, i.e., Catholic, Muslim, or Hindu, as well as endorsing a higher degree of religiosity in Jewish and Muslim partners (religious vs. non-religious).

2. **Bi-directional IPV in women:**

- Individual level: Stress and depression were identified as associated factors.
- Family level: Lower dyadic adjustment was found to be an associated factor.

3. **Gender-based associated factors:**

These factors were integrated for each level of the model. For example, at the individual level, factors included partners being sexually dissatisfied or having accepting attitudes towards violence. At the family level, factors included the partner's control of women's reproductive health and pressure to have a male child. At the community level, factors included controlling behavior by relatives in-law, and at the societal level, factors included dowry demands.

4. **Protective factors:**

Early initiation of antenatal care and institutional delivery, as well as giving birth in clinical settings, were identified as protective factors at the individual level. Additionally, living in urban areas was found to be a protective factor at the community level.

4.1.2 Paper II

Paper II was designed as a rapid review. Considering the necessity of addressing the issue of IPV in the context of the ongoing pandemic and in order to present relevant knowledge in a timely manner, we conducted this rapid review following the Cochrane guidelines for rapid reviews. We used abbreviated systematic review methods and applied the following methodological shortcuts: There was no dual abstract, dual full-text screening, dual data extraction, or dual assessment of risk of bias. Data were collected and derived from 11 peer-reviewed observational studies. Of these, nine studies were cross-sectional, one was longitudinal, and one comprised comparative case studies. They were published in English (n=10) and Spanish (n = 1).

The included studies involved 15,695 women. Six of the included studies were conducted in the USA, followed by one study in Egypt, Ethiopia, Spain, Sweden, and Turkey, respectively. All of the included studies investigated violence against women where the sole perpetrator was their current or former male intimate partner. No studies with men as victims were identified. We synthesized results narratively and in tabular form. Because of the heterogeneity of available primary studies, we did not conduct any quantitative analyses for this review (Mojahed et al, 2021b).

In *Paper II*, we aimed at investigating a range of pre-pandemic contexts of social and geographical isolation and their associations with IPV. The rationale behind this was to provide reliable, preliminary knowledge of isolation's potential impact during the COVID-19 pandemic on the experience of IPV. Studies investigating the prevalence and possible underlying factors of IPV, such as social and geographical isolation, during the COVID-19 pandemic were far from conclusive at the time of this review, and drawing conclusions from comparable situations in the past was limited.

We documented the following main findings: **1)** social isolation correlated with the experience of physical and sexual IPV among female drug users, and predicted physical, sexual, and psychological IPV among immigrant women; **2)** most of the included studies had social support as the measure for social isolation, and the lack of it thereof predicted IPV; **3)** women who reported having social support had a lowered probability of ever being abused than women who reported not having social support; **4)** women with previous victimization experience, who currently had social support, had a lower probability of being abused again by a different partner than those who had no social support; **5)** women who were severely assaulted, had fewer friends, fewer contacts with their friends, fewer long-

term friendships, and fewer friends who really listened to them than did the non-battered women and the battered women who were not severely assaulted; **6**) for affected pregnant women, the presence of individuals in their social network who were also in abusive relationships was found to be associated with a decrease in emotional and critical support; **7**) having lack of social support as well as being geographically isolated (i.e., living in what is considered/approximated as rural areas) had a compounding effect of increasing the risk of IPV.

We also summarized the recommendations made by the individual studies in order to inform future policy of the possibilities on how to go on with IPV during the COVID-19 pandemic. There, we concluded the following: **1**) battered women were more likely to seek out support from family and friends than from professional helpers. Therefore, interventions should aim at re-establishing social networks for them; **2**) for women living in rural areas, interventions should not be limited to formal networks, but should also include informal (social) networks in the community; **3**) improving the economic status of rural households could be an effective strategy to reduce IPV; as well as **4**) increasing the focus on access to preventive services for rural women, including domestic violence intervention programs (DVIP).

4.1.3 Paper III

Data for *Paper III* were collected from the population-based longitudinal study DREAM_{CORONA}. As this study investigates victimization prevalence and predictors of IPV, we included only participants who completed the IPV questionnaire at T2 of the DREAM_{CORONA} study. Dropout analyses were performed via Student's t-tests and chi-square tests to detect any significant differences between completers and non-completers of the *short form of the Revised Conflict Tactics Scale (CTS2S)*. Further, data were analyzed descriptively to determine the prevalence of IPV victimization in women and men, and the change in the experienced IPV victimization during the pandemic (Mojahed et al, In Review).

We computed Pearson correlation analyses to examine the associations of all included variables. Next, we conducted a multiple logistic regression analysis to identify prospective predictors of IPV. The final model had the binary measure of IPV as the outcome and age, education, pregnancy status, parity, household size, relationship satisfaction, dyadic coping, postpartum depression symptoms, anger-hostility symptoms, and social support as predictors. Results are given as Odds Ratios (OR) with 95%

confidence intervals (CI). The regression models were calculated for women and men separately to detect differential predictors of their IPV victimization.

The total sample consisted of 737 participants, with 64% female ($n = 468$) and 37% male ($n = 269$) participants. The mean (SD) age of the women was 31.61 years (3.89) and the age range was from 20 to 43 years. Only 13.7% ($n = 64$) were pregnant at the first assessment point (T1) of DREAM_{CORONA}, with 7.3% ($n = 34$) being pregnant with their first child. For the female participants, 91.9% ($n = 430$) had one or more than one child. The mean (SD) age of men was 34.05 years (4.93) and the age range was from 24 to 55 years. Of them, 17.5% ($n = 47$) had pregnant partners, whereas 6.7% ($n = 18$) were expecting their first child. There were 92.6% ($n = 249$) of men who had one or more than one child. The mean (SD) household size was 3.21 (0.75) for women, and 3.14 (0.71) for men with a range of 1 to 10 people living in the same household for both female and male participants.

In *Paper III*, we documented the following main findings: **1)** five in 10 women and 4 in 10 men faced at least one form of IPV in the last 12 months by their current partner. Psychological aggression was the most prevalent form of IPV encountered by women and men, with 48.5% and 38.3%, respectively. This was followed by physical assault with 2.6% and sexual coercion forms of violence for women, as well as for men, with 3.3% and 1.5%, respectively; **2)** Of those who experienced any form of IPV in the last 12 months, 89.7% women and 89% men were victimized by a single violent behavior. One woman was found to experience a total of 5 out of 6 of the assessed abusive behaviors; **3)** The majority of women and men reported no change in victimization by psychological and physical violence during the pandemic. On the other hand, about a quarter of (expectant) mothers (27%) and fathers (22-24%) reported an increase in psychological and physical IPV. With regard to sexual violence, neither mothers nor fathers reported any changes during the pandemic; **4)** women's higher partnership satisfaction [OR = 0.873; 95% CI: (0.81–0.93)] decreased the likelihood for IPV victimization for them, whereas having higher symptom levels of anger-hostility [OR = 1.151; 95% CI: (1.04–1.27)] increased this probability; and **5)** men's younger age [OR = 0.928; 95% CI: (0.87–0.98)] and higher partnership satisfaction [OR = 0.844; 95% CI: (0.75–0.93)] decreased the probability of their victimization. Similar to women, having higher symptom levels of anger-hostility in men [OR = 1.196; 95% CI: (1.03–1.38)] increased the likelihood for victimization.

4.2 Interpretation of the results

4.2.1 Prevalence rates and associated factors

In *Paper I*, we found that IPV estimates varied in terms of whether pregnancy or postpartum could be more of a vulnerable sub-period compared to the other. Nevertheless, having frequent time assessments could improve our knowledge of the course of IPV over the perinatal period, which in turn could be helpful for policy makers, among others. Perinatal providers too, as well as healthcare workers in general are therefore in a unique position to identify, evaluate, and facilitate services for women experiencing IPV.

Risk factors of IPV during the perinatal period may often be similar to risk factors for IPV in general. Still, given that pregnancy and the postpartum period are times that may demand increased relationship commitment and resources, such as emotional support, financial stability, access to healthcare services, social networks, education, etc., shedding more light on some risk factors are likely to be important here.

Our narrative review In *Paper I* revealed that most of the risk factors relating to uni-directional IPV were detected in studies focusing on IPV during pregnancy. Victim- and perpetrator-related factors at the individual level constituted both younger age and lower socioeconomic status, as well as having experienced or witnessed interparental physical violence during childhood. In the case of victimized women, insufficient utilization of prenatal care services, and reduced ability in decision-making, as well as low self-esteem were found to increase the risk of IPV.

Being of young age and economically dependent (Dhungel et al, 2017) could limit access to resources, and emphasize a lack of decision-making, which in turn could increase the risk of violence by creating an environment in which one partner can exert control over the other through abusive behaviors (Conroy, 2014).

Further, younger partners or those with lower socioeconomic status may face heightened stress levels due to various factors such as financial strain, limited social support, or inadequate access to healthcare (Mojahed et al, 2022). Stress can negatively impact relationships and increase the risk of violence as individuals may resort to harmful coping mechanisms, including aggression and violence. They may also face challenges in accessing resources and support systems that can help alleviate stress or address relationship difficulties. This lack of resources can contribute to feelings of frustration,

isolation, and helplessness, potentially escalating tensions and increasing the risk of IPV (National Institute of Justice [NIJ], 2009).

Exposure to interparental IPV during childhood does not directly cause individuals to become victims of violence in adulthood. Instead, this form of child abuse is likely to disrupt normal developmental processes, such as the establishment of secure attachment to caregivers, which plays a crucial role in regulating behavior and emotions (Dvir et al, 2014). It can also lead to difficulties in relating to others and forming healthy relationships (Bell & Higgins, 2015), as well as problems in areas such as aggression, heightened arousal, and impulse control (Wilson et al, 1999). While these factors may serve as adaptive responses in abusive environments, they can also increase the risk of re-victimization. This perpetuates the cycle of violence across generations, as individuals who have been exposed to parental IPV in childhood may be more likely to experience violence in their own adult relationships (Al-Eisaa et al, 2020; Butler et al, 2020).

Family level factors consisted of unplanned and undesired pregnancies, having multiple abortions, multigravidity, as well as having more (or fewer) than two children. Previous research pointed out, such factors could be considered as consequences (Mojahed et al, 2022), or even a form of IPV known as reproductive coercion and abuse (RCA) (Grace & Anderson, 2018). This form of abuse is attributed to the partner's control over the woman's reproductive health, or reproductive injury caused by assaultive episodes (Tarzia & Hegarty, 2021). RCA research is however still in its infancy and further research is needed.

Of the risk factors that could be considered as gender-based was the perpetrator's sexual dissatisfaction that placed mothers at higher risk for IPV postpartum. In few societies, traditional gender roles and expectations may place an emphasis on male sexual satisfaction and the notion of male entitlement within intimate relationships (Naghavi et al, 2019). When these expectations are not met, it may lead to feelings of strain and anger (De Coster & Cornell Zito, 2010), or a perceived threat to one's masculinity. In such situations, some male individuals may resort to violent behaviors. These behaviors can manifest as psychological, or even physical IPV (Reidy et al, 2014). By exerting control or power over their partner, they may attempt to regain a sense of dominance or restore their perceived entitlement within the relationship (Hill et al, 2023).

We also found that the factor of pressuring women to have a male child, which increased women's risk for victimization during pregnancy, as well as partners'

disappointment with the child's gender (i.e., being female), which contributed to increased risk for victimization postpartum, as gender-based. These findings are consistent with previous evidence (Mojahed et al, 2022).

At the societal level, and from an intersectional lens, we found that possessing specific social (immigrant or HIV-positive women), ethnic (Jewish women of Sephardic descent or non-white women), and religious identities (Muslim or Hindu), and having higher degrees of religiosity can contribute to an increased risk of IPV for women. The various aspects of one's identity can intersect and interact to shape an individual's experiences and vulnerabilities (Crenshaw, 2011).

For example, Jewish women of Sephardic descent or non-white women may face unique challenges and forms of discrimination when living in predominantly white societies. In addition to their gender identity, women who experience racism and/or colorism may face unique challenges that differ from those experienced by their counterparts from the racially dominant group or women from other ethnic backgrounds. They may face stereotypes and prejudices that perpetuate harmful narratives about their worth, agency, or vulnerability by their intimate partners (Monterrosa, 2021). In addition, support systems and institutions may be less responsive or provide limited resources to address their specific needs, further increasing their vulnerability to IPV (Holliday et al, 2020).

Immigrant women may face additional factors, such as language barriers, limited social support networks, economic dependence, and fear of deportation, which can increase their vulnerability to IPV. Not to mention, their unfamiliarity with legal rights in host countries may also contribute to increased risk (İlkkaracan, 1996). Women who are HIV-positive and have an HIV-positive child may experience additional challenges in their relationships, such as stigma, and dependence on their partner for healthcare and financial support (Hatcher et al, 2016). Stigma may contribute to increased vulnerability to IPV, which doubles the burden of adversity by complicating issues around disclosure, access to both HIV-related and pregnancy-related health care (Marais et al, 2019), and support in the case of IPV (Yonga et al, 2022), highlighting syndemic risk (Rice et al, 2017) and potentially worsening their I health (Mootz et al, 2021).

Women belonging to certain religions, such as Catholic, Muslim, or Hindu, may encounter cultural and religious norms, patriarchal structures, and interpretations that perpetuate gender inequalities and potentially increase the risk of IPV. Additionally,

endorsing a higher degree of religiosity may intersect with these factors, potentially influencing power dynamics within relationships, and emphasizing the rigid gender roles and male dominance, along with cultural expectations of women's subservience (Mojahed et al, 2022).

The results in *Paper III* indicate that 5 in 10 (expectant) mothers, and 4 in 10 (expectant) fathers experienced at least one IPV behavior during the first year of COVID-19 in Germany. The most prevalent type was found to be psychological aggression, which is in line with the findings in *Paper I*. As emphasized earlier in *section 1.2*, exposure to IPV can have an adverse effect on mother-child interactions. IPV has been associated with less positive attunement to the infant, negative cognitions about parenting ability and self-efficacy, and decreased maternal responsiveness (Huth-Bocks et al, 2013). In turn, these can increase the risk of hostile interactions between the caregiver and child, and neglectful parenting practices (Cox et al, 2000).

4.2.2 Men's experiences of IPV

Traditionally, discussions around IPV have focused primarily on women as victims and men as perpetrators due to the higher prevalence of violence against women. However, research has shown that men can also be victims of IPV. It is therefore crucial to recognize that IPV can affect individuals of any gender, and shedding light on men's experiences allows for a more comprehensive understanding of the issue.

There is growing evidence that psychological violence may be the most common form of IPV experienced by both women and men (Follingstad & Rogers, 2013). In the case of men, this aligns with our finding that most of the IPV-affected male participants experienced psychological aggression (i.e., being insulted or sworn or shouted or yelled at) in *Paper III*. Findings from qualitative research unveiled that men undergo episodes of abuse that commence with less violent acts in the early stages of the relationship, gradually escalating into more severe forms of violence. This escalation could be further triggered by significant life events or changes in the relationship, such as the birth of a child (Entilli & Cipolletta, 2017; Machado et al, 2017).

Although a comprehensive understanding of how men define psychological violence is still evolving (McHugh et al., 2013), some studies have shed light on men's descriptions of psychological violence. These descriptions include instances of being yelled at, insulted, belittled, humiliated, having their sexuality questioned, experiencing control and

surveillance, isolation from family and friends, having their competence as fathers questioned, facing false allegations of child abuse, and enduring threats of losing custody of their children (e.g., Bates, 2019; Entilli & Cipolletta, 2017; Machado et al, 2017; Nybergh et al, 2016; Walker et al, 2019). While the majority of men may not fear physical violence from a female partner, few studies have shown that they have concerns about degradation and humiliation in the relationship (Bates, 2020; Nybergh et al, 2016). Research in this area remains relatively young and further investigation into men's experiences of psychological as well as sexual and physical violence, and their intersections with gender is required.

We also found that having higher levels of anger-hostility symptoms significantly predicted higher probability of IPV victimization for both women and men in *Paper III*. Adjusting to the psychological burden, which might result from dealing with external stressors relating to the pandemic (Bartels et al, 2022), as well as raising (or expecting) a child, could be a possible reason for having higher levels of anger-hostility symptoms in the first place (Mojahed et al, 2022). Having higher anger-hostility symptoms could be an expression of an already difficult relationship, where practicing violent behaviors could be pre-existing and/or bi-directional.

4.2.3 Isolation as key risk factor and a tactic

In *Paper II*, indicators of social isolation varied across the studies. These studies used a variety of approaches to indirectly assess social isolation. These approaches included assessing factors such as lack of social support, lack of emotional or informational support, low number of friends or frequency of contacts, and decreased levels of social interaction.

It is important to note that the presence of any one of these indicators alone does not necessarily indicate social isolation. However, when combined with other factors, such as unemployment, poverty or drug use, these indicators can serve as a more reliable measure of social isolation. Our findings are consistent with most recent studies which suggest that increasing feelings of isolation during the COVID-19 lockdown measures which may also lead to violence against others (Jung et al, 2020), such as one's intimate partner (Moreira et al, 2020). The findings on geographical isolation are in line with those in *Paper I*, of which living in urban areas was found to be a protective factor in a number of studies.

As previously mentioned under *section 1.3*, isolation was exacerbated during the COVID-19 pandemic due to the preventive measures adapted across the globe. The added dangers of prolonged isolation, together with the disruption of vital support and social systems, may have perpetuated various control tactics (Goodman & Epstein, 2022). In the case of expecting partners, this may have had a more profound effect, as it may have made them feel that they had no one but the abusive partner, making it more difficult to seek help or leave (Wood et al, 2022).

Indeed, in *Paper III*, the findings revealed a significant correlation between social support and IPV for both men and women, but it was not found to be a prospective predictor. It is important to note that this could be attributed to the fact that the majority of the affected individuals (90%) had only encountered a single violent psychological act and could be considered as primarily facing situational couple violence, where control tactics were not present.

Findings from *Paper II* shed light on the possible increased likelihood of specific populations, such as female drug users, pregnant women, and migrant women, to experience IPV under the COVID-19 pandemic conditions. Recent research say that marginalized groups, such as racial or ethnic minorities, immigrants, or LGBTQI+ individuals, may fear discrimination, or encounter a lack of responsive support services, which can increase their isolation and hinder their ability to access resources and support (Sabri et al, 2022).

Female drug users, particularly those who are marginalized or with a certain minority background, may experience intersecting forms of discrimination and isolation. The stigma associated with substance use, combined with social marginalization, can create significant barriers to seeking help (Simonelli et al, 2014). These individuals may also face increased vulnerability to abusive relationships, as their drug use may be used as a tool for further control and manipulation by abusive partners (Gilchrist et al, 2019; Phillips et al, 2020).

4.2.4 The issue of disclosure

Since this dissertation has a major focus on reporting prevalence estimates, disclosing of IPV and the circumstances leading to disclosure should be taken under consideration, for both male and female partners. In general, disclosing an experience of violence can be a difficult and traumatizing experience (Dworkin et al, 2019). When a

person decides to disclose their experience of violence, it often requires them to confront painful memories and emotions that they may have been avoiding or suppressing.

In addition, victims of violence often harbor deep-seated fears of being blamed for the harm inflicted upon them (Ullman, 2023). These fears may be particularly high if the perpetrator is someone they know or have a relationship with (Dworkin et al, 2019). For female victims, the process of disclosing their experiences can trigger symptoms of PTSD, depression, and anxiety (Ullman, 2023). The disclosure itself can profoundly impact their sense of safety and trust in others. Moreover, if unsupportive attitudes prevail, the trauma experienced by female victims may be exacerbated (Ullman, 2010 and 2023). These unsupportive attitudes can further erode their confidence in seeking help, exacerbate self-blame, and contribute to a deep sense of isolation.

In the case of affected male individuals, the consequences of these gender-biased perceptions and actions, such as accusing them of being the perpetrators of the violence and threatening them with arrest, can be significant (Walker et al, 2019). Gender stigmatization that impedes men from showing emotional vulnerability, disclosing abuse/violence or seeking help (Hines et al, 2015) means that health and other challenges related to violence may go unaddressed.

Even when men do choose to disclose experiencing IPV, they may not receive the support they require. According to the findings of Morgan and Wells (2016), some men who sought help or services for IPV expressed a sense that their concerns were not taken seriously. Similarly, in their qualitative study, Brooks et al. (2017) found that some men were concerned about being doubted by others and being denied support when sharing their experiences of IPV. Such reactions can cause affected individuals to doubt their own perceptions and experiences, and further compound their trauma.

4.3 Limitations and strengths

It is well established that among men and women, a dose-response relationship exists, where greater severity of violence results in worse health outcomes (Scott-Storey, 2011 and 2018). In *Paper I*, most of the included studies identified specific acts of violence only at specific points in time, or over a defined period (e.g., the past year), making it difficult to assess trajectories of violence over time, including shifts in the severity of abuse, and the context or impact of terror and fear, and thus to distinguish unique 'subtypes' of violence (e.g. intimate terrorism vs. situational couple violence) (Kelly &

Johnson, 2008; Johnson, 2008). Nevertheless, the strengths of *Paper I*, lie in the systematic search for relevant literature, the systematic process of data extraction, and the focus on prevalence estimates of IPV and its different forms between partners and associated factors.

In addition, the majority of measures used in large-scale surveys, such as the Conflict Tactics Scale, primarily capture situational couple violence rather than intimate terrorism (Johnson, 2006), as it was the case in *Paper III*, which could lead to inadequate understanding of the nature and prevalence of more severe forms and patterns of IPV among men and women. Under-reporting of more severe forms of violence is therefore to be expected. Conversely, it is also important to note that over-reporting of less severe behaviors can be expected. Both need to be taken under consideration. These factors contribute to the complexity involved in accurately assessing and understanding the dynamics of IPV, and highlight the importance of utilizing comprehensive measures and employing a nuanced approach to capture the full range of IPV experiences.

In *Paper II*, we conducted a rapid review due to the urgency of the topic and its implications for the COVID-19 pandemic. As a result, certain methodological steps of the review process had to be abbreviated due to time constraints. As neither dual title-abstract nor dual full-text screening was performed, relevant studies may have been missed and some selection bias may have been introduced. Nevertheless, this rapid review had clear eligibility criteria for study inclusion. Our procedures, based on the guidance and training materials for rapid reviews produced by Cochrane, lead us to believe that the overall conclusion was not affected by these limitations.

While the rapid review methodology limits the depth and breadth of the analysis, this focused assessment of isolation as a key determinant allows us to shed light on a specific aspect of the complex relationship between the pandemic and IPV. It serves as a valuable contribution to the existing body of research, offering a targeted perspective that can inform policy decisions and guide future studies in understanding and addressing the unique challenges faced by victims of IPV during times of isolation and restricted social interaction.

In *Paper III*, our analysis of the changes in experienced IPV behaviors during the pandemic was limited by the retrospective nature of the assessment. The population-based sample included mostly well-educated and relatively young (expectant) parents. Our findings can therefore not be generalized to other populations such as vulnerable

groups, such as social, sexual, and gender minorities, who may be disproportionately affected by pandemic-related stressors related to employment, finances, and psychological health (Nowaskie & Roesler, 2022, Sachdeva et al, 2021), which in turn may make them more vulnerable to IPV. Moreover, women who dropped out of the study had higher postpartum depression symptoms than the women in the final sample. One explanation for that could be that these women were more distressed and therefore dropped out of the study, which would mean that our result could underestimate the effect of postpartum depression on their likelihood for IPV victimization.

Regardless, our IPV prevalence analysis and regression models covered nearly the complete first year of COVID-19 in Germany. The longitudinal nature of our study allowed us to prospectively identify protective and risk factors of IPV victimization. Knowledge of prospective predictors can be crucial from a prevention perspective, as it provides insight into factors that could prevent or reduce the occurrence of any form of IPV. Further, our data are based on the actual experience of our participants and therefore not biased by help-seeking behaviors, which might have been altered by the pandemic.

4.4 Practical implications

The results of the three reported studies have several practical implications. We document that aggressive behaviors, mostly psychological, are present in every second (expectant) couple, and may lead to more severe forms of aggression or abuse (Follingstad & Dehart, 2000). Based on our findings, it is evident that individuals who seek antenatal care or give birth in clinical settings face a lower risk of perinatal IPV. Therefore, it becomes crucial for healthcare providers to prioritize the screening of women for signs of IPV during routine obstetric care. By implementing regular screening protocols, healthcare professionals can identify and support individuals who may be experiencing IPV, ensuring their safety and well-being during the perinatal period.

Additionally, it is important for providers to recognize that exposure to IPV can have detrimental effects on the mental health of perinatal partners. The risk of mental health distress is heightened for individuals who have experienced IPV, and this can impact their ability to effectively engage in caregiving responsibilities. To mitigate these difficulties and promote positive caregiver-child relationships, providing previously-affected caregivers with appropriate resources related to parenting could be of great support (Ragavan et al, 2020). This support can enhance their parenting skills, resilience, and overall well-being, ultimately benefiting the well-being of both the caregiver and the child.

By integrating routine IPV screening into obstetric care and providing targeted resources for previously-affected caregivers, healthcare providers can play a vital role in preventing and addressing the challenges associated with perinatal IPV. This comprehensive approach not only ensures the safety and support of individuals experiencing IPV but also contributes to the promotion of healthy parenting practices and positive familial relationships.

As experiences of IPV remained largely unchanged during the COVID-19 pandemic, there is a strong need to recommend strengthening and improving access to services. Policies need to ensure that alternative support services (e.g., messenger services, telemedicine) are accessible and reliable for victims of severe IPV who are isolated, with particular attention to reaching survivors safely in the presence of perpetrators and in ways that are undetectable and untraceable. In addition, IPV awareness raising is essential so that people working in the informal or formal sector, as well as family and friends in the immediate social network of those at-risk are sensitized to the signs of violence.

Our empirical findings have implications for enhancing already existing prevention and intervention programs, as they lend support for the use of programs targeting interaction patterns, particularly adverse types of interactions such as psychological aggression. The measures tackling IPV during the pandemic should have not only focused on the provision of accessible services for IPV victims and raising the awareness of the issue but must have been accompanied by continuous efforts to promote holistic interventions for victims, where psychological symptoms of anger and hostility are addressed.

4.5 Future research directions

The papers included in this thesis as well as the current literature provide several directions for future research. *Paper 1* contributed to the literature by providing prevalence estimates of IPV among intimate partners as well as its associated factors during the perinatal period. Our results highlighted the relationship between IPV and the varying associated factors, which relate to the different levels of the integrative ecological model, which were also interpreted through an intersectional lens. We recommend that future research to embed the associated factors following a sequence moving from the collective to the individual level. This could help build a more comprehensive image for adequate protection and future prevention of individuals.

Further, Studies regarding bi-directional perpetration of IPV during the perinatal period have been explored, yet their findings need to be interpreted with caution. Conducting further research that delves into not only the prevalence but also the motivations and contexts of bi-directional IPV during the perinatal period could improve our understanding of its detrimental effects on partners and their families. Such research could pave the way for the development of more effective intervention strategies.

Regarding our narrative synthesis in *Paper II* of the pre-pandemic data, it emphasized that isolation could be associated with experiencing IPV in the context of the COVID-19 pandemic. Associated factors like limited access to formal and informal services as well as disruptions of social networks has affected millions of people during the pandemic due to quarantine as well as physical and social distancing measures. Further research is needed to explore the interplay between social isolation and support, the severity of violence, and other contributing factors to gain a more comprehensive understanding of IPV dynamics and its long-term consequences on affected individuals in order to inform effective prevention and intervention strategies.

IPV victimization is not exceptional in Germany. In *Paper III*, psychological aggression was present in almost every second couple. The majority of women and men disclosed no changes in their experienced IPV victimization, suggesting that they continued experiencing psychological and physical IPV during the pandemic. However, our findings also revealed an increase in the experienced IPV for female and male participants during the pandemic. We recommend future research to perform longitudinal assessments of IPV.

In addition, the inclusion of the other partner in IPV research could provide more context to better understand and prevent IPV in samples that include both (expectant) partners. The ability to provide appropriate support and resources to those who are most significantly affected by IPV, including men, depends on the accurate measurement of variation in experiences of IPV and an openness to identifying such variation. And in order to obtain 'accurate' prevalence rates of IPV, experiences of violence need to be measured in ways that capture the context (examining severity, patterns, coercive control) and take into account the gendered aspects of the relationship as well as the context of the partnership (e.g., sex/gender of the partner).

As scales or measures are attached to gender perspectives, it is imperative to identify the subtype(s) of IPV being measured and to include indicators that reflect how

that particular type of violence is experienced by individuals of all genders. Finally, IPV measures need to be validated for use with men to demonstrate that they are appropriate, accurate, and comprehensive and that they reflect the construct of IPV as experienced by men.

5. Summary

Background: Intimate partner violence (IPV) is not only considered a serious public health issue and a cause of human suffering (National Center for Injury Prevention of the Centers for Disease Control and Prevention, 2015), IPV can be a barrier to utilization of care in vital life phases (Bonomi et al, 2009; Snow Jones, Dienemann, & Schollenberger, 2006), and a determinant of many serious negative health outcomes for affected individuals and their families (Silverman et al, 2020). As a significant contributor to health, social, and economic disparities, violence jeopardizes the fabric of families and transcends all levels of socioeconomic status (Rhodes, 2012).

Among those who suffer serious to fatal consequences as a direct result of IPV, the perinatal period has only recently received special attention in research and is extremely scarce (WHO, 2011). This is particularly the case as the exposure/context of IPV may be further complicated by societal crises such as natural disasters and pandemics, where the threat of violence and its health consequences may be heightened (Yehuda et al, 2008).

Objectives: The objectives of this dissertation were to address the knowledge gaps pertaining to perinatal IPV and violence experiences during the COVID-19 pandemic. It had three specialist articles, two of which were reviews of the literature, and one was a population-based empirical study. The objectives of the dissertation were as follows: **1)** To explore uni- and bi-directional IPV prevalence estimates and associated factors during the perinatal period (*Paper I*) (Mojahed et al, 2021a); **2)** To investigate a broader range of pre-pandemic contexts of social and geographical isolation and their associations with IPV, as well as to provide reliable, preliminary knowledge of their potential impact during the COVID-19 pandemic (*Paper II*) (Mojahed et al, 2021b); **3)** To explore the 12-month prevalence of psychological, physical, and sexual IPV within an existing cohort, which consists of women and men, as well as to detect any possible changes during the COVID-19 pandemic in the experienced IPV behaviors as opposed to pre-pandemic times (*Paper III*) (Mojahed et al, 2023); **4)** To explore factors that could prospectively predict IPV victimization (*Paper III*).

Materials and Methods: *Paper I* involved a qualitative synthesis of the literature. Due to the heterogeneity of prevalence studies and varying violence definitions, quantitative analyses were not feasible for this review. The paper investigated prevalence estimates of perinatal IPV among intimate partners and explored associated factors. Information such as author, year of publication, recruitment setting, study design, sample size, directionality

of IPV, prevalence estimates, and types of violence were extracted and tabulated. The integrative ecological model was used to consider population characteristics and (gender-based) associated factors relevant to IPV prevalence.

Paper II was a rapid review conducted following Cochrane guidelines to address the urgency of studying IPV in the context of the COVID-19 pandemic. The review focused on the correlation between social and geographical isolation and IPV.

Paper III utilized data from the population-based longitudinal study DREAM_{CORONA}. Descriptive analyses were performed to determine the prevalence of IPV victimization among women and men, examining changes during the pandemic. Pearson correlation analyses and multiple logistic regression analysis were conducted to identify associations and potential predictors of IPV. The results were presented as odds ratios with confidence intervals.

Results: In *Paper I*, several key findings were reported. Psychological uni-directional IPV against female partners was most prevalent during pregnancy. Studies comparing IPV prevalence before and after childbirth showed mixed results, with some reporting a decrease and others reporting an increase in IPV after birth. Risk factors at the individual, family, community, and societal levels were identified, including socioeconomic status, substance use, insufficient prenatal care utilization, low self-esteem, unplanned pregnancy, lack of support, and certain social and ethnic identities.

Paper II found that lack of social support increased the risk of IPV victimization, and the compounding effect of social and geographical isolation heightened this risk. It also revealed that social isolation correlated with physical and sexual IPV among female drug users and predicted various forms of IPV among immigrant women.

In *Paper III*, it was found that around 50% of women and 40% of men experienced some form of IPV in the last 12 months. Psychological aggression was the most prevalent form of violence reported. The majority of women and men reported no change in victimization by psychological and physical violence during the pandemic. On the other hand, about a quarter of (expectant) mothers (27%) and fathers (22-24%) reported an increase in psychological and physical IPV. With regard to sexual violence, neither mothers nor fathers reported any changes during the pandemic. Higher partnership satisfaction reduced the likelihood of IPV victimization, while symptoms of anger-hostility increased this probability.

Conclusions: Considering the burden of perinatal IPV and the impact of the COVID-19 pandemic on IPV, this dissertation highlights the urgent need for effective preventive interventions. The findings suggest the importance of initiating antenatal care and delivering in clinical settings, as these factors were associated with a lower risk of perinatal IPV. Routine screening for IPV in obstetric care is crucial, and healthcare providers should be aware of the elevated risk for mental health distress among perinatal partners exposed to IPV.

As experiences of IPV remained largely unchanged during the pandemic, there is a strong recommendation to strengthen and improve access to support services. Alternative support measures such as messenger services and telemedicine should be accessible and reliable for victims of severe IPV who may face increased isolation. Raising awareness about IPV is essential for individuals in informal and formal sectors, as well as family and friends within the immediate social network of those at risk. The findings also support the use of programs targeting adverse interaction patterns, particularly psychological aggression.

Future research should focus on associated factors of IPV during the peripartum period and other critical life phases or societal events. It is crucial to adopt ecological and intersectional perspectives to gain a comprehensive understanding of IPV. Furthermore, including the perspective of the other partner in IPV research can provide valuable context for better prevention and intervention strategies.

6. Zusammenfassung

Hintergrund: Partnerschaftsgewalt wird nicht nur als ernstes Problem der öffentlichen Gesundheit und als Ursache menschlichen Leidens angesehen (National Center for Injury Prevention of the Centers for Disease Control and Prevention, 2015), sondern kann auch ein Hindernis für die Inanspruchnahme von Gesundheitsversorgung in kritischen Lebensphasen und ein entscheidender Faktor für viele schwerwiegende negative gesundheitliche Folgen für die Betroffenen und ihre Familien sein (Bonomi et al, 2009; Snow Jones, Dienemann, & Schollenberger, 2006; Silverman et al, 2020). Als wesentlicher Faktor für gesundheitliche, soziale und wirtschaftliche Ungleichheiten gefährdet Gewalt das Familiengefüge und erstreckt sich auf alle Ebenen des sozioökonomischen Status (Rhodes, 2012).

Bei denjenigen, die als direkte Folge von Partnerschaftsgewalt schwere oder sogar tödliche Folgen erleiden, ist die perinatale Phase erst in jüngster Zeit in den Blickpunkt der Forschung gerückt und äußerst selten (WHO, 2011). Dies ist umso mehr der Fall, als die Exposition der Kontext von Gewalt gegen Frauen durch soziale Krisen wie Naturkatastrophen und Pandemien, die das Risiko von Gewalt und ihren gesundheitlichen Folgen erhöhen können, noch komplizierter werden kann (Yehuda et al, 2008).

Zielsetzung: Ziel dieser Dissertation war es, die Wissenslücken in Bezug auf perinatale Gewalt und Gewalterfahrungen während der COVID-19-Pandemie zu schließen. Sie bestand aus drei Fachartikeln, zwei davon waren Literaturübersichten und einer war eine bevölkerungsbasierte empirische Studie. Die Ziele der Dissertation waren: 1) uni- und bidirektionale Prävalenzschätzungen der Partnerschaftsgewalt und damit verbundene Faktoren während der perinatalen Periode zu untersuchen (*Veröffentlichung I*) (Mojahed et al, 2021a); 2) ein breiteres Spektrum präpandemischer Kontexte sozialer und geographischer Isolation und ihrer Assoziationen mit IPV zu untersuchen und verlässliche vorläufige Erkenntnisse über ihre potenziellen Auswirkungen während der COVID-19-Pandemie zu liefern (*Veröffentlichung II*) (Mojahed et al, 2021b); 3) die 12-Monats-Prävalenz von psychischer, physischer und sexueller Partnerschaftsgewalt in einer bestehenden Kohorte von Frauen und Männern zu untersuchen und mögliche Veränderungen im erlebten Gewaltverhalten während der COVID-19-Pandemie im Vergleich zur Zeit vor der Pandemie zu identifizieren (*Veröffentlichung III*) (Mojahed et al, 2023); 4) Untersuchung von Faktoren, die eine Viktimisierung durch Partnerschaftsgewalt vorhersagen können (*Veröffentlichung III*).

Material und Methoden: In *Veröffentlichung I* wurde ein qualitativer Literature Review erstellt. Der Artikel untersuchte Prävalenzschätzungen von perinataler Partnerschaftsgewalt und die damit verbundenen Faktoren. Informationen wie Autor, Publikationsjahr, Rekrutierungssetting, Studiendesign, Stichprobengröße, Direktionalität der Gewalt, Prävalenzschätzungen und Gewaltformen wurden extrahiert und tabellarisch dargestellt. Das integrative ökologische Modell wurde verwendet, um Bevölkerungsmerkmale und damit verbundene (geschlechtsspezifische) Faktoren zu berücksichtigen, die für die Prävalenz von Partnerschaftsgewalt relevant sind.

Veröffentlichung II stelle ein Rapid Review dar, der gemäß den Cochrane Richtlinien durchgeführt wurde, um der Dringlichkeit der Untersuchung von Partnerschaftsgewalt im Zusammenhang mit der COVID-19-Pandemie Rechnung zu tragen. Der Review konzentrierte sich auf den Zusammenhang zwischen sozialer und geographischer Isolation und Partnerschaftsgewalt.

In *Veröffentlichung III* wurden Daten aus der bevölkerungsbasierten Längsschnittstudie DREAM_{CORONA} verwendet. Es wurden deskriptive Analysen durchgeführt, um die Prävalenz der Viktimisierung durch Partnerschaftsgewalt bei Frauen und Männern zu bestimmen und die Veränderungen während der Pandemie zu untersuchen. Pearson-Korrelationsanalysen und multiple logistische Regressionsanalysen wurden durchgeführt, um Zusammenhänge und potenzielle Prädiktoren für IPV zu identifizieren. Die Ergebnisse wurden als Odds Ratios mit Konfidenzintervallen dargestellt.

Ergebnisse: In *Veröffentlichung I* war psychische Gewalt gegen Frauen während der Schwangerschaft am häufigsten. Risikofaktoren wurden auf individueller, familiärer, gemeinschaftlicher und gesellschaftlicher Ebene identifiziert, darunter sozioökonomischer Status, Substanzkonsum, unzureichende Inanspruchnahme von Schwangerschaftsvorsorge, geringes Selbstwertgefühl, ungeplante Schwangerschaft, mangelnde Unterstützung sowie bestimmte soziale und ethnische Identitäten.

In *Veröffentlichung II* wurde festgestellt, dass ein Mangel an sozialer Unterstützung das Risiko erhöht, Opfer von Partnerschaftsgewalt zu werden, und dass die verstärkende Wirkung sozialer und geografischer Isolation dieses Risiko noch erhöht. Es zeigte sich auch, dass soziale Isolation mit körperlicher und sexueller Gewalt gegen Frauen bei Drogenkonsumentinnen korreliert und verschiedene Formen von Gewalt gegen Frauen bei Migrantinnen vorhersagt.

In *Veröffentlichung III* wurde festgestellt, dass etwa 50% der Frauen und 40% der Männer in den letzten 12 Monaten irgendeine Form von Gewalt in der Partnerschaft erlebt hatten. Psychische Gewalt war die am häufigsten berichtete Form. Die Mehrheit der Frauen und Männer berichtete von keiner Veränderung der Viktimisierung durch psychische und physische Gewalt während der Pandemie. Hingegen berichtete etwa ein Viertel der (werdenden) Mütter (27%) und Väter (22-24%) von einer Zunahme psychischer und physischer Gewalt in der Partnerschaft. In Bezug auf sexuelle Gewalt berichteten weder Mütter noch Väter von Veränderungen während der Pandemie. Eine höhere Partnerschaftszufriedenheit verringerte die Wahrscheinlichkeit, Opfer von Partnerschaftsgewalt zu werden, während Symptome von Wut und Feindseligkeit diese Wahrscheinlichkeit erhöhten.

Schlussfolgerungen: Angesichts der Belastung durch perinatale Partnerschaftsgewalt und der Auswirkungen der COVID-19-Pandemie auf Partnerschaftsgewalt unterstreicht diese Dissertation die dringende Notwendigkeit wirksamer präventiver Interventionen. Die Ergebnisse weisen darauf hin, wie wichtig es ist, Schwangerschaftsvorsorgeuntersuchungen im klinischen Umfeld zu initiieren und durchzuführen, da diese Faktoren mit einem geringeren Risiko für perinatale Partnerschaftsgewalt assoziiert sind. Ein routinemäßiges Screening auf Partnerschaftsgewalt in der Geburtshilfe ist von entscheidender Bedeutung. Des Weiteren sollten sich Gesundheitsdienstleister des erhöhten Risikos psychischer Störungen bei perinatalen Partnern, die Partnerschaftsgewalt erlebt haben, bewusst sein.

Da die Erfahrung von Gewalt gegen Frauen während der Pandemie weitgehend unverändert geblieben ist, wird dringend empfohlen, den Zugang zu Hilfsangeboten zu stärken und zu verbessern. Alternative Unterstützungsmaßnahmen wie Messenger-Dienste und Telemedizin sollten für Betroffene schwerer Partnerschaftsgewalt, die möglicherweise zunehmend isoliert sind, zugänglich und verlässlich sein. Die Sensibilisierung für Partnerschaftsgewalt ist für Personen im informellen und formellen Sektor sowie für Familienmitglieder und Freunde im unmittelbaren sozialen Netzwerk gefährdeter Personen von entscheidender Bedeutung. Die Ergebnisse unterstützen auch den Einsatz von Programmen, die auf unerwünschte Interaktionsmuster, insbesondere psychische Aggression, abzielen.

Zukünftige Forschung sollte sich auf die mit Partnerschaftsgewalt assoziierten Faktoren in der perinatalen Phase und anderen kritischen Lebensphasen oder sozialen Ereignissen

konzentrieren. Für ein umfassendes Verständnis von Partnerschaftsgewalt ist es wichtig, ökologische und intersektionale Perspektiven zu berücksichtigen. Darüber hinaus kann die Einbeziehung der Perspektive des jeweils anderen Partners in die Forschung zu Partnerschaftsgewalt einen wertvollen Kontext für bessere Präventions- und Interventionsstrategien liefern.

7. References

- Agrawal A, Ickovics J, Lewis JB, Magriples U, Kershaw TS. 2014. Postpartum intimate partner violence and health risks among young mothers in the United States: a prospective study. *Maternal and child health journal*, 18(8), 1985–1992. <https://doi.org/10.1007/s10995-014-1444-9>.
- Aguilar Ticona JP, Baig H, Nery N, Doss-Gollin S, Sacramento GA, Adhikarla H, et al. 2021. Risk of sexually transmitted Zika virus in a cohort of economically disadvantaged urban residents. *J Infect Dis*.
- Al-Eissa MA, Saleheen HN, Almuneef M. 2020. Examining the Relationship Between Witnessing Intimate Partner Violence and Victimization Among Children in Saudi Arabia. *Journal of interpersonal violence* 35(5-6), 1334–1350. <https://doi.org/10.1177/0886260517696865>.
- Alberto G, Yodanis C. 1998. *Erster Bericht zu den ökonomischen Kosten der Gewalt gegen Frauen*, Freiburg: Universität Freiburg.
- Arenas-Arroyo E, Fernandez-Kranz D, Nollenberger N. 2020. Can't Leave You Now! Intimate Partner Violence Under Forced Coexistence and Economic Uncertainty. IZA Discussion Paper No. 13570, Available at SSRN: <https://ssrn.com/abstract=3669499> or <http://dx.doi.org/10.2139/ssrn.3669499>.
- Baker L, Etherington N. 2023. Intersectionality: Issue 15. Western University. https://www.vawlearningnetwork.ca/our-work/issuebased_newsletters/issue-15/index.html.
- Bartels C, Hessmann P, Schmidt U, Vogelgsang J, Ruhleder M, Kratzenberg A, et al. 2022. Medium-term and peri-lockdown course of psychosocial burden during the ongoing COVID-19 pandemic: a longitudinal study on patients with pre-existing mental disorders. *Eur Arch Psychiatry Clin Neurosci*. 272(5):757-71.
- Bates EA. 2019. “No one would ever believe me”: an exploration of the impact of intimate partner violence victimization on men. *Psychology of Men & Masculinities* 21(4), 497–507. <https://doi.org/10.1037/men0000206>.

- Bates EA. 2020. "Walking on egg shells": a qualitative examination of men's experiences of intimate partner violence. *Psychology of Men & Masculinities* 21(1), 13–24. <https://doi.org/10.1037/men0000203>.
- Bayarri Fernández E, Ezpeleta L, Granero R, Dela Osa N, Domenech JM. 2011. Degree of exposure to domestic violence, psychopathology, and functional impairment in children and adolescents. *Journal of Interpersonal Violence* 26(6), 1215–1231."
- Bell KM, Higgins L. 2015. The impact of childhood emotional abuse and experiential avoidance on maladaptive problem solving and intimate partner violence. *Behavioral Sciences* 5:154–75.
- Birgitt H, Evelyn D. 2006. *Kosten häuslicher Gewalt in Österreich*. Wien.
- Blackburn JF. 2008. Reading and phonological awareness skills in children exposed to domestic violence. *Journal of Aggression, Maltreatment and Trauma* 17(4),415–438.
- Bond J. 2017. Zika, feminism, and the failures of health policy. *Washington Lee Law Rev Online* 73(2):841.
- Bonomi AE, Anderson ML, Rivara FP, Thompson RS. 2009. Health care utilization and costs associated with physical and nonphysical-only intimate partner violence. *Health Serv Res* 44(3):1052–1067.
- Boy A, Salihu HM. 2004. Intimate partner violence and birth outcomes: A systematic review. *Int. J. Fertil. Womens Med* 49, 159–164.
- Brooks C, Martin S, Broda L, Poudrier J. 2017. "How many silences are there? "Men's experience of victimization in intimate partner relationships. *Journal of Interpersonal Violence* 35(23–24), 1–24. <https://doi.org/10.1177/08862605177199>.
- Buffarini R, Coll C, Moffitt T, Silveira M, Barros F, Murray J. 2021. Intimate partner violence against women and child maltreatment in a Brazilian birth cohort study: co-occurrence and shared risk factors. *BMJ Global Health*.
- Butler N, Quigg Z, Bellis MA. 2020. Cycles of violence in England and Wales: the contribution of childhood abuse to risk of violence revictimisation in adulthood. *BMC Med* 18, 325. <https://doi.org/10.1186/s12916-020-01788-3>.

- Campbell JC, Glass N, Sharps PW, Laughon K, Bloom T. 2007. Intimate partner homicide: review and implications of research and policy. *Trauma Violence Abuse* 8:246–69. doi: 10.1177/1524838007303505 18.
- Carbone-López K, Kruttschnitt C, MacMillan R. 2006. Patterns of intimate partner violence and their associations with physical health, psychological distress and substance use. *Public Health Reports* 121(4), 382–392. <https://doi.org/10.1177%2F003335490612100406>.
- Cha S, Masho SW. 2014. Intimate Partner Violence and Utilization of Prenatal Care in the United States. *Journal of Interpersonal Violence* 29(5), 911–927. <https://doi.org/10.1177/0886260513505711>.
- Chan KL, Straus MA, Brownridge DA, Tiwari A, Leung WC. 2008. Prevalence of dating violence and suicidal ideation among male and female university students worldwide. *Journal of Midwifery Women's Health* 53(6), 529–537. <https://doi.org/10.1016/j.jmwh.%202008.04.016>.
- Coker AL, Davis KE, Arias I. 2002. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med* 23(4):260–268.
- Coker AL, Sanderson M, Dong B. 2004. Partner violence during pregnancy and risk of adverse pregnancy outcomes. *Paediatr. Perinat. Epidemiol.* 18, 260–269. doi: 10.1111/j.1365-3016.2004.00569.x.
- Cokkinides, VE, Coker AL, Sanderson M, Addy C, and Bethea L. 1999. Physical violence during pregnancy: maternal complications and birth outcomes. *Obstet. Gynecol.* 93, 661–666. doi: 10.1016/s0029-7844(98)00486-4.
- Collins PH. 2002. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. 2nd ed. New York: Routledge. accessed March 2, 2023. Available online at: <https://homologacao-reciis.icict.fiocruz.br/index.php/reciis/article/download/854/1496>.
- Conradt E, Lester BM, Appleton AA, Armstrong DA, Marsit CJ. 2013. The roles of DNA methylation of NR3C1 and 11b-HSD2 and exposure to maternal mood disorder in utero on newborn neurobehavior. *Epigenetics* 8, 1321–1329. doi: 10.4161/epi.26634.

- Conroy AA. 2014. Gender, power, and intimate partner violence: a study on couples from rural Malawi. *J Interpers Violence.*;29(5):866-888 doi:10.1177/0886260513505907.
- Counts DA, Brown J, Campbell J. 1992. *Sanctions and sanctuary: cultural perspectives on the beating of wives.* Westview Press: Boulder, Colorado.
- Cox S, Hopkins J, Hans S. 2000. Attachment in preterm infants and their mothers: Neonatal risk status and maternal representations. *Infant Mental Health Journal* (6)21:464–480.
- Crenshaw K. 1989. Demarginalizing the intersection of race and sex: a black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. *Univ Chic Leg Forum* 14:538–54.
- Crenshaw K. 1991. Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Rev.* 43(6):1241–99.
- Crenshaw K. 2011. Postscript. In: Lutz H, MTH V, Supik L, editors. *Framing intersectionality: Debates on a multi-faceted concept in gender studies, the feminist imagination-Europe and beyond.* Kindle. Surrey: Ashgate Publishing Ltd p. 221–34.
- De Coster S, Cornell Zito R. 2010. Gender and general strain theory: The gendering of emotional experiences and expressions. *Journal of Contemporary Criminal Justice* 26(7), 224–245. <https://doi.org/10.1177/1043986209359853>.
- Devries KM, Kishor S, Johnson H, Stöckl H, Bacchus LJ, Garcia-Moreno C, et al. 2010. Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. *Reprod Health Matters* 18:158– 70. doi: 10.1016/S0968-8080(10)36533-5.
- Devries KM, Mak JY, Bacchus LJ, Child JC, Falder G, Petzold M, Astbury J, Watts CH. 2013. Intimate partner violence and incident depressive symptoms and suicide attempts: a systematic review of longitudinal studies. *Plos Medicine* 10(5), e1001439. doi: 10.1371/journal.pmed.1001439 PMID: 23671407.
- Devries KM, Mak JYT, Garcia-Moreno C, Petzold M, Child JC, Falder G, et al. 2013. The global prevalence of intimate partner violence against women. *Science* 340:1527–8. doi: 10.1126/science.1240937.

- Dhungel S, Dhungel P, Dhital SR, et al. 2017. Is economic dependence on the husband a risk factor for intimate partner violence against female factory workers in Nepal? *BMC Women's Health* 17, 82. <https://doi.org/10.1186/s12905-017-0441-8>.
- Dvir Y, Ford JD, Hill M, Frazier JA. 2014. Childhood maltreatment, emotional dysregulation, and psychiatric comorbidities. *Harvard Review Psychiatry* 22(3):149–61.
- Dworkin ER, Brill CD, Ullman SE. 2019. Social reactions to disclosure of interpersonal violence and psychopathology: A systematic review and meta-analysis. *Clinical Psychology Review*, 72, 101750. <https://doi.org/10.1016/j.cpr.2019.101750>.
- Entilli L, Cipolletta S. 2017. When women get violent: the construction of domestic abuse experience from a heterosexual men's perspective. *Journal of Clinical Nursing* 26(15-16), 2328–2341. <https://doi.org/10.1111/jocn.13500>.
- European Union Agency for Fundamental Rights (FRA). 2014. Violence against women: An EU wide survey.
- Evans DP. 2020. COVID-19 and violence: a research call to action. *BMC women's health* 20(1), 1-3.
- Federal Office for Gender Equality (EBG). 2020. Definition, Formen und Folgen häuslicher Gewalt. Accessed on March 2, 2023: www.ebg.admin.ch.
- Follingstad DR, Dehart DD. 2000. Defining psychological abuse of husbands toward wives: Contexts, behaviors, and typologies. *Journal of Interpersonal Violence*.;15(9):891-920.
- Follingstad DR, Rogers JM. 2013. Validity concerns in the measurement of women's and men's report of intimate partner violence. *Sex Roles* 69(4), 149–167. <https://doi.org/10.1007/s11199-013-0264-5>.
- Frauenhauskoordination e.V. Violence against women: Costs of violence. 2023. Accessed February 27, 2023. <https://www.frauenhauskoordination.de/en/thematic-portal/violence-against-women/consequences-of-violence/costs-of-violence>.

- Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH, Health WHOM-cSoWs, et al. 2006. Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *Lancet* 368(9543):1260-9.
- Gilchrist G, Dennis F, Radcliffe P, Henderson J, Howard LM, Gadd D. 2019. The interplay between substance use and intimate partner violence perpetration: a meta-ethnography. *Int J Drug Policy* 65:8–23.
- Gloor D, Meier H. 2012. Beurteilung des Schweregrades häuslicher Gewalt, Sozialwissenschaftlicher Grundlagenbericht. Im Auftrag des EBG. Bern.
- Goodman LA, Epstein D. 2022. Loneliness and the COVID-19 Pandemic: Implications for Intimate Partner Violence Survivors. *Journal of family violence* 37(5), 767–774. <https://doi.org/10.1007/s10896-020-00215-8>.
- Grace KT, Anderson JC. 2018. Reproductive coercion: a systematic review. *TVA* 19(4):371–90.
- Graham-Bermann SA, Howell KH, Miller LE, Kwek J, Lilly MM. 2010. Traumatic events and maternal education as predictors of verbal ability for preschool children exposed to intimate partner violence (IPV). *Journal of Family Violence* 25(4), 383–392.
- Hammett JF, Halmos MB, Parrott DJ et al. 2022. COVID Stress, socioeconomic deprivation, and intimate partner aggression during the COVID-19 pandemic. *BMC Public Health* 22, 1666. <https://doi.org/10.1186/s12889-022-14093-w>.
- Han A, Stewart DE. 2014. Maternal and fetal outcomes of intimate partner violence associated with pregnancy in the Latin American and Caribbean region. *Int. J. Gynaecol. Obstet.* 124, 6–11. doi: 10.1016/j.ijgo.2013.06.037.
- Haselschwerdt ML. 2014. Theorizing children's exposure to intimate partner violence using Johnson's typology. *Journal of Family Theory & Review* 6(3), 199–221. <https://doi.org/10.1111/jftr.12040>.
- Hatcher AM, Stöckl H, Christofides N, Woollett N, Pallitto CC, Garcia-Moreno C, et al. 2016. Mechanisms linking intimate partner violence and prevention of mother-to-child transmission of HIV: a qualitative study in South Africa. *Soc Sci Med.* 168:130–9.

- Heise LL, Ellsberg, M, Gottmoeller M. 2002. A global overview of gender-based violence. *International Journal of Gynecology and Obstetrics* 78(1), 5–14.
- Heise LL. 1998. Violence against women: An integrated, ecological framework. *Violence Against Women* 4(3), 262–290.
- Helfer RE. 1987. The perinatal period, a window of opportunity for enhancing parent-infant communication: an approach to prevention. *Child abuse & neglect* 11(4), 565–579. [https://doi.org/10.1016/0145-2134\(87\)90082-2](https://doi.org/10.1016/0145-2134(87)90082-2).
- Herrera VM, McCloskey LA. 2001. Gender differences in the risk for delinquency among youth exposed to family violence. *Child Abuse and Neglect* 25, 1037–1051.
- Hill TD, Garcia-Alexander G, Sileo K, Fahmy C, Testa A, Luttinen R, Schroeder R. 2023. Male Sexual Dysfunction and the Perpetration of Intimate Partner Violence. *Violence against women*, 10778012231174348. Advance online publication. <https://doi.org/10.1177/10778012231174348>.
- Hines DA, Douglas EM, Berger JL. 2015. A self-report measure of legal administrative aggression within intimate relationships. *Aggressive Behavior* 41(4), 295–309. <https://doi.org/10.1002/ab.21540>.
- Hines DA, Douglas EM. 2010. A closer look at men who sustain intimate terrorism by women. *Partner Abuse* 1(3), 286–313. <https://doi.org/10.1891/1946-6560.1.3.286>.
- Hines DA, Douglas EM. 2015. Health problems of partner violence victims: Comparing help-seeking men to a population-based sample. *American Journal of Preventive Medicine* 48(2), 136–144. <https://doi.org/10.1016/j.amepre.2014.08.022>.
- Holliday CN, Kahn G, Thorpe RJ, Shah R, Hameeduddin Z, Decker MR. 2020. Racial/Ethnic Disparities in Police Reporting for Partner Violence in the National Crime Victimization Survey and Survivor-Led Interpretation. *Journal of racial and ethnic health disparities*, 7(3), 468–480. <https://doi.org/10.1007/s40615-019-00675-9>.
- <https://nij.ojp.gov/topics/articles/economic-distress-and-intimate-partner-violence>.

- Huth-Bocks AC, Krause K, Ahlfs-Dunn S, Gallagher E, Scott S. 2013. Relational trauma and posttraumatic stress symptoms among pregnant women. *Psychodyn Psychiatry* 41:277–301.
- İlkkaracan P. 1996. domestic violence and family life as experienced by Turkish immigrant women in Germany. *Women for women's human rights reports no. 3*. Accessed May 25, 2023. https://kadinininsanhaklari.org/wp-content/uploads/2018/06/immigrant_women_96.pdf.
- Ireland TO, Smith CA. 2009. Living in Partner-violent families: Developmental links to antisocial behavior and relationship violence. *Journal of Youth and Adolescence* 38, 323–339.
- Janssen PA, Holt VL, Sugg NK, Emanuel I, Critchlow CM, Henderson AD. 2003. Intimate partner violence and adverse pregnancy outcomes: a population-based study. *Am. J. Obstet. Gynecol.* 188, 1341–1347. doi: 10.1067/mob.2003.274.
- Johnson M. 2008. *A typology of domestic violence: Intimate terrorism, violent resistance, and situation couple violence*. Northeastern University Press.
- Johnson MP. 2006. Conflict and control: Gender symmetry and asymmetry in domestic violence. *Violence Against Women*, 12(11), 1003–18. <https://doi.org/10.1177/1077801206293328>.
- Jones AS, Dienemann J, Schollenberger J, et al. 2006. Long-term costs of intimate partner violence in a sample of female HMO enrollees. *Womens Health Issues.*;16(5):252-261. doi:10.1016/j.whi.2006.06.007.
- Jones N, Małachowska A, Guglielmi S, Alam F, Hamad BA, Alheiwidi S, et al. 2020. 'I have nothing to feed my family': COVID-19 risk pathways for adolescent girl in low- and midding-income countries. London.
- Jouriles EN, Mueller V, Rosenfield D, McDonald R, Dodson MC. 2012. Teens' experiences of harsh parenting and exposure to severe intimate partner violence: Adding insult to injury in predicting teen dating violence. *Psychology of Violence* 2(2),125–138.

- Jung S, Kneer J, Krüger T. 2020. Mental health, sense of coherence, and interpersonal violence during the COVID-19 pandemic lockdown in Germany. *J Clin Med*. 9:3708. doi: 10.3390/jcm9113708.
- Jung S, Kneer J, Kruger THC. 2020. Mental health, sense of coherence, and interpersonal violence during the covid- 19 pandemic lockdown in Germany. *J Clin Med*. 9:1–12. doi: 10.3390/jcm9113708.
- Junge C, Garthus-Niegel S, Slinning K, Polte C, Simonsen TB, Eberhard-Gran M. 2017. The Impact of Perinatal Depression on Children's Social-Emotional Development: A Longitudinal Study. *Maternal and child health journal*, 21(3), 607–615. <https://doi.org/10.1007/s10995-016-2146-2>.
- Kapella O, Baierl A, Rille-Pfeiffer C, Geserick C, Schmidt EM, Schröttle M. 2011. Gewalt in der Familie und im nahen sozialen Umfeld. Österreichische Prävalenzstudie zur Gewalt an Frauen und Männern. Wien: Österreichisches Institut für Familienforschung an der Universität Wien.
- Kapur N. 2020. Gender analysis: prevention and response to Ebola virus disease in the Democratic Republic of Congo. Accessed March 2, 2023. <https://reliefweb.int/report/democratic-republic-congo/gender-analysis-prevention-and-response-ebola-virus-disease>.
- Kaukinen C. 2020. When stay-at-home orders leave victims unsafe at home: Exploring the risk and consequences of intimate partner violence during the COVID-19 pandemic. *American journal of criminal justice* 45, 668-679.
- Kaura SA, Lohman BJ. 2007. Dating violence victimization, relationship satisfaction, mental health problems, and acceptability of violence: A comparison of men and women. *Journal of Family Violence* 22(6), 367–381. <https://doi.org/10.1007/s10896-007-9092-0>.
- Kelly JB, Johnson MP. 2008. Differentiation among types of intimate partner violence: research update and implications for interventions. *Family Court Review* 46(3), 476–499. <https://doi.org/10.1111/j.1744-1617.2008.00215.x>.

- Kelly UA. 2011. Theories of intimate partner violence: From blaming the victim to acting against injustice: Intersectionality as an analytic framework. *Advances in nursing science* 34(3), E29-E51.
- Kernic MA, Wolf ME, Holt VL, McKnight B, Huebner CE, Rivara FP. 2003. Behavioral problems among children whose mothers are abused by an intimate partner. *Child Abuse and Neglect* 27, 1231–1246.
- Klengel T, Dias BG, Ressler KJ. 2016. Models of intergenerational and transgenerational transmission of risk for psychopathology in mice. *Neuropsychopharmacology*. 41:219–31. doi:10.1038/npp.2015.249.
- Lausi G, Pizzo A, Cricenti C, Baldi M, Desiderio R, Giannini AM, Mari E. 2021. Intimate Partner Violence during the COVID-19 Pandemic: A Review of the Phenomenon from Victims' and Help Professionals' Perspectives. *International journal of environmental research and public health*, 18(12), 6204. <https://doi.org/10.3390/ijerph18126204>.
- Levendosky AA, Huth-Bocks A, Semel MA. 2002. Adolescent peer relationships and mental health functioning in families with domestic violence. *Journal of Clinical Child Psychology* 3(2), 206–218.
- Levendosky AA, Huth-Bocks AC, Shapiro DL, Semel MA. 2003. The impact of domestic violence on the maternal–child relationship and preschool age children’s functioning. *Journal of Family Psychology* 17(3),275–287.
- Levinson D. 1989. *Violence in cross cultural perspective*. Sage Publishers: Newbury Park, California.
- Lipsky S, Holt VL, Easterling TR, Critchlow CW. 2003. Impact of police-reported intimate partner violence during pregnancy on birth outcomes. *Obstet. Gynecol.* 102, 557–564. doi: 10.1016/s0029-7844(03)00573-8.
- Luthra R, Abramovitz R, Greenberg R, Schoor A, Newcorn J, Schmeidler J, et al. 2009. Relationship between type of trauma exposure and posttraumatic stress disorder among urban children and adolescents. *Journal of Interpersonal Violence* 24(11),1919–1927.

- Machado A, Santos A, Graham-Kevan N, Matos M. 2017. Exploring help seeking experiences of male victims of female perpetrators of IPV. *Journal of Family Violence*, 32(5), 513–523. <https://doi.org/10.1007/s10896-016-9853-8>.
- Marais A, Kuo CC, Julies R, Stein DJ, Joska JA, Zlotnick C. 2019. “If He’s Abusing You . . . the Baby Is Going to Be Affected”: HIV-Positive Pregnant Women’s Experiences of Intimate Partner Violence. *Violence Against Women*. 25(7):839–61.
- McHugh MC, Rakowski S, Siwderski C. 2013. Men’s experiences of psychological abuse: Conceptualization and measurement issues. *Sex Roles* 69(3–4), 168–181. <https://doi.org/10.1007/s11199-013-0274-3>.
- Meinhart M, Vahedi L, Carter SE, Poulton C, Mwanze Palaku P, Stark L. (2021). Gender-based violence and infectious disease in humanitarian settings: lessons learned from Ebola, Zika, and COVID-19 to inform syndemic policy making. *Conflict and health*, 15(1), 84. <https://doi.org/10.1186/s13031-021-00419-9>.
- Mojahed A, Alaidarous N, Kopp M, Pogarell A, Thiel F, Garthus-Niegel S. 2021a. Prevalence of Intimate Partner Violence Among Intimate Partners During the Perinatal Period: A Narrative Literature Review. *Front. Psychiatry* 12:601236. doi: 10.3389/fpsy.2021.601236.
- Mojahed A, Alaidarous N, Shabta H, Hegewald J, Garthus-Niegel S. 2022. Intimate partner violence against women in the Arab countries: A systematic review of risk factors. *Trauma Violence Abuse* 23(2):390-407. doi:10.1177/1524838020953099.
- Mojahed A, Brym S, Hense H, Grafe B, Helfferich C, Lindert J and Garthus-Niegel S. 2021b. Rapid review on the associations of social and geographical isolation and intimate partner violence: Implications for the ongoing COVID-19 pandemic. *Front. Psychiatry* 12:578150. doi: 10.3389/fpsy.2021.578150
- Mojahed A, Mack J, Staudt A, Weise V, Shiva L, Chandra P, Garthus-Niegel S. 2023. Prevalence and predictors of intimate partner violence during the COVID-19 pandemic: Results from the population-based study DREAM_{CORONA}. [In Review].
- Monterrosa AE. 2021. How Race and Gender Stereotypes Influence Help-Seeking for Intimate Partner Violence. *Journal of interpersonal violence* 36(17-18), NP9153–NP9174. <https://doi.org/10.1177/0886260519853403>.

- Mootz JJ, Basaraba CN, Corbeil T, Johnson K, Kubanga KP, Wainberg ML, Khoshnood, K. 2021. Armed conflict, HIV, and syndemic risk markers of mental distress, alcohol misuse, and intimate partner violence among couples in Uganda. *Journal of Traumatic Stress* 34: 1016– 1026. <https://doi.org/10.1002/jts.22740>.
- Moreira DN, Pinto da Costa M. 2020. The impact of the Covid-19 pandemic in the precipitation of intimate partner violence. *Int J Law Psychiatry* 71:101606. doi: 10.1016/j.ijlp.2020.101606.
- Morgan W, Wells M. 2016. 'It's deemed unmanly': men's experiences of intimate partner violence (IPV). *Journal of Forensic Psychiatry & Psychology* 27(3), 404–418. <http://dx.doi.org/10.1080/14789949.2015.1127986>.
- Moylan CA, Herrenkohl TI, Sousa C, Tajima EA, Herrenkohl RC, Russo MJ. 2010. The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence* 25, 53–63.
- Mueller I, Tronick E. 2019. Early life exposure to violence: Developmental consequences on brain and behavior. *Front. Behav. Neurosci.* 13:156. doi: 10.3389/fnbeh.2019.00156.
- Naghavi A, Amani S, Bagheri M, De Mol J. 2019. A critical analysis of intimate partner sexual violence in Iran. *Front Psychol.* 10:2729. doi: 10.3389/fpsyg.2019.02729.
- National Center for Injury Prevention of the Centers for Disease Control and Prevention. 2015. Intimate partner violence surveillance: uniform definitions and recommended data elements. Version 2.0.
- National Institute of Justice (NIJ). Economic Distress and Intimate Partner Violence. 2009. Accessed May 2, 2023.
- Nowaskie DZ, Roesler AC. 2022. The impact of COVID-19 on the LGBTQ+ community: Comparisons between cisgender, heterosexual people, cisgender sexual minority people, and gender minority people. *Psychiatry Res.* 309:114391. doi:10.1016/j.psychres.2022.114391.
- Nybergh L, Enander V, Krantz G. 2016. Theoretical considerations on men's experiences of intimate partner violence: An interview-based study. *Journal of Family Violence* 31(2), 191–202. <https://doi.org/10.1007/s10896-015-9785-8>.

- O'Donnell K, O'Connor TG, Glover V. 2009. Prenatal stress and neurodevelopment of the child: focus on the HPA axis and role of the placenta. *Dev. Neurosci.* 31, 285–292. doi: 10.1159/000216539.
- Ozcan S & Kirca N. The Effect of Postpartum Violence against Mothers on Mother-Infant Bonding. 2018. *International Journal of Caring Science* 11(3), 1830.
- Palladino CL, Singh V, Campbell J, Flynn H, Gold K. 2011. Homicide and suicide during the perinatal period: findings from the National Violent Death Reporting System. *Obstet Gynecol.* 118:1056. doi: 10.1097/AOG.0b013e31823294da.
- Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, Oertelt-Prigione S, et al. 2020. Pandemics and violence against women and children. Center for Global Development.
- Pfitzner N, Fitz-Gibbon K, True J. 2022. When staying home isn't safe: Australian practitioner experiences of responding to intimate partner violence during COVID-19 restrictions. *Journal of Gender-Based Violence* 6(2):297-314.
- Pfitzner N, Fitz-Gibbon K, True J. 2020. Responding to the 'shadow pandemic': Practitioner views on the nature of and responses to violence against women in Victoria, Australia during the COVID-19 restrictions. Monash University. <https://doi.org/10.26180/5ED9D5198497C>.
- Phillips H, Warshaw C, Kaewken O. 2020. Literature review: Intimate partner violence, substance use coercion, and the need for integrated service models. National Center on Domestic Violence, Trauma, and Mental Health.
- Plant DT, Pariante CM, Sharp D, Pawlby S. 2015. Maternal depression during pregnancy and offspring depression in adulthood: Role of child maltreatment. *Br J Psychiatry Suppl.* 207:213–20. doi: 10.1192/bjp.bp.114.156620.
- Ragavan MI, Garcia R, Berger RP, Miller E. 2020. Supporting Intimate Partner Violence Survivors and Their Children During the COVID-19 Pandemic. *Pediatrics*, 146(3), e20201276. <https://doi.org/10.1542/peds.2020-1276>.
- Rakers F, Rupprecht S, Dreiling M, Bergmeier C, Witte OW, Schwab M. 2017. Transfer of maternal psychosocial stress to the fetus. *Neuroscience and biobehavioral reviews*,

S0149-7634(16)30719-9. Advance online publication.
<https://doi.org/10.1016/j.neubiorev.2017.02.019>.

- Ramborger ME, Zubilete MAZ, Acosta GB. 2018. Prenatal stress and its effects of human cognition, behavior and psychopathology: a review of the literature. *Pediatr. Dimensions* doi: 10.15761/pd.1000159.
- Reidy DE, Berke DS, Gentile B, Zeichner A. 2014. Man enough? Masculine discrepancy stress and intimate partner violence. *Personality and Individual Differences* 68(1), 160–164. <https://doi.org/10.1016/j.paid.2014.04.021>.
- Rhodes KV. 2012. Taking a fresh look at routine screening for intimate partner violence: what can we do about what we know? *Mayo Clin Proc* 87(5):419-23. doi: 10.1016/j.mayocp.2012.02.006.
- Rice WS, Burnham K, Mugavero MJ, James L, Atkins GC, Turan B. 2017. Association between internalized HIV-related stigma and HIV care visit adherence. *J Acquir Immune Defic Syndr.* 76(5):482–7.
- Rose L, Alhusen J, Bhandari S, Soeken K, Marcantonio K, Bullock L, et al. 2010. Impact of intimate partner violence on pregnant women’s mental health: mental distress and mental strength. *Issues Ment Health Nurs.* 31:103–11. doi: 10.3109/01612840903254834.
- Rosen D, Seng JS., Tolman RM, Mallinger G. 2007. Intimate partner violence, depression, and posttraumatic stress disorder as additional predictors of low birth weight infants among low-income mothers. *J. Interpers.* 22, 1305–1314. doi: 10.1177/088626050730455.
- Sabri B, Hartley M, Saha J, Murray S, Glass N, Campbell JC. 2020. Effect of COVID-19 pandemic on women’s health and safety: a study of immigrant survivors of intimate partner violence. *Health Care Women Int.* doi: 10.1080/07399332.2020.1833012.
- Sabri B, Tharmarajah S, Njie-Carr VPS, Messing JT, Loerzel E, Arscott J, Campbell JC. 2022. Safety Planning With Marginalized Survivors of Intimate Partner Violence: Challenges of Conducting Safety Planning Intervention Research With Marginalized Women. *Trauma, Violence, & Abuse* 23(5), 1728–1751. <https://doi.org/10.1177/15248380211013136>.

- Sacco S. 2017. Häusliche Gewalt Kostenstudie für Deutschland: Gewalt gegen Frauen in (ehemaligen) Partnerschaften. ISBN: 374396354X, 9783743963542.
- Sachdeva I, Aithal S, Yu W, Toor P, Tan JCH. 2021. The disparities faced by the LGBTQ+ community in times of COVID-19. *Psychiatry Res.* 297:113725. doi:10.1016/j.psychres.2021.113725.
- Sarkar NN. 2008. The impact of intimate partner violence on women's reproductive health and pregnancy outcome. *J. Obstet. Gynaecol.* 28, 266–271. doi: 10.1080/01443610802042415.
- Schrötle M, Ansorge N. 2008. Gewalt gegen Frauen in Paarbeziehungen. Eine sekundäranalytische Auswertung zur Differenzierung von Schweregraden, Mustern, Risikofaktoren und Unterstützung nach erlebter Gewalt. Berlin: Bundesministerium für Familie, Senioren, Frauen und Jugend.
- Schury K, Koenig AM, Isele D, Hulbert AL, Krause S, Umlauf M, et al. 2017. Alterations of hair cortisol and dehydroepiandrosterone in mother-infant dyads with maternal childhood maltreatment. *BMC Psychiatry* 17:213. doi: 10.1186/s12888-017-1367-2.
- Scott-Storey K, O'Donnell S, Wuest J. 2018. Cumulative lifetime violence severity: Does it make a difference to the health of Canadian men? *International Journal of Men's Social & Community Health*, 1(1), Article e22–e39.
- Scott-Storey K. 2011. Cumulative abuse: do things add up? An evaluation of the conceptualization, operationalization, and methodological approaches in the study of the phenomenon of cumulative abuse. *Trauma, Violence & Abuse* 12(3), 135–50. <https://doi.org/10.1177/1524838011404253>.
- Silverman JG, Decker MR, Reed E, Raj A. 2006. Intimate partner violence victimization prior to and during pregnancy among women residing in 26 US states: associations with maternal and neonatal health. *Am. J. Obstet. Gynecol.* 195, 140–148. doi: 10.1016/j.ajog.2005.12.052.
- Silverman JG, Fonseka RW, Dehingia N, Boyce SC, Chandurkar D, Singh K, et al. 2020. Associations between recent intimate partner violence and receipt and quality of perinatal health services in Uttar Pradesh. *PLoS ONE* 15(5): e0232079. <https://doi.org/10.1371/journal.pone.0232079>.

- Simonelli A, Pasquali CE, De Palo F. 2014. Intimate partner violence and drug-addicted women: from explicative models to gender-oriented treatments. *European journal of psychotraumatology* 5, 10.3402/ejpt.v5.24496. <https://doi.org/10.3402/ejpt.v5.24496>.
- Snow Jones A, Dienemann J, Schollenberger J. 2006. Long-term costs of intimate partner
- Tarzia L, Hegarty K. 2021. A conceptual re-evaluation of reproductive coercion: centring intent, fear and control. *Reprod Health* 18, 87. <https://doi.org/10.1186/s12978-021-01143-6>.
- Thiel F, Buechl VCS, Rehberg F, Mojahed A, Daniels JK, Schellong J, et al. 2022. Changes in prevalence and severity of domestic violence during the COVID-19 pandemic: A systematic review. *Front Psychiatry* 13:874183.
- Thorson A, Formenty P, Lofthouse C, Broutet N. 2016. Systematic review of the literature on viral persistence and sexual transmission from recovered Ebola survivors: evidence and recommendations. *BMJ Open* 1–8.
- Tierolf B, Geurts E, Steketee M. 2021. Domestic violence in families in the Netherlands during the coronavirus crisis: A mixed method study. *Child Abuse & Neglect*, 116, 104800.
- Tilbrook E, Allan A, Dear G. 2010. Intimate partner abuse of men. Edith Cowan University.
- Ullman SE. 2010. Talking about sexual assault: Society's response to survivors. American Psychological Association Press. <https://doi.org/10.1037/12083-004>.
- Ullman SE. 2023. Correlates of Social Reactions to Victims' Disclosures of Sexual Assault and Intimate Partner Violence: A Systematic Review. *Trauma, Violence, & Abuse*, 24(1), 29–43. <https://doi.org/10.1177/15248380211016013>.
- UN Women. 2020. Violence Against Women and Girls: the Shadow Pandemic. Retrieved March 2, 2023, from United Nations: <https://www.unwomen.org/en/news/stories/2020/4/statement-ed-phumzile-violence-against-women-during-pandemic>.
- Walker A, Lyall K, Silva D, Craigie G, Mayshak R, Costa B, Hyder S, Bentley A. 2019. Male victims of female-perpetrated intimate partner violence, help-seeking and

reporting behaviors: A qualitative study. *Psychology of Men & Masculinities* 21(2), 213–223. <https://doi.org/10.1037/men0000222>.

Watson D, Parsons S. 2005. *Domestic Abuse of Women and Men in Ireland: Report on the National Study of Domestic Abuse*. Dublin: Stationery Office.

WHO. 2011. *Intimate Partner Violence During Pregnancy: Information Sheet*. Geneva: World Health Organization.

WHO. 2012. *Understanding and Addressing Violence against Women: Intimate Partner Violence*. World Health Organization; Geneva, Switzerland.

WHO. 2020a. *Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women*. Executive summary.

WHO. 2020b. *COVID-19 and violence against women: what the health sector/system can do*, (No. WHO/SRH/20.04). World Health Organization.

Wilson AE, Calhoun KS, Bernat JA. 1999. Risk recognition and trauma-related symptoms among sexually revictimized women. *J Consult Clin Psychol* 67:705–10.

Wood SN, Yirgu R, Wondimagegnehu A et al. 2022. Impact of the COVID-19 pandemic on intimate partner violence during pregnancy: evidence from a multimethods study of recently pregnant women in Ethiopia. *BMJ Open* 12:e055790. doi: 10.1136/bmjopen-2021-055790.

Yehuda R, Bell A, Bierer LM, Schmeidler J. 2008. Maternal, not paternal, PTSD is related to increased risk for PTSD in offspring of Holocaust survivors. *J Psychiatr Res*. 42:1104–11. doi: 10.1016/j.jpsychires.2008.01.002.

Yonga AM, Kiss L, Onarheim KH. 2022. A systematic review of the effects of intimate partner violence on HIV-positive pregnant women in sub-Saharan Africa. *BMC Public Health* 22, 220. <https://doi.org/10.1186/s12889-022-12619-w>.

Zero O, Geary M. 2020. *COVID-19 and Intimate Partner Violence: A Call to Action*. Rhode Island medical journal 103(5).

Zinzow HM, Ruggiero KJ, Resnick H, Hanson R, Smith D, Saunders B, Kilpatrick D. 2009. Prevalence and mental health correlates of witnessed parental and community violence in a national sample of adolescents. *Journal of Child Psychology and Psychiatry* 50(4), 441–450.

8. Abbreviations, figures, and tables

IPV – Intimate partner violence

WHO – World Health Organization

HPAA – Hypothalamic-pituitary-adrenal axis

PTSD – Post-traumatic stress disorder

PTSS – Post-traumatic stress symptoms

DV – Domestic violence

HIV – Human immunodeficiency viruses

CTS2S – The short form of the Revised Conflict Tactics Scale

OR – Odds Ratio

CI – Confidence interval

SD – Standard deviation

NIJ – National Institute of Justice

RCA – Reproductive coercion and abuse

LGBTIQ+ – Lesbian, gay, bisexual, transgender, intersex, queer, asexual and other sexually or gender diverse

9. Appendices

Anlage 1

1. Erklärungen zur Eröffnung des Promotionsverfahrens Hiermit versichere ich, dass ich die vorliegende Arbeit ohne unzulässige Hilfe Dritter und ohne Benutzung anderer als der angegebenen Hilfsmittel angefertigt habe; die aus fremden Quellen direkt oder indirekt übernommenen Gedanken sind als solche kenntlich gemacht. Ich versichere ferner, die "Richtlinien zur Sicherung guter wissenschaftlicher Praxis, zur Vermeidung wissenschaftlichen Fehlverhaltens und für den Umgang mit Verstößen" der Technischen Universität Dresden befolgt zu haben.
2. Bei der Auswahl und Auswertung des Materials sowie bei der Herstellung des Manuskripts habe ich Unterstützungsleistungen von folgenden Personen erhalten:
3. Weitere Personen waren an der geistigen Herstellung der vorliegenden Arbeit nicht beteiligt. Insbesondere habe ich nicht die Hilfe eines kommerziellen Promotionsberaters in Anspruch genommen. Dritte haben von mir weder unmittelbar noch mittelbar geldwerte Leistungen für Arbeiten erhalten, die im Zusammenhang mit dem Inhalt der vorgelegten Dissertation stehen.
4. Die Arbeit wurde bisher weder im Inland noch im Ausland in gleicher oder ähnlicher Form einer anderen Prüfungsbehörde vorgelegt.
5. Die Inhalte dieser Dissertation wurden in folgender Form veröffentlicht:
6. Ich bestätige, dass es keine zurückliegenden erfolglosen Promotionsverfahren gab.
7. Ich bestätige, dass ich die Promotionsordnung der Medizinischen Fakultät der Technischen Universität Dresden anerkenne.
8. Ich habe die Zitierrichtlinien für Dissertationen an der Medizinischen Fakultät der Technischen Universität Dresden zur Kenntnis genommen und befolgt.

Datum, Ort:

Unterschrift:

Anlage 2

Erklärung über die Einhaltung gesetzlicher Bestimmungen

- ✓ Hiermit bestätige ich die Einhaltung der folgenden aktuellen gesetzlichen Vorgaben im Rahmen meiner Dissertation
- ✓ das zustimmende Votum der Ethikkommission bei Klinischen Studien, epidemiologischen Untersuchungen mit Personenbezug oder Sachverhalten, die das Medizinproduktegesetz betreffen Aktenzeichen der zuständigen Ethikkommission:



Prof. Dr. Susan Garthus-Niegel

Aktenzeichen der zuständigen Ethikkommission:

The DREAM_{CORONA} study (Paper III) received ethical approval from the Ethics Committee of the Faculty of Medicine of the Technical University of Dresden (No: EK 278062015) and was conducted in accordance with the Helsinki declaration.

- ✓ die Einhaltung von Datenschutzbestimmungen der Medizinischen Fakultät und des Universitätsklinikums Carl Gustav Carus.

Datum, Ort:

Unterschrift:

Anlage 3

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Prevalence of Intimate Partner Violence Among Intimate Partners During the Perinatal Period: A Narrative Literature Review

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Intimate partner violence (IPV) affects individuals and families from all backgrounds, regardless of their ethnicity, socio-economic status, sexual orientation, or religion. Pregnancy and childbirth could be a time of vulnerability to violence because of changes in physical, emotional, social, and economic demands and needs. Prevalence of IPV against women during the perinatal period is increasingly researched and documented. However, evidence on IPV prevalence among intimate partners as well as on the course of IPV over the perinatal period is scarce. The purpose of this review was to provide a narrative synthesis of the existing literature regarding the prevalence estimates of IPV among intimate partners over the perinatal period. Through this review, we also gained better insight into associated factors, as well as the various forms of IPV. Of the 766 studies assessing prevalence estimates identified, 86 were included, where 80 studies focused on unidirectional IPV (i.e., perpetrated by men against women) and six studies investigated bidirectional IPV (i.e., IPV perpetrated by both partners). Most of the included studies reported lower overall prevalence rates for unidirectional IPV postpartum (range: 2–58%) compared to pregnancy (range: 1.5–66.9%). Psychological violence was found to be the most prevalent form of violence during the entire perinatal period. Studies on bidirectional IPV mostly reported women's perpetration to be almost as high as that of their partner or even higher, yet their findings need to be interpreted with caution. In addition, our results also highlighted the associated factors of IPV among partners, in which they were assimilated into a multi-level ecological model and were analyzed through an intersectional framework. Based on our findings, IPV is found to be highly prevalent during the entire perinatal period and in populations suffering from social inequalities. Further research exploring not only the occurrence, but also the motivations and the context of the bidirectionality of IPV during the perinatal period may facilitate better understanding of the detrimental consequences on partners and their families, as well as the development of effective intervention strategies. Public health prevention approaches intervening at optimal times during the perinatal period are also needed.

Keywords: intimate partner violence, bidirectional IPV, perinatal period, prevalence, associated factors, narrative review

INTRODUCTION

Intimate partner violence (IPV) affects individuals and families from various ethnic, economic, religious, or sexual backgrounds. The World Health Organization (WHO) defines IPV as “any act or behavior within a present or former intimate relationship that causes physical, psychological, or sexual harm” (1). These behaviors may pertain to (1) acts of physical violence (e.g., hitting, kicking, beating); (2) sexual violence (e.g., forced sexual intercourse, sexual coercion); (3) psychological (emotional) violence (e.g., insults, humiliation, intimidation, threats of harm); (4) controlling behavior (e.g., isolation from family and friends, monitoring movements, restricting access to financial resources, employment, education, medical care) (1, 2). With approximately a third of the women worldwide having experienced IPV during their life (3), IPV represents the most common form of violence against women. The WHO multi-country study on women’s health and domestic violence against women found the prevalence of physical IPV in pregnancy to range between 1% in Japan to 28% in Peru, with the majority of sites ranging between 4 and 12% (4). An analysis of Demographic and Health Surveys and the International Violence against Women Survey found prevalence rates for IPV during pregnancy between 2% in Australia, Denmark, Cambodia, and Philippines to 13.5% in Uganda, with the majority ranging between 4 and 9% (5). Clinical studies around the world, which tend to yield higher prevalence rates but often are the only sources of information available, found the highest prevalence in Egypt with 32%, followed by India (28%), Saudi Arabia (21%), and Mexico (11%) (6). A recent review of African clinical studies reported prevalence rates of 23–40% for physical, 3–27% for sexual, and 25–49% for emotional or psychological intimate partner violence during pregnancy (7). Taking into account the variations based on the cultural background and populations investigated, prevalence of IPV could be higher in specific groups, for example, those experiencing critical life events such as the transition to parenthood, which may in turn augment and intersect with already existing factors and thus increase the risk to engage in or experience IPV.

Physical health consequences of IPV perpetrated against women have great negative consequences on the mother and her offspring, including delayed prenatal care, low birth weight (LBW), intrauterine growth retardation, preterm labor, or even miscarriage (7–11). Psychological implications of IPV during the perinatal period may be of particular importance because they may also bear adverse consequences for the mother, the child and the entire family. Depression, post-traumatic stress disorder (PTSD), anxiety, panic disorders, and substance abuse disorders have been documented as the most common psychological consequences of IPV for mothers during their pregnancy and postpartum (5, 12). Maternal depression during pregnancy is associated with an increased risk for offspring’s future depression (13), whereas maternal exposure to adverse life events, such as the exposure to violence during pregnancy, has been linked to offspring autism and schizophrenia (14). Maternal PTSD during pregnancy and after childbirth could impact the offspring’s hypothalamo-pituitary-adrenocortical (HPA) axis

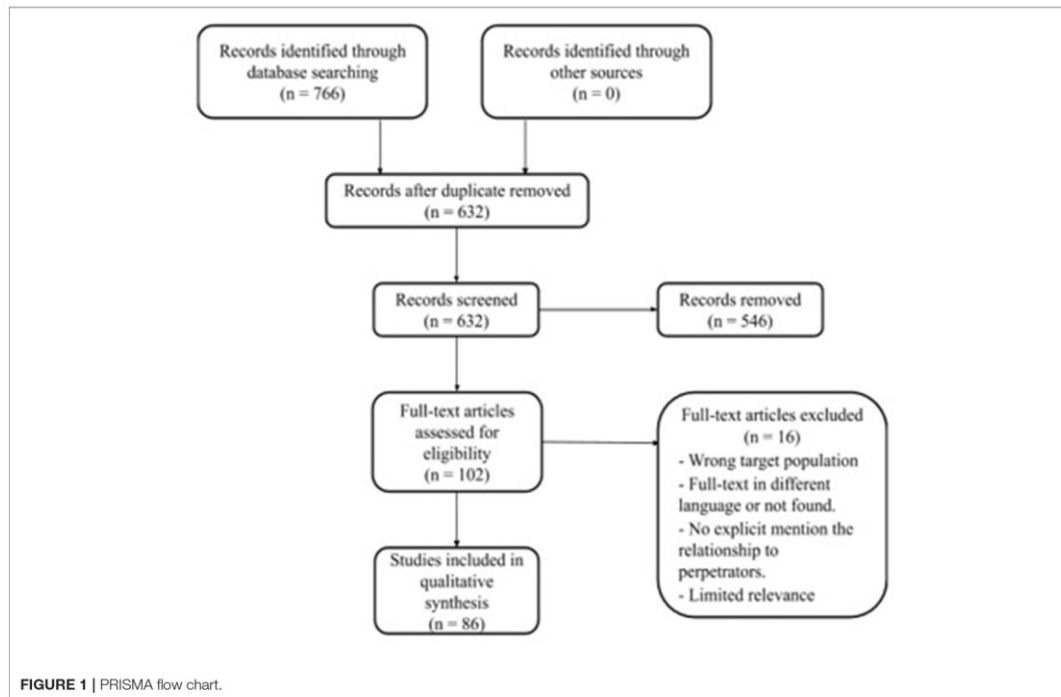
regulation (15), which in turn would result in psychological disorders such as anxiety, eating disorders, and externalizing problems during childhood and later in life (16). The gravest consequence of IPV during the perinatal period is death. Several studies found that maternal injury is a leading cause of maternal mortality; 54.3% of pregnancy-associated suicides involved intimate partner conflict, whereas 45.3% of pregnancy-related homicides were associated with pre-existing IPV victimization of women (17, 18).

Despite great advances in researching IPV, little is known about how victimization experiences may be patterned over the perinatal period (i.e., during the time frame from 1 year before to 24 months after the birth of the child), and how it may represent a period of particular vulnerability to violence. Where prevalence of IPV against women alone is increasingly researched and documented during the perinatal period, reported evidence on bidirectional IPV (i.e., perpetrated by both partners) prevalence is still scarce. Women’s IPV perpetration has detrimental health consequences on both partners (19). It increases men’s and women’s risk for substance abuse and depression (20). While the context of violence toward men has been proven to be very different for women in that it represents defensive or retaliatory behavior, violence common to both partners can nonetheless result in a more stressful and dangerous living environment for children (21). In fact, IPV among intimate partners is associated with child maltreatment and reduced social-emotional child development (22–25). Therefore, it appears to be imperative to not only investigate prevalence estimates of IPV perpetrated against women alone, but to also improve our understanding of bidirectional IPV during pregnancy and postpartum in order to inform the ongoing process of developing effective screening and interventions for women and their families. The purpose of this review is to provide a narrative synthesis of the existing literature regarding the prevalence estimates of IPV among partners over the perinatal period as well as any associated factors. These factors will be analyzed through an intersectional approach that considers individual, family, community, and societal related factors within an ecological model.

MATERIALS AND METHODS

Search Strategy

A systematic search of the available literature was performed in March 2020 from the following databases: PubMed, Embase via Ovid, CINAHL, and Scopus. The search strategy was developed according to the PICO model to determine search concepts and types of studies. The keywords (and their combinations) adopted for the research are the following: perinatal, perinatal women, perinatal men, perinatal couple, intimate partner violence, IPV, domestic violence, spousal abuse, prevalence, observational studies. Separate searches for each primary database combined Medical Subject Subheadings (MeSH) terms and key text words with the Boolean operators (AND) and (OR), accordingly. The full list of search terms for PubMed can be found in **Appendix A**.



Eligibility Criteria

All publications in English, German, and Arabic languages that appeared between 2000 and 2020 have been considered. For studies to be included in this review, the search was international and had to include a sample that refers to IPV victims affected by it during the perinatal period (i.e., the time frame from 1 year before to 24 months after the birth of the child). The target population were intimate partners, regardless of the nature of their intimate relationship. Only empirical quantitative studies such as cohort, case-control, and cross-sectional studies were included. Qualitative studies were excluded. We considered IPV the primary outcome for this review.

Data Collection Process

A flowchart of the search and inclusion process is presented in **Figure 1**. The search provided a total of 766 articles. After removing duplicates, a total of 632 papers were collected and imported into a web-based tool, Rayyan QCRI (26). The abstracts of these articles were checked, in which 546 abstracts demonstrated no relevance for this review and were excluded. Assessment of eligibility of the 102 full-text articles lead to exclusion of 16 articles because they did not report the relationship to perpetrators (i.e., being an intimate partner or a natal family member, etc.), nor did they provide any prevalence estimates. The remaining 86 studies will be described in the results section.

Data Synthesis

A qualitative approach was employed in synthesizing the results. Since prevalence studies of IPV tend to be highly heterogeneous and violence definitions tend to vary among research settings, we did not consider conducting any quantitative analyses for this review. The relevant data were tabulated in a data extraction form that was developed. Prevalence estimates of IPV among intimate partners, as well as associated factors relevant for IPV during the perinatal period were constructed. For each paper, we extracted and systematized the following information: author and year of publication; setting (e.g., clinical- or population-based); study design; sample size (e.g., final sample, response rate); the directionality of IPV (i.e., uni- or bidirectional); overall IPV prevalence estimates (i.e., during pregnancy, postpartum, or both); and its types (i.e., physical, sexual, psychological, economic). In addition, we also considered population characteristics and associated factors significant to IPV prevalence when available, using a multi-level ecological model where each factor is assimilated into the following levels: (a) the individual level, which represents the biological and personal history of the individuals; (b) family level, which represents factors relating to the immediate context where abuse took place; (c) community level, which represents factors relating to the formal or informal social institutions or structures in which violent relationships are embedded; and (d) societal level, which represents factors relating to gender inequality, religious

or cultural belief systems, societal norms, and economic or social policies (10, 27).

RESULTS

Study Selections

An overview of the study selection process can be found in **Figure 1**. Eighty-six studies met the inclusion criteria (28–113). The majority of the studies were cross-sectional ($n = 75$) and few used longitudinal designs ($n = 11$). The studies originated from 35 countries, published in English, and recruited only women ($n = 90,895$) (**Appendix B**). Eighty of the included studies investigated violence against women where the perpetrator was their current or former intimate partner. Six studies explored bidirectional perpetration of IPV, in which women can be both perpetrators as well as victims. Three terms were used to describe the violence, i.e., IPV, Gender-Based Violence (GBV), and Domestic Violence (DV). We excluded studies that reported perpetrators other than intimate partners, such as family members, since the aim of the present review was to summarize and describe the prevalence of violence perpetrated by intimate partners, as well as to investigate what factors were associated with the prevalence of IPV during the perinatal period.

Prevalence Estimates of Unidirectional IPV and Its Types

According to the results from the included studies, we found that IPV prevalence estimates were reported either during pregnancy ($n = 60$) or during the postpartum period ($n = 5$). Further, some studies reported comparable estimates during both pregnancy and the postpartum period ($n = 9$), whereas others reported estimates during the entire perinatal period ($n = 2$) (**Table 1**).

The overall IPV prevalence during pregnancy ranged from 1.5 to 66.9%, being highest in Kenya (96) and lowest in Sweden (54). During pregnancy, prevalence of psychological violence was the most prevalent form of violence and ranged from 1% in Sweden (54) to 81% in South Africa (53), followed by physical violence, ranging from 0.4% in Sweden (54) to 60.6% in Uganda (44). Sexual violence was reported in 40 studies, with a range between 0.1 and 39.4%. Prevalence estimates for economic violence were reported in two studies only: in Nigeria with 6.8% (72) and in India with 37% (59).

Moreover, the overall IPV prevalence during the 1st year postpartum ranged from 2% in Sweden (102) to 58% in Iran (32). One study reported prevalence estimates within 2 years postpartum (28) for overall IPV (37%) as well as other forms of violence i.e., physical violence (31%), psychological violence (28%), and sexual violence (6%). One study reported estimates of IPV at 3, 6, 12, 18, and 24 months postpartum, with the overall IPV prevalence rate being highest at the earliest measurement point after birth, i.e., 3 months postpartum (21, 3, 16, 17.7, 17.7, 12.8%, respectively) (66). In Iran, a study reported IPV prevalence estimates for physical (25%) and psychological violence (35%) during the first 48 h after delivery.

Studies reporting prevalence estimates of IPV both during pregnancy as well as at follow-ups during the postpartum period provided comparable estimates before and after childbirth. A

study from Nepal reported a decrease of prevalence rates from pregnancy to 6–10 weeks postpartum for overall (26.2–20%), physical (9.4–4.8%), and sexual IPV (16–7.3%) with an exception for psychological violence, where the prevalence rate remained the same (15%) (40). A study from Bangladesh reported a slight decrease in prevalence estimates for overall (66.4–63.6%), physical (35–32.2%), and sexual IPV (18.5–15.5%) during the first 6 months postpartum compared to the time during pregnancy. However, psychological violence was reported to have significantly increased from 18.5 to 60.8% during the first 6 months postpartum compared to the time during pregnancy (68). In Iran, a study reported increased prevalence estimates for overall (42–53.3%), physical (10–14.7%), psychological (33–42.7%), and sexual IPV (17.3–25%) during 6–18 months postpartum compared to the time during pregnancy (91).

A South African study also reported a decrease in prevalence rates, where overall IPV decreased from 21.3–17.7% during the first 9 months postpartum compared to the time during pregnancy. Prevalence estimates for physical (8.7%), psychological (16.6%), and sexual violence (3%) only occurred during pregnancy (62). Furthermore, a study from Tanzania reported higher prevalence rates during pregnancy for physical (12.4%, 5.2%), psychological (31%, 17.8%), sexual (9%, 3.8%), and economic violence (48.4%, 11.4%) compared to the first 9 months postpartum (84). Prevalence rates for overall (3.7–25.6%) and sexual IPV (0.1–0.5%) were reported to increase postpartum in comparison to the time during pregnancy, whereas physical (14%, 4.3%) and psychological violence (32.9%, 25%) seemed to be higher during pregnancy (87). In Nigeria, a study reported a 20% decrease in overall IPV prevalence (0.8%) during the first 6 weeks postpartum compared to the time during pregnancy (20.8%). Further four studies reported prevalence estimates of IPV during pregnancy and postpartum without providing any comparable estimates before and after childbirth (46, 61, 70, 106) (**Table 1**).

Lastly, prevalence estimates during the entire perinatal period, where no differentiation between before and after childbirth was made, were reported in two studies. A study in England found only psychological and physical violence to be prevalent, with 24 and 9.6%, respectively (81). Another study from Ghana reported psychological violence as most prevalent with 34%, followed by 17% for physical violence, and 15% for sexual violence (108).

Prevalence Estimates of Bidirectional IPV and Its Types

Only six studies investigated bidirectionality of IPV. In the studies focused on bidirectional IPV, two of these studies were during pregnancy (37, 89), one study was during the postpartum period (46), and three studies were during both pregnancy and the postpartum period (42, 58, 66) (**Table 2**).

Few studies presented the prevalence of IPV victimization and perpetration during the perinatal period over time (**Table 2**). At baseline (i.e., during pregnancy), a range between 8.5 and 67.7% of women endorsed at least one instance of IPV victimization and 9.4–72.2% endorsed at least one instance of IPV perpetration. At follow-up (i.e., during postpartum), a range between 12.3

TABLE 1 | Prevalence estimates of unidirectional IPV during the perinatal period.

Perinatal period	Country	Overall IPV	Physical violence	Psychological violence	Sexual violence	Economic violence	Study ID
During pregnancy	USA	-	19%	-	-	-	Alhusen et al. (29)
		8.9%	-	-	-	-	Koenig et al. (78)
		14.5%	-	-	0.9%	-	Lutgendorf et al. (89)
	Portugal	43.4%	21.9%	43.2%	19.6%	-	Almeida et al. (30)
		Turkey	11.1%	-	-	-	-
	Nigeria	31.7%	8.1%	26.7%	9.7%	-	Karaoglu et al. (73)
		34.4%	50.9%	68.5%	-	-	Ashimi & Amole (33)
		32.5%	27.5%	5.9%	9.8%	-	Ezeanochie et al. (47)
		-	8.1%	51.7%	1.7%	-	Ezechi et al. (48)
		17.7%	10.8%	66.2%	2.7%	-	Fawole et al. (50)
		12.6%	26.5%	1.4%	10.7%	-	Gyuse et al. (61)
		7.8%	11.2%	43.5%	1.8%	6.8%	Jeremiah et al. (71)
		44.6%	-	60.1%	-	-	Onoh et al. (94)
		-	10.3%	-	-	-	Umoh et al. (108)
		Brazil	-	6.5%	19.1%	-	-
	Ethiopia	-	4.6%	-	-	-	Fiorotti et al. (55)
		34.6%	-	-	-	-	Massumi Okada et al. (86)
		41.1%	21%	29.1%	19.8%	-	Azene et al. (34)
	India	58.7%	32.2%	57.8%	7.6%	-	Fekadu et al. (51)
		-	44.2%	39.1%	23.7%	-	Yohannes et al. (112)
		-	7.1%	30.6%	10.4%	-	Babu et al. (35)
	South Africa	29.7%	26.9%	79.1%	33.2%	37%	Garg et al. (58)
		12.3%	10%	10.7%	1.8%	-	Jain et al. (67)
		-	13%	-	-	-	Peedicayil et al. (97)
	Mexico	21%	15%	15%	2%	-	Bernstein et al. (37)
		15%	76%	81%	26%	-	Field et al. (52)
		-	29%	32%	20%	-	Malan et al. (84)
	Jordan	41%	17%	26%	5%	-	Modiba et al. (87)
		18.6%	10.8%	5.9%	4%	-	Cervantes-Sanchez et al. (40)
	Uganda	43.8%	15.8%	72.9%	11.3%	-	Romero-Gutierrez et al. (99)
		15.4%	-	-	-	-	Clark et al. (42)
		40.9%	34.7%	28.1%	15.5%	-	Okour & Badarneh (92)
	Iran	-	10.4%	23.4%	5.7%	-	Oweis et al. (96)
		26.7%	60.6%	59.6%	39.4%	-	Clarke et al. (43)
		57%	-	-	-	-	Kaye et al. (75)
	Sweden	27.8%	10.6%	22.2%	10%	-	Eputai et al. (46)
		55.9%	10.2%	43.5%	17.3%	-	Farrokh-Eslamlou et al. (49)
	Israel	1.5%	0.4%	1%	0.1%	-	Finnbogadóttir et al. (53)
		2%	0.7%	1.6%	0.1%	-	Finnbogadóttir et al. (54)
	Pakistan	5.4%	20.3%	21.6%	4.1%	-	Fisher et al. (56)
		35%	Minor: 27% Severe: 6%	-	-	-	Habib et al. (62)
		38%	14%	24%	14%	-	Karmaliani et al. (74)
	Malaysia	5.7%	-	-	-	-	Sohail & Qadir (105)
		35%	12.9%	29.8%	9.8%	-	Haron et al. (63)
		35.9%	12.9%	29.8%	9.8%	-	Khaironisak et al. (76)
	England	66.4%	35.2%	65%	18.5%	-	Islam et al. (67)
	Japan	17%	14.7%	14.3%	-	-	Johnson et al. (72)
			15.9%	-	-	-	Kita et al. (77)

(Continued)

TABLE 1 | Continued

Perinatal period	Country	Overall IPV	Physical violence	Psychological violence	Sexual violence	Economic violence	Study ID
	Belgium, Iceland, Denmark, Estonia, Norway, and Sweden	-	2.2%	2.7%	0.4	-	Lukasse et al. (80)
	Kenya	37%	10%	29%	12%	-	Makayoto et al. (83)
		66.9%	29.9%	55.8%	39.2%	-	Owaka et al. (95)
	Sri Lanka	15.9%	-	-	-	-	Muzrif et al. (90)
	Vietnam	35.2%	32.2%	3.5%	10%	-	Nguyen et al. (91)
	Jamaica	41%	-	-	-	-	Pitter & Dunn (98)
	Zimbabwe	63.1%	15.9%	-	38%	-	Shamu et al. (102)
	Nepal	27.2%	3%	16.6%	17.3%	-	Sherstha et al. (103)
	Tanzania	-	19%	-	-	-	Stöckl et al. (107)
	Nicaragua	32%	13%	32%	7%	-	Valladares et al. (109)
	Belgium	10.6%	0.5%	-	10.1%	-	Van Parys et al. (110)
	Taiwan	-	6.9%	-	-	-	Yang et al. (111)
Postpartum							
Within 2 years	India	37%	31%	28%	6%	-	Ahmed et al. (28)
Within 1 year	Iran	58%	21%	54%	21%	-	Amiri et al. (31)
	Sweden	2%	-	-	-	-	Rubertson et al. (100)
At 3 months	USA	21.3%	-	-	-	-	Harrykisson et al. (64)
At 6 months		16%					
At 12 months		17.7%					
At 18 months		17.7%					
At 24 months		12.8%					
During 48 h after delivery	Iran	-	25%	35%	-	-	Salari & Nakhaee (101)
During pregnancy and postpartum							
During pregnancy	Nepal	26.2%	9.4%	15%	16.1%	-	Bhatta & Assanangkornchai (38)
6–10 weeks postpartum		20%	4.8%	15.2%	7.3%	-	
During pregnancy and 6 weeks postpartum	India	15%	12%	8%	2%	-	Das et al. (44)
During pregnancy and postpartum		28.4%	-	-	-	-	Silverman et al. (104)
During pregnancy and postpartum (3–6–12 months)	Australia	17%	2.2%	9%	-	-	Gartland et al. (59)
During pregnancy	South Africa	21.3%	8.7%	16.6%	3%	-	Groves et al. (60)
Postpartum (first 9 months)		17.7%	-	-	-	-	
During pregnancy	Bangladesh	66.4%	35%	18.5%	18.5%	-	Islam et al. (66)
Postpartum (first 6 months)		63.6%	32.2%	60.8%	15.5%	-	
During pregnancy and postpartum	Iran	60.6%	14.6%	60.5%	23.5%	-	Jahanfan & Malekzadegan (65)
During pregnancy		56%	-	-	-	-	Jamshidimanesh et al. (70)
Postpartum		-	5%	51.3%	-	-	
During pregnancy		42%	10%	33%	17.3%	-	Mohammadhosseini et al. (89)
Postpartum (6 to 18 months)		53.5%	14.7%	42.7%	25%	-	
During pregnancy	Tanzania	-	12.4%	31%	9%	48.4%	Mahenge et al. (82)
Postpartum (first 9 months)		-	5.2%	17.8%	3.8%	11.4%	
During pregnancy	Brazil	3.7%	14%	32.9%	0.1%	-	Marcacine et al. (85)
Postpartum		25.6%	4.3%	25.1%	0.5%	-	
During pregnancy	Nigeria	28%	-	-	-	-	Olagbuji et al. (93)
Postpartum (first 6 weeks)		0.8%	-	-	-	-	
During perinatal period	England	-	9.6%	24%	-	-	Kothari et al. (79)
	Ghana	46%	17%	34%	15%	-	Spangenberg et al. (106)

TABLE 2 | Prevalence estimates of bidirectional IPV during the perinatal period.

Perinatal period	Country	Study ID	Setting & sample size	Prevalence of IPV Victimization	Prevalence of IPV Perpetration	Remarks
During pregnancy	Iran	Mohammad-Alizadeh-Charandabi et al. (88)	Clinical-based: public health care centers/posts in Tabriz, Iran Sample: 408 pregnant women (first 6-months)	Overall: Adolescents: 69.1% Adults: 69.8%	Overall: Adolescents: 72.1% Adults: 71%	Population: 136 adolescents (15–19) and 272 adults (19–29) Reported lifetime IPV linked to perpetration by pregnant women
		Bahrami-Vazir et al. (36)	Clinical-based: public health care centers/posts in Tabriz, Iran Sample: 525 pregnant women (24–30 weeks)	Psychological: 58% Physical: 22% Sexual coercion: 30%	Psychological: 65% Physical: 19% Sexual coercion: 15%	No data on incidents of IPV victimization prior perpetration by pregnant women
During postpartum	Brazil	Moraes et al. (45)	Clinical-based: two-stage cluster sampling from 27 primary care clinics (pediatrics) in the city of Rio de Janeiro Sample: mothers of infants up to 6 months (6-months PP)	Overall: 18.3% Minor physical: 17.5% Severe physical: 7.9%	Overall: 25% Minor physical: 23.2% Severe physical: 11.2%	Reported data on reciprocity of violence within couple
During pregnancy and postpartum	United States	Charles & Perreira (41)	Clinical-based: stratified random sample of hospital births in 20 large US cities Baseline: 4,898 pregnant women Follow-up: 3,830 (1-year PP)	Overall during pregnancy: 8.5% Overall during postpartum (1-year): 30%	Overall during pregnancy: 13.4% Overall during postpartum (1-year): 34%	
		Flanagan et al. (57)	Clinical-based: two university-affiliated health clinics Baseline: 180 pregnant women Follow-up: 122 (6-weeks PP)	Overall during pregnancy: 11.7% Overall during postpartum (6-weeks): 9.4%	Overall during pregnancy: 9.4% Overall during postpartum (6-weeks): 7.4%	
		Hellmuth et al. (65)	Clinical-based: two university affiliated health clinics between Baseline: 132 pregnant women Follow-up: 73 (6-weeks PP)	Overall during pregnancy: 67.7% Overall during postpartum (6-weeks): 54.1%	Overall during pregnancy: 72.2% Overall during postpartum (6-weeks): 64.8%	Reported data on IPV perpetration by women without history of victimization.

TABLE 3 | Prevalence of types of bidirectional IPV during the perinatal period at baseline and follow-up.

Study ID	Sample size	Baseline			Follow-up		
		Type of IPV	Victimization	Perpetration	Type of IPV	Victimization	Perpetration
Charles & Perreira, (41)	Baseline: 4,898 pregnant women Follow-up: 3,830 (1-year PP)	- Physical - Emotional	Overall: 8.5% 1.7% 7.5%	Overall: 13.4% 8.2% 7.0%	- Physical - Emotional - Sexual coercion	Overall: 30% 3.1% 17.3% 21.4%	Overall: 34% - 13.3% 27.7%
Flanagan et al. (57)	Baseline: 180 pregnant women Follow-up: 122 (6-weeks PP)	- Sexual only - Sexual with psychological or physical	Overall: 11.7% 1.7% 10.0%	Overall: 9.4% 9.4%	- Sexual	Overall: 12.3% 1.6% 10.7%	Overall: 7.4% 0.8% 6.6%
Hellmuth et al. (65)	Baseline: 132 pregnant women Follow-up: 73 (6-weeks PP)	- Psychological - Severe physical - At least one type	Overall: 67.7% 13.3% 8.3% Not reported.	Overall: 72.2% 21.1% 9.4% 12%	- Psychological - Severe physical - At least one type	Overall: 54.1% 10.7% 4.1% Not reported	Overall: 64.8% 20.5% 12.3% 7%

and 54.1% of women endorsed at least one instance of IPV victimization and 7.4–64.8% endorsed at least one instance of IPV perpetration. After childbirth, two studies suggest that prevalence of IPV perpetration declined for about 10% (58, 66), whereas Charles & Perreira (41) reported around 20% increase in prevalence (42). In regard to IPV victimization, only

Hellmuth et al. (66) reported around 10% increase in prevalence estimates, while others suggest a decrease in prevalence rates for <20% (42, 58). In addition, it was noted that although there is a percentage of women endorsed perpetrating some form of violence against their intimate partners during the perinatal period, it was not clear if this violence was reciprocal or not.

Only one longitudinal study (66) reported no reciprocity of IPV perpetration endorsed by women (i.e., 12% during pregnancy and 7% during postpartum). Reciprocity of violence within couples was defined as the endorsement of both perpetration of violence against their partner and victimization of violence by their partner (Table 3) (46).

There is a limited consistency in reporting the prevalence of types of IPV victimization or perpetration across the perinatal period. For example, Bahrami-Vazir and colleagues (45) investigated the prevalence of subcategories of IPV perpetration during pregnancy, such as psychological (58%), sexual (30%), or physical violence (22%) (37). Similarly, Charles & Perreira (42) reported only the prevalence rates of physical violence (1.7%) and emotional violence (7.5%) experienced by pregnant women. They also reported prevalence rates of subcategories of IPV during postpartum, such as physical (3.1%) and emotional violence (17.3%), as well as controlling behavior (21.4%). Other authors categorized IPV types based on severity. In Hellmuth et al.'s (65), women who participated during pregnancy reported experiences of severe physical violence (8.3%) and minor psychological violence (13.3%) (66), while another study found that women during postpartum endorsed victimization of minor physical violence (17.5%) and severe physical violence (7.9%) (46). Mohammad-Alizadeh-Charandabi et al. (88) compared prevalence of IPV between age groups, i.e., adolescents (15–19 years of age) and young adults (20–29 years of age) (89). They found that, during pregnancy, sexual IPV victimization was significantly more common in both adolescents and adults, conversely, psychological IPV perpetration was significantly more common than victimization only among the adolescents.

Associated Factors Related to Unidirectional IPV During the Perinatal Period

In the following, we focus on associated factors found to be significantly related to IPV either during pregnancy or during the postpartum period. Other studies reported factors during both pregnancy and the postpartum period, whereas even others reported estimates during the entire perinatal period.

In pregnancy, 45 studies investigated associated factors of IPV (Table 4).

At the *individual level*, risk factors were either related to victims or perpetrators of IPV. Victim-related factors such as pregnant women's lower education (30, 32, 34, 36, 43, 51, 54, 63, 95, 98, 112, 113), younger age (35, 36, 51, 53, 64, 72, 76, 92), unemployment (52, 53, 72, 98), or being self-employed (62), marital status (30, 38, 53, 64), mental health issues (34, 38), alcohol use (38), drug use (64, 77), having previous experience of IPV (92, 103, 110), and having witnessed or been a victim of physical violence during childhood (34, 43, 54, 55, 64, 76, 77, 98, 100) were all associated with higher victimization of IPV. Inappropriate utilization of prenatal care services for pregnant women (40) constituted another significant association, whereas early initiation of antenatal care could be considered a protective factor (35). Moreover, dowry demand (67, 98), low ability for decision-making as well as low self-esteem (68, 97) were also associated with increased risk for IPV. **Perpetrator-related factors** related to

IPV included perpetrator's younger age (34, 78, 96, 103, 104), lower education (35, 50, 57, 97, 104), substance use, including alcohol (34–36, 43, 44, 51, 52, 68, 77, 78, 96, 98, 103, 104, 112, 113), unemployment (34, 50, 57, 59, 72, 112), and having witnessed or been a victim of physical violence during childhood (100).

At the *family level*, factors such as those relating to marriage, family life, conflict within the family, family's living conditions are explored and included at this level. Partner's control of woman's reproductive health (103) like husband's prohibition of contraception use (44, 108), having previous abortion experience (78), multigravidity (56, 70, 93), multiparity (36, 68, 77, 78, 93, 98, 109), and low parity (72) were significantly associated with increased IPV victimization for women. Financial factors were explored in six studies. IPV increased when the family had financial distress/insufficient income (53–55, 57, 100), or when the women were the providers and the ones responsible for the family's income (34). Further factors like accusations of extramarital affair by husbands (98) or polygamous marriages (33, 76, 95) were explored and found to be statistically significant. A number of studies found the risk of violence increased by undesired pregnancy (53, 54, 93, 97), the pressure on pregnant women to have a male child (70, 93), and by being forced into marriage (32). In contrast, results of Azene et al. (34) indicated that women choosing their husband on their own, i.e., without relying on their family, is associated with IPV in pregnancy (35).

At the *community level*, factors relating to the extended family, family's residency, and the nature of marriage are explored and included. Pregnant women being related to their husbands more distantly, as well as their less frequent communication with their natal family (43) were found to be a significant factor for increasing IPV. Living in rural areas (35, 68) such as tea plantation sectors in Sri Lanka (91), and lack of social support (92, 98, 104) were found to increase the odds of experiencing IPV. On the contrary, urban residency (36, 63, 93) was also linked to IPV. However, in another study, urban residency was found to be a protective factor against IPV (30), see Table 4.

At the *societal level*, factors relating to the cultural context are heavily influenced by the social, religious, and political systems and should be included at this level. Pregnant women with a certain ethnicity such as being Jewish women of Sephardic descent, (57), being non-Caucasian (30, 33), with an immigrant status (30), being HIV-positive (48, 49) and having an HIV-positive child (48), or belonging to a certain religion, i.e., Catholic, Muslim, or Hindu (56, 59, 91), as well as endorsing a higher degree of religiosity (religious vs. non-religious) were at higher risk for IPV (57). Studies found that women who endorsed violence supporting attitude were also at risk for experiencing IPV (43, 52, 77, 104).

During the postpartum period, three studies investigated associated factors of IPV (28, 31, 102).

At the *individual level* and as victim-related factors, IPV risk was significantly higher for younger mothers and those *unable* to fully meet the sexual expectations of their husbands (31). Institutional delivery opposed to home birth was found to be a protective factor against IPV (28).

TABLE 4 | Factors associated with unidirectional IPV.

Perinatal period	Ecological model	Associated factors	Risk factor	Protective factor	Study ID	
During pregnancy	Individual level (victim-related)	Lower education	X		(30, 32, 34, 36, 43, 51, 54, 63, 95, 98, 112, 113)	
		Younger age	X		(35, 36, 51, 53, 64, 72, 76, 92)	
		Unemployment	X		(52, 53, 72, 98)	
		Being self-employed	X		(62)	
		Marital status	X		(30, 38, 53, 64)	
		Mental health issues	X		(34, 38)	
		Alcohol use	X		(38)	
		Drug use	X		(64, 77)	
		Having previous experience of IPV	X		(92, 103, 110)	
		Having witnessed or been a victim of physical violence during childhood	X		(34, 43, 54, 55, 64, 76, 77, 98, 100)	
		Inappropriate utilization of prenatal care services for pregnant women	X		(40)	
		Early initiation of antenatal care		X	(35)	
		Dowry demand	X		(67, 98)	
	Low ability for decision-making, low self-esteem	X		(68, 97)		
	Individual level (perpetrator-related)	Younger age	X		(34, 78, 96, 103, 104)	
		Lower education	X		(35, 50, 57, 97, 104)	
		Drug use	X		(34–36, 43, 44, 51, 52, 68, 77, 78, 96, 98, 103, 104, 112, 113)	
		Unemployment	X		(34, 50, 57, 59, 72, 112)	
		Having witnessed or been a victim of physical violence during childhood	X		(100)	
		Family level	Partner's control of woman's reproductive health	X		(44, 103, 108)
			Having previous abortions	X		(78)
			Multigravidity	X		(56, 70, 93)
			Multi- and low parity	X		(36, 68, 72, 77, 78, 93, 98, 109)
			Financial distress/insufficient income	X		(53–55, 57, 100)
	Women as sole providers		X		(34)	
	Husband's jealousy		X		(98)	
	Polygamous marriages		X		(33, 76, 95)	
	Undesired pregnancy		X		(53, 54, 93, 97)	
	Pressure to have a male child		X		(70, 93)	
	Community level	Unwanted marriage	X		(32)	
		Being related more distantly		X	(43)	
		Less frequent communication with her natal family	X		(43)	
		Rural residency	X		(35, 68, 91)	
Lack of social support		X		(92, 98, 104)		
Urban residency		X	X	(30, 36, 63, 93)		
Societal level	Ethnicity (i.e., jewish or non-caucasian)	X		(30, 33, 57)		
	Immigrant status	X		(30)		
	HIV-positive	X		(48, 49)		
	Having HIV-positive child	X		(48)		
	Religion (e.g. Catholic, Muslim)	X		(56, 59, 91)		
	High degree of religiosity	X		(57)		
	Having supporting attitudes toward violence	X		(43, 52, 77, 104)		

(Continued)

TABLE 4 | Continued

Perinatal period	Ecological model	Associated factors	Risk factor	Protective factor	Study ID
Postpartum	Individual level (victim-related)	Younger mothers	X		(28, 31, 102)
		Institutional delivery		X	(28)
	Individual level (perpetrator-related)	Sexual dissatisfaction	X		(31)
	Family level	Unplanned pregnancy	X		(31, 102)
		Giving birth to female child	X		(31)
During pregnancy and postpartum	Individual level (victim-related)	Having more than one child	X		(102)
		History of IPV	X		(39, 61, 90)
		Lower education	X		(90)
	Individual level (perpetrator-related)	Regular alcohol use during pregnancy and puerperium	X		(94)
		Employment	X		(45)
		Alcohol use	X		(45)
	Family level	Longer duration of marriage	X		(39)
		Insufficient income	X		(45, 60, 90)
	Community level	Controlling behavior of mother in-law	X		(39)
	Societal level	Belonging to an ethnic minority (i.e., Janajati)	X		(39, 61, 90)
HIV-positive		X		(94)	

At the *family level*, unplanned pregnancy (31, 102), husband being disappointed about infant gender (i.e., having female children) (31), and having more than one child (102) were significantly related to IPV, see **Table 2**.

During both pregnancy and the postpartum period, six studies investigated associated factors with IPV (39, 45, 60, 61, 90, 94). Victim-related factors at the *individual level* included history of IPV (39, 61, 90), women who have lower education (90), and women reporting regular alcohol use during pregnancy and puerperium (94). One study reported higher risk of IPV for employed women (45). As for perpetrator-related factors, one study reported husband's alcohol use (45).

At the *family level*, longer duration of marriage (39), and insufficient income (45, 60, 90) constituted risk factors (see **Table 2**).

At the *community level*, controlling behavior of the mother-in-law was associated with higher victimization of IPV (39). At the *societal level*, belonging to an ethnic minority (e.g., Janajati ethnicity in Nepal) (39, 61, 90) and being HIV-positive (94) were found to be associated with increased IPV victimization.

Associated Factors Related to Bidirectional IPV During the Perinatal Period

Among the studies examining bidirectional perpetration, four of them investigated associated factors of IPV (**Table 5**).

In pregnancy and at the *individual level*, intimate partners' dissatisfaction with their own employment status constituted an associated variable for bidirectional IPV during pregnancy (37).

During the postpartum period and at the *individual level*, insufficient prenatal and postpartum medical care, lower

education and/or insecure employment status of mothers were reported to be associated factors (46).

At the *family level*, unwanted pregnancy was found to be associated with bidirectional IPV, as well as not living with a partner, or living in a household with more than one child younger than 5 years of age (46).

At the *societal level*, Moaes et al. (45) also reported that black adolescent mothers were at higher risk to experience IPV.

During both pregnancy and the postpartum period and at the *individual level*, maternal stress due to unwanted pregnancy and feeling unsafe in one's neighborhood, lower education status, partner's substance use was associated with higher prevalence rates of bidirectional IPV. Also, IPV during pregnancy was a strong predictor of violence after childbirth, especially in constellations where both partners perpetrated violence against each other reciprocally (42). Hellmuth et al. (65) reported associated factors for reciprocal IPV, such as reported alcohol abuse in partners as well as stress and depression.

At the *family level*, family structure was strongly associated with interpersonal violence, i.e., women who were single or uninvolved with their previous partner at the time of their child's birth were four times more likely to have been involved in a violent relationship during pregnancy (42). Lower dyadic adjustment (i.e., a process with consequences that can be identified with the rate of a couple's problematic conflicts, interpersonal tensions, individual anxiety, marital satisfaction, coherence, integrity, and collaboration about important problems) (115) was found to be an associated factor (66).

TABLE 5 | Factors associated with bidirectional IPV.

Perinatal period	Ecological model	Associated factors	Risk factor	Protective factor	Study ID	
During pregnancy	Individual level	Partner's dissatisfaction with their employment status	X		(36)	
Postpartum	Individual level	Insufficient prenatal and postpartum medical care	X		(45)	
		Younger age	X			
		Lower education	X			
		Insecure employment status	X			
	Family level	Unwanted pregnancy	X			
		Not living with the partner	X			
		Living in a household with more than one child younger than 5 years of age	X			
	Societal level	Ethnicity (i.e., African)	X			
	During pregnancy and postpartum	Individual level	Lower education	X		(41)
			Substance use	X		
Alcohol abuse			X			
Being separated from child's father				X		
Family level		Stress and depression	X		(65)	
		Lower dyadic adjustment	X		(65)	
		Societal level	Ethnicity (i.e., Hispanic)	X		(41)

At the *societal level*, Hispanic and other mothers in relation to white mothers were more likely to experience or perpetrate violence and abuse during pregnancy (42).

DISCUSSION

Our review aimed at examining prevalence estimates of IPV victimization and perpetration over the perinatal period. Moreover, we were interested in associated factors as well as the various forms of IPV during this period.

Prevalence of Unidirectional IPV and Its Types

The narrative synthesis of relevant data revealed that most of the included studies reported on IPV during pregnancy with overall prevalence rates ranging from 1.5 to 66.9%. Less research concentrated on IPV during the postpartum period. Here, overall prevalence estimates ranged from 2 to 58%. The considerable variation of prevalence estimates found is indicative of considerable between-study variation. Hence, included studies were conducted in heterogeneous countries and investigated diverse populations with different cultural backgrounds and gender role distributions among women and men. Also, definitions of IPV, methods, and time of measurement differed markedly. Gazmararian et al. (113) already pointed out that such factors may affect prevalence estimates of IPV in pregnancy (116). Therefore, our results indicate that between-study variation could be of influence across the entire perinatal period.

Of special interest are studies reporting prevalence estimates during both pregnancy and the postpartum period. Here, the course of IPV over the perinatal period could be examined. Most of the included studies reported lower overall IPV

prevalence rates postpartum compared to pregnancy. At first glance, this finding seems counterintuitive, as pregnancy clearly does not prevent the occurrence of intimate partner violence, regardless of its many negative health implications for women and their unborn child. Our findings add to the conflicting evidence of whether intimate partner violence increases or decreases during pregnancy (117). However, factors associated with IPV in this period ought to be considered when trying to explain this finding. In fact, a study found that prevalence estimates of IPV during pregnancy could be higher because expectant mothers may think staying with the violent partner is the safer option for their unborn child. Lost energy, low self-esteem, and hoping that the violence ends after the pregnancy constitute further possible reasons (54). Various forms of IPV were found including psychological, physical, sexual, and economic violence. Here, again prevalence rates, as well as types of IPV under investigation differed markedly across studies. Psychological violence was found to be the most prevalent form. This is consistent with previous research (7). The included studies focused primarily on psychological, physical, and sexual violence, while economic violence had been investigated by two studies only. This however could disregard the consequences of this type of violence and its relevant inclusion within the definition of IPV. As economic violence is often used as a controlling mechanism as part of a larger pattern of intimate partner violence (118). Despite the broad consensus that IPV, by definitions, includes all forms of sexual violence (119), an Iranian study (71) stated clearly the exclusion of questions on sexual violence and marital rape from their investigations due to cultural reasons (p. 8). This is an indication that sexual violence might be under researched in some contexts and prevalence rates could be even higher in reality (27).

Prevalence of Bidirectional IPV and Its Types

Despite the clear research focus on unidirectional IPV, six of the included studies investigated bidirectional IPV among partners in pregnancy and/or postpartum. However, these data were solely based on women's reports. The results of these studies show the prevalence of IPV perpetration of women to be almost as high as or even higher than their victimization both during and after pregnancy. This is similar to the findings based on the two path-breaking national family violence surveys conducted by Straus & Gelles (119) which suggest gender symmetry of IPV, indicating that women are as likely to perpetrate violence as men. However, it is argued that women tend to overestimate their violence against their partners (120). This could be attributed to "their likelihood to remember their own aggression because it is deemed less appropriate and less acceptable for women than for men and thus takes on the more memorable quality of a forbidden act or one that is out of character" [(121): p. 405]. In addition to overestimating their own violence, women may also tend to underestimate their partner's violence given the norms of domestic life, which frequently find women discounting, downplaying, or normalizing their partner's violent behavior (120). Furthermore, these studies reported missing information regarding the context of the violence perpetrated by women. This could be due to the instrument used in most of the bidirectional studies (i.e., CTS-2), which has been assumed to be framing the occurrence of violence within the context of conflict resolution, which is of crucial importance in international settings where multiple populations are under examination at once (122). Most importantly, CTS-2 provides limited information about the context, initiation pattern, severity, intention, and motivation of abuse that many researchers consider central features of IPV (122). Research has consistently indicated that women's IPV perpetration is motivated mostly in self-, or in their children's defense, rather than driven by control and/or punishing motives (120, 123). Therefore, further enhanced research needs to be done to not only identify the occurrence, but also the context of the violence perpetrated by women during the perinatal period, in order to improve our understanding of the implications of this violence on their partners and their families.

Associated Factors

Risk factors for IPV during the perinatal period may often be similar to risk factors for IPV in general. Still, given that pregnancy and the postpartum period are times that may demand increased relationship commitment and the resources needed, shedding more light on some risk factors are likely to be important here. Our narrative review revealed that most of the risk factors relating to unidirectional IPV were detected in studies focusing on IPV during pregnancy. Victim- and perpetrator-related factors at the individual level constituted both younger age and lower socioeconomic status, as well as having experienced or witnessed physical violence during childhood. This is found to be consistent with previous research (4, 7, 27). For the victimized pregnant women alone, early initiation of

antenatal care (ANC) was found to be a protective factor for IPV. This could be attributed to the early detection and intervention of IPV, which possibly prevented further victimization (124). The same could be said for women who give birth in clinical settings vs. women who give birth at home, where their IPV victimization is found to decrease postpartum. Associated factors such as alcohol and drug use, insufficient utilization of prenatal care services, and reduced ability in decision-making as well as low self-esteem were also found to increase the risk of being victimized. However, previous research shows that such factors would rather be considered as consequences, where a multitude of pregnancy-specific health behaviors, as well as damaged self-image are common implications of IPV (125). Furthermore, a study reported that partners' sexual dissatisfaction could place mothers at higher risk for IPV postpartum. This could be attributed to the fact that the women are not as sexually available as their partners would like them to be, especially during this period. The patriarchal structure of some cultural contexts, which endorse the idea that a woman should be ready to satisfy her partner's sexual desires under any circumstances and at any cost could explain the higher risk for IPV victimization. This may suggest that the more patriarchal the societies the more such factors might play a role in the occurrence of IPV (27, 126). Family level related factors consisted of unplanned and undesired pregnancies, having multiple abortions, multigravidity, as well as having more (or fewer) than two children. As previous research pointed out, such factors could be considered as consequences of IPV, where some would be attributed to the partner's control over the woman's reproductive health or injury caused by assaultive episodes (27, 125, 127). Of relevant associated factors to IPV were the pressure on women to have a male child, which increased women's risk for victimization during pregnancy, as well as partners' disappointment with the child's gender (i.e., being female), which contributed to increased risk for victimization postpartum. These findings are consistent with previous evidence (27). Associated factors with bidirectional IPV were found to be similar to those regarding unidirectional IPV. Of special interest, women who perpetrated violence had partners with poorer dyadic adjustment, greater depression and stress levels, as well as greater severity of reported alcohol abuse compared to women who did not perpetrate IPV. Although causal attributions cannot be made here, further research is warranted to identify detrimental outcomes that are key indicators of mental, emotional, and physical health.

Applying an Intersectional Approach

The studies included have traditionally identified individual characteristics and features of the social context that may be important for understanding violence against women. This scope of analysis often overlooks the power dynamic and impact of overlapping identities that are shaping the living realities of individuals and pushing them to the margins of society. An intersectional approach analyzes these identities, which could help enhance our understanding of how they coexist and shape individuals' lives in the community. Here, the findings reveal the interrelatedness of the factors mentioned thus far with the

factors at the societal level like ethnicity (e.g., Jewish, African, or Hispanic women), having immigrant status, being HIV-positive, or having an HIV-positive child) indicate that the intersectionality lens is of essential importance in the context of our review. Instead of viewing characteristics such as age, socioeconomic status, class, gender, or race individually or as parts of an individual (128), an intersectional perspective views the influence of these characteristics as a process within a structural context of overlapping and interlocking identities. Such factors therefore appear not only to predispose pregnant women and mothers to IPV but it may worsen pre-existing violence. For example, as an immigrant woman, in addition to being confronted with gender inequalities, she is also faced with structural violence (i.e., injustices embedded in economic, political and cultural structures) of the host society (30). Consequently, IPV is a more complex problem for immigrant women and has serious consequences based on their social identities. As a person with a Jewish, African, or Hispanic racial identity, she faces racial discrimination (racism). As a woman, she faces sexism, which includes gender inequality, prejudice, stereotyping, or discrimination based on gender. Another form of discrimination would be social classism, which is discrimination based on a person's economic position in society that is determined mainly by income, educational attainment, financial security, and other criteria. Race is proven to influence social class standing. Likewise, gender and class are related because women continue to be underrepresented in high-level and highly paid positions but overrepresented in low-paying jobs (129, 130). Her multiple interlocked identities of race, gender, and class determine her lived experiences of violence. This implies that power relations intersect to produce specific vulnerabilities for specific groups in specific contexts. Moreover, new insights on the intersecting inequities resulting from different systems of domination (e.g., racism, sexism, classism), and varying forms of discrimination at community and societal levels (e.g., medical care, education, or employment) can help in highlighting the need for tailored prevention and intervention strategies for IPV (131).

STRENGTHS AND LIMITATIONS

Strengths of this review lie in the systematic search for relevant literature, the systematic process of data extraction, and its focus on prevalence estimates of IPV and its varying forms among partners, as well as their associated factors. Nonetheless, some limitations ought to be considered. Due to the narrative design of the review, no meta-analyses of the reported IPV prevalence estimates were conducted. Therefore, no pooled estimates were presented. Our hypothesis that the considerable variation of prevalence estimates found is attributable to between-study variation was not tested.

CONCLUSIONS

This work contributes to the literature by providing prevalence estimates of IPV among intimate partners as well as its associated factors during the perinatal period. Higher prevalence estimates were reported during pregnancy, with an overall IPV prevalence ranging from 1.5 to 66.9%, followed by an overall IPV prevalence of 2–58% during the postpartum period. Psychological violence was found to be the most prevalent form during the entire perinatal period compared to physical or sexual violence. Our results also highlighted the relationship between IPV and the varying associated factors, which relate to the different levels of the ecological model, suggesting a complex pattern of intersecting factors, which could put pregnant and/or postpartum women or partners at greater risk for IPV victimization. Studies regarding bidirectional perpetration of IPV during the perinatal period have been explored, yet their findings need to be interpreted with caution. Further research exploring not only the occurrence, but also the motivations and the contexts of the bidirectionality of IPV during the perinatal period may facilitate better understanding of the detrimental consequences on partners and their families, as well as better understanding of the detrimental consequences on partners and their families, as well as the development of effective intervention strategies. Public health prevention approaches intervening at optimal times during the perinatal period, are also needed. As a future outlook, as part of the recently started INVITE study (study on INtimate partner VIolence Treatment prEferences), our research group will generate a more comprehensive view of intervention preferences and barriers reported by postpartum women, who could be exposed to IPV and/or suffer from mental health problems.

AUTHOR CONTRIBUTIONS

AM, NA, MK, and SG-N designed and conceptualized the present study. AM and NA developed the search strategies. AM, NA, MK, AP, and FT conducted manuscript screening, data extraction, and wrote the first draft of the manuscript. SG-N supervised data extraction and drafting of the manuscript. AM, NA, MK, and SG-N contributed to the manuscript revision. All authors read and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsy.2021.601236/full#supplementary-material>

REFERENCES

- World Health Organization. *Understanding and Addressing Violence Against Women: Intimate Partner Violence*. (2012). Available online at: https://apps.who.int/iris/bitstream/handle/10665/77432/WHO_RHR_12.36_eng.pdf (accessed August 10, 2020).
- Van Gelder N, Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, et al. COVID-19: reducing the risk of infection might increase the risk of intimate partner violence. *EClinicalMedicine*. (2020) 21:100348. doi: 10.1016/j.eclinm.2020.100348
- Devries KM, Mak JYT, Garcia-Moreno C, Petzold M, Child JC, Falder G, et al. The global prevalence of intimate partner violence against women. *Science*. (2013) 340:1527–8. doi: 10.1126/science.1240937
- Garcia-Moreno C, Jansen AFMH, Watts C, Ellsberg M, Heise L. *WHO Multi-Country Study on Women's Health and Domestic Violence Against Women*. (2005). Available online at: http://dx.doi.org/10.1181/10665/77432/WHO_RHR_12.36_eng.pdf (accessed August 10, 2020).
- Devries KM, Kishor S, Johnson H., Stöckl H, Bacchus LJ, Garcia-Moreno C, et al. Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. *Reprod Health Matters*. (2010) 18:158–70. doi: 10.1016/S0968-8080(10)36533-5
- Campbell JC. Health consequences of intimate partner violence. *Lancet*. (2002) 359:1331–6. doi: 10.1016/S0140-6736(02)08336-8
- Shamu S, Abrahams N, Temmerman M, Musekiwa A, Zarowsky C. A systematic review of African studies on intimate partner violence against pregnant women: prevalence and risk factors. *PLoS ONE*. (2011) 6:e17591. doi: 10.1371/journal.pone.0017591
- World Health Organization. *Preventing Intimate Partner and Sexual Violence Against Women: Taking Action and Generating Evidence*. (2010). Available online at: https://apps.who.int/iris/bitstream/handle/10665/44350/9789275716359_por.pdf (accessed August 10, 2020).
- Bonomi AE, Thompson RS, Anderson M, Reid RJ, Carrell D, Dimer JA, et al. Intimate partner violence and women's physical, mental, and social functioning. *Am J Prev Med*. (2006) 30:458–66. doi: 10.1016/j.amepre.2006.01.015
- Heise L, Ellsberg M, Gottmoeller M. A global overview of gender-based violence. *Int J Gynecol Obstet*. (2002) 78:S5–14. doi: 10.1016/S0020-7292(02)00038-3
- United Nations Office on Drugs and Crime. *Global Study on Homicide: Gender-Related Killing of Women and Girls*. (2018). Available online at: https://www.unodc.org/documents/data-and-analysis/GSH2018/GSH18_Gender-related_killing_of_women_and_girls.pdf (accessed August 10, 2020).
- Rose L, Alhusen J, Bhandari S, Soeken K, Marcantonio K, Bullock L, et al. Impact of intimate partner violence on pregnant women's mental health: mental distress and mental strength. *Issues Ment Health Nurs*. (2010) 31:103–11. doi: 10.3109/01612840903254834
- Plant DT, Pariente CM, Sharp D, Pawlby S. Maternal depression during pregnancy and offspring depression in adulthood: Role of child maltreatment. *Br J Psychiatry Suppl*. (2015) 207:213–20. doi: 10.1192/bjpp.bp.114.156620
- Klengel T, Dias BG, Ressler KJ. Models of intergenerational and transgenerational transmission of risk for psychopathology in mice. *Neuropsychopharmacology*. (2016) 41:219–31. doi: 10.1038/npp.2015.249
- Yehuda R, Bell A, Bierer LM, Schmeidler J. Maternal, not paternal, PTSD is related to increased risk for PTSD in offspring of Holocaust survivors. *J Psychiatr Res*. (2008) 42:1104–11. doi: 10.1016/j.jpsychires.2008.01.002
- Schury K, Koenig AM, Isele D, Hulbert AL, Krause S, Umlauf M, et al. Alterations of hair cortisol and dehydroepiandrosterone in mother-infant dyads with maternal childhood maltreatment. *BMC Psychiatry*. (2017) 17:213. doi: 10.1186/s12888-017-1367-2
- Campbell JC, Glass N, Sharps PW, Laughon K, Bloom T. Intimate partner homicide: review and implications of research and policy. *Trauma Violence Abuse*. (2007) 8:246–69. doi: 10.1177/1524838007303505
- Palladino CL, Singh V, Campbell J, Flynn H, Gold K. Homicide and suicide during the perinatal period: findings from the National Violent Death Reporting System. *Obstet Gynecol*. (2011) 118:1056. doi: 10.1097/AOG.0b013e31823294da
- Hines DA, Douglas EM. Alcohol and drug abuse in men who sustain intimate partner violence. *Aggress Behav*. (2012) 38:31–46. doi: 10.1002/ab.20418
- Coker AL, Davis KE, Arias I, Desai S, Sanderson M, Brandt HM, et al. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med*. (2002) 23:260–8. doi: 10.1016/S0749-3797(02)00514-7
- Sullivan TP, Meese KM, Swan SC, Mazure CM, Snow DL. Precursors and correlates of women's violence: Child abuse traumatization, victimization of women, avoidance coping, and psychological symptoms. *Psychol Women Q*. (2005) 29:290–301. doi: 10.1111/j.1471-6402.2005.00223.x
- Garthus-Niegel S, Ayers S, Martini J, Von Soest T, Eberhard-Gran M. The impact of postpartum post-traumatic stress disorder symptoms on child development: a population-based, 2-year follow-up study. *Psychol Med*. (2016) 47:161–70. doi: 10.1017/S003329171600235X
- Schechter DS, Moser DA, Aue T, Gex-Fabry M, Pointet VC, Cordero MI, et al. Maternal PTSD and corresponding neural activity mediate effects of child exposure to violence on child PTSD symptoms. *PLoS ONE*. (2017) 12:e0181066. doi: 10.1371/journal.pone.0181066
- Polte C, Junge C, von Soest T, Seidler A, Eberhard-Gran M, Garthus-Niegel S. Impact of maternal perinatal anxiety on social-emotional development of 2-year-olds, a prospective study of Norwegian mothers and their offspring. *Matern Child Health J*. (2019) 23:386–96. doi: 10.1007/s10995-018-2684-x
- Junge C, Garthus-Niegel S, Slinning K, Polte C, Simonsen TB, Eberhard-Gran M. The impact of perinatal depression on children's social-emotional development: a longitudinal study. *Matern Child Health J*. (2017) 21:607–15. doi: 10.1007/s10995-016-2146-2
- Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan—a web and mobile app for systematic reviews. *Syst Rev*. (2016) 5:210. doi: 10.1186/s13643-016-0384-4
- Mojahed A, Alaidarous N, Shabta H, Hegewald J, Garthus-Niegel S. Intimate partner violence against women in the Arab countries: a systematic review of risk factors. *Trauma Violence Abuse*. (2020) doi: 10.1177/1524838020953099
- Ahmad J, Khan ME, Mozumdar A, Varma DS. Gender-based violence in rural Uttar Pradesh, India: Prevalence and association with reproductive health behaviors. *J Interpers Violence*. (2016) 31:3111–28. doi: 10.1177/0886260515584341
- Alhusen JL, Marguerite BL, Bullock L, Sharps P. Intimate partner violence, substance use, and adverse neonatal outcomes among urban women. *J Pediatr*. (2013) 136:471–6. doi: 10.1016/j.jpeds.2013.01.036
- Almeida FSJ, Coutinho EC, Duarte JC, Chaves CMB, Nelas PAB, Amaral OP, et al. Domestic violence in pregnancy: prevalence and characteristics of the pregnant woman. *J Clin Nurs*. (2017) 26:2417–25. doi: 10.1111/jocn.13756
- Amiri M, Mohammad-Alizadeh-Charandabi S, Mirghafourvand M, Farshbaf-Khalili A, Ranjbar F. Intimate partner violence during the first year after childbirth in an urban area of Iran: prevalence and its predictors. *Int J Womens Health Reprod Sci*. (2018) 6:491–8. doi: 10.15296/ijwhr.2018.81
- Arslantaş H, Adana F, Ergin F, Gey N, Biçer N, Kiranşal N. Domestic violence during pregnancy in an Eastern City of Turkey: a field study. *J Interpers Violence*. (2012) 27:1293–313. doi: 10.1177/0886260511425248
- Ashimi AO, Amole TG. Prevalence and predictors for domestic violence among pregnant women in a rural community Northwest, Nigeria. *Niger Med J*. (2015) 56:118. doi: 10.4103/0300-1652.150696
- Azene ZN, Yeshita HY, Mekonnen FA. Intimate partner violence and associated factors among pregnant women attending antenatal care service in Debre Markos town health facilities, Northwest Ethiopia. *PLoS ONE*. (2019) 14:e0218722. doi: 10.1371/journal.pone.0218722
- Babua BV, Kar SK. Abuse against women in pregnancy: a population-based study from Eastern India. *WHO South East Asia J Public Health*. (2012) 1:133–43. doi: 10.4103/2224-3151.206926
- Bahrani-Vazir E, Mohammad-Alizadeh-Charandabi S, Gheichkhani F, Mohammadi A, Mirghafourvand M. Intimate partner abuse among couples during pregnancy and its predictors as reported by pregnant women visiting governmental health care centres in Tabriz, Iran. *J Biosoc Sci*. (2020) 52:400–11. doi: 10.1017/S002193201900052X
- Bernstein M, Phillips T, Zerbe A, McIntyre JA, Brittain K, Petro G, et al. Intimate partner violence experienced by HIV-infected pregnant

- women in South Africa: a cross-sectional study. *BMJ Open*. (2016) 6:e011999. doi: 10.1136/bmjopen-2016-011999
38. Bhatta N, Assanangkornchai S. Patterns of domestic violence against women during pregnancy and the postpartum period in Kathmandu, Nepal. *Asia Pac Psychiatry*. (2019) 11:e12342. doi: 10.1111/appy.12342
 39. Carneiro JF, Valongueiro S, Ludermitr AB, Araújo TVB. Physical violence by an intimate partner and the inappropriate use of prenatal care services among women in Northeastern Brazil. *Rev Bras Epidemiol*. (2016) 19:243–55. doi: 10.1590/1980-5497201600020003
 40. Cervantes-Sánchez P, Delgado-Quinones EG, Nuño-Donlucas MO, Sahagún-Cuevas MN, Hernández-Calderón J, Ramírez-Ramos JK. Prevalence of domestic violence in pregnant women from 20 to 35 years in a family medicine unit. *Rev Méd Inst Mex Seguro Soc*. (2016) 54:286–91. Available online at: <https://www.medigraphic.com/pdfs/imss/im-2016/im163d.pdf> (accessed August 10, 2020).
 41. Charles P, Pereira KM. Intimate partner violence during pregnancy and 1-year post-partum. *J Fam Violence*. (2007) 22:609–19. doi: 10.1007/s10896-007-9112-0
 42. Clark CJ, Hill A, Jabbar K, Silverman JG. Violence during pregnancy in Jordan: its prevalence and associated risk and protective factors. *Violence Against Women*. (2009) 15:720–35. doi: 10.1177/1077801209332191
 43. Clarke S, Richmond R, Black E, Fry H, Obol JH, Worth H. Intimate partner violence in pregnancy: a cross-sectional study from post-conflict northern Uganda. *BMJ Open*. (2019) 9:e027541. doi: 10.1136/bmjopen-2018-027541
 44. Das S, Bapat U, More NS, Alcock G, Joshi W, Pantvaiddya S, et al. Intimate partner violence against women during and after pregnancy: a cross-sectional study in Mumbai slums. *BMC Public Health*. (2013) 13:817. doi: 10.1186/1471-2458-13-817
 45. Moraes CL, Reichenheim ME, Gama SGN, Leal MC. Prevalence of physical intimate partner violence in the first six months after childbirth in the city of Rio de Janeiro, Brazil. *Cad Saúde Pública*. (2017) 33:e00141116. doi: 10.1590/0102-311x00141116
 46. Eputai J, Udho S, Auma AG, Nabirye RC. Intimate partner violence among pregnant women in Uganda. *Afr J Midwifery Womens Health*. (2019) 13:1–5. doi: 10.12968/AJMW.2018.0027
 47. Ezeanochie MC, Olagbuji BN, Ande AB, Kubeyinje WE, Okonofua FE. Prevalence and correlates of intimate partner violence against HIV-seropositive pregnant women in a Nigerian population. *Acta Obstet Gynecol Scand*. (2011) 90:535–9. doi: 10.1111/j.1600-0412.2011.01083.x
 48. Ezechi OC, Gab-Okafor C, Onwujekwe DI, Adu RA, Amadi E, Herbertson E. Intimate partner violence and correlates in pregnant HIV positive Nigerians. *Arch Gynecol Obstet*. (2009) 280:745–52. doi: 10.1007/s00404-009-0956-9
 49. Farrokhi-Eslamlou H, Oshnouei S, Haghighi N. Intimate partner violence during pregnancy in Urmia, Iran in 2012. *J Forensic Leg Med*. (2014) 24:28–32. doi: 10.1016/j.jflm.2014.03.007
 50. Fawole OI, Abass LWA, Fawole AO. Prevalence of violence against pregnant women in Ibadan, Nigeria. *Afr J Med Med Sci*. (2010) 39:293. Available online at: https://www.researchgate.net/profile/Olafunmilayo_Fawole/publication/51473810_Prevalence_of_violence_against_pregnant_women_in_ibadan_nigeria/links/587a569108ae4445c0630535/Prevalence-of-violence-against-pregnant-women-in-Ibadan-Nigeria.pdf (accessed August 10, 2020).
 51. Fekadu E, Yizgaw G, Gelaye KA, Ayele TA, Minwuye T, Geneta T, et al. Prevalence of domestic violence and associated factors among pregnant women attending antenatal care service at University of Gondar Referral Hospital, Northwest Ethiopia. *BMC Womens Health*. (2018) 18:138. doi: 10.1186/s12905-018-0632-y
 52. Field S, Onah M, van Heyningen T, Honikman S. Domestic and intimate partner violence among pregnant women in a low resource setting in South Africa: a facility-based, mixed methods study. *BMC Womens Health*. (2018) 18:119. doi: 10.1186/s12905-018-0612-2
 53. Finnbogadóttir H, Dykes AK, Wann-Hansson C. Prevalence of domestic violence during pregnancy and related risk factors: a cross-sectional study in southern Sweden. *BMC Womens Health*. (2014) 14:63. doi: 10.1186/1472-6874-14-63
 54. Finnbogadóttir H, Dykes AK, Wann-Hansson C. Prevalence and incidence of domestic violence during pregnancy and associated risk factors: a longitudinal cohort study in the south of Sweden. *BMC Pregnancy Childbirth*. (2016) 16:228. doi: 10.1186/s12884-016-1017-6
 55. Fiorotti KF, Amorim MHC, Lima EFA, Primo CC, Moura MAV, Leite FMC. Prevalence and factors associated with domestic violence: study in a high-risk maternity hospital. *Texto Contexto Enfermagem*. (2018) 27:e0810017. doi: 10.1590/0104-07072018000810017
 56. Fisher M, Yassour-Borochowitz D, Neter E. Domestic abuse in pregnancy: results from a phone survey in northern Israel. *IMAJ RAMAT GAN*. (2003) 5:35–9. Available online at: https://www.researchgate.net/profile/Menachem_Fisher/publication/10894738_Domestic_abuse_in_pregnancy_Results_from_a_phone_survey_in_Northern_Israel/links/0fcfd509179e957cb7000000.pdf (accessed August 10, 2020).
 57. Flanagan JC, Véronique J, Gordon KC, Moore TM, Stuart GL. Examining the prevalence, bidirectionality, and co-occurrence of sexual intimate partner violence among women during pregnancy and postpartum. *Partner Abuse*. (2014) 5:407–19. doi: 10.1891/1946-6560.5.4.407
 58. Garg S, Singh MM, Rustagi R, Engtipi K, Bala I. Magnitude of domestic violence and its socio-demographic correlates among pregnant women in Delhi. *J Family Med Prim Care*. (2019) 8:3634–9. doi: 10.4103/jfmpc.jfmpc_597_19
 59. Gartland D, Hemphill SA, Hegarty K, Brown SJ. Intimate partner violence during pregnancy and the first year postpartum in an Australian pregnancy cohort study. *Matern Child Health J*. (2011) 15:570–8. doi: 10.1007/s10995-010-0638-z
 60. Groves AK, Moodley D, McNaughton-Reyes L, Martin SL, Foshee V, Maman S. Prevalence, rates and correlates of intimate partner violence among South African women during pregnancy and the postpartum period. *Matern Child Health J*. (2015) 19:487–95. doi: 10.1007/s10995-014-1528-6
 61. Gyuse AN, Ushie AP, Etukidem A. Prevalence of domestic violence among antenatal women attending a Nigerian hospital. *Niger J Med*. (2009) 18:375–9. doi: 10.4314/njm.v18i4.51246
 62. Habib S, Abbasi N, Khan B, Danish N, Nazir Q. Domestic violence among pregnant women. *J Ayub Med Coll Abbottabad*. (2018) 30:237–40. Available online at: <https://pesquisa.bvsalud.org/portal/resource/%20es/mdl-29938426> (accessed August 10, 2020).
 63. Haron K, Shaffie Z, Ghazi HF, Isa ZM. Women's attitude and its influence on violence during pregnancy in northern state of Peninsular Malaysia: cross-sectional study. *J Interpers Violence*. (2018). doi: 10.1177/0886260518759059
 64. Harrykissoon SD, Rickert VI, Wiemann CM. Prevalence and patterns of intimate partner violence among adolescent mothers during the postpartum period. *Arch Pediatr Adolesc Med*. (2002) 156:325–30. doi: 10.1001/archpedi.156.4.325
 65. Hellmuth JC, Gordon KP, Stuart GL, Moore TM. Women's intimate partner violence perpetration during pregnancy and postpartum. *Matern Child Health J*. (2013) 17:1405–13. doi: 10.1007/s10995-012-1141-5
 66. Islam MJ, Broidy L, Mazerolle P, Baird K, Mazumder N. Exploring intimate partner violence before, during, and after pregnancy in Bangladesh. *J Interpers Violence*. (2018). doi: 10.1177/0886260518775753
 67. Islam MJ, Broidy L, Baird K, Mazerolle P. Exploring the associations between intimate partner violence victimization during pregnancy and delayed entry into prenatal care: evidence from a population-based study in Bangladesh. *Midwifery*. (2017) 47:43–52. doi: 10.1016/j.midw.2017.02.002
 68. Jahanfar S, Malekzadegan Z. The prevalence of domestic violence among pregnant women who were attended in Iran University of Medical Science Hospitals. *J Fam Violence*. (2007) 22:643. doi: 10.1007/s10896-007-9084-0
 69. Jain S, Varshney K, Vaid NB, Guleria K, Vaid K, Sharma N. A hospital-based study of intimate partner violence during pregnancy. *Int J Gynecol Obstet*. (2017) 137:8–13. doi: 10.1002/ijgo.12086
 70. Jamshidmanesh M, Soleymani M, Ebrahimi E, Hosseini F. Domestic violence against pregnant women in Iran. *J Fam Reprod Health*. (2013) 7:7–10. Available online at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4064743/pdf/JFRH-7-007.pdf> (accessed August 10, 2020).
 71. Jeremiah IGBK, Oriji VK. Domestic violence in pregnancy among antenatal attendees at the University of Port Harcourt Teaching Hospital, Port Harcourt. *Niger J Med*. (2011) 3: 355–59. Available online at: https://www.researchgate.net/profile/Israel_Jeremiah/publication/51692762_Domestic_violence_in_pregnancy_among_antenatal_attendees_at_the_University_of_Port_Harcourt_Teaching_Hospital_Port_Harcourt/links/5dbd84bc92851c8180258ab9/Domestic-violence-in-pregnancy-among-

- antenatal-attendees-at-the-University-of-Port-Harcourt-Teaching-Hospital-Port-Harcourt.pdf (accessed August 10, 2020).
72. Johnson JK, Haider F, Ellis K, Hay DM, Lindow SW. The prevalence of domestic violence in pregnant women. *BJOG*. (2003) 110:272–5. doi: 10.1046/j.1471-0528.2003.02216.x
 73. Karaoglu L, Celbis O, Ercan C, Ilgar M, Pehlivan E, Gunes G, et al. Physical, emotional and sexual violence during pregnancy in Malatya, Turkey. *Eur J Public Health*. (2006) 16:149–56. doi: 10.1093/eurpub/cki161
 74. Karmaliani R, Irfan F, Bann CM, McClure EM, Moss N, Pasha O, et al. Domestic violence prior to and during pregnancy among Pakistani women. *Acta Obstet Gynecol Scand*. (2008) 87:1194–201. doi: 10.1080/00016340802460263
 75. Kaye D, Mirembe F, Bantebya G. Risk factors, nature and severity of domestic violence among women attending antenatal clinic in Mulago Hospital, Kampala, Uganda. *Cent Afr J Med*. (2002) 48:64–8.
 76. Khaironissak H, Zaridah S, Hasanain FG, Zaleha MI. Prevalence, risk factors, and complications of violence against pregnant women in a hospital in Peninsular Malaysia. *Women Health*. (2017) 57:919–41. doi: 10.1080/03630242.2016.1222329
 77. Kita S, Yaeko K, Porter SE. Prevalence and risk factors of intimate partner violence among pregnant women in Japan. *Health Care Women Int*. (2014) 35:442–57. doi: 10.1080/07399332.2013.857320
 78. Koenig LJ, Whitaker DJ, Royce RA, Wilson TE, Callahan MR, Fernandez MI. Violence during pregnancy among women with or at risk for HIV infection. *Am J Public Health*. (2002) 92:367–70. doi: 10.2105/AJPH.92.3.367
 79. Kothari R, Easter A, Lewis R, Howard LM, Micali N. Intimate partner violence among women with eating disorders during the perinatal period. *Int J Eat Disord*. (2015) 48:727–35. doi: 10.1002/eat.22429
 80. Lukasse M, Schroll AM, Ryding EL, Campbell J, Karro H, Kristjansdottir H, et al. Prevalence of emotional, physical and sexual abuse among pregnant women in six European countries. *Acta Obstet Gynecol Scand*. (2014) 93:669–77. doi: 10.1111/aogs.12392
 81. Lutgendorf MA, Busch JM, Doherty DA, Conza LA, Moore SO, Magann EF. Prevalence of domestic violence in a pregnant military population. *Obstet Gynecol*. (2009) 113:866–72. doi: 10.1097/AOG.0b013e31819bd9c3
 82. Mahenge B, Stöckl H, Abubakari A, Mbwambo J, Jahn A. Physical, sexual, emotional and economic intimate partner violence and controlling behaviors during pregnancy and postpartum among women in Dar es Salaam, Tanzania. *PLoS ONE*. (2016) 11:e0164376. doi: 10.1371/journal.pone.0164376
 83. Makayoto LA, Omolo J, Kamweya AM, Harder VS, Mutai J. Prevalence and associated factors of intimate partner violence among pregnant women attending Kisumu District Hospital, Kenya. *Matern Child Health J*. (2013) 17:441–7. doi: 10.1007/s10995-012-1015-x
 84. Malan M, Spedding MF, Sorsdahl K. The prevalence and predictors of intimate partner violence among pregnant women attending a midwife and obstetrics unit in the Western Cape. *Glob Ment Health*. (2018) 5:e18. doi: 10.1017/gmh.2018.9
 85. Marcacine KO, Abuchaim ESV, Abrahão AR, Michelone CSL, Abrão ACFV. Prevalence of intimate partner violence reported by puerperal women. *Acta Paul Enferm*. (2013) 26:395–400. doi: 10.1590/S0103-21002013000400015
 86. Massumi Okada M, Hoga LAK, Borges ALV, Albuquerque RS, Belli MA. Domestic violence against pregnant women. *Acta Paulista de Enfermagem*. (2015) 28:270–4. doi: 10.1590/1982-0194201500045
 87. Modiba LM, Baliki O, Mmalasa R, Reineke P, Nsiki C. Pilot survey of domestic abuse amongst pregnant women attending an antenatal clinic in a public hospital in Gauteng Province in South Africa. *Midwifery*. (2011) 27:872–9. doi: 10.1016/j.midw.2010.09.008
 88. Mohammad-Alizadeh-Charandabi S, Bahrami-Vazir E, Kamalifard M, Mirghafourvand M. Intimate partner violence during the first pregnancy: a comparison between adolescents and adults in an urban area of Iran. *J Forensic Leg Med*. (2016) 43:53–60. doi: 10.1016/j.jflm.2016.07.002
 89. Mohammadhosseini E, Sahraan L, Bahrami T. Domestic abuse before, during and after pregnancy in Jahrom, Islamic Republic of Iran. *East Mediterr Health J*. (2010) 16:752–8. doi: 10.26719/2010.16.7.752
 90. Muzrif MM, Perera D, Wijewardena K, Schei B, Swahnberg K. Domestic violence: a cross-sectional study among pregnant women in different regions of Sri Lanka. *BMJ Open*. (2018) 8:e017745. doi: 10.1136/bmjopen-2017-017745
 91. Nguyen TH, Ngo TV, Nguyen VD, Nguyen HD, Nguyen HTT, Gammeltoft T, et al. Intimate partner violence during pregnancy in Vietnam: prevalence, risk factors and the role of social support. *Glob Health Action*. (2018) 11:69–76. doi: 10.1080/16549716.2019.1638052
 92. Okour AM, Badarneh R. Spousal violence against pregnant women from a Bedouin community in Jordan. *J Womens Health*. (2011) 20:1853–9. doi: 10.1089/jwh.2010.2588
 93. Olagbuji B, Ezeanochie M, Ande A, Ekaete E. Trends and determinants of pregnancy-related domestic violence in a referral center in southern Nigeria. *Int J Gynecol Obstet*. (2010) 108:101–3. doi: 10.1016/j.ijgo.2009.09.024
 94. Onoh RC, Umeora OJ, Ezeonu PO, Onyebuchi AK, Lawani OL, Agwu UM. Prevalence, pattern and consequences of intimate partner violence during pregnancy at Abakaliki Southeast Nigeria. *Ann Med Health Sci Res*. (2013) 3:484–91. doi: 10.4103/2141-9248.122048
 95. Owaka IO, Nyanchoka MK, Atili HE. Intimate partner violence in pregnancy among antenatal attendees at health facilities in West Pokot county, Kenya. *Pan Afr Med J*. (2017) 28:229. doi: 10.11604/pamj.2017.28.229.8840
 96. Oweis A, Gharaibeh M, Alhourani R. Prevalence of violence during pregnancy: findings from a Jordanian survey. *Matern Child Health J*. (2010) 14:437–45. doi: 10.1007/s10995-009-0465-2
 97. Peedicayil A, Sadowski LS, Jeyaseelan L, Shankar V, Jain D, Suresh S, et al. Spousal physical violence against women during pregnancy. *BJOG*. (2004) 111:682–7. doi: 10.1111/j.1471-0528.2004.00151.x
 98. Pitter CP, Dunn L. Profiling pregnant women at risk for domestic violence in Jamaica: a pilot study. *Int J Childbirth*. (2018) 7:170–80. doi: 10.1891/2156-5287.7.4.170
 99. Romero-Gutiérrez G, Cruz-Arvizu VH, Regalado-Cedillo CA, León ALPP. Prevalence of violence against pregnant women and associated maternal and neonatal complications in Leon, Mexico. *Midwifery*. (2011) 27:750–3. doi: 10.1016/j.midw.2010.06.015
 100. Rubertsson C, Hildingsson I, Rådestad I. Disclosure and police reporting of intimate partner violence postpartum: a pilot study. *Midwifery*. (2010) 26:e1–5. doi: 10.1016/j.midw.2008.01.003
 101. Salari Z, Nakhaee N. Identifying types of domestic violence and its associated risk factors in a pregnant population in Kerman hospitals, Iran Republic. *Asia Pac J Public Health*. (2008) 20:49–55. doi: 10.1177/1010539507308386
 102. Shamu S, Abrahams N, Zarowsky C, Shefer T, Temmerman M. Intimate partner violence during pregnancy in Zimbabwe: A cross-sectional study of prevalence, predictors and associations with HIV. *Trop Med Int Health*. (2013) 18:696–711. doi: 10.1111/tmi.12078
 103. Shrestha SD, Pradhan R, Tran TD, Gualano RC, Fisher JRW. Reliability and validity of the Edinburgh Postnatal Depression Scale (EPDS) for detecting perinatal common mental disorders (PCMDs) among women in low- and lower-middle-income countries: a systematic review. *BMC Pregnancy Childbirth*. (2016) 16:72. doi: 10.1186/s12884-016-0859-2
 104. Silverman JG, Balaiah D, Decker MR, Boyce SC, Ritter J, Naik DD, et al. Family violence and maltreatment of women during the perinatal period: associations with infant morbidity in Indian slum communities. *Matern Child Health J*. (2016) 20:149–57. doi: 10.1007/s10995-015-1814-y
 105. Sohail S, Qadir E. The frequency of domestic violence in pregnancy and its demographic characteristics. *Med Forum Mon*. (2009) 20:25–8. Available online at: https://www.researchgate.net/publication/289162266_The_frequency_of_domestic_violence_in_pregnancy_and_its_demographic_characteristics (accessed August 10, 2020).
 106. Spangenberg K, Wobil P, Betts CL, Wiesner TF, Gold KJ. Intimate partner violence among mothers of sick newborns in Ghana. *Health Care Women Int*. (2016) 37:583–94. doi: 10.1080/07399332.2015.1037444
 107. Stöckl H, Watts C, Mbwambo JKK. Physical violence by a partner during pregnancy in Tanzania: prevalence and risk factors. *Reprod Health Matters*. (2010) 18:171–80. doi: 10.1016/S0968-8080(10)36525-6
 108. Umoh AV, Abah GM, Ugege WE, Inyangetoh EC. Prevalence and attitude of women to spousal physical abuse in pregnancy in a Niger delta community of Nigeria. *TAF Prev Med Bull*. (2012) 11:731–6. doi: 10.5455/pmb.1-1329127812

109. Valladares E, Pena R, Persson LA, Högberg U. Violence against pregnant women: prevalence and characteristics. A population-based study in Nicaragua. *BJOG*. (2005) 112:1243–8. doi: 10.1111/j.1471-0528.2005.00621.x
110. Van Parys AS, Deschepper E, Michiels K, Temmerman M, Verstraelen H. Prevalence and evolution of intimate partner violence before and during pregnancy: a cross-sectional study. *BMC Pregnancy Childbirth*. (2014) 14:294. doi: 10.1186/1471-2393-14-294
111. Yang M-S, Yang M-J, Chou F-H, Yang H-M, Wei S-L, Lin J-R. Physical abuse against pregnant aborigines in Taiwan: prevalence and risk factors. *Int J Nurs Stud*. (2006) 34:21–7. doi: 10.1016/j.ijnurstu.2004.12.005
112. Yohannes K, Abebe L, Kisi T, Demeke W, Yimer S, Feyiso M, et al. The prevalence and predictors of domestic violence among pregnant women in Southeast Oromia, Ethiopia. *Reprod Health*. (2019) 16:37. doi: 10.1186/s12978-019-0694-9
113. Gazmararian JA, Lazoric S, Spitz AM, Ballard TJ, Saltzman LE, Marks S. Prevalence of violence against pregnant women. *JAMA*. (1996) 275:1915–20. doi: 10.1001/jama.275.24.1915
114. Audi CAF, Segall-Corrêa AM, Santiago SM, Andrade MGG, Pérez-Escamilla R. Violence against pregnant women: prevalence and associated factors. *Revista de saúde pública*. (2008) 42:877–85. doi: 10.1590/S0034-89102008005000041
115. Ghaffari M. Spiritual well-being and dyadic adjustment: Mediator effects for family strengths. *Iran J Psychiatry Behav Sci*. (2016) 10:e1699. doi: 10.17795/ijpbs-1699
116. Jasinski JL. Pregnancy and domestic violence: a review of the literature. *Trauma Violence Abuse*. (2004) 5:47–64. doi: 10.1177/1524838003259322
117. Stylianou AM. Economic abuse within intimate partner violence: a review of the literature. *Violence Vict*. (2018) 33:3–22. doi: 10.1891/0886-6708.VV-D-16-00112
118. Ruiz-Pérez I, Plazaola-Castaño J, Vives-Cases C. Methodological issues in the study of violence against women. *J Epidemiol Community Health*. (2007) 61:ii26–31. doi: 10.1136/jech.2007.059907
119. Straus MA, Gelles RJ, Smith C. *Physical Violence in American Families: Risk Factors and Adaptations to Violence in 8,145 Families*. 1st ed. New York: Routledge (1990). doi: 10.1891/0886-6708.5.4.297
120. Kimmel MS. “Gender symmetry” in domestic violence: a substantive and methodological research review. *Violence Against Women*. (2002) 8:1332–63. doi: 10.1177/107780102237407
121. Dobash RP, Dobash RE, Wilson M, Daly M. The myth of sexual symmetry in marital violence. *Soc Probl*. (1992) 39:71–91. doi: 10.1525/sp.1992.39.1.03x00641
122. Ellsberg M, Heise L, World Health Organization. *Researching Violence Against Women: A Practical Guide for Researchers and Activists*. (2005). Available online at: http://dspace.ceid.org.tr/xmlui/bitstream/handle/1/941/9241546476_eng.pdf?sequence=1&isAllowed=y (accessed August 12, 2020).
123. Swan SC, Gambone LG, Caldwell JE, Sullivan TP, Snow DL. A review of research on women’s use of violence with male intimate partners. *Violence Vict*. (2008) 23:301–14. doi: 10.1891/0886-6708.23.3.301
124. Jewkes R, Levin J, Penn-Kekana L. Risk factors for domestic violence: findings from a South African cross-sectional study. *Soc Sci Med*. (2002) 55:1603–17. doi: 10.1016/S0277-9536(01)00294-5
125. Alhusen JL, Ray L, Sharps P, Bullock L. Intimate partner violence during pregnancy: maternal and neonatal outcomes. *J Womens Health*. (2015) 24:100–6. doi: 10.1089/jwh.2014.4872
126. Naghavi A, Amani S, Bagheri M, De Mol J. A critical analysis of intimate partner sexual violence in Iran. *Front Psychol*. (2019) 10:2729. doi: 10.3389/fpsyg.2019.02729
127. Ellsberg M, Peña R, Herrera A, Liljestrand J, Winkvist A. Candies in hell: women’s experiences of violence in Nicaragua. *Soc Sci Med*. (2000) 51:1595–610. doi: 10.1016/S0277-9536(00)00056-3
128. Collins PH. *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. 2nd ed. New York: Routledge (2002). Available online at: <https://homologacao-reciis.icict.fiocruz.br/index.php/reciis/article/download/854/1496> (accessed August 12, 2020).
129. Reeves RV. Hoarding the dream, still. In: *Dream Hoarders*. Washington: Brookings Institution (2018). Available online at: https://www.brookings.edu/wp-content/uploads/2018/03/9780815734482_ch1.pdf (accessed August 12, 2020).
130. Sowell RL, Seals BF, Phillips KD, Julious CH. Disclosure of HIV infection: how do women decide to tell? *Health Educ Res*. (2003) 18:32–44. doi: 10.1093/her/18.1.32
131. Pogarell A, Garthus-Niegel S, Mojahed A, von Verschuer C, Rokyta U, Kummer W, et al. Community case study trauma-specific treatment and counseling for refugee women exposed to intimate partner violence. *Front Psychiatry*. (2019) 10:891. doi: 10.3389/fpsyg.2019.00891

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Rapid Review on the Associations of Social and Geographical Isolation and Intimate Partner Violence: Implications for the Ongoing COVID-19 Pandemic

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While the COVID-19 pandemic forced millions of people to stay home and minimize their social contacts, newspaper reports worldwide raised concerns as they reported an increasing rate of intimate partner violence (IPV). One link of the measures enforced to control the pandemic to IPV might be a possible side effect of those measures, namely social and geographical isolation. As there was no scientific data investigating the association of IPV and social and geographical isolation in the context of epidemics or pandemics at the time of conducting this rapid review, we aimed at investigating a broader range of contexts of social as well as geographical isolation and its association with IPV to draw conclusions regarding the COVID-19 pandemic. We searched Embase, PubMed, PsycINFO, and Web of Science (core collection). A research strategy was developed and observational studies were included if they considered men and/or women, estimates of social and geographical isolation, and IPV as a primary outcome. Of the 526 identified studies, 11 were included in this review. The included studies involved 15,695 women and were conducted in the USA, Sweden, Ethiopia, Egypt, Spain, and Turkey. Indicators of social isolation such as lack of social, emotional, or informational support or the frequency and quality of social contacts were narratively assessed. Geographical isolation was primarily assessed by physical distance to the next town or support service. Both social and geographic isolation were found to be associated with an increased risk of IPV. Recommendations made by the individual studies include the following: (a) improving access to social networks outside the victims' own group, (b) improving their economic circumstances, (c) asserting the responsibility for those in contact with the victims, and (d) increasing the focus on access to preventive services and programs need to be taken into account. Therefore, considering the particular

infrastructure and legislation of the countries affected by the pandemic, policies need to ensure constant access to shelters and other help services and increase awareness for IPV in the society. In addition, future studies are warranted to assess prevalence rates and risk factors of IPV during the COVID-19 pandemic.

Keywords: intimate partner violence, social isolation, geographical isolation, association, COVID-19, pandemic, rapid review

INTRODUCTION

The COVID-19 outbreak, declared as a pandemic in March 2020 by the World Health organization [WHO] (1), forced several countries worldwide to impose strict measures to fight the outbreak of the virus. To contain infections, millions of people were forced to stay at home and minimize their social contacts. While physical and social distancing are effective measures to control the virus (2, 3), they showed negative impacts in other domains of public health. The resulting social isolation of such measures can be a major stressor that can contribute to widespread emotional distress, several psychological perturbations, and mood disturbances such as boredom, stress, depression, insomnia, irritability, anger, and frustration (4, 5). Possible distress within relationships with family and friends is also expected (6). Reports of newspapers and news agencies in several countries around the world reported an increasing rate of domestic violence among intimate partners (i.e., intimate partner violence (IPV) and against children, as well as an expected rise in femicide cases, child marriages, and genital mutilation in children since the implementation of the lockdown measures (7–11).

Social and Geographical Isolation and IPV

IPV refers to any behavior within an intimate relationship that causes physical, psychological, and/or sexual harm to those in former or current relationships (12). Types of behavior could include: (A) acts of physical violence, such as slapping, hitting, kicking, and beating; (B) sexual violence, including forced sexual intercourse and other forms of sexual coercion; (C) emotional (psychological) abuse, such as insults, belittling, constant humiliation, intimidation (e.g., destroying things), threats of harm, threats to take away children; (D) controlling behavior, including isolating a person from family and friends, monitoring their movements, and restricting access to financial resources, employment, education, or medical care (12). IPV can happen to anyone, regardless of any gender specifications, and in any form of intimate relations (13). However, it is the most common form of violence against women, and approximately one in three women worldwide has experienced violence by an intimate partner during her lifetime (14).

Among the many factors that could contribute and affect the experience of IPV, isolation is a key concept for understanding IPV in various contexts (15). There are different understandings of social isolation, but with regard to the present study we refer to social isolation as a “lack of contact or of sustained interaction with individuals and institutions that represent mainstream

society” (16) (p. 60). Social isolation is often measured by the type and extent of social support (17). In the case of IPV, for example, social support from individuals outside the intimate relationship has been recognized as an important protective factor and moderator of the effect of IPV on many physical and mental health outcomes (18, 19). In fact, it was suggested that the likelihood of violence against women decreases as the amount of social support available to them increases (20) and vice versa (21). Women who have friends or family members available for support seem therefore less socially isolated and thus in turn better protected from victimization at the hands of their partner than women without such support systems (22, 23). In addition, social isolation plays a major role in creating the structural dislocation of minorities and marginalized populations and the differential distribution of resources (i.e., social capital), which in turn could directly increase the risk for IPV victimization for individuals who face overlapping social discriminations due to their race, gender, class, etc. (13, 24, 25). Furthermore, geographical isolation can be defined by distance to resources like neighbors, friends, police stations, hospitals, or the nearest village or town (26). Such remoteness, which for instance can be found in rural areas, may also imply sociocultural and psychological isolation (27), thereby accentuating social isolation. Hence, social as well as geographical isolation could have implications for intensifying the hidden nature of IPV itself and undermine efforts to both seek and provide help (15).

The global pandemic and its consequences like lockdowns of entire nations represent a novel situation in several countries. Reports show the urgency to take a closer look at associations of IPV and the measures to control the pandemic (28, 29). One possible link might be a side effect of the imposed physical and social distancing (30). These preventative restrictions foster isolation and may result in victims of IPV being trapped at home with the perpetrators (12, 30). Apart from that, availability of social support systems such as family and friends might be limited; in addition, closed shelters and limited accessibility of protection services could make it more difficult for survivors to escape from their perpetrator (11, 30). Studies investigating the prevalence and possible underlying factors of IPV like social and geographical isolation during the COVID-19 pandemic are still inconclusive (31), and drawing conclusions from comparable situations in the past is limited. We found it most appropriate to conduct this rapid review which aims at investigating a broader range of pre-pandemic contexts of social and geographical isolation and their associations with IPV, as well as providing reliable, preliminary knowledge of their potential impact during

the COVID-19 pandemic¹. When investigating the association of IPV and social or geographical isolation, the bidirectional nature should be taken into consideration. On the one hand, studies have found that isolation is one of several negative outcomes of IPV (32). This association can be found in terms of coercive control, which implicates that social isolation can be caused by IPV through controlling several aspects of the victim's everyday life, such as limiting social contacts or access to professional help (33). On the other hand, studies investigated IPV against women found that many victims experienced physical and emotional aspects of IPV as a consequence of being forced into isolation by the perpetrator, suggesting that IPV could be a possible outcome of social and geographical isolation (34).

MATERIALS AND METHODS

Considering the necessity of addressing the issue of IPV in the context of the ongoing pandemic and in order to present relevant knowledge in a timely manner, we conducted this rapid review following the Cochrane guidelines for rapid reviews (35–37).

Search Strategy

Research articles were primarily obtained through searches which were carried out in the following databases: Embase, PubMed, PsycINFO, and Web of Science (core collection). We used a combination of terms relating to IPV and social and geographical isolation, such as quarantine or social distancing as well as pandemics and epidemics. Separate searches for each primary database combined Medical Subject Subheadings (MeSH) terms and key text words with the Boolean operators (AND) and (OR), accordingly. The last date of the search considered for this review was on the 23rd of May, 2020 and was not restricted to any date range. The full list of search terms for PubMed can be found in the **Appendix**.

Eligibility Criteria

For studies to be included in this review, we rigorously followed our population, intervention, comparison, and outcomes (PICOS) scheme. The target population were men and/or women in intimate relationships. The intervention was limited to the exposure to social and geographical isolation, as well as epidemics/pandemics. No comparators were considered. We considered IPV to be the only primary outcome for this review. We excluded any studies, which did not clearly report perpetrators as intimate partners or victims (e.g., children) for two main reasons. One was to keep the definition of our outcome clear and consistent throughout our review. The second reason was to reduce the possibility of including studies, which did not utilize adequate statistical models to disentangle the results (e.g., subgroup analyses for perpetrators other than intimate partners). Only empirical quantitative studies such as cohort, case-control, and cross-sectional studies were included, with qualitative studies being excluded. We originally planned to include only articles published in English and German, but we diverged from the protocol and considered articles published in

Spanish for inclusion as well, since these languages are spoken by the authors.

Data Collection Process

In order to conduct this rapid review, we used abbreviated systematic review methods and applied the following methodological shortcuts according to the Cochrane guidelines for rapid reviews: There was no dual abstract, dual full-text screening, dual data extraction, or dual assessment of risk of bias. All studies collected through the database searches were imported into the web-based, systematic review tool Rayyan QCRI (38). The identified titles and abstracts were then divided and screened; one reviewer (A. M.) screened titles and abstracts of studies identified by the search on PubMed, the other reviewer (H. H.) screened the ones identified by the search on Embase and PsycINFO. In case any of the reviewers were unsure whether titles and abstracts complied with the eligibility criteria, a second reviewer (S. B.) was consulted.

Full texts were then reviewed independently by the same reviewers (A. M.) and (H. H.) against the same inclusion and exclusion criteria as above. In case of uncertainties, a second reviewer (S. B.) was consulted. All studies that were accepted based on the full text screening were retained for data extraction. A data extraction form was developed where (S. B.) and (H. H.) then extracted data from each of the included studies. Extracted data included: author and year of publication, country, sample size, IPV prevalence estimates, type of isolation or its indicators, type of IPV (physical, sexual, psychological, and social), effect measures, as well as any recommendations made by the authors in the light of their findings.

Risk of Bias (Quality) Assessment

Originally, we decided that the use of quality assessment tools was not feasible, due to the time constraints in conducting a rapid review. However, we diverged from the protocol and assessed the risk of bias of the included studies. According to the Cochrane guidelines for rapid reviews (37), the risk of bias should be limited to be rated by one reviewer (A. M.), with full verification of all judgements by a second reviewer (H. H.). We evaluated the overall risk of bias for each included study as “low,” “high,” or “unclear.” We followed the example used by Romero Starke et al. (39), and considering the criteria described by SIGN (40) and CASP (41). Items of the checklist were modified accordingly to suit the purpose of this review:

Recruitment Procedure

Adequate recruitment methods should be insured, such as randomized sampling. The response rate should be 50% or more, if not achieved, a non-participation analysis should take place. Studies that yielded high risk in this domain (i.e., studies that utilized convenience and clinical-populations) scored high risk in the overall assessment. For cohort studies, if the loss to follow-up was below 20% and there was no substantial difference between the comparison groups, this domain should be rated as low. Similarly, for a case-control study, both cases and control subjects should have a response of 50% or more, if this number was not achieved, non-participation analysis should be performed

¹https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=185917.

where substantial differential selection of cases and controls should be excluded. For cross-sectional designs, adequacy of randomization and inclusion criteria for participation, and an acceptable response rate to be 50% or more should be presented for this domain to be considered as low risk.

Exposure Definition and Measurement

The exposure should be defined as social and/or geographical isolation. Both or any other terms, such as social support, living in rural areas, etc., which fall under social or geographical isolation should be accurately stated and measured for this domain to be considered as low risk.

Outcome

The outcome should be defined as intimate partner violence (IPV). Other terms used for violence among intimate partners, e.g., domestic/family violence were considered to be high risk, because it would mean that other members of the family (father, brother, mother in-law, etc.) may have been co-perpetrators, and that is not what we aimed to measure. Nevertheless, if these terms were used, other indications of spousal/intimate violence should have been reported. IPV should be assessed with standardized validated IPV victimization tools, including self-report questionnaires.

Confounding

A list of potential confounders had to be given, such as age, location, region, years of education, socioeconomic status.

Analysis Methods

Studies had to include one of the following effect measures to assess associations of social and/or geographical isolation and IPV: Odds ratios (OR), correlations (r), differences between groups (d), or regression coefficients (B or β). Also, adequate statistical models had to be used to reduce bias and control for confounding (e.g., standardization, adjustment in multivariate model, stratification, etc.) for this domain to be considered as having a low risk of bias.

Funding

The sources of funding and the involvement of the funding body in the research were assessed in this domain. This domain should be rated as having low risk, if a study was funded by a non-profit organization(s) and it was not affected by sponsors. If there was any participation in the data analysis or the study was probably affected by the sponsoring organization, the domain should be considered as high risk.

Conflict of Interest

Authors should report not having a conflict of interest for this domain to be rated as having a low risk.

Overall Assessment of Risk of Bias

We considered the first five domains (i.e., Recruitment Procedure to Analysis Methods) as major domains, while Funding and Conflict of Interest were considered as minor domains. We defined the overall scoring rules for the assessment of risk of bias

for each study as high risk if any of the major domains was rated as “high risk” or “unclear risk.”

Data Synthesis

We synthesized results narratively and in tabular form. Because of the heterogeneity of available primary studies, we did not consider conducting any quantitative analyses for this review.

RESULTS

Description of Studies

The database search yielded 526 citations published between 1989 and 2020 (Figure 1). Articles were excluded based on information in the title and abstract. The full texts of potentially relevant articles were obtained for further assessment.

Characteristics of Included Studies

Our searches identified 11 relevant studies (15, 42–51) (Table 1). Of these, nine studies were cross-sectional (42, 43, 45–51), one was longitudinal (15), and one comprised comparative case studies (44). They were published in English ($n = 10$) and Spanish ($n = 1$). The included studies involved 15,695 women. Six of the included studies were conducted in the USA (15, 42, 44, 45, 47, 48), followed by one study in Sweden (46), Ethiopia (43), Egypt (50), Spain (49), and Turkey (51), respectively. All of the included studies investigated violence against women where the sole perpetrator was their current or former male intimate

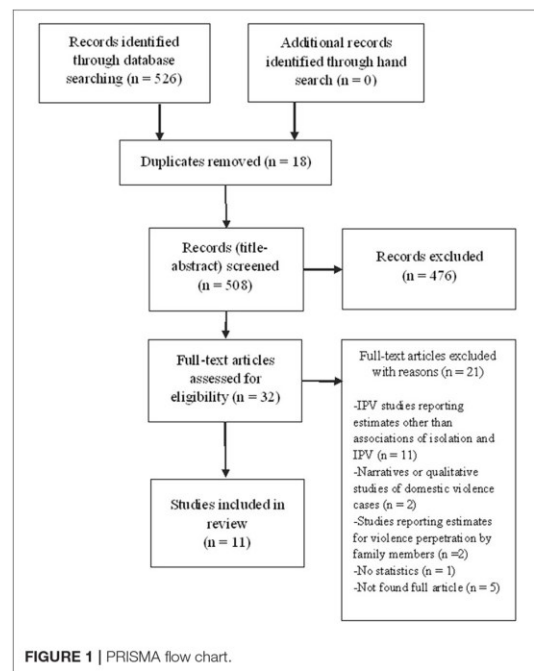


FIGURE 1 | PRISMA flow chart.

TABLE 1 | Characteristics of included studies.

Study id	country	Setting	Study design	Sample size	prevalence of IPV	Population's characteristics
1	Fernbrant et al. (46) Sweden	Population-based	Cross-sectional	804	Lifetime: 22.1% (emotional: 15.9%, physical/sexual: 14.8%) By previous partner: 20.5% (emotional: 14.3%, physical/sexual: 13.9%) By current partner: 6.7% (emotional: 6.1%, physical/sexual: 2.4%)	That women residing in Sweden (since 2006) Age: range: 18-64 years Marital status: 85.4% married/cohabiting Occupation: 39.3% employed Education: 0-9 years: 52.1%, 10 or more years: 47.9% Self-indicated social isolation: 39.9% Self-rated mental health: poor: 19.2%, good: 80.2% Men or women married or cohabiting with an opposite sex partner (couples) Part of the NSFH (National Survey of Families and Households), waves 1 and 2
2	Lanier and Maume (15) USA	Population-based	Longitudinal	4,914	Count of the number of times the female partner was the victim of physical violence in the past year, ranging from 0 to 4 (where four indicates four or more incidents): Non-metro counties: M = 0.09 (SD = 0.48) Metro: M = 0.10 (SD = 0.48) number of incidents in past year (one or more): non-metro: 5.08%, metro: 5.87%	Non-metro counties N = 4,006 M = 41.41 (SD = 16.66) Black: 11.42%, Hispanic: 3.86%, White: 84.72% Metro counties N = 4,636 M = 39.53 (SD = 14.02) Black: 15.1%, Hispanic: 6.57%, White: 78.33% Age Ethnicity Income-to-needs ratio M = 4.99 (SD = 4.95) M = 1.09 (SD = 1.25) M = 3.82 (SD = 3.18) M = 1.07 (SD = 1.28) (Demographics refer to whole sample of N = 8,642) Female drug users (most commonly used substance: smokable cocaine), part of a larger study, investigating HIV sexual risk behaviors, street-recruited Age: > 18 years old/mean age: 37.6 y (SD = 6.8) Ethnicity: Caucasian: 41%, Alaska Natives/ American Indians: 32%, African American: 21% Education: Less than high school: 32.4%, high school graduation or GED: 36.3%, more than high school: 31.3% Monthly income from all sources: M = \$1144 (SD = \$2358) Monthly legal income: M = \$557 (SD = \$727) Social class (self-reported): Upper class: 3.5%, middle class: 22.4%, working class: 25.9%, lower class: 30.1%, truly needy: 18.1% Number of children at home: M = 0.6 (SD = 1.5) Women who attended for elective abortion at a clinic, Iowa residents No table for demographic information
3	Farris and Fenaughty (45) USA	Population-based	Cross-sectional	262	At least one incident of physical violence: 38.2%	
4	Peek-Asa et al. (48) USA	Clinic-based	Cross-sectional	1,478	Overall: 16.1% (physical/sexual: 12.5%, battering: 9%) Urban towns: 15.5% Large rural towns: 13.5% Small rural towns: 22.5% Isolated rural areas: 17.9%	

(Continued)

TABLE 1 | Continued

Study id	country	Setting	Study design	Sample size prevalence of IPV	Population's characteristics
5	Bosch and Schumm (42) USA	Population-based	Cross-sectional	56 100%	Women who experienced an abusive relationship Age: M = 40.5 years (SD = 8.6), range: 22–63 years Ethnicity: Caucasian: 84%, Native-American: 14%, African American: 2% Marital Status: 80% married during abusive relationship (at time of interview, only one woman was still married to formerly abusive husband) Education: Less than high school: 5%, college degree: 14%, some college training: 40% additional vocational training: 9% Occupation: 49% working part-time, 38% working full-time during abusive relationship Mean annual household income (during abusive relationship): M = \$34250, (SD = \$29319) 36% receiving consistent monetary support 90% with minor children (average of 3.5 children, SD = 1.5) Ever-married women, survey of households Age: range 15–49 years (15–19: 22.7%, 20–24: 19.4%, 25–29: 20.0%, 30–34: 15.2%, 35–39: 10.8%, 40–44: 6.9%, 45–59: 5.0%) Marital Status: 71.3% married, 56.4% divorced, 73.5% widowed Education: Uneducated: 49.0%, primary: 34.2%, secondary: 11.4%, higher: 5.4% Wealth index: Poor: 44.7%, middle: 14.1%, rich: 41.2% 74.3% living in rural areas, 25.7% in urban areas Currently or formerly married women, systematic random sample from an Egyptian city Age: range 18–65 years (18–29: 21.6%, 30–44: 41.4%, 45–65: 37.0%) Marital status: 86% married, 14% divorced/separated/widowed Education: illiterate: 40.2%, read and write: 35.3%, below University level: 14.9% University level or above: 9.6% Occupation: 77.3% housewife, 22.6% employed
6	Chernet and Cherie (43) Ethiopia	Population-based	Cross-sectional	4,714 30%	Women who sought help at a primary care center Age: M = 38.83 years (SD = 11.15), range: 18–65 Marital status: 62.9% married, 25.6% single, 11.5% separated/divorced/widowed Education: University degree: 34.7%, high school: 23.7%, middle school: 37.9%, no education: 3.7% Occupation: 35.3% housewives, 51.0% employed, 13.7% student/unemployed Monthly income: > 1,200€: 36.0%, 900–1,200€: 23.5%, 600–900: 25.6%, <600: 15.0% Number of children: none: 29.7%, one: 20.5%, two: 33.3%, three or more: 16.4% Mothers with a current partner (40 severely assaulted battered mothers, 46 battered but not severely assaulted mothers, 57 not battered mothers) Age: M = 30.56 years Ethnicity: 33.49% African American, 35.46% Latina American, 33.7% Anglo-American Marital status: 47.53% married Education: M = 11.23 years 86.03% lived below 120% of the poverty line Number of children: M = 2.99
7	Seedhom (50) Egypt	Population-based	Cross-sectional	1,502 physical violence: 30.3% sexual violence: 7.5% sexual and physical violence: 31.6% emotional violence: 49.3% All forms of violence: 60.4%	Women who sought help at a primary care center Age: M = 38.83 years (SD = 11.15), range: 18–65 Marital status: 62.9% married, 25.6% single, 11.5% separated/divorced/widowed Education: University degree: 34.7%, high school: 23.7%, middle school: 37.9%, no education: 3.7% Occupation: 35.3% housewives, 51.0% employed, 13.7% student/unemployed Monthly income: > 1,200€: 36.0%, 900–1,200€: 23.5%, 600–900: 25.6%, <600: 15.0% Number of children: none: 29.7%, one: 20.5%, two: 33.3%, three or more: 16.4% Mothers with a current partner (40 severely assaulted battered mothers, 46 battered but not severely assaulted mothers, 57 not battered mothers) Age: M = 30.56 years Ethnicity: 33.49% African American, 35.46% Latina American, 33.7% Anglo-American Marital status: 47.53% married Education: M = 11.23 years 86.03% lived below 120% of the poverty line Number of children: M = 2.99
8	Plazaola-Castaño et al. (49) Spain	Clinic-based	Cross-sectional	1,402 any type of violence during lifetime: 32.0% physical violence and sometimes psychological: 7.0% psychological violence: 14.0% psychological and sexual violence: 2.5% all three types of violence: 6.0%	Women who sought help at a primary care center Age: M = 38.83 years (SD = 11.15), range: 18–65 Marital status: 62.9% married, 25.6% single, 11.5% separated/divorced/widowed Education: University degree: 34.7%, high school: 23.7%, middle school: 37.9%, no education: 3.7% Occupation: 35.3% housewives, 51.0% employed, 13.7% student/unemployed Monthly income: > 1,200€: 36.0%, 900–1,200€: 23.5%, 600–900: 25.6%, <600: 15.0% Number of children: none: 29.7%, one: 20.5%, two: 33.3%, three or more: 16.4% Mothers with a current partner (40 severely assaulted battered mothers, 46 battered but not severely assaulted mothers, 57 not battered mothers) Age: M = 30.56 years Ethnicity: 33.49% African American, 35.46% Latina American, 33.7% Anglo-American Marital status: 47.53% married Education: M = 11.23 years 86.03% lived below 120% of the poverty line Number of children: M = 2.99
9	Coohey (44) USA (Iowa)	Recruited from parent groups in public schools, social service agencies, day care centers + libraries in Chicago	Comparative case studies	143 No prevalence estimates were provided	Women who sought help at a primary care center Age: M = 38.83 years (SD = 11.15), range: 18–65 Marital status: 62.9% married, 25.6% single, 11.5% separated/divorced/widowed Education: University degree: 34.7%, high school: 23.7%, middle school: 37.9%, no education: 3.7% Occupation: 35.3% housewives, 51.0% employed, 13.7% student/unemployed Monthly income: > 1,200€: 36.0%, 900–1,200€: 23.5%, 600–900: 25.6%, <600: 15.0% Number of children: none: 29.7%, one: 20.5%, two: 33.3%, three or more: 16.4% Mothers with a current partner (40 severely assaulted battered mothers, 46 battered but not severely assaulted mothers, 57 not battered mothers) Age: M = 30.56 years Ethnicity: 33.49% African American, 35.46% Latina American, 33.7% Anglo-American Marital status: 47.53% married Education: M = 11.23 years 86.03% lived below 120% of the poverty line Number of children: M = 2.99

(Continued)

TABLE 1 | Continued

Study id	country	Setting	Study design	Sample size prevalence of IPV	Population's characteristics
10	Yanikkerem et al. (51) Turkey	Population-based	Cross-sectional	217 9.7% rural areas: 17.3% urban areas: 2.7%	Pregnant women living in certain areas (household survey) Age: 42.4% aged 25 years and younger, 57.6% older than 25 years Marital status: 82.5% married, 17.5% unmarried Education: elementary or less: 75.1%, more than elementary: 24.9% Occupation: 6.5% employed, 93.6% unemployed Income status: High to middle: 81.1%, low: 18.9% 52.1% attended clinic in urban areas, 47.9% in rural areas
11	Levendosky et al. (47) USA (Michigan)	Population-based	Cross-sectional	203 71.4%	Women in their last trimester of pregnancy Age: M = 25.3 years Ethnicity: 63% Caucasian, 25% African American, 5% Latina, 7% other ethnic backgrounds Marital status: 49% single + never married, 40% married, 11% separated/divorced/widowed Education: Less than high school: 16%, high school: 30%, post-high-school training: 41%, college: 13.5% Monthly income: Median = \$1500, range: \$0-\$9500 Number of children: one or more: 57%

partner. No study with men as victims was identified. Two terms were used to describe the violence, i.e., IPV ($n = 8$), and Domestic Violence (DV) ($n = 3$).

Quality of Included Studies

Seven studies scored high risk of bias (42, 44, 45, 47–49, 51), while four studies scored low risk of bias (15, 43, 46, 50). Table 2 summarizes the risk of bias assessment scores for the included studies.

Associations of Social and Geographical Isolation and IPV

Two studies reported associations of social isolation and IPV (45, 46). In Farris & Fenaughty (45), social isolation was strongly correlated with physical and sexual IPV among female drug users. In another study, social isolation was reported among immigrant women as a predictor for physical, sexual, and psychological IPV (46). Both social and geographical isolation were reported in two of the included studies (15, 42). Social isolation was assessed in terms of lack of emotional and informational support and found to be a predictor for an increased risk of IPV among women, who were also geographically isolated. They were found to be living approximately 6 miles away from the closest town, 12 miles away from closest mental health center, and 78 miles away from closest shelter service (42). In Lanier & Maume (15), social isolation was assessed in terms of lack of social support. Variables such as lack of help received, interaction through socializing, and church participation were measured and found to be significantly associated with increased risk of IPV. The geographical isolation aspect was assessed according to the counties classification into metropolitan counties, if they were located in a metropolitan area and contained an urban population of 20,000 or more, or non-metropolitan counties, which are an approximation of the rural context. It was also combined with the disadvantage index (i.e., sum of relative presence of Black residents, poverty households, female-headed households, and the unemployed in the county), as well as the Gini index (i.e., a standard measure of income inequality ranging from 0 to 100, where 100 indicates perfect inequality). The model for respondents in non-metro counties indicated the likelihood of women experiencing IPV in the past year was reduced significantly as levels of help received increased. Other findings indicating that respondents living in metro counties with higher levels of income inequality also reported a greater degree of IPV. This was also true for respondents in metro counties with more minor children in the household.

Four studies investigated lack of social support as indicator for social isolation (44, 47, 49, 50). Coohy (44) found that mothers who were severely assaulted, had fewer friends, fewer contacts with their friends, fewer long-term friendships, and fewer friends who really listened to them than did the non-battered mothers and the battered mothers who were not severely assaulted. In another study, social isolation was assessed by measuring the quality of support among a network of pregnant battered women (47). However, correlations between the average severity of violence and the practical, emotional, and critical support were not found to be statistically significant.

TABLE 2 | Risk of bias of included studies.

Study ID	Bosch and Schumm (42)	Chernet and Cherie (43)	Coohey (44)	Farris and Fenaughty (45)	Fernbrant et al. (46)	Lanier and Maume (15)	Levendosky et al. (47)	Peek-Asa et al. (48)	Plazaola-Castaño et al. (49)	Seedhom (50)	Yanikkerem et al. (51)
MAJOR DOMAINS											
Recruitment Procedure	High risk	Low risk	High risk	High risk	High risk	Low risk	Unclear risk	Unclear risk	High risk	Low risk	High risk
Exposure	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk
Definition and Measurement	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	High risk	Low risk	Low risk
Outcome	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	High risk	Low risk	Low risk
Confounding	Low risk	Low risk	Low risk	Unclear risk	Low risk	Low risk	Low risk	Low risk	Unclear risk	Low risk	Low risk
Analysis Methods	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	High risk	Low risk	High risk
MINOR DOMAINS											
Funding	Unclear risk	Low risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Unclear risk	Unclear risk	Unclear risk	Unclear risk	Unclear risk
Conflict of Interest	Unclear risk	Low risk	Unclear risk	Unclear risk	Unclear risk	Low risk	Unclear risk	Low risk	Unclear risk	Low risk	Unclear risk
Overall Assessment	High risk	Low risk	High risk	High risk	Low risk	Low risk	High risk	High risk	High risk	Low risk	High risk

Yet, for battered women, the number of supporters in their network who were in an abusive relationship as well, was related to impaired emotional and critical support among these women. No further investigations were made regarding the association between this similarity of battered women and their supporters and IPV (47). In Plazaola-Castaño et al. (49), women who reported having social support had a lowered probability of ever being abused than women who reported not having social support. Women who experienced abuse in the past and currently having social support had a lower probability of being abused again by a different partner than those who had no social support. Lack of social support was also investigated in Seedhom (50) and it was considered a predictor for physical, social, and emotional violence. Three studies investigated geographical isolation (43, 48, 51) and found it to be a risk factor for IPV. Chernet & Cherie (43), and Yanikkerem and colleagues (51) found that women living in rural areas were at significantly higher risk compared to women living in urban areas (Table 3).

Recommendations Made by Individual Studies

As a summary of the recommendations made by the individual studies, Coohey (44) pointed out that battered women were more likely to seek out support from family and friends than from professional helpers. Besides, interventions should aim at re-establishing social networks of women experiencing abuse (49). It was also emphasized that interventions for women living in rural areas should not be limited to formal networks, but should also include informal (social) networks within the community in order to provide information and advice, help women access resources and hold abusers accountable (15, 42). These studies expressed how imperative it is that abusers are held accountable for their abusive behaviors. In the case of socially isolated migrant women, this focus should be applied to the social structures as a whole to improve women's access to networks outside their own group (46). Moreover, improving the economic status of rural households could be an effective strategy to reduce IPV (43). Apart from that, as isolation is also likely to be tied closely to experiences of violence and drug use for the disadvantaged population of abused female drug users, people who have contact with victims ought to provide immediate support and resources (45). Finally, Peek-Asa et al. (48) recommended increasing the focus on access to preventive services in the case of rural women, including Domestic Violence Intervention programs (DVIP) resources.

DISCUSSION

The objective of our rapid review was to investigate the associations between social and geographical isolation and IPV and their possible implications for the ongoing COVID-19 pandemic. In this rapid review, the literature search did not reveal any studies associated with social or geographical isolation in the context of epidemics or pandemics. This means that the

TABLE 3 | Findings of individual studies.

Study id/country	Type of isolation	Type of IPV	Effect measures	Recommendations by authors
1 Fernbrant et al. (46) Sweden	Social isolation	IPV (physical, sexual, psychological)	OR: 3.37 (1.82–6.24)	The role of social capital in increasing resilience against poor mental health for those living in abusive relationships indicates a need for supporting social structures that facilitate Thai women's access to networks outside their own group.
2 Lanier and Maume (15) USA	Geographic isolation, social isolation (social support)	IPV (physical or sexual assault, threat of assault)	Non-metro counties/ metro counties (N = 1,781/N = 3,133): Help received: $\beta = -0.2180/0.060$ ($p = 0.19/0.374$) Interaction –socializing: $\beta = 0.053/-0.004$ ($p = 0.20/0.919$) Interaction –church $\beta = -0.040/-0.022$ ($p = 0.518/0.617$) Interaction –participation $\beta = 0.004/-0.004$ ($p = 0.923/0.882$) OR = 5.17 (2.62–10.19)	The study suggests that policies that work to increase the social networks of women living in rural areas may effectively decrease violence.
3 Farris and Fenaughty (45) USA	Social isolation	IPV (physical, sexual)	OR = 5.17 (2.62–10.19)	People who do have contact with this disadvantaged population have an added responsibility to provide immediate support and resources Intervention cannot be aimed singularly at social isolation, as isolation is likely to be tied closely to experiences of violence and drug use.
4 Peek-Asa et al. (48) USA	Geographic isolation	IPV (physical, sexual, psychological)	OR = 1.2 (0.7–2.1)	Increased focus on access to preventive services, including Domestic Violence Intervention Programs (DVIP) resources, is critically needed.
5 Bosch and Schumm (42) USA	Social and geographic isolation (~6 miles from closest town/grocery store, 12 miles from closest mental health center, 78 miles from closest shelter services)	IPV	Previous/current abuse access to resources: $r = -0.381^{**}$ emotional non-support: $r = 0.355/0.360^{**}$ Abuse during relationship access to resources: $\beta = 0.515^{***}$ emotional support: $\beta = 0.423^{***}$ Abuse at time of interview informational support: $\beta = -0.577^{***}$ ($**p < 0.01$, $***p < 0.001$)	It is imperative that persons in the informal and formal networks take individual responsibility in holding abusers accountable for their abusive behaviors. Women should not be held totally responsible for tackling this societal issue on their own. Practitioners must work with the informal and formal networks within communities to provide information and advice, help women access resources, and hold abusers accountable.
6 Chernet and Cherie (43) Ethiopia	Geographic isolation (living rural as a predictor)	IPV (physical, sexual, emotional)	Living in rural, being poor, being divorced and being 25–39 years old are found to be significant predictors if IPV Urban area: OR = 0.66 (0.5353–0.8127)	Improving economic status of household and awareness creation for rural residents can be effective strategies to reduce IPV.
7 Seedhom (50) Egypt	Lacking social support; being separated/ widow/ divorced	IPV (physical, sexual, emotional)	Lifetime prevalence of IPV lower for women with social support: 18.4 vs. 16.6% ($p < 0.002$) <i>logistic regression (social support as predictor):</i> physical and social violence: $\beta = 1.63$, OR = 7.8 (3.12–14.60) emotional violence: $\beta = 1.12$, OR = 9.6 (4.20–20.40)	-

(Continued)

TABLE 3 | Continued

Study id/country	Type of isolation	Type of IPV	Effect measures	Recommendations by authors
8 Plazaola-Castaño et al. (49) Spain	Lack of social support	IPV (physical, psychological and sexual)	Social support and abuse: OR = 0.11 (0.05–0.20) Social support and recurring abuse: OR = 0.14 (0.05–0.37)	Interventions should aim at re-establishing social networks of women experiencing abuse.
9 Coohy (44) USA (Iowa)	Lack of social networks and received support (family and friends)	Domestic violence	Association between being severely assaulted and social network/ support characteristics: Size of friendship network: $r = -0.17^*$ Number of contacts with friends: $r = -0.17^*$ Number of long-term friends: $r = -0.23^*$ Number of friends who really listened: $r = -0.22^*$ ($p < 0.05$)	As battered women were more likely to seek out support from family and friends than from professional helpers after a battering incident, interventions that include members of a woman's social network might be effective in keeping them and their children safe.
10 Yanikkerem et al. (51) Turkey	Geographic isolation (rural area)	Domestic violence against pregnant women	Women who lived rural area had experienced violence more than women who lived in urban areas ($p < 0.05$) Higher numbers of violence in women seeking prenatal clinics (139.3 vs. 199.8, $p = 0.000$)	–
11 Levendosky et al. (47) USA (Michigan)	Lack of social support (structural support, e.g., total number of supporters; functional support, e.g., emotional)	Domestic violence	Isolation assessed by measuring quality of support: correlation of average severity of violence and practical/emotional/ critical support: 0.08/0.00/–0.13 (not significant)	–

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

applicability of our conclusions regarding the ongoing COVID-19 pandemic could be limited. However, as we already argued in the beginning, the ongoing pandemic represents a novel situation, it was therefore inevitable for us to consider pre-lockdown contexts as an approach to draw conclusions.

We found isolation, both social and geographical, was associated with IPV. Indicators of social isolation varied across studies. While two studies assessed social isolation directly (45, 46), there was a variety of approaches assessing social isolation indirectly among the other studies. Those approaches included assessing lack of social support (49, 50), lack of emotional or informational support (42), lack of practical, emotional, and critical support (47), number of friends or frequency of contacts (44), as well as membership in social networks and levels of social interaction (15). Having one of those indicators alone does not necessarily indicate being socially isolated, but when combined with other factors, such as unemployment, poverty, or drug use, they may provide an adequate indicator of social isolation (34). These findings are consistent with most recent studies which suggest that increasing feelings of isolation during the COVID-19 lockdown measures may cause abuse of alcohol, drugs, as well as increased anger and aggression, which may also lead to violence toward the self or others (52), such as one's intimate partner (53). Combined with isolation, experiencing economic problems caused by an ongoing lockdown can significantly contribute to the increase of stress in an already strenuous relationship, precipitating IPV episodes (54). Indeed, initial studies and reports indicate changes in the prevalence of IPV and the extent of injuries. For instance, latest figures imply either a decline or an increase in IPV cases in various countries. However, where there has been a reported decrease, it was in stark contrast to the severity of the injuries that have been presented (55). Thus, the current research evidence remains inconclusive, since there are few representative surveys and figures available. In any case, IPV interventions and the care of affected individuals and their children must be guaranteed even in times of an ongoing pandemic, where urgent adaptation of intervention and protection measures of IPV to these special conditions, as well as the timely announcement of corresponding help offers are of central importance.

Implications for the Ongoing COVID-19 Pandemic

Many of the included studies have emphasized social support through the recommendations that they made in order to enhance the interventions and prevention of IPV in the context of isolation. Of these studies, some have expressed living in rural areas (i.e., being geographically isolated) could correlate with social isolation, which in turn could increase the risk of IPV victimization (15, 42). Such isolation could be very similar to our context of the COVID-19 pandemic, where physical entrapment of potential victims is seen due to the enforced quarantine and physical and social distancing rules. Furthermore, this remoteness or entrapment with emergency resources being limited, such as the closure of women's shelters and ambulatory and community referral sites during the pandemic, could render

victims more vulnerable to IPV (56, 57). Even without isolation, access to information and support could be a difficult task for women in violent relationships. In times where personal freedom is restrained even more, digital means of communication such as m-health, social media, or telemedicine could play an important role in reducing the sense of isolation and entrapment the victims may suffer, and could facilitate better access to key workers (e.g., helplines, legal aid) and foster better support (11). The generalizability of how isolation and IPV are associated is limited due to the heterogeneous characteristics of the included study populations, like the fact that some studies were conducted in low and middle income countries such as Ethiopia (43), while others were conducted in high-income countries like Sweden (46). Some studies included very specific populations such as female drug users (45), women who attended for elective abortion (48), pregnant women (47, 51), and migrant women (46). Nevertheless, our results shed light on the possible increased likelihood for these populations to experience IPV under the COVID-19 pandemic circumstances. Therefore, the recommendations of those studies, such as improving access to social networks outside the victims' own group, improving their economic circumstances, asserting the responsibility for those in contact with the victims, and increasing the focus on access to preventive services and programs need to be taken into account. It is also very important for the governments around the globe to develop innovative strategies in order to ensure access to all the relevant information and the infrastructure in place, along with the required services, during this crisis situation. This is especially important for those being at most danger (i.e., women, children, elderly) (58). Moreover, the cross-sectional design of some of the included studies does not allow us to determine whether IPV consequently leads to isolation, especially social isolation, or whether isolation rather serves as cause of IPV. Nevertheless, findings in our review show that isolation is strongly associated with an increased risk of IPV. This could be applied to the context of this rapid review since isolation could be seen as a consequence of the physical and social distancing, as well as quarantine during this pandemic.

Limitations

We conducted a rapid review due to the urgency of the topic and its implications for the ongoing COVID-19 pandemic. As a result, time constraints asked for an abbreviation of certain methodological steps of the review process. Since neither dual titles-abstract nor dual full-text screening were performed, relevant studies might have been missed and a certain selection bias might have been introduced. Only published studies with language restriction (i.e., English, German, and Spanish) were used, this could mean that some eligible studies may be missed, resulting in a selection bias. Upon our risk of bias assessment, seven studies were found to be of high risk. This could influence the quality of the rapid review in general, causing mainly reporting bias. Nevertheless, the present rapid review contains clear eligibility criteria. Our procedures, which were based on the guidance and training materials produced by Cochrane for rapid reviews make us assume that the overall conclusion was not affected by those limitations.

CONCLUSIONS AND IMPLICATIONS FOR FUTURE RESEARCH

In this review, we aimed at identifying possible associations between social and geographical isolation and IPV to assess their potential impact during the ongoing COVID-19 pandemic. Overall, our narrative synthesis of the pre-pandemic data emphasized that isolation could be associated with experiencing IPV in the context of the current pandemic. Associated factors like limited access to formal and informal services as well as disruptions of social networks has affected millions of people during the pandemic due to quarantine, and physical and social distancing measures. Therefore, isolation circumstances should be seriously considered as an important factor regarding recommendations made by the individual studies for interventions and prevention of IPV. Policies need to make sure that alternative help services (e.g., messenger services, telemedicine) are accessible and dependable by victims of IPV who are affected by isolation with particular attention to reaching survivors safely while perpetrators are present and in ways that cannot be detected or traced. In addition, increasing awareness for IPV is essential so that people working in the informal or formal sector as well as family and friends in the immediate social network of IPV victims are sensitized to signs of violence.

Additionally, help systems in the countries included in the review differ widely. Therefore, conclusions of this review have to be adopted to fit the particular help systems, infrastructure, and legislation. Measures such as pharmacies establishing code words for victims to get help were established in Belgium, France, Spain, the Netherlands, and Germany. For example, in Germany, the national coalition of pharmacist organizations (Bundesvereinigung Deutscher Apothekerverbände e.V.), the national coalition of women's counseling services (Bundesverband Frauenberatungsstellen und Frauennotrufe [bff]), and the national helpline against violence against women (Hilfetelefon Gewalt gegen Frauen) started a national campaign. Nineteen thousand pharmacies are providing information about the national helpline since pharmacies belong to the very few places where women can access low threshold information regarding health and well-being during the pandemic. This campaign raises awareness for the possibility of 24/7 free and anonymous counseling. The national helpline is of key importance. It is free, available at all times, and it offers

counseling for female victims, translation, information, and redirection to a local counseling service and/or shelter. While face-to-face counseling and admission to shelters has proven problematic during the pandemic, the website and phone service remain of vital importance and safe options during isolation. Also, the Fed, the Ministry for Family Affairs, Senior Citizen, Women and Youth in Germany started a cooperation with supermarkets, displaying information regarding help hotlines or services on posters and the back of receipts. To establish more conclusive evidence, a systematic review with meta-analysis is currently being performed by one of this study's co-authors (J. L².)

DATA AVAILABILITY STATEMENT

The original contributions generated for this study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

AUTHOR CONTRIBUTIONS

AM, SG-N, SB, and HH designed and conceptualized the present study. AM, SB, and HH conducted manuscript screening and data extraction. AM wrote the first draft of the manuscript. SG-N supervised data extraction and drafting of the manuscript. AM, SB, HH, BG, CH, JL, and SG-N contributed to the analysis and interpretation. AM, HH, and SG-N contributed to the manuscript revision. All authors read and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsy.2021.578150/full#supplementary-material>

²https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020186517.

REFERENCES

1. World Health Organization (WHO). *COVID-19 and Violence Against Women - What the Health Sector/System Can Do*. (2020). Available online at: <https://www.who.int/reproductivehealth/publications/emergencies/COVID-19-VAW-full-text.pdf?ua=1> (accessed May, 2020).
2. Nussbaumer-Streit B, Mayr V, Dobrescu AI, Chapman A, Persad E, Klerings I, et al. Quarantine alone or in combination with other public health measures to control COVID-19 : a rapid review. *Cochrane Database Syst Rev*. (2020) 4:CD013574. doi: 10.1002/14651858.CD013574
3. Lau H, Khosrawipour V, Kocbach P, Mikolajczyk A, Schubert J, Bania J, et al. The positive impact of lockdown in Wuhan on containing the COVID-19 outbreak in China. *J Travel Med*. (2020) 27:taaa037. doi: 10.1093/jtm/taaa037
4. Ammar A, Mueller P, Trabelsi K, Chtourou H, Boukhris O, Masmoudi L, et al. Psychological consequences of COVID-19 home confinement: the ECLB-COVID19 multicenter study. *PLoS ONE*. (2020) 15:e0240204. doi: 10.1371/journal.pone.0240204
5. Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. (2020) 10227:912–20. doi: 10.1016/S0140-6736(20)30460-8

6. Ammar A, Chtourou H, Boukhris O, Trabelsi K, Masmoudi L, Brach M, et al. Covid-19 home confinement negatively impacts social participation and life satisfaction: a worldwide multicenter study. *Int J Environ Res Public Health*. (2020) 17:1–17. doi: 10.3390/ijerph17176237
7. United Nations Population Funds [UNFPA]. *Millions More Cases of Violence, Child Marriage, Female Genital Mutilation, Unintended Pregnancy Expected Due to the COVID-19 Pandemic*. (2020). Available online at: <https://www.unfpa.org/news/millions-more-cases-violence-child-marriage-female-genital-mutilation-unintended-pregnancies> (accessed March 2021).
8. Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: strengthening community collaborations to save lives. *Forensic Sci Int*. (2020) 2:1–3. doi: 10.1016/j.fsisr.2020.100089
9. Fraser E. *Impact of COVID-19 Pandemic on Violence Against Women and Girls*. (2020). Available online at: <https://www.dmfeforpeace.org/peaceexchange/wp-content/uploads/2020/04/vawg-helpdesk-284-covid-19-and-vawg.pdf> (accessed March 2021).
10. Wanqing Z. *Domestic Violence Cases Surge During COVID-19 Epidemic*. (2020). Available online at: <http://www.sixthtone.com/news/1005253/domestic-violence-cases-surge-during-covid-19-epidemic#> (accessed May 2020).
11. WHO. *Addressing Violence Against Children, Women and Older People During the COVID-19 Pandemic: Key Actions*. (2020). Available online at: https://www.who.int/publications/i/item/WHO-2019-nCoV-Violence_actions-2020.1 (accessed March 2021).
12. van Gelder N, Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, et al. COVID-19: Reducing the risk of infection might increase the risk of intimate partner violence. *EclinicalMedicine*. (2020) 21:100348. doi: 10.1016/j.eclinm.2020.100348
13. Mojahed A, Alaidarous N, Kopp M, Pogarell A, Thiel F, Garthus-Niegel S. Prevalence of intimate partner violence among intimate partners during the perinatal period: a narrative literature review. *Front Psychiatry*. (2021) 12:61. doi: 10.3389/fpsy.2021.601236
14. Devries KM, Mak JYT, Garcia-Moreno C, Petzold M, Child JC, Falder G, et al. The global prevalence of intimate partner violence against women. *Science*. (2013) 340:1527–8. doi: 10.1126/science.1240937
15. Lanier C, Maume MO. Intimate partner violence and social isolation across the rural/urban divide. *Violence Against Women*. (2009) 15:1311–30. doi: 10.1177/1077801209346711
16. Wilson WJ. *The Truly Disadvantaged: The Inner City, the Underclass, Public Policy*. Chicago: University of Chicago Press (1987).
17. National Institute for Health Research (NHS). *Interventions for Loneliness and Social Isolation*. Center for Reviews and Dissemination University of York (2014). Available online at: <https://www.york.ac.uk/media/crd/Loneliness%20and%20social%20isolation.pdf> (accessed May 2020).
18. Denham AC, Frasier PY, Hooten EG, Belton L, Newton W, Gonzalez P, et al. Intimate partner violence among Latinas in Eastern North Carolina. *Violence Against Women*. (2007) 13:123–40. doi: 10.1177/1077801206296983
19. Glass N, Perrin N, Campbell J, Soeken K. The protective role of tangible support on post-traumatic stress disorder symptoms in urban women survivors of violence. *Res Nurs Health*. (2007) 30:558–68. doi: 10.1002/nur.20207
20. Dias NG, Costa D, Soares J, Hatzidimitriadou E, Ioannidi-Kapoulou E, Lindert J, et al. Social support and the intimate partner violence victimization among adults from six European countries. *Fam Pract*. (2018) 36:117–24. doi: 10.1093/fampra/cmy042
21. Sanz-Barbero B, Barón N, Vives-Cases C. Prevalence, associated factors and health impact of intimate partner violence against women in different life stages. *PLoS ONE*. (2019) 14: e0221049. doi: 10.1371/journal.pone.0221049
22. Mojahed A, Alaidarous N, Shabta H, Hegewald J, Garthus-Niegel S. Intimate partner violence against women in the Arab countries: a systematic review of risk factors. *Trauma Violence Abuse*. (2020) 1524838020953099. doi: 10.1177/1524838020953099. [Epub ahead of print].
23. Wright EM. The relationship between social support and intimate partner violence in neighborhood context. *Crime Delinq*. (2012) 61:1333–59. doi: 10.1177/0011128712466890
24. Pogarell A, Garthus-Niegel S, Mojahed A, van Verschuer C, Rokyta U, Kummer W, et al. Community case study on trauma-specific treatment and counseling for refugee women exposed to intimate partner violence. *Front Psychiatry*. (2019) 10:891. doi: 10.3389/fpsy.2019.00891
25. Lee MR, Maume MO, Ousey G. Social isolation and lethal violence across the metro/nonmetro divide: the effects of socioeconomic disadvantage and poverty concentration on homicide. *Rural Sociol*. (2003) 68:107–31. doi: 10.1111/j.1549-0831.2003.tb00131.x
26. Tittman SM, Harteau C, Beyer KMM. The effects of geographic isolation and social support on the health of Wisconsin women. *Wis Med J*. (2016) 115:65–70.
27. Riddell T, Ford-Gilboe M, Leipert B. Strategies used by rural women to stop, avoid, or escape from intimate partner violence. *Health Care Women Int*. (2009) 30:134–59. doi: 10.1080/07399330802523774
28. Armbruster S, Klotzbücher V. *Lost in Lockdown? COVID-19, Social Distancing, and Mental Health in German*. (Albert-Ludwigs-Universität Freiburg, Wilfried-Guth-Stiftungsprofessur für Ordnungs- und Wettbewerbspolitik, Freiburg i. Br., Working Paper No. 2020–04) Freiburg. (2020).
29. Leslie E, Wilson R. *Sheltering in place and domestic violence: evidence from calls for service during COVID-19*. (May 14, 2020). Available online at: <https://ssrn.com/abstract=3600646> (accessed June, 2020). doi: 10.2139/ssrn.3600646
30. Peterman A, Potts A, O'Donnell M, Thompson K, Shah N, Oertelt-Prigione S, et al. *Pandemics and Violence Against Women and Children*. (CGD Working Paper No. 528) Chapel Hill, NC. (2020).
31. Chandan JS, Taylor J, Bradbury-Jones C, Nirantharakumar K, Kane E, Bandyopadhyay S. COVID-19: a public health approach to manage domestic. *Lancet Public Health*. (2020) 5:e309. doi: 10.1016/S2468-2667(20)30112-2
32. Avdibegovic E, Brkic M, Sinanovic O. Emotional profile of women victims of domestic violence. *Mater Sociomed*. (2017) 29:109–13. doi: 10.5455/msm.2017.29.109-113
33. Robinson AL, Myhill A, Wire J. Practitioner (mis) understandings of coercive control in England and Wales. *Crim Crim Justice*. (2019) 18:29–49. doi: 10.1177/1748895817728381
34. James SE, Johnson J, Raghavan C. "I couldn't go anywhere": Contextualizing violence and drug abuse: a social network study. *Violence Against Women*. (2004) 10:991–1014. doi: 10.1177/1077801204267377
35. Seidler A, Nußbaumer-Streit B, Apfelbacher C, Zeeb H, für die Querschnitts-AG Rapid Reviews des Kompetenznetzes Public Health zu, COVID-19. Rapid Reviews in Zeiten von COVID-19 – Erfahrungen im Zuge des Kompetenznetzes Public Health zu COVID-19 und Vorschlag eines standardisierten Vorgehens [Rapid Reviews in the Time of COVID-19 - Experiences of the Competence Network Public Health COVID-19 and Proposal for a Standardized Procedure]. *Gesundheitswesen (Bundesverband der Ärzte des Öffentlichen Gesundheitsdienstes (Germany))*. (2021) 83:173–9. doi: 10.1055/a-1380-0926
36. Tricco AC, Langlois EV, Straus SE. *Rapid Reviews to Strengthen Health Policy and Systems: A Practical Guide*. Geneva: World Health Organization (2017).
37. Garrity C, Gartlehner G, Kamel C, King VJ, Nussbaumer-Streit B, Stevens A, et al. *Cochrane Rapid Reviews. Interim Guidance from the Cochrane Rapid Reviews Methods Group Austria*. (2020).
38. Ouzzani M, Hammady H, Fedorowicz Z, Elmagarmid A. Rayyan - A web and mobile app for systematic reviews. *Syst Rev*. (2016) 5:210. doi: 10.1186/s13643-016-0384-4
39. Romero Starke K, Petereit-Haack G, Schubert M, Kämpf D, Schliebner A, Hegewald J, et al. The age-related risk of severe outcomes due to COVID-19 infection: a rapid review, meta-analysis, and meta-regression. *Int J Environ Res Public Health*. (2020) 17:5974. doi: 10.3390/ijerph17165974
40. Scottish Intercollegiate Guidelines Network. (SIGN). *Methodology Checklist 3: Cohort Studies*. Available online at: <http://www.sign.ac.uk> (accessed March 3, 2021).
41. Critical Appraisal Skills Programme. *CASP Cohort Study Checklist*. Available online at: <https://casp-uk.net/casp-tools-checklists/> (accessed March 3, 2021).
42. Bosch K, Schumm WR. Accessibility to resources: helping rural women in abusive partner relationships become free from abuse. *J Sex Marital Ther*. (2004) 30:357–70. doi: 10.1080/00926230490465118

43. Chernet AG, Cherie KT. Prevalence of intimate partner violence against women and associated factors in Ethiopia. *BMC Womens Health*. (2020) 20:1–7. doi: 10.1186/s12905-020-0892-1
44. Coohy C. The relationship between mothers' social networks and severe domestic violence: a test of the social isolation hypothesis. *Violence Victims*. (2007) 22:503–12. doi: 10.1891/088667007781554008
45. Farris CA, Fenaughty AM. Social isolation and domestic violence among female drug users. *Am J Drug Alcohol Abuse*. (2002) 28:339–51. doi: 10.1081/ADA-120002977
46. Fernbrant C, Emmelin M, Essén B, Östergren PO, Cantor-Graae E. Intimate partner violence and poor mental health among Thai women residing in Sweden. *Glob Health Action*. (2014) 7:24991. doi: 10.3402/gha.v7.24991
47. Levendosky AA, Bogat GA, Theran SA, Trotter JS, von Eye A, Davidson WS. The social networks of women experiencing domestic violence. *Am J Community Psychol*. (2004) 34:95–109. doi: 10.1023/B:AJCP.0000040149.58847.10
48. Peek-Asa C, Wallis A, Harland K, Beyer K, Dickey P, Saftlas A. Rural disparity in domestic violence prevalence and access to resources. *J Womens Health*. (2011) 20:1743–9. doi: 10.1089/jwh.2011.2891
49. Plazaola-Castaño J, Ruiz-Pérez I, Montero-Piñar MI. Apoyo social como factor protector frente a la violencia contra la mujer en la pareja. *Gac Sanit*. (2008) 22:527–33. doi: 10.1016/S0213-9111(08)75350-0
50. Seedhom AE. Sociodemographic associations of intimate partner violence against women in a rural area, El-Minia governorate, Egypt, 2010. *J Public Health Policy*. (2012) 20:81–8. doi: 10.1007/s10389-011-0431-5
51. Yanikkerem E, Karadaş G, Adıgüzel B, Sevil Ü. Domestic violence during pregnancy in Turkey and responsibility of prenatal healthcare providers. *Am J Perinatol*. (2006) 23:93–103. doi: 10.1055/s-2006-931802
52. Jung S, Kneer J, Krüger T. Mental health, sense of coherence, and interpersonal violence during the COVID-19 pandemic lockdown in Germany. *J Clin Med*. (2020) 9:3708. doi: 10.3390/jcm9113708
53. 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. doi: 10.1016/j.ijlp.2020.101606
54. Women's Aid UK. *The Impact of COVID-19 on Women and Children Experiencing Domestic Abuse, and the Life-Saving Services That Support Them*. Available online at: <https://www.womensaid.org.uk/the-impact-of-covid-19-on-women-and-children-experiencing-domestic-abuse-and-the-life-saving-services-that-support-them/> (accessed May 2020).
55. 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:E38–45. doi: 10.1148/radiol.2020202866
56. Websdale N. *Rural Woman Battering and the Justice System: An Ethnography*. Thousand Oaks, CA: Sage (2002).
57. DeKeseredy WS, Joseph C. Separation and/or divorce sexual assault in rural Ohio: preliminary results of an exploratory study. *Violence Against Women*. (2006) 12:301–11. doi: 10.1177/1077801205277357
58. Singh M. Domestic harassment of women and children during COVID-19. *Eur J Mol Clin Med*. (2020) 7:754–61.

Conflict of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Anlage 4

Erklärung zu Eigenanteilen den Publikationen

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Anlage 5

Einverständnis der Verlage für die Verwendung der Veröffentlichungen im Rahmen der Dissertation

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