

Effect of intimate partner violence on breast feeding practices: A systematic review

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Abstract

Objective: The objective of the study was to determine the correlation between breastfeeding practices and intimate partner violence (IPV).

Methods: A comprehensive literature search was performed in Google Scholar, Cochrane Database of Systematic Reviews, and PubMed, focusing on articles published in English from 2000 to 2023. The review included original cohort and cross-sectional studies that assessed the impact of IPV (sexual, emotional, and/or physical) on breastfeeding practices. The quality of the included articles was evaluated using the Newcastle–Ottawa Scale.

Results: The review incorporated 22 original articles (16 cohort and 6 cross-sectional) from various countries. Different forms of IPV, including physical, emotional, and sexual violence, were examined. Out of these studies, 19 reported a negative impact of IPV on breastfeeding practices, including delayed breastfeeding initiation, early cessation, lower intention to exclusively breastfeed, and shorter breastfeeding duration among mothers who experienced IPV. The quality assessment revealed that only two of the six cross-sectional studies were of fair quality, while the rest were good to fair. For cohort studies, only five were satisfactory, with overall quality ranging from fair to poor. Most studies indicated that IPV, at any stage and in any form, was associated with unfavorable breastfeeding outcomes. This was particularly evident in low- and

middle-income countries such as Kenya, Zimbabwe, Nepal, India, Nigeria, and Bangladesh. Determinants like maternal education, age, delivery mode, and employment also influenced breastfeeding initiation.

Conclusion: The review concluded that IPV exposure is significantly related to poor breastfeeding practices. It highlighted the need for individual study meta-analyses to quantify the correlation between IPV and breastfeeding practices. Additionally, it called for more high-quality longitudinal studies that control for potential confounders to better understand this relationship.

Keywords: Breastfeeding, exclusive breastfeeding, domestic violence, intimate partner violence, spousal abuse

Introduction

Intimate partner violence (IPV) refers to aggression or abuse by dating partners and current and former spouses in an intimate relationship (1). IPV can be classified into different types, namely verbal, physical, economic, sexual, and emotional. The World Health Organization (WHO) defines IPV as a behavior that leads to sexual, psychological, or physical harm to the people in an intimate relationship (2). The National Intimate Partner and Sexual Violence Survey data suggest that 26% of men and 41% of women have experiences of sexual violence, stalking, and/or physical violence by their partner or spouse during their lifetime. In addition, psychological aggression by an intimate partner has been reported by more than 53 million men and 61 million women in their lifetime (3). Frequently, men are the perpetrators of IPV (4). The WHO advises that sexual or physical violence is experienced by one in three women from their intimate partner in their lifetime (2).

IPV has severe consequences. IPV is related to higher rates of substance usage, particularly tobacco use, among victims. Survivors of IPV are more prone to suffer from post-traumatic stress disorder (PTSD), depression, anxiety, and suicidal tendency (5). Women who have experienced intimate partner abuse are more likely to report sexually transmitted infections, such as those caused by human immunodeficiency virus, and unwanted pregnancies. In addition, IPV-related injuries commonly include fractures, lacerations, strangulations, and traumatic brain injuries (5).

Researchers have established a correlation between IPV and poor outcomes in reproductive health, including low birth weight, preterm birth, miscarriage, inadequate weight gain, induced abortion, and poor attachment to the child (6,7). According to the WHO, mothers should initiate breastfeeding within 1 hour of child birth and should continue until 2 years or more, along with complementary breastfeeding (8). However, IPV affects the initiation of breastfeeding practices as well. It may influence breastfeeding both directly and indirectly. Besides leading to body negativity, anxiety, and depression, IPV may pose challenges in relaxing for a let-down of breast milk and sore nipples, all of which affect breastfeeding (9). Existing literature states that childhood experiences of violence prevents women from differentiating the maternal and sexual roles of their breasts, thus making it difficult to continue exclusive breastfeeding (10,11).

Despite reports on the link between IPV and breastfeeding, the factors that mediate this association have not yet been clearly identified. In addition, studies on the correlation between breastfeeding practices and IPV have generated contradictory results. According to a systematic review of 12 studies, most studies have reported on an adverse correlation between breastfeeding initiation and exclusive breastfeeding for the initial 6 months. However, the researchers have not discussed the role of potential confounders (12). Another study in Africa suggested that IPV is correlated with lower adjusted odds for

breastfeeding initiation and exclusive breastfeeding, compared with higher odds in other countries (13). Because of the debatable findings, we aimed to conduct a thorough systematic review to determine the correlation of IPV exposure before, during, and after pregnancy with breastfeeding practices, considering the confounders.

Methods

We performed this systematic review based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (14).

We searched the Cochrane Database of Systematic Reviews, Google Scholar, and PubMed databases for articles published from 2000 to 2023. Articles published only in English language were considered for inclusion. The search terms consisted of "IPV" OR "intimate partner violence" OR "domestic violence" OR "spouse abuse" OR "sexual abuse" OR "physical abuse" OR "sexual violence" OR "stalking" OR "psychological aggression" OR "physical violence" AND "breastfeeding" OR "breastfeeding behavior" OR "breastfeeding practice" OR "maternal health" OR "attachment theory" OR "parent-child relationship" OR "mother-child bond" OR "mother-infant relationship" OR "parental stress."

We created a PICO model (Population, Intervention, Control, and Outcomes) for our search strategy and article selection (15). We included studies that reported on women exposed to IPV by men before, during, or after pregnancy, who breastfed their infants from birth until at least 6 months; studies that reported on: women with breastfeeding counterindication, unable to breastfeed, with chronic illness and eating disorders, and with substance abuse.

We defined IPV as any form of psychological violence (humiliation, intimidation, and threats), economic violence (i.e., limiting access to education, money, employment, and health care), physical violence (i.e., hitting, slapping, beating, and kicking), sexual violence (forced sexual intercourse or coercion), and controlling behavior (i.e., separating an individual from family and friends and regulating their actions).

Breastfeeding behavior was the primary outcome, which was defined as follows: (i) exclusive breastfeeding of the child from the first day of life and up to 6 months, (ii) breastfeeding initiation and its duration, (iii) intention to breastfeed, and (iv) duration of exclusive breastfeeding. Exclusive breastfeeding was defined as providing no other food apart from breast milk to the child, without any other drink or food. We considered cross-sectional and cohort studies eligible for inclusion.

After removing duplicates, we screened the articles for their titles, abstract, and full text. Data were extracted from the selected studies into a standardized Excel file. The extracted data consisted of the authors, study design, setting, country, age, sample size, tools, exposure, and outcomes.

We used the Newcastle–Ottawa Scale (NOS) to evaluate the quality of the selected cohort studies (16). We used a modified form of the NOS to evaluate the quality of the cross-sectional studies. The NOS consists of the following parameters: comparability, exposure, selection process, and outcomes. Parameters with sufficient explanation can be given 9 stars. “Good quality” cohort studies get 1 or 2 stars in comparability, 3 or 4 stars in selection, and 2 or 3 stars in exposure/outcomes. “Fair quality” cohort studies get 1 or 2 stars in comparability, 2 stars in selection, and 2 or 3 stars in exposure/outcomes. By contrast, “poor quality” cohort studies get 0 stars in comparability, 0 or 1 star in selection, and 0 or 1 star in exposure/outcomes. Cross-sectional studies can be given 10 stars in total. 9 to 10 stars, 7 to 8 stars, 5 to 6 stars, and 0 to 4 stars indicate “very good,” “good,” “satisfactory,” and “unsatisfactory” studies.

Results

Summary of the database search and study selection
The literature search generated 72 articles. After excluding the duplicates, we selected 69 articles for reading the titles and abstracts. Next, we selected 31 articles for reading the text in full. A total of 22 articles were selected for inclusion in this systematic review. Figure 1 depicts the flow chart of the entire selection process.

Figure 1: PRISMA flow diagram for data extraction

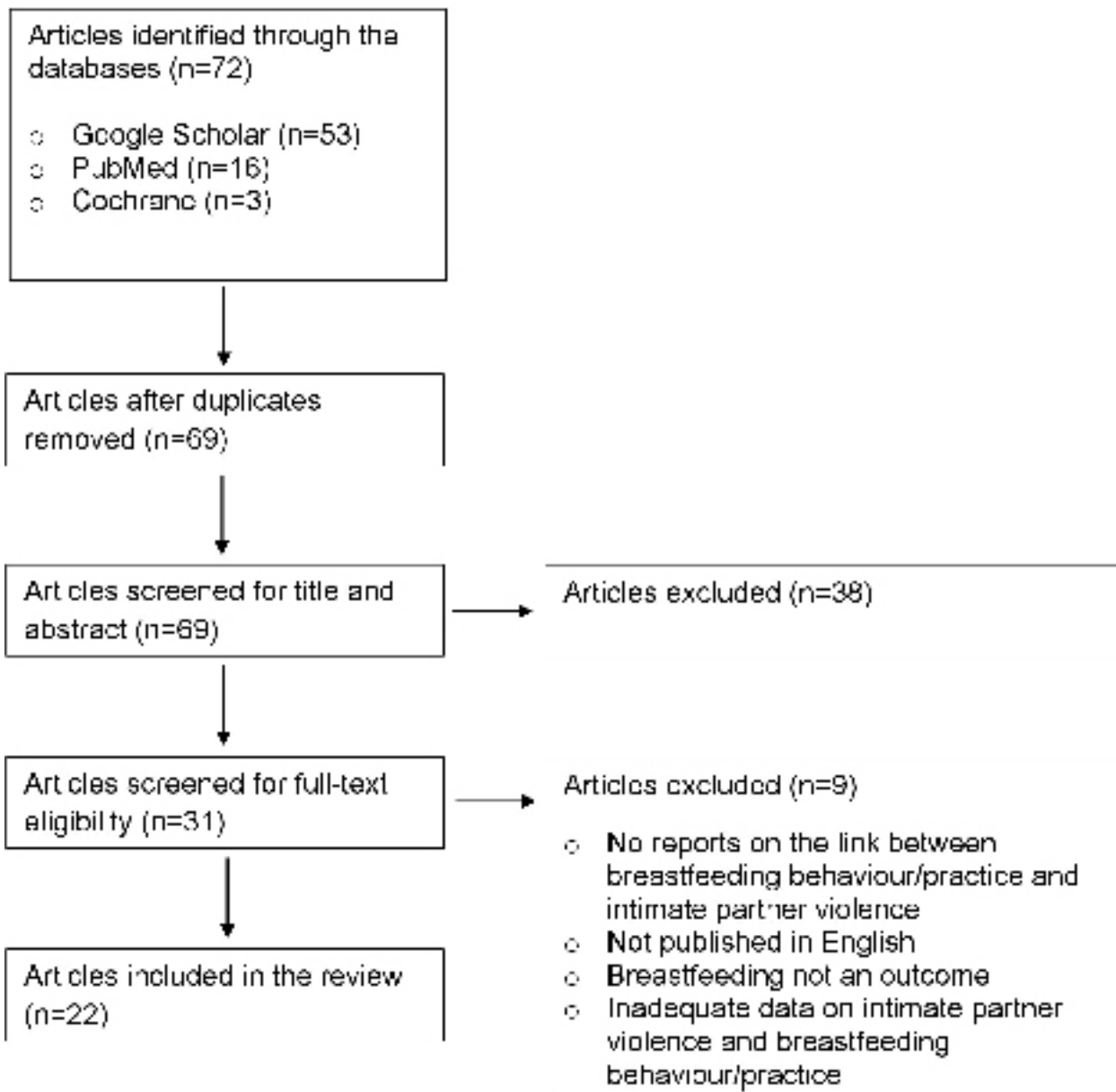


Table 1 describes the overall characteristics of the studies included in this review. Of the 22 articles, there were 6 cross-sectional and 16 cohort studies. All studies were published between 2006 and 2023. Three studies were conducted in the USA, (17-19) five in Africa, (20-24) four in Brazil, (25-28) four in India, (29-32) two in Bangladesh, (33,34) one in Sweden, (35) one in Australia, (36) one in low- and middle-income countries, (37) and one in Spain (38). The size of the study population ranged from 21 to 259,657 people. The setting consisted of public datasets, randomly selected households, antenatal clinics, survey respondents, and subdistricts. Exposure to IPV was generally measured using face-to-face interviews, (25,27,34) structured interviews, (22) telephonic interviews, (25) the Conflict Tactics Scale, (21,28) Index of Spouse Abuse, (38) Composite Abuse Scale, (36) survey questions, (24,30,32) etc. Regarding the exposure, all studies recorded IPV experiences. However, one study each specifically focused on spousal emotional violence, (31) physical IPV, (28) and IPV along with adverse, psychological factors, and childhood experiences (18). The outcome of breastfeeding was measured in the form of breastfeeding duration, exclusive breastfeeding, breastfeeding initiation, or its cessation.

Table 1. Summary of the included studies

Authors	Study design	Country	Setting	Sample size	Age	Tools	Exposure	Outcomes
Wallenborn et al. 2018	Cohort	USA (47 states)	Public data set	195,264	<20 to 35+ years	Pregnancy Risk Assessment Monitoring System (PRAMS)	Intimate partner violence (IPV)	Breastfeeding duration
Misch et al. 2013	Cohort	8 African countries	Randomly selected households	4,822	15–49 years	Demographic and Health Surveys (DHS)	IPV	Breastfeeding initiation and exclusive breastfeeding
Miller-Graff et al. 2018	Cohort	USA	Low-income women accessing WIC services	101	18-39 years	PRAMS	IPV and adverse, psychological factors, and childhood experiences	Prenatal breastfeeding education, pregnancy health problems, preterm labor, and breastfeeding
Silverman et al. 2006	Cohort	USA	26 states	118,579	<20 to >30 years	PRAMS	IPV	Not breastfeeding, early cessation of breastfeeding
Caleyachetty et al. 2019	Cohort	51 low- and middle-income countries	Randomly chosen woman per household	108,427 for the early initiation of breastfeeding analysis and 115,245 for the exclusive breastfeeding analysis	15 to 49 years	DHS	IPV	Early initiation of breastfeeding analysis and exclusive breastfeeding analysis
Leite et al. 2023	Cohort	Birth in Brazil study	Hospital-based	20,527	12 to ≥35 years	Face-to-face interviews and 2 follow-up telephone interviews	IPV	Breastfeeding at the maternity and breastfeeding 43–180 days after birth
Finnbogadóttir et al. 2017	Cross-sectional	Sweden	Antenatal clinic	731	18 to 48 years	NorVold Abuse Questionnaire	IPV	Breastfeeding

Table 1. Summary of the included studies (continued)

Islam et al. 2023	Cross-sectional	Bangladesh	2 Sub-Districts	426	15 to 49 years	Coded questions and modified version of a domestic violence questionnaire	IPV	Early initiation of breastfeeding
Tran et al. 2020	Cross-sectional	Bangladesh	4 districts	2,000	13 to 44 years	Face-to-face interviews	IPV	Maternal common mental disorders, breastfeeding practices
Walters et al. 2021	Cross-sectional	Malawi, Tanzania, and Zambia	Random sampling of DHS respondents	8,941	15 to 49 years	Revised Conflict Tactics Scale	IPV	Early initiation of breastfeeding (within 1 hour of birth), exclusive breastfeeding (in previous 24h), and continued breastfeeding
Kjerulff Madsen et al. 2019	Cohort	Tanzania	Antenatal care in Pasua and Majengo Health Clinics in Moshi	1,128	<20 to >30 years	Structured interviews	IPV	Premature termination of exclusive breastfeeding
Metheny et al. 2020	Cohort	India	INFHS respondents	259,657	15 to 35+ years	Interviews	IPV	Infant feeding behavior for children aged less than 6 months and those aged from 7 to 12 months
Olubodun et al. 2023	Cohort	Nigeria	Nigeria Demographic and Health Survey respondents	3,749	15 to 49 years	Coded responses	IPV	Optimal breastfeeding for age
Baraldi et al. 2022	Cross-sectional	Brazil	Maternity hospital in Ribeirao Preto	21	17 to 36 years	Open interview	IPV	Experience of exclusive breastfeeding

Table 1. Summary of the included studies (continued)

Martin et al. 2019	Cohort	Spain	Maternities in 15 public hospitals	779	<20 to ≥40 years	Index of Spouse Abuse and one-to-one interviews	IPV	Breastfeeding avoidance
Hasselmann et al. 2016	Cohort	Brazil	4 primary health clinics in Rio de Janeiro	564 children	30 to 60 days	Conflict Tactics Scales and face-to-face interviews with the mothers	IPV	Interruption of exclusive breastfeeding
Ariyo et al. 2021	Cohort	Nigeria	Nigeria Demographic and Health Survey respondents	2,668	Mean 28 years	Survey questions	Psychological, physical, and sexual IPV	EBF or mixed-feeding
Roginiel, 2013	Cohort	India, Nepal, and Timor-Leste	DHS and violence module respondents	15,848	15 to 49 years	Survey questions	IPV	Breastfeeding
Zureick-Brown et al. 2015	Cohort	India	2005–2006 National Family Health Survey	3,552 mother–infant dyads	>15 years	Survey questions	Any IPV and physical or sexual IPV	Exclusive breastfeeding, bottle feeding, or semi-solid foods
James et al. 2014	Cohort	Australia	MOVE trial	2,621	15 to 35+ years	Composite Abuse Scale and Survey questions	IPV disclosure	Breastfeeding outcomes
Mezzavilla et al. 2021	Cross-sectional	Brazil	4 primary care facilities of Rio de Janeiro	217	<20 to ≥35 years	Portuguese version of CTS-1 and a closed-ended question instrument	Physical IPV	Breastfeeding practices
Tiwari et al. 2018	Cohort	India	Third Indian National Family Health Survey respondents	60,350	15 to 49 years	Modified version of the revised CTS-2	Spousal emotional violence	Reproductive outcomes, breastfeeding, unwanted pregnancies, and utilization of antenatal care and skilled delivery care for last delivery

Summary of quality assessment

Of the 16 cross-sectional studies, 5 studies were assessed as “satisfactory”(18,22,25,27,37) and 11 studies were judged as “unsatisfactory” (Table 2) (17,19,20,23,24,29-32,36,38). Of the six cohort studies, four studies were assessed as “good quality” (21,33-35) and two studies were judged as “fair quality” (Table 3) (26,28).

Table 2. Newcastle-Ottawa Scale: Quality assessment tool for cross sectional studies.

Authors	Selection				Comparability	Outcome assessment (max**)	Statistics	Score	Quality
	Representativeness of the sample	Sample size justified	Non-respondents	Ascertainment of exposure (max**)					
Finnbogadóttir et al. 2017	•	•		••		•	6	Good	
Islam et al. 2023	•	•	•	•		••	7	Good	
Tran et al. 2020	•	•	•	••		•	7	Good	
Walters et al. 2021	•	•	•	•		•	6	Good	
Baraldi et al. 2022	•		•	•		•	4	Fair	
Mezzavilla et al. 2021	•		•	•			3	Fair	

Table 3. Newcastle-Ottawa Scale: Quality assessment tool for cohort studies

Authors	Selection				Comparability			Outcome		Score	Quality
	Representativeness of the cohort	Selection of the non-exposed cohort	Ascertainment of exposure	Demonstration that outcome of interest was not present at start of study	Comparability of cohorts on the basis of the design or analysis controlled for confounders	Assessment of outcome	Was follow-up long enough for outcomes to occur	Adequacy of follow-up of cohorts	Total		
Wallenborn et al. 2018	*		*		*	*			4	4	Unsatisfactory
Misch et al. 2013	*		*		*	*			4	4	Unsatisfactory
Miller-Graff et al. 2018	*		*		*	*	*	*	6	6	Satisfactory
Silverman et al. 2006	*		*						2	2	Unsatisfactory
Caleyachetty et al. 2019	*		*		*	*	*	*	6	6	Satisfactory
Leite et al. 2023	*		*			*	*	*	5	5	Satisfactory
Kjerulff Madsen et al. 2019	*		*			*	*	*	5	5	Satisfactory
Mietheny et al. 2020	*		*			*	*	*	3	3	Unsatisfactory
Olubodun et al. 2023	*		*			*	*	*	3	3	Unsatisfactory
Martin et al. 2019	*		*		*	*	*	*	4	4	Unsatisfactory
Hasselmann et al. 2016	*		*		*	*	*	*	6	6	Satisfactory
Ariyo et al. 2021	*		*		*	*	*	*	4	4	Unsatisfactory

Initiation of Breastfeeding

Twelve studies reported outcomes based on the initiation of breastfeeding when exposed to IPV. In one study, a greater likelihood of initiating breastfeeding was not correlated with IPV (17). IPV has been related to a lower likelihood of breastfeeding at 6 weeks postpartum (OR=0.22) (18). Women with IPV experiences in the year before but not during pregnancy (OR 1.45, CI 1.26–1.66), during pregnancy but not in the year before (OR 1.35, CI 1.11–1.64), and IPV during both periods (OR 1.52, CI 1.34–1.72) were more likely to avoid breastfeeding (19). Mothers in Malawi commonly engaged in early breastfeeding initiation (95.6%), whereas those in Nigeria least often practiced exclusive breastfeeding (37.1 %) (20). Mothers from Kenya experiencing emotional IPV (uOR 0.60, $p=0.077$), from Zambia experiencing sexual IPV (uOR 0.44, $p=0.017$), and from Zimbabwe experiencing physical IPV (uOR 0.47, $p=0.003$) demonstrated 40% to 53 % lower odds of early breastfeeding initiation (20). Mothers exposed to sexual IPV displayed higher likelihood to delay breastfeeding in Tanzania [AOR 1.30 (1.04, 1.62), $p<0.05$], Zambia [AOR 1.28 (1.06, 1.54), $p<0.05$], and Malawi [AOR 1.55 (1.14, 2.10), $p<0.01$] (21). Obstetric violence exerted an indirect moderate impact on breastfeeding from 43 days to 180 days after child birth (25). In India, sexual IPV experiences were related to a 21% decreased likelihood of early initiation of breastfeeding (OR 0.79, 95% CI: 0.69–0.91), whereas both sexual and physical IPV experiences were related to a 49% reduction in the odds of early breastfeeding (OR 0.51, 95% CI: 0.42–0.64). Childhood witness to IPV was related to 21% higher odds of breastfeeding (OR 1.21, 95% CI: 1.02–1.43). Nepalese mothers with sexual or physical IPV experiences were 42% (OR 0.58, 95% CI: 0.37–0.92) less likely to initiate early breastfeeding than those without an IPV experience in their lifetime. Physical IPV experience was related to a 79% lesser likelihood of breastfeeding (OR 0.21, 95% CI: 0.08–0.57). Lifetime or any IPV type were insignificantly related to early breastfeeding initiation in Timor-Leste (30). Indian mothers who experienced IPV displayed a reduced likelihood to breastfeed within 1 hour of child birth than mothers who were unexposed (29% vs. 35%). Mothers exposed to physical, sexual, or any IPV displayed lower unadjusted odds of breastfeeding soon after child birth (ORs=0.79 and 0.78 respectively, $P=0.026$) and slightly higher unadjusted odds of feeding liquids in the 24 hours before the study (ORs=1.19 and 1.22, $P=0.088$) (32). Bangladeshi mothers who experienced sexual and physical IPV were 46% (AOR: 0.54, 95% CI [0.31, 0.96]) and 51% (AOR: 0.49, 95% CI [0.27, 0.87]) less likely to initiate early breastfeeding than their non-abused counterparts. Only 44.7% of mothers experiencing physical IPV initiated early breastfeeding. Similarly, 52.3% and 43.0% of mothers who experienced psychological and sexual IPV, respectively, initiated early breastfeeding (33). Similarly, Bangladeshi mothers experiencing IPV displayed a lesser likelihood to initiate breastfeeding early (OR from 0.87 to 0.95, $P<0.05$). The odds of early breastfeeding were lower among mothers who experienced emotional violence (OR: 0.66, 95% CI: 0.53, 0.82), controlling behavior (OR: 0.72, 95% CI:

0.56, 0.92), and physical, sexual, and emotional IPV (OR: 0.71, 95% CI: 0.54, 0.93) (34). By contrast, there were no statistically significant differences between Australian mothers with and without IPV experiences with regard to breastfeeding (36). In middle- and low-income countries, mothers with IPV experiences displayed a lesser likelihood to initiate breastfeeding early (AOR: 0.88 [95% CI 0.86–0.91], $p<0.001$). Similarly, maternal exposure to sexual (AOR: 0.84 [95% CI 0.80–0.88], $p=0.001$), emotional (AOR: 0.90 [95% CI 0.87–0.93], $p<0.001$), and physical (AOR: 0.90 [95% CI 0.88–0.93], $p=0.001$) violence were related to reduced initiation of early breastfeeding (37). In Spain, psychological IPV exposure augmented the odds of avoiding breastfeeding (aOR=2.0; 95% CI=1.2–3.3) (38).

Breastfeeding duration

Two studies reported on outcomes focusing on the duration of breastfeeding when exposed to IPV. Women with IPV experiences before pregnancy displayed 1.27 times higher likelihood to breastfeed for ≤ 8 weeks and 1.29 times higher likelihood to never breastfeed than women without IPV experiences. Moreover, women with IPV experiences in the 12 months during and before pregnancy displayed 1.23 times higher likelihood to never breastfeed (17). By contrast, spousal controlling behavior reported by Indian mothers was significantly associated with poor reproductive outcomes, except breastfeeding. Exposure to spousal emotional violence was not related to the odds of short breastfeeding duration (<1 month or not initiating) (31).

Breastfeeding cessation

Three studies reported outcomes based on breastfeeding cessation when exposed to IPV. Women who initiated breastfeeding and reported IPV during pregnancy displayed higher likelihood to stop breastfeeding by 4 weeks post-partum (OR 1.41–1.71). Black race (ORadj 1.27, CI 1.16–1.38), aged 20 years (ORadj 1.30, CI 1.18–1.45), unmarried (ORadj 1.42, CI 1.31–1.54), and current smoking status (ORadj 2.16, CI 1.99–2.35) affected breastfeeding cessation among such women (19). Tanzanian mothers exposed to emotional IPV displayed twice higher likelihood to discontinue breastfeeding for 1 year [AOR 2.23 (2.09, 4.57), $p<0.05$] (21). Brazilian mothers who stopped exclusive breastfeeding reported a -0.267 average obstetric violence score regardless of the delivery type. However, obstetric violence exerted a weaker effect on breastfeeding cessation among women with C-sections (C-section = -0.105) (25). In Brazil, mothers experiencing severe IPV were 30% more likely to stop early exclusive breastfeeding in month 2 of child birth regardless of the age, sex, maternal schooling, birth weight, number of household assets, and maternal age (27).

Exclusive breastfeeding

Eleven studies reported outcomes based on the duration of breastfeeding when exposed to IPV. IPV was not negatively related to breastfeeding exclusivity after controlling for the confounders (18). Mothers in Malawi commonly engaged in exclusive breastfeeding (73.4%), whereas mothers in Nigeria least practiced exclusive

breastfeeding (14.4%). Mothers from Kenya and Liberia experiencing emotional IPV (uOR 0.46–0.55, $p=0.088$) and from Kenya experiencing physical IPV (uOR 0.63, $p=0.066$) reported 37% to 54% lower odds of exclusive breastfeeding. Zambian mothers exposed to sexual IPV reported 2.49 times the adjusted odds of exclusive breastfeeding ($p=0.025$) (20). Mothers who were exposed to emotional [AOR 1.72 (1.18, 2.50), $p < 0.01$] or physical [AOR 1.82 (1.31, 2.51), $p < 0.001$] IPV were more likely not to breastfeed exclusively (21). Mothers exposed to IPV at any point displayed >50% higher odds of premature exclusive breastfeeding termination than their non-exposed counterparts. Mothers aged over 30 years displayed twice the odds of premature exclusive breastfeeding termination and more than 4 times the odds upon exposure to physical, sexual, and emotional IPV. Mothers of girls displayed more than twice the odds of premature exclusive breastfeeding termination upon exposure to at least one type of IPV (22). Exclusive breastfeeding (i.e., optimal breastfeeding) was reported by 31.7% of Nigerian mothers with children aged under 6 months and 70.4% among mothers with children aged from 6 months to 23 months. Moreover, mothers who reported two forms of IPV displayed lower odds of exclusive breastfeeding (aOR 0.79; 95% CI 0.53–1.17, $p=0.238$) (23). Nigerian women who experienced physical IPV and psychological IPV reported a 31% (AOR 0.73; 95% CI 0.53, 1.01; $p < 0.05$) and 34% (AOR 0.66; 95% CI 0.47, 0.92; $p < 0.05$) lesser likelihood of exclusive breastfeeding practice, respectively, than women who did not. Women exposed to any form of IPV reported a 26% (AOR 0.74; 95% CI 0.55, 1.00; $p < 0.05$) reduced likelihood of exclusive breastfeeding practice than their nonexposed counterparts (24). IPV during the pregnancy-puerperal cycle is a determinant that negatively impacts the practice of EBF. In Brazil, IPV resulted in a disruption in exclusive breastfeeding practice until 6 months of age of the child, besides causing early weaning because of hypogalactia. Lack of partner support, quarrels, and disharmony in the mother-child bond negatively affected exclusive breastfeeding progress (26). In Brazil, severe IPV was significantly related to interrupted breastfeeding at 3 months of age among children exclusively breastfed until 2 months of their life (27). Brazilian couples exposed to mutual physical abuse were 2,14 times more likely to not engage in breastfeeding (adjusted CI 1.06–4.31) for their child. They displayed 2.71 times and 5.15 times greater likelihood to use a baby bottle (CI 1.19–6.16) and use breast milk substitutes (CI 1.13–23.4), respectively (28). Indian mothers who experienced severe physical IPV and with children aged ≤ 6 months displayed lesser likelihood to breastfeed their child exclusively (aOR = 0.72, (95% CI: 0.52–0.99), $p=0.049$). Mothers aged from 20 years to 24 years displayed greater likelihood to breastfeed their child exclusively for 6 months before beginning complimentary feeding (aOR = 1.76, (95%CI: 1.05–2.92), $p = 0.031$). Indian mothers reporting sexual or physical IPV were less likely to breastfeed their infants exclusively 24 hours before the study than their counterparts (42% vs. 47%). Indian mothers experiencing sexual or physical IPV displayed marginally lower unadjusted odds of breastfeeding exclusively in the 24 hours before the

study (OR=0.83, $P=0.090$) (32). By contrast, women in Sweden experiencing IPV reported on greater exclusive breastfeeding practice than women without a history of abuse (35).

Discussion

This review provides evidence for the link between IPV and unfavorable breastfeeding practices, as observed in 19 of the 22 studies included in this systematic review. Of six cross-sectional studies, only two were assessed as being of fair quality; thus, their overall quality ranged from good to fair. Of 16 cohort studies, only five were assessed to be satisfactory; thus, their overall quality ranged from fair to poor. Most studies reported that exposure to any form of IPV and at any stage was negatively associated with early exclusive breastfeeding termination, breastfeeding duration, low probability to initiate breastfeeding, and breastfeeding cessation/avoidance. The initiation of breastfeeding and exclusive breastfeeding practices were the most commonly reported findings in the included studies. The association between IPV experiences and reduced likelihood to initiate breastfeeding were mostly reported by studies conducted in low- and middle-income countries, such as Kenya, Zimbabwe, Nepal, India, Nigeria, and Bangladesh. Breastfeeding initiation can be attributed to several determinants, such as maternal education, maternal age, delivery mode, and maternal employment. Low levels of education, low maternal age, and poor employment commonly reported in such countries, elucidating the reason behind delayed breastfeeding initiation practices (39). Studies suggest that mothers who experience abuse during their pregnancy show two times greater likelihood to miss their prenatal care appointments (40). These appointments encourage conversations about breastfeeding, which is central to early prenatal care (41). Thus, our findings of breastfeeding cessation or short duration of breastfeeding can be attributed to the impact of IPV on maternal education about prenatal care. Results reported in the included studies about IPV experiences and poor breastfeeding practices can be related to reports of unplanned pregnancies among IPV victims (42). IPV during pregnancy substantially leads to post-traumatic stress disorder and depression as comorbidities, which negatively affect maternal mental health and cause suicidal ideations (43). In such conditions, the mother is unable to develop a bond with the child, resulting in breastfeeding cessation.

This review is based on up-to-date evidence for IPV before, during, and after pregnancy and its impact on breastfeeding practices. A strength of this review is that it corroborates findings from the UNICEF that experiences of violence by a maternal caregiver reduces the likelihood of exclusive breastfeeding and early breastfeeding initiation. IPV negatively affects the mental health and psychosocial wellbeing of maternal caregivers, thus limiting their ability to care for their children and themselves and eventually affecting breastfeeding (44). Moreover, IPV experiences are related to a household environment that does not support breastfeeding, thus compromising infant nutrition

and mother-child bond (45). Support from a partner during breastfeeding substantially increases breastfeeding success. However, a woman is less likely to obtain partner support in an abusive relationship (46). Breastfeeding practices facilitate an intimate interaction between a child and mother, resulting in emotional intimacy, harmony, reciprocity, and skin perception to touch. This bond eventually rejects the perpetrator, who often considers the child as an opponent for the woman's consideration. Therefore, the perpetrator tries to discourage breastfeeding and adopts a hostile outlook toward the child and mother (47). A second strength of this review is the inclusion of two studies that were based on data from the Pregnancy Risk Assessment Monitoring System. Whereas Wallenborn et al. used results from mothers who participated in the PRAMS study from 2004 to 2014, Silverman et al. used results from mothers who participated in the PRAMS study from 2000 to 2003. An additional aspect of this review is that we performed a meticulous quality assessment of all articles using the validated NOS, in place of the Strengthening the Reporting of Observational Studies in Epidemiology tool, which is prone to bias.

A limitation of this systematic review is that most studies were cohort of an unsatisfactory quality. Findings from unsatisfactory studies are prone to bias and less reliable, thus compromising the quality of evidence. In addition, most of the studies failed to sufficiently control for the confounders, affecting the internal validity of our results. Because the majority of included studies focused on women from low and middle socioeconomic groups, our findings cannot be generalized to broader populations. Furthermore, the NOS versions used for quality assessment do not consider that cross-sectional studies as inferior to cohort studies in the evidence hierarchy. Therefore, researchers are required to consider this parameter when assessing the general quality of evidence based on NOS.

In the included studies, women were predominantly questioned about their IPV experiences regarding pregnancy, which might have introduced recall bias. This is because some women may not be able to recall the extent of IPV they had been exposed to or previous instances of IPV. We cannot rule out the tendency of women to refuse participation in IPV studies or to underreport IPV to protect their perpetrator or themselves (48). The true correlation between IPV and breastfeeding practices may have been underestimated because of underreporting or recall bias. IPV is a complex phenomenon that affects at a physical, emotional, and mental level. Therefore, countries should encourage intervention programs against all types of IPV, among both victims and perpetrators. Such a program will serve as a way to bring about a change of social behavior and feelings about IPV. The central objective of these programs should be to boost the confidence of IPV victims, avert gender-based IPV, and enable the victims to come out of abusive relationships.

Conclusion

This systematic review indicates a complex association between breastfeeding practices and IPV and the challenges in assessing the impact of exposure to any type of IPV on breastfeeding practices without performing a meta-analysis. Most of the included studies suggested that IPV exposure before, during, and after pregnancy was related to diminished breastfeeding practice; however, a few studies reported on no significant correlation between IPV and breastfeeding. Considering the lack of consensus on the confounders that affect this association, researchers should try to describe the central outcome measures and take account of superior quality longitudinal studies with predefined confounders. Finally, the varied effects of IPV across cultural and socioeconomic scenarios and prevalent beliefs about breastfeeding warrant investigation. These contextual variances will also help elucidate dissimilar results across countries.

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