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# Prevalence of Physical Violence Against Brazilian Women: Systematic Review and Meta-Analysis

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#### Abstract

Violence against women is a major problem in Brazil, but data on its prevalence are scarce. We aimed to estimate the prevalence of physical violence against women in Brazil. We conducted a systematic review and meta-analysis of the prevalence of physical violence against women. Population-based researches that assessed physical violence in Brazilian women were searched on MEDLINE, Embase, Scopus, and VHL/BIREME. The last search update was carried out in March 2020. Two researchers selected the studies, extracted the data, and assessed the quality of the eligible studies. Summary of prevalence and 95% confidence interval (CI) was calculated using Freeman–Tukey double arccosine transformation, weighted by the official local population size. Heterogeneity was estimated by  $I^2$  and investigated by meta-regression analyses. Of 3,408 reports, 13 studies carried out from 1999 to 2016 (n = 25,781 women) were included. Most studies had limitations on sample size (5/13) and response rate (7/13). The prevalence of physical violence was 22.4% in lifetime (95% CI [21.6, 23.2%];  $I^2 = 99.0\%$ ), and 11.5% in previous year (95% CI [11.1, 11.9%];  $I^2 = 99.5\%$ ). Assuring privacy during interview significantly increased the prevalence (p = .028; residual  $I^2 = 80.0\%$ ). Higher prevalence was also observed in studies with adequate sample source, validated questionnaire, and privacy (in both recall periods), potentially due to lower risk of nonresponse bias. Over two in 10 Brazilian women suffered physical violence during their lives, and over one tenth, in the previous year. Measurement of outcome affected the prevalence; privacy should be assured for the interviewee for future reliable estimates in the country.

#### **Keywords**

woman, Brazil, meta-analysis, prevalence, systematic review, violence exposure, domestic violence

Violence against women is a violation of women's human rights and a major public health problem worldwide (Krahe, 2018; Kumar et al., 2013). About one in three women globally have experienced either physical and/or sexual violence in their lifetime (Kumar et al., 2013; World Health Organization, 2013). Most often, it occurs within intimate relationships, but there is a considerable occurrence of violence against women committed by nonintimate partners.

The interplay of individual, relationship, community, and societal factors considered in the ecological framework of violence provides a more comprehensive explanation of the violence cycle (Di Napoli et al., 2019). The intertwinement of contributing factors reveals interdependence among the circumstances and recognizes that isolated changes—which are usually focused at the individual level—are insufficient to prevent this major threat. Comprehension of the environment that favors violence against women is the first approach to properly tackle it (Di Napoli et al., 2019).

Economic, social, and political contexts also explain the differences in prevalence of violence against women across

countries. Higher rates of violence against women and the consequences to women's lives due to violence are remarked in low- and middle-income countries (Coll et al., 2020). Discrepancy in investments on investigations about violence against women is a common trait, as researches are more frequent in richer countries, while these problems are more prevalent in poorer ones (García-Moreno et al., 2015). Scientific investigations in the field, in turn, are essential tools to understand and prevent violence against women.

Intimate partner violence against women—often characterized by severe and repetitive episodes—represents a serious

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public health problem in Brazil, with high burden to the physical and mental health of the victims (Batista et al., 2018; Dutra et al., 2013). Support to the victims remains fragile, and difficulties are faced in multiple areas, including proper assistance for the victims (Batista et al., 2018). Physical violence against women—and its catastrophic outcome in femicide—epitomizes a recurring tragedy in the country. In 2018, over four in 100,000 Brazilian women were murdered, with disparities across the country influenced by regional inequalities (Alves et al., 2020).

Physical aggression against women causes several types of injuries, chronic health problems, and mental health consequences (Rivara et al., 2019). This type of violence is usually concomitant or subsequent to other types of violence such as psychological and verbal violence. Estimating physical violence is thus more common as a health indicator (Devries et al., 2013) and can not only bring data about physical aggression itself but also potentially signal the simultaneous occurrence of other types of violence, which could be underestimated.

Nationwide estimations about the prevalence of physical violence against women are absent in Brazil, hampering the acknowledgment and prevention of the problem in the country. Summarization of representative local studies would bring valuable information on the prevalence of physical violence against women in Brazil. Previous reviews focused on specific groups or included studies with convenience sampling, impairing the external validity of the results (Baigorria et al., 2017; Frank et al., 2010; Li et al., 2014; Pinto et al., 2014; Silva et al., 2017). More accurate estimation on the proportion of women affected by physical violence in Brazil would potentially enlighten the issue and foster public policies to protect and prevent physical aggression against women.

We aimed to estimate the prevalence of physical violence against women in Brazil by means of a systematic review and meta-analysis.

# Method

#### Protocol and Registration

The protocol for this systematic review was registered with the International Prospective Register of Systematic Reviews (PROSPERO), registration number CRD42019118293.

# Eligibility Criteria

We considered eligible observational studies with epidemiologically representative sampling of the population that assessed the prevalence of physical violence against women perpetrated by any offender. Surveys that assessed the outcome based on a single question were excluded. There were no restrictions on language, publication date or type to bring more complete evidence and avoid publication bias in the results. Studies based on reports such as police and health facility records were not eligible due to representativeness of such reports, based on convenience sampling.

# Information Sources and Search Strategy

We searched MEDLINE, EMBASE, Scopus, and Latin American and Caribbean Center on Health Sciences Information Virtual Health Library (VHL/BIREME). The following search strategy was used on MEDLINE (via PubMed) and adapted to the other sources: (Brasil OR Brazil) AND (women OR woman OR female OR spouse OR partner OR partners) AND (violence OR atrocities OR assault OR (intimate partner) OR abuse OR maltreatment OR offense OR offenses) AND ((prevalence or prevalences or cross-sectional or (cross sectional) or survey or surveys or "systematic"[sb])). The last search was held on March 2020. References of relevant studies were screened, and researchers in the field were consulted to identify potentially eligible research.

# Study Selection

Two researchers (MTS, IBN) independently assessed the eligibility of the study according to titles, abstracts, and full texts of the selected articles. Disagreements were solved by a third reviewer (TFG). An online platform for systematic review management (www.covidence.org) was used for this process.

# **Data Collection Process**

Two researchers (IBN, TFG) independently extracted the data in a spreadsheet prepared by the authors previously using Microsoft Excel. The following data were extracted: study, presence of secondary studies, year of research, setting, city and state, age-group, population characteristics, source of sample, measurement and criterion of outcome, recall period, sample size, number of women, and outcome data (number of women that suffered violence: physical, severe physical, mild physical, minor physical, psychological, sexual, and verbal). The authors of primary studies were contacted to obtain more accurate information as needed.

#### Risk of Bias

Two researchers (IBN, TFG) independently assessed the quality using the Joanna Briggs Institute's checklist for prevalence studies (Munn et al., 2015) and assessed the researches based on nine methodological items, adopting as standard the information in parenthesis: (1) sample source (reliable), (2) adequate sampling (probabilistic sampling or universal), (3) adequate sample size (statistically calculated), (4) description of participants (sample adequately described), (5) coverage of the analysis (similar coverage for different subgroups and reporting of all types of violence measured), (6) criterion for outcome (use of appropriated and validated instrument to measure physical violence), (7) measurement of the outcome (privacy of women to report violence), (8) statistical analysis (adequate calculation of prevalence and confidence intervals [CIs]), and (9) adequate response rate (low rate of refusals and losses). If the study fulfilled the criterion, it received a point in the item. The final score was the sum of points of each study.

# Summary Measures

The primary outcome was the prevalence of physical violence and a 95% CI. Secondary outcomes were prevalence and 95% CI of severe, mild, and minor physical violence. If available in studies, we also summarized the prevalence and 95% CI of psychological, sexual, and verbal violence.

#### Synthesis of Results

The pooled estimate of overall and subgroup prevalence of physical violence was calculated by meta-analysis, a statistical method that combined the results of the included studies weighted by the statistical relevance of each study. Proportion meta-analyses were calculated by Freeman–Tukey double arcsine transformation weighted by the population size (metaprop command, ftt option). The local population of study was obtained from the official estimates of the Brazilian Institute of Geography and Statistics for the period of each research. The heterogeneity was assessed by  $\chi^2$  test, adopting a significance level of p < .10, and by the estimation of the inconsistency between studies ( $I^2$ ). All analyses were calculated at Stata Version 14.2 (College Station, TX).

#### **Risk of Bias Across Studies**

For outcomes with at least 10 studies, the presence of smallstudy effects (publication bias) was assessed by visual inspection of asymmetry of the funnel plot and by calculation of Egger's test, adopting a significance level of p < .05.

#### Additional Analyses

Meta-regressions were calculated by the modified Knapp– Hartung method to investigate the effect of independent variables (quality score of the risk of bias, year of publication, sample size, methods for outcome assessment) on the variability of prevalence of physical violence among studies in outcomes with at least 10 included studies. Subgroup analyses were performed by type of questionnaire, study quality, and recall period.

# Results

# Study Selection

Out of 3,408 unique records retrieved from search, we included 13 studies published in 41 different records (Figure 1). We contacted 12 studies and 10 provided clarification or additional data, of which four were excluded as ineligible by proving ineligible after clarification. The reasons for exclusion of studies assessed in full text (Appendix A) and all references of included studies (Appendix B) are detailed in tables.

# Study Characteristics

All included studies were cross-sectional, employed household sampling, and measured the outcome by interview. In total, 25,781 women were included, aged from 14 to over 60 years old, in surveys held between 1999 and 2016. Three studies were national (Ally et al., 2016; Reichenheim et al., 2006; Zaleski et al., 2010), and one was conducted in two regions, Southeast and Northeast (Schraiber et al., 2007). Most occurred in the South and Southeast regions; none occurred exclusively in the North of Brazil, but this region was assessed in nationwide studies. Most women had an intimate partner, and all studies considered this as the perpetrator to assess physical violence (Table 1).

One study used nonvalidated questionnaire (Carvalho & Oliveira, 2017). The other studies used validated tools: five used Conflict Tactics Scale (CTS) (Anacleto et al., 2009; Bruschi et al., 2006; de Paiva & Tavares, 2015; Miranda et al., 2010; Reichenheim et al., 2006), three used the revised CTS (CTS2) (Ally et al., 2016; Moraes et al., 2016; Zaleski et al., 2010), and four used the World Health Organization's questionnaire about Violence Against Women (WHO VAW) (Lindner et al., 2015; Lucena et al., 2017; Moura et al., 2009; Schraiber et al., 2007).

Diversity of participants was covered in most researches with a wide range of age, education, socioeconomic status, and ethnicity. Gender identity, sexual orientation, and religion were not addressed.

#### Risk of Bias Within Studies

Two studies had higher scores (8–9) in the quality assessment (Lindner et al., 2015, Schraiber et al., 2007), and the majority scored 5–6 from nine quality items. Most studies had methodological limitations on sample size, response rate, coverage of analysis, and measurement of outcomes (Table 2). All studies employed probabilistic sampling.

#### Synthesis of Results

The prevalence of physical violence against women in lifetime was 22.4% (95% CI [21.6, 23.2%];  $I^2 = 99.0\%$ ), higher than the one observed for the past 12 months (11.5%; 95% CI [11.1, 11.9%];  $I^2 = 99.5\%$ ; Figure 2). There was a gradient in the prevalence of mild (16.3%; 95% CI [14.0, 18.7];  $I^2 = 99.4\%$ ), moderate (12.4%; 95% CI [10.7, 14.3];  $I^2 = 98.2\%$ ), and severe (11.9%; 95% CI [10.6, 13.3%];  $I^2 = 94.8\%$ ) physical violence during lifetime (Table 3). Other types of violence reported in included studies were verbal, psychological, and sexual (Table 3).

# **Risk of Bias Across Studies**

The funnel plot showed a slight asymmetry in the distribution of studies that assessed physical violence in the previous year (Appendix C), but small-study effect was discarded in Egger's

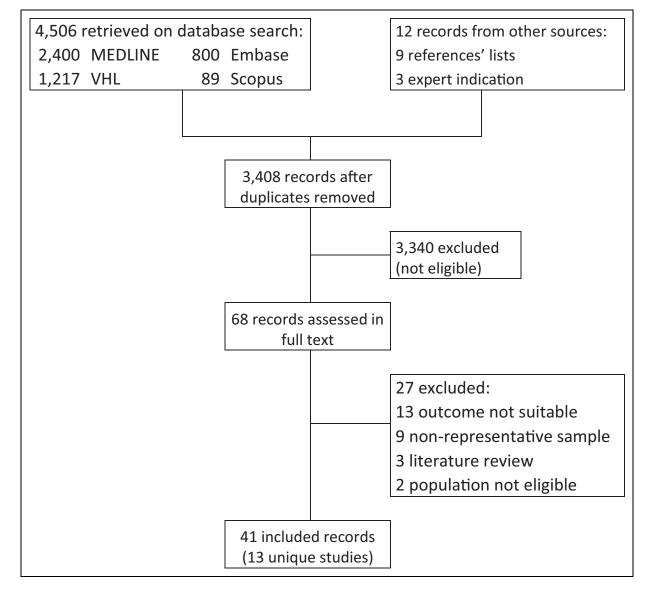


Figure 1. Process of study selection and inclusion of studies in the review.

test (p = .692). Other outcomes did not have minimum studies to be assessed for this effect.

# Additional Analysis

Privacy for women to report violence showed to increase its prevalence in the meta-regression analysis (p = .028; adjusted  $R^2 = 51.6\%$ ; residual  $I^2 = 80.0\%$ ). No effect on heterogeneity was observed from quality score (p = .349), number of women (p = .706), and year of the research (p = .389411; Appendix D). For the other outcomes, meta-regression was not possible due to the small number of studies.

Studies that used nonvalidated questionnaire (Carvalho & Oliveira, 2017) had lower prevalence of physical violence against women in lifetime when compared to studies that used WHO VAW (Lindner et al., 2015; Lucena et al., 2017; Moura et al., 2009; Schraiber et al., 2007) and CTS (Anacleto et al.,

2009; de Paiva & Tavares, 2015; Reichenheim et al., 2006; Table 4). Higher prevalence was also observed in studies with adequate sample source, validated questionnaire, and allowed privacy to the interviewee to assess the outcome in both recall periods (Bruschi et al., 2006; Lindner et al., 2015; Miranda et al., 2010; Schraiber et al., 2007).

#### Discussion

One in five Brazilian women suffered physical violence during their life, and one in 10 were physically assaulted in the previous year according to population representative studies included in this systematic review with meta-analysis. Mild physical violence was more frequent than moderate, which in turn was more frequent than severe violence throughout Brazilian women's life. All studies assessed physical violence perpetrated by the intimate partner. Methodological aspects

Table I.	Main	Characteristics	of the	Included Studies.
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Study	Year	Location	Characteristics	Age-Group (Years)	Assessment	Sample (n)	Women (%)
Ally (2016)	2012	Brasil	With intimate partner	≥I4	CTS2	2,120	60.7
Anacleto (2009)	2006	Lages, SC	No restrictions	20–59	CTS	1,042	100.0
Bruschi (2006)	1999	Embu, SP	With child <18 years and intimate partner in life	15-49	CTS	86	100.0
Carvalho (2017)	2016	Northeast capitals <sup>a</sup>	With intimate partner in life	15–50	Nonvalidated questionnaire	10,094	100.0
de Paiva (2015)	2014	Uberaba, MG	With intimate partner in life	$\geq$ 60	CTS	729	66.8
Lindner (2015)	2010	Florianópolis, SC	No restrictions	20–59	WHO VAW	1,720	55.7
Lucena (2017)	2014	João Pessoa, PB	With intimate partner in life	>18	WHO VAW	424	100.0
Miranda (2010)	2003	Embu, SP	No restrictions	15-49	CTS	784	100.0
Moraes (2016)	2010	Duque de Caxias, RJ	With child <18 years and intimate partner in life	20–59	CTS2	625	100.0
Moura (2009)	2007	Varjão, DF	Nonpregnant, with intimate partner in previous year	15-49	WHO VAW	278	100.0
Reichenheim (2006)	2003	Brazilian capitals <sup>b</sup>	With intimate partner in life	15-69	CTS	6,774	100.0
Schraiber (2007)	2001	São Paulo, SP; Zona da Mata, PB	With intimate partner in life	15-49	WHO VAW	2,128	100.0
Zaleski (2010)	2006	Brasil	With intimate partner is previous year	≥I4	CTS2	1,445	56.3

Note. CTS = Conflict Tactics Scale; CTS2 = revised CTS; WHO VAW: World Health Organization Violence Against Women.

<sup>a</sup> Aracaju, Fortaleza, João Pessoa, Maceió, Natal, Recife, Salvador, São Luís, and Teresina. <sup>b</sup> Manaus, Belém, Fortaleza, Natal, João Pessoa, Recife, Aracaju, Belo Horizonte, Vitória, Rio de Janeiro, São Paulo, Curitiba, Florianópolis, Porto Alegre, Campo Grande, and Brasília.

Table 2. Quality Assessment of Included Studies.

Study	Sample Source	Sampling	Sample Size	Participants	Coverage	Outcome Criteria		Statistics	Response Rate	Score
Ally (2016)	I	I	0 <sup>a</sup>	I	0 <sup>b</sup>	Ι	0 <sup>c</sup>	I	I	6
Anacleto (2009)	I	I	I	I	0 ь	I	0 <sup>c</sup>	I	0 d	6
Bruschi (2006)	I	I	0 <sup>a</sup>	I	I	I	I	0 <sup>e</sup>	0 d	6
Carvalho (2017)	I	I	I	0 <sup>f</sup>	I	0 <sup>g</sup>	0 <sup>h</sup>	0 <sup>e</sup>	I	5
de Paiva (2015)	I	I	I	I	I	I	0 <sup>h</sup>	0 <sup>e</sup>	0 d	6
Lindner (2015)	I	I	I	I	I	I	I	I	Ι	9
Lucena (2017)	I	I	I	0 <sup>f</sup>	0 ь	I	0 <sup>h</sup>	0 <sup>e</sup>	Ι	5
Miranda (2010)	0 <sup>i</sup>	I	0 <sup>a</sup>	I	0 <sup>c</sup>	I	I	I	0 <sup>d</sup>	5
Moraes (2016)	0 <sup>i</sup>	I	0 <sup>a</sup>	I	0 <sup>c</sup>	I	I	0 <sup>e</sup>	I	5
Moura (2009)	0 <sup>i</sup>	I	0 <sup>a</sup>	I	0 <sup>b</sup>	I	I	I	0 <sup>d</sup>	5
Reichenheim (2006)	I	I	0 <sup>a</sup>	0 <sup>f</sup>	0 <sup>b</sup>	I	I	I	I	6
Schraiber (2007)	I	I	0 <sup>a</sup>	I	I	I	I	I	I	8
Zaleski (2010)	I	I	0 <sup>a</sup>	I	I	I	0 <sup>h</sup>	I	0 d	6
Total	10	13	5	10	6	12	7	8	7	_

<sup>a</sup>Sample size not reported. <sup>b</sup> No prevalence presentation for all types of violence measured. <sup>c</sup> Analysis restricted to a specific age range, neighborhood, or location. <sup>d</sup> Low response rates, no information or no justification. <sup>e</sup> No information on methodology and/or confidence interval. <sup>f</sup> No specific demographic information. <sup>g</sup> Nonvalidated questionnaire. <sup>h</sup> The privacy of the interviewees was not ensured. <sup>i</sup> The source of the sampling was not adequately informed.

of researches, such as privacy during interview and use of validated tools to measure physical violence, affected the estimates. All included research presented at least one item related to human diversity. The absence of language, gender identity, sexual orientation, ability, and cultural aspects in the primary studies shows the need for more concern with diversity description of the sample.

Results are based on estimates published in the literature from different Brazilian settings, and high heterogeneity is anticipated in a meta-analysis of prevalence (Barendregt et al., 2013). Outcome assessment may explain the heterogeneity found. To obtain the full evidence on proportion of women who suffered physical violence in Brazil, we searched and included studies regardless of language or publication type. Despite this, searches were based only in English terms, and missing studies due to this limitation is possible. Reporting bias from convenience sampled studies based on police or health service records was avoided. We did not find studies occurred

			ES (95% CI)
Brasil	•		6.3 (5.1, 7.8)
Lages	+		12.9 (11.0, 15.0)
	•		5.4 (5.0, 5.8)
Uberaba	+		6.4 (4.5, 8.9)
Duque de Caxias	-+-		26.9 (23.6, 30.5)
Varjão	<b>_</b>		32.4 (27.1, 38.1)
Brasil	•		23.7 (22.7, 24.8)
São Paulo	+		8.3 (6.7, 10.2)
Zona da Mata/PE	+		12.9 (11.1, 14.9)
Brasil	+		9.8 (8.0, 12.1)
%, p = 0.0)	4		11.5 (11.1, 11.9)
Embu	<b>•</b>		33.7 (24.6, 44.2)
	•		17.3 (16.5, 18.0)
	+		17.5 (15.2, 20.1)
•			59.0 (54.2, 63.5)
	+		26.0 (23.1, 29.2)
			58.6 (52.8, 64.3)
	+		28.3 (25.5, 31.3)
	+		33.8 (31.1, 36.5)
	Ċ		22.4 (21.6, 23.2)
,	•		
			1
	Lages Northeast capitals Uberaba Duque de Caxias Varjão Brasil São Paulo Zona da Mata/PE Brasil 5%, p = 0.0) Embu Northeast capitals Florianópolis João Pessoa Embu Varjão São Paulo Zona da Mata/PE 5%, p = 0.0)	Lages Northeast capitals Uberaba Duque de Caxias Varjão Brasil São Paulo Zona da Mata/PE Brasil %, p = 0.0) Embu Northeast capitals Florianópolis João Pessoa Embu Varjão São Paulo Zona da Mata/PE + %, p = 0.0)	Lages Northeast capitals Uberaba Duque de Caxias Varjão Brasil São Paulo Zona da Mata/PE Brasil %, p = 0.0) Embu Northeast capitals Florianópolis João Pessoa Embu Varjão São Paulo Zona da Mata/PE + * * * * * * * * * * * * *

Figure 2. Prevalence of physical violence against woman according to the recall time.

Table 3. Prevalence of Violence	Against Women (	(%) and 95% Confidence Interval (	CI) According to the T	ype and Recall Period.

Outcome	Recall Period	Number of Studies	Number of Women	Prevalence, % (95%Cl)	l <sup>2</sup> (%)
Severe physical	Lifetime	4	2,253	11.9 [10.6, 13.3]	94.8
. ,	12 months	2	7,816	14.3 [13.5, 15.1]	42.5
Moderate physical	Lifetime	2	1,383	12.4 [10.7, 14.3]	98.2
Mild physical	Lifetime	3	1,294	16.3 [14.0, 18.7]	99.4
1 /	12 months	I	1,042	6.4 [5.1, 8.1]	
Psychological	Lifetime	4	12,500	32.4 [31.5, 33.4]	99.5
, 0	12 months	4	2,893	14.7 [14.1, 15.4]	98.9
Sexual	Lifetime	4	12,500	8.3 [7.8, 8.9]	98.0
	12 months	4	12,500	2.8 [2.5, 3.2]	96.8
Verbal	12 months	3	7,816	77.5 76.5, 78.6]	92.9%

exclusively in the Northern region of Brazil, which has the lowest population density in the country. The Brazilian population was estimated in over 200 million inhabitants in 2010 and less than 10% lived in this region (IBGE, 2010). The Northern region is also the least developed Brazilian region, with poor research infrastructure, which helps to

7

Recall Period	Subgroups	No. of Studies	No. of Women	Prevalence, % (95% CI)	l <sup>2</sup> (%)
Questionnaire					
Lifetime	CTS	2	870	26.7 [23.7, 29.7]	84.4
	WHO VAW	5	3,789	32.5 [31.0, 34.0]	98.8
	Nonvalidated	I	10,094	17.3 [16.5, 18.0]	
12 months	CTS	3	8,303	19.1 [17.9, 20.3]	99.0
	CTS2	3	2,725	11.1 [10.0, 12.3]	98.9
	WHO VAW	3	2,406	12.8 [11.5, 14.2]	98.4
	Nonvalidated	1	10,094	5.4 [5.0, 5.8]	_
Quality <sup>a</sup>					
Lifetime	Yes	5	3,957	26.7 [25.3, 28.1]	95.I
	No	3	10,796	25.2 23.6, 26.8	99.6
12 months	Yes	3	8,902	20.1 [19.2, 21.0]	99.1
	No	7	14,626	7.1 [6.7, 7.6]	98.6

Table 4. Subgroup Analysis of the Prevalence of Physical Violence Against Women (%) in Lifetime With 95% Confidence Interval (CI).

Note. CTS = Conflict Tactics Scale; CTS2 = revised CTS; WHO VAW: World Health Organization Violence Against Women.

<sup>a</sup>Studies that had adequate sample source, used validated questionnaire, and allowed privacy to the interviewee to assess the outcome.

explain why there were few epidemiological studies exclusively held in this area.

Estimates of physical violence during lifetime based on validated tools were higher than nonvalidated ones, possibly due to a more accurate ability to measure the violence. The presence of vague or intimidating terms in nonvalidated questionnaires, such as "violence," may explain this nonresponse bias. Quantitative comparisons of violence should take into account psychometric properties-or the lack of it-and equivalence among diverse groups of victims (Cardenas, 2020). Even validated tools may have limitations, especially when developed in a setting and applied in an economically and culturally different context. Much can be lost in the adaptation of the tool, which can compromise the understanding of the questions, data comparison, assessment of the results, and the reliability of the questionnaires to different population groups (Cardenas, 2020). Some cross-cultural reliability studies may be restricted to college samples or have different results in men and women and may affect the psychometric properties of the scales (Chapman & Gillespie, 2019). Cross-cultural differences of mediating factors like help-seeking behavior, coping strategies, racism, and values within cultural groups affected the association between intimate partner violence and depression in a systematic review (White & Satyen, 2015). An assessment of psychometric properties of aggression scales in late life also observed limitation or absence of key indicators of reliability and validity (Ravyts et al., 2020).

Lower prevalence of physical violence in both recall periods was observed in studies that did not ensure privacy for women. In sensitive outcomes, privacy and safety are basic procedures to avoid nonresponse due to intrusiveness of surveys. For a sensitive and stigmatized outcome such as violence, measurement should be based on valid instruments with privacy assured to provide reliable results (Plutzer, 2019). To assess sensitive topics, survey techniques are recommended, including randomized, nonrandomized, crosswise, and triangular models and, more prominently, audio computer-assisted self-interviewing, which significantly reduces reporting bias and is well accepted in developing settings (Hoffmann et al., 2020; Langhaug et al., 2010). No included study employed techniques like these.

Although all included studies were based on representative sampling, methodological concerns were common in most of them. Main sources of bias comprised inadequate sample size and low response rates, which impact on the estimated prevalence of the individual study and our pooled analysis. The wide range of age, in some studies including adolescents, may be a cause of variability across studies' results. Collectively, these constraints may under- or overestimate the magnitude of physical violence against women (Plutzer, 2019). Alternative computations of the outcomes that are prone to convenience sampling, such as police or health services reports, were not considered in the present review to avoid bias. Secondary sources of reporting, like report of the neighbor, proved to be reliable and valid for sexual violence in specific settings of conflict and disaster (Stark et al., 2020), but neither were identified in our search.

The prevalence of physical violence against women in Brazil estimated in this meta-analysis points to a worrying figure of one in five women victimized during life. Intimate partners were the main perpetrators of physical violence against women in Brazil. The observed prevalence of physical violence perpetrated by intimate partner in the life course of Brazilian women was similar to the worldwide estimate that 30% of women who have been in a relationship suffered physical or sexual violence perpetrated by an intimate partner in their lifetime (World Health Organization, 2013). The "Maria da Penha Law," enacted in 2006, is the main instrument for combating violence against women in Brazil and includes mechanisms for the prevention and repression of domestic and family violence against women, which makes intimate partner violence a more recognizable problem. Its implementation focuses more on punishing aggressors than on preventing violence and is a landmark in violence against women policies. Prevention of violence in

Brazil was also an indirect effect of major social programs like Brazilian conditional cash transfer program (Programa Bolsa Familia)-started in 2003-which proved to reduce homicide and hospitalization from violence between 2004 and 2012 (Machado et al., 2019). Broader public policies are needed, aimed at preventing violence against women, including education, justice, public safety, work, and social security, among others. Health services play an important role and are more trusted by Brazilian women than the legal system and may represent the victim's first contact with public institutions (Evans et al., 2020). Strengthen the Brazilian Unified Health System is also necessary to welcome the victims and guide them in the steps to overcome violence, in addition to provide health care assistance (Minayo et al., 2018). Contrary to the social rights of Brazilians, austerity measures that have reduced social investments in health care and other welfare state policies in Brazil increased suicide and homicide since 2014, with the expectation of worsening health outcomes resulting from violence in the near future (Machado et al., 2019).

Other types of violence measured in this review—verbal, psychological, and sexual—were limited to studies that had assessed physical violence. Despite the representative sampling of included studies, the literature search for this review was not specific for these secondary outcomes and may be underestimated. Psychological and verbal violence were more frequent than physical violence in the studies that reported these outcomes. Physical violence was less prevalent than psychological violence among women in different settings (Elghossain et al., 2019; Muluneh et al., 2020).

National, representative research is needed to better estimate physical and other types of violence that threaten Brazilian women and to identify the more vulnerable groups. This elucidative scenario is necessary to reach the fifth Sustainable Development Goal in Brazil. The elimination of violence against women is the main topic in this agenda since it includes economic breakdowns, which have a major impact on other objectives. Action must be taken in society as a whole and in all its layers to achieve the desired effect (Babu & Kusuma, 2017). From our results, such effort should consider crossculturally validated questionnaires that should be applied ensuring privacy and safety for the participant to provide reliable estimates of violence against women in Brazil.

# Conclusion

Physical violence against women has a high prevalence in Brazil. Almost one fifth of Brazilian women have suffered some type of physical violence during their lifetime. Mild physical violence was more frequent than moderate, which in turn was more frequent than severe violence. Further efforts on nationwide representative research should use validated tools and ensure privacy and safety of the participants to allow reliability of the magnitude of physical violence in Brazil.

# Summary of Critical Findings

- One in five Brazilian women suffered physical violence in their lifetime.
- Almost one in 10 women suffered physical violence in previous year.
- Mild physical violence was the most prevalent subtype of violence against women in Brazil throughout life.
- The lowest prevalence of physical violence—in lifetime and in the previous year—was observed in studies that employed nonvalidated questionnaires.
- A lower prevalence of physical violence in both recall periods was observed in studies that did not ensure privacy for women.
- Use of nonvalidated questionnaires explained the high heterogeneity observed.

# Implications of the Review for Research, Practice, and Policy

Implications for research.

- Nationwide surveys are needed to estimate the current prevalence of physical violence against women in Brazil.
- Privacy and safety should be assured in future research to avoid nonresponse bias.
- The assessment of physical violence should rely on validated and culturally adapted tools.
- Data on diversity of participants, such as gender identity, sexual orientation, culture, and religion, should be prioritized in further research in the field.

#### Implications for practice.

- Health professionals should be aware of physical violence in women during attendance and provide patient orientation to prevent and report the abuses.
- Training should be provided for health professionals for screening for violence against women.

#### Implications for policy.

- Law enforcement measures to prevent violence against women should be prioritized.
- Police authorities should receive training and appropriated reports to better welcome women and their complaints and reports.
- Achieving the fifth Sustainable Development Goal in Brazil depends on active measures to reduce the observed high prevalence.

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#### Supplemental Material

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