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Research article

Intimate partner violence against reproductive-age women and associated factors in Peru: evidence from national surveys, 2015–2017

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ABSTRACT

Purpose: We aimed to evaluate the factors associated with intimate partner violence (IPV) against reproductive-age women in Peru.

Methods: Secondary analysis of the ENDES 2015–2017. ENDES is a multi-stage survey with a probabilistic sampling design for the urban and rural areas of the 25 regions of Peru. A total of 62,870 women of reproductive age (15–49 years) were included. IPV was defined as any report of violence (physical, psychological or sexual) committed by the last partner of the women. Categorical variables were described using absolute frequencies and weighted proportions. We used generalized linear models with Poisson family and log link function to calculate prevalence ratios (PR) for the associated factors with their respective 95% confidence intervals.

Results: The overall IPV was 38.7%. The prevalence of sexual, psychological and physical IPV was 6.9%, 26.8%, and 31.2%, respectively. The frequency of any IPV was lower in younger women, those living with their intimate partners or married, and those living in a coastal region different from Lima. IPV was more frequent among women with a low educational level, or with a partner with low educational level, with children, with a partner with alcohol habit, in women with a history of violence by the father against the mother and living in the highlands or the jungle.

Conclusions: In Peru, IPV affects nearly four in ten women (physical and psychological types were the most frequent). The factors associated with IPV can be useful markers to identify the most vulnerable groups for implementing interventions intended to decrease the prevalence of IPV.

1. Introduction

Violence against women is defined as any act that results or can result in physical, sexual, or psychological injury or suffering in women, including threats, coercion or loss of freedom either in public or private life [1]. The most frequent types of violence experienced by women are imposed by intimate partners, including aggression or physical, sexual and psychological damage [2]. According to the World Health Organization (WHO), one of every three women has experienced physical or sexual violence by an intimate partner some time in her life; therefore, this issue must be considered a public health concern [3].

Among the adverse effects of intimate partner violence (IPV) we can include lesions and affectation of mental, physical, sexual and reproductive health. This kind of violence diminishes work productivity and increases the risk of HIV transmission and other sexually transmitted infections [4, 5, 6]. Several factors associated with IPV have been described and include: young age of the perpetrator, alcohol consumption by the partner, physical abuse during childhood, low educational level of the partner, low socioeconomic level, economic dependence of the woman, and previous exposure to family violence [7, 8, 9, 10, 11].

Previous studies in Latin America have described a prevalence of IPV of 29.8% in women older than 15 years [3]. Similarly, other studies

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conducted in Latin America have reported IPV prevalence rates that range from 25.5% to 46.4% [12, 13], being more significant than those reported in Europe (6.1%) [14]. A previous national study conducted in Peru reported the prevalence of IPV as being 38.5% [11]. However, the outcome was defined differently because the different types of IPV were not explored, other variables were included in the analyses, and complex survey sampling was not considered, leading to possible biases in the reported estimates.

During the last years, IPV has achieved greater relevance in Peru because of the increased number of femicides caused by this problem [15] with 1,129 victims being registered between 2009-2018. Nine out of every ten IPV were by intimate partners (by the current partner, ex-partner, or family member) and, in half of all the cases were in women of reproductive-age [16]. For this reason, this study was aimed at estimating the prevalence and factors associated with IPV in Peru between 2015 and 2017.

2. Methods

2.1. Design and study area

We performed a secondary analysis of data from the Demographic and Family Health Surveys (ENDES) in 2015, 2016, and 2017. ENDES includes sociodemographic, health and violence-related data. Regarding the last one, it was collected by a direct interview conducted by qualified personnel. The interviewer first had to ensure complete privacy and confidentiality; otherwise, it was not conducted.

ENDES is a multi-stage survey with a probabilistic sampling design for the urban and rural areas of the 25 departments of Peru. This sampling design allows obtaining a representative annual view of the Peruvian population health indicators, administrative regions, urban or rural areas of residence, and natural regions (Coast, Highlands, Jungle). Additional information on the methodology of this survey is available from its webpage [17, 18].

The coast is characterized by a dry climate and many urban areas, including Lima, the capital of Peru. The highlands are located in a mountainous area with a cold and rainy climate, also having rural and urban areas. The jungle has a tropical climate and areas that are mainly covered by vegetation [19]. In rural areas, there are two types of primary sampling units (PSU): a) a conglomerate composed of one or more blocks with approximately 140 private houses, and b) the rural residence registration (RRR) composed of one or more populated centers with approximately 140 houses; the secondary sampling unit (SSU) is the house integrating the PSU. In urban areas, the PSU is the conglomerate that consists of one or more blocks with about 140 houses; the SSU, as in rural areas, is the house within the PSU [17, 18].

2.2. Population and sample

A total of 102,069 women of reproductive-age (aged 15–49 years) were surveyed during the period from 2015-2017. The ENDES includes a violence questionnaire that aims to collect information on cases of physical, psychological, and sexual violence that have ever occurred in reproductive-age women (aged 15–49 years). For this study, violence questionnaire respondents (n = 65 265) were considered for the analysis, while those who did not provide complete answers to the variables of interest (3.7%) were excluded. The effective sample for the analysis was composed of 62,870 women (Figure1).

2.3. Variables and procedures

Psychological violence was evaluated with the following three questions: Has your last husband/intimate partner/ever… done things to humiliate you in front of everyone?, Has he threatened to do something to you or somebody who is close to you?, and Has he threatened to leave the house and take your children away or stop financial support?" Sexual violence was evaluated with the following two questions: Has your last husband/intimate partner/ever … forcibly compelled you to have sexual relations even if you do not want to? and Has he ever forced you to have sexual acts that you disapprove of? Physical violence was evaluated through the following seven questions: Has your last husband/intimate partner/ever… pushed you, shaken you or thrown something at you? Has he slapped you or twisted your arm?, Has he beaten you with the fist or something that could hurt you?, Has he kicked or dragged you?, Has he tried to strangle or burn you?, Has he threatened you with a knife, gun or any kind of weapon?, And Has he attacked you with a knife, gun or any other weapon? IPV was defined as a positive answer to any of the questions.

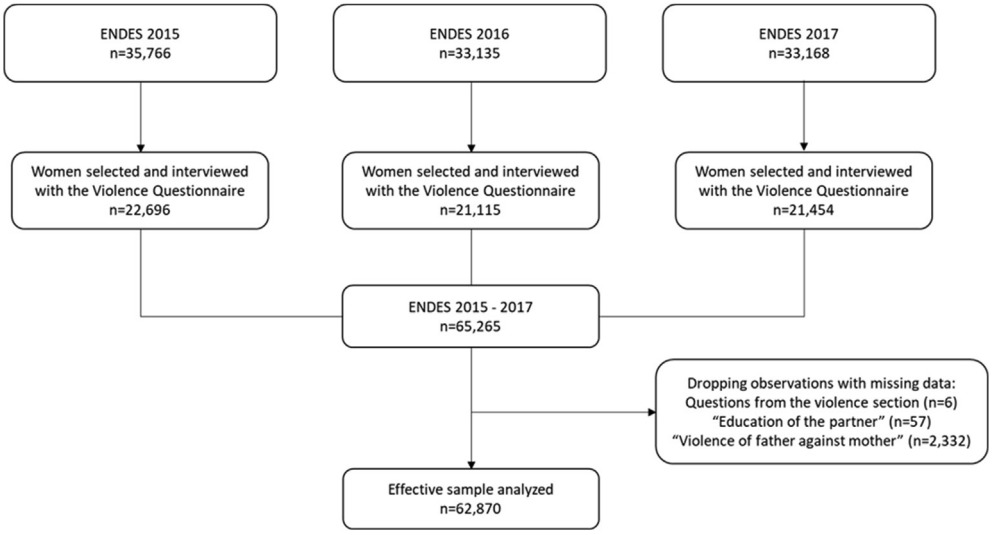


Figure 1. Flowchart of the selection of the study sample, ENDES 2015–2017.

Relevant sociodemographic variables included: current marital status (non-live-in, live-in partner only, married, widow, divorced) and wealth index (low, average, high). Other covariates of interest were selected according to the literature and their possible relationship with IPV; these included: age [20, 21, 22], partner's alcohol consumption [23, 24, 25], both women's and partner's educational levels [26, 27, 28], number of children (0, 1, 2, >2), family history of violence (the father used to beat the mother) [9, 29] and geographical region [30, 31] (Lima Metropolitan Area, rest of the coastline, highlands, jungle).

2.4. Statistical analysis

ENDES 2015–2017 databases were downloaded and imported to the R v3.5.2 statistical package. All the analyses were performed considering the complex sampling design for ENDES using the survey package.

Categorical variables were described using absolute frequencies and weighted proportions, with 95% confidence intervals (95%CI). The Chi-square test was used to compare the proportions of independent variables in each type of IPV. Generalized linear models (GLM) with Poisson family and log-link function were used to evaluate IPV factors considering a statistical approach [11, 14]. The measure of association was the prevalence ratio (PR) with its respective 95% CI. The forward variable selection method was used to create nested models to determine the potentials of associated variables. The Wald test was also used to select variables that presented the strongest statistical association with the dependent variable until no variable reported a p-value (>0.05). The remaining variables of the final model were analyzed using bivariate and multivariate analyses to further determine their IPV association.

2.5. Ethical aspects

The research protocol was approved by the Research Ethics Committee of San Bartolomé Hospital (RCEI-40), Lima, Peru. In addition, ENDES databases are open access and were downloaded without identifiers and, therefore, did not represent any risk for the participants. The databases were downloaded from the following link: http://iinei.inei.gob.pe/microdatos/.

3. Results

3.1. Characteristics of the study population

We analyzed the data of 62,870 reproductive-age women evaluated during 2015–2017, obtaining a prevalence of 38.7% for any IPV. The most frequent age group 25–35 years (39.2%), most of whom had a secondary or higher education (59.4% and 22.2%), respectively. Most of the study participants were from Lima Metropolitan Area (31.9%) and had a low wealth index (41.7%). Alcohol consumption by an intimate partner (80.2%) and violence by the father against the mother (44.3%) were some of the most important antecedents (Table 1).

3.2. Prevalence according to the type of violence against women

The prevalence of sexual, psychological, and physical violence was 6.9%, 26.8%, and 31.2%, respectively. Table 2 shows the prevalence and types of IPV according to the characteristics of the study population. We found that in women whose intimate partners drank alcohol, the prevalence of any type of IPV was 41.1%, while sexual, physical and psychological violence prevalence were 7.4%, 33.6% and 28.5%,

Table 1. Characteristics of the study population (n = 62,870).

Variables	n	%*	95%CI*
Study year			
2015	21,855	35.0	34.4–35.6
2016	20,362	32.3	31.7–32.8
2017	20,653	32.7	32.1–33.3
Geographical region			
Lima Metropolitan Area	7,045	31.9	29.4–34.4
Rest of the coastline	19,243	25.9	24.1–27.7
Highlands	18,851	22.7	21.5–23.9
Jungle	17,731	19.5	18.4–20.5
Wealth index			
High	16,622	36.9	35.4–38.5
Average	13,036	21.4	20.6–22.2
Low	33,212	41.7	40.2–43.2
Age groups (years)			
46 - 49	4,083	10.7	10.2–11.2
36 - 45	17,421	33.7	33.0–34.4
26 - 35	27,351	39.2	38.5–39.9
15 - 25	14,015	16.3	15.9–16.8
Current marital status			
Non-live-in	7,134	14.6	14.0–15.2
Live-in-partner only	37,652	53.9	53.0–54.8
Married	17,723	30.5	29.7–31.4
Widowed + divorced	361	1.0	0.8–1.2
Women's educational level			
Higher	17,901	31.4	30.3–32.6
Secondary	28,173	43.9	42.9–44.9
No education/primary	16,796	24.6	23.7–25.6
Partner's educational level			
Higher	12,401	22.2	21.1–23.3
Secondary	37,907	59.4	58.3–60.5
No education/primary	12,562	18.4	17.6–19.2
Number of children			
0	1,899	6.2	5.8–6.7
1	16,156	25.3	24.7–26
2	19,600	31.5	30.9–32.2
>2	25,215	36.9	36.1–37.7
Partner's alcohol consumption			
No	12,304	19.8	19.2–20.5
Yes	50,566	80.2	79.5–80.8
Family antecedent of violence			
No	34,551	55.7	54.9–56.5
Yes	28,319	44.3	43.5–45.1
Any type of violence			
No	39,402	61.3	60.5–62.1
Yes	23,468	38.7	37.9–39.5
Sexual violence			
No	58,781	93.1	92.7–93.5
Yes	4,089	6.9	6.5–7.3
Psychological violence			
No	46,978	73.2	72.5–73.9
Yes	15,892	26.8	26.1–27.5
Physical violence			
No	43,810	68.8	68.0–69.5
Yes	19,060	31.2	30.5–32.0

* Weighted percentages according to survey complex sampling.

respectively. In addition, in women with a family history of violence, the prevalence of any type of IPV was 48.4%, whereas sexual, physical and psychological violence prevalence were 9.1%, 39.6% 33.7%. Finally, we found that in women living in the highlands, the frequency of any type of IPV was 41.1%), and individually, the prevalence of sexual, physical and psychological violence was 8.5%, 34.4% and 28.3%.

3.3. Factors associated with violence against women

The adjusted model (Table 3) suggested that the prevalence of different types of IPV was significantly lower in women aged 36–45 years (aPR: 0.90; 95%CI: 0.85–0.95), aged 26–35 years (aPR: 0.85; 95%CI: 0.80–0.90), aged 15–25 years (aPR: 0.81; 95%CI: 0.76–0.87), and living with their intimate partners (aPR: 0.52; 95%CI: 0.50–0.54) or married (aPR: 0.48; 95%CI: 0.46–0.51). Accordingly, the prevalence of IPV was higher in women with a medium wealth index (aPR: 1.06; 95%CI: 1.01–1.10) and secondary education (aPR: 1.06; 95%CI: 1.01–1.12). Similar results were obtained for women whose intimate partners had secondary education (aPR: 1.21; 95%CI: 1.14–1.27), primary education or had no education (aPR: 1.18; 95%CI: 1.10–1.27); with children (1 child (aPR: 1.44; 95%CI: 1.27–1.65), 2 children (aPR: 1.65; 95%CI: 1.44–1.89), more than two children (aPR: 1.89; 95%CI: 1.66–2.16); with an intimate partner with alcohol habit (aPR: 1.31; 95%CI: 1.24–1.38) and in women with a history of violence by the father against the mother (aPR: 1.49; 95%CI: 1.43–1.54). On the other hand, the prevalence was significantly lower in women living in a coastal region different from

Table 2. Prevalence and types of intimate partner violence according to the characteristics of the study population (n = 62,870).

Variables	Any type of violence			Sexual violence			Psychological violence			Physical violence		
	n = 23,468			n = 4,089			n = 15,892			n = 19,060		
	n	%	p	n	%	p	n	%	P	n	%	p
Study year												
2015	8,331	39.8	0.061	1,492	7.8	0.001	5,739	28.2	0.011	6,720	31.8	0.243
2016	7,727	38.6		1,321	6.4		5,187	26.2		6,287	31.4	
2017	7,410	37.8		1,276	6.4		4,966	26.0		6,053	30.5	
Geographical region												
Lima Metropolitan Area	2,524	38.3	<0.001	350	5.5	<0.001	1,780	27.4	<0.001	1,928	29.3	<0.001
Rest of the coastline	6,687	35.7		1,049	6.1		4,362	23.8		5,430	29.0	
Highlands	7,460	41.1		1,430	8.5		5,120	28.3		6,107	34.4	
Jungle	6,797	40.7		1,260	8.2		4,630	28.1		5,595	33.7	
Wealth index												
High	5,569	36.0	<0.001	712	5.1	<0.001	3,744	25.2	<0.001	4,349	27.6	<0.001
Average	5,178	42.6		881	7.6		3,458	29.3		4,291	35.0	
Low	12,721	39.2		2,496	8.1		8,690	26.9		10,420	32.5	
Age groups (years)												
46 - 49	1,961	48.2	<0.001	522	13.0	<0.001	1,404	34.9	<0.001	1,611	38.6	<0.001
36 - 45	7,161	41.5		1,480	8.1		4,944	29.4		5,813	33.0	
26 - 35	9,928	36.7		1,501	5.3		6,617	24.8		8,041	29.9	
15 - 25	4,418	31.6		586	4.3		2,927	21.1		3,595	25.8	
Current marital status												
Non-live-in	4,791	67.3	<0.001	1,441	19.5	<0.001	3,972	55.7	<0.001	3,960	55.3	<0.001
Live-in-partner only	12,781	34.4		1,678	4.5		8,281	22.6		10,309	27.6	
Married	5,702	32.1		910	4.8		3,483	19.8		4,627	25.6	
Widowed + divorced	194	56.9		60	13.4		156	46.6		164	46.9	
Women's educational level												
Higher	5,889	33.6	<0.001	792	4.4	<0.001	3,987	23.6	<0.001	4,592	25.5	<0.001
Secondary	11,159	41.5		1,812	6.9		7,482	28.3		9,164	34.1	
No education/primary	6,420	40.3		1,485	10.1		4,423	28.2		5,304	33.4	
Partner's educational level												
Higher	3,867	31.1	<0.001	502	4.1	<0.001	2,618	21.6	<0.001	2,985	23.7	<0.001
Secondary	14,709	41.0		2,455	7.0		9,879	28.2		12,011	33.2	
No education/primary	4,892	40.7		1,132	9.9		3,395	28.6		4,064	34.0	
Number of children												
0	427	21.7	<0.001	54	2.3	<0.001	260	14.3	<0.001	337	15.9	<0.001
1	5,057	33.9		683	4.5		3,421	23.3		3,982	26.6	
2	7,161	37.9		1,013	5.7		4,752	25.7		5,747	30.6	
>2	10,823	45.6		2,339	10.4		7,459	32.2		8,994	37.5	
Partner's alcohol consumption												
No	3,337	29.3	<0.001	484	4.7	<0.001	2,211	20.1	<0.001	2,530	21.6	<0.001
Yes	20,151	41.1		3,605	7.4		13,681	28.5		16,530	33.6	
Family antecedent of violence												
No	10,306	31.0	<0.001	1665	5.1	<0.001	6,927	21.3	<0.001	8,170	24.6	<0.001
Yes	13,162	48.4		2,424	9.1		8,965	33.7		10,890	39.6	

Weighted percentages according to survey complex sampling.

Table 3. Factors associated with intimate partner violence, ENDES 2015–2017.

Variables	Crude model			Adjusted model		
	cPR	95%CI	p	aPR	95%CI	p
Geographical region						
Lima Metropolitan Area	Ref.			Ref.		
Rest of the coastline	0.93	0.88–0.99	**0.027**	0.93	0.88–0.98	**0.004**
Highlands	1.08	1.01–1.14	**0.017**	1.09	1.03–1.15	**0.002**
Jungle	1.06	1.00–1.13	**0.041**	1.07	1.01–1.13	**0.013**
Wealth index						
High	Ref.			Ref.		
Medium	1.18	1.12–1.25	**<0.001**	1.06	1.01–1.10	**0.021**
Low	1.09	1.04–1.14	**0.001**	0.97	0.92–1.02	0.251
Age groups (years)						
46 - 49	Ref.			Ref.		
36 - 45	0.86	0.81–0.91	**<0.001**	0.90	0.85–0.95	**<0.001**
26 - 35	0.76	0.72–0.81	**<0.001**	0.85	0.80–0.90	**<0.001**
15 - 25	0.66	0.62–0.70	**<0.001**	0.81	0.76–0.87	**<0.001**
Current marital status						
Non-live-in	Ref.			Ref.		
Live-in-partner only	0.51	0.49–0.53	**<0.001**	0.52	0.50–0.54	**<0.001**
Married	0.48	0.45–0.50	**<0.001**	0.48	0.46–0.51	**<0.001**
Widowed + divorced	0.85	0.72–0.99	**0.037**	0.90	0.76–1.07	0.235
Women's educational level						
Higher	Ref.					
Secondary	1.24	1.18–1.30	**<0.001**	1.06	1.01–1.12	**0.011**
No education/primary	1.20	1.14–1.27	**<0.001**	0.99	0.93–1.05	0.698
Partner's educational level						
Higher	Ref.					
Secondary	1.32	1.24–1.40	**<0.001**	1.21	1.14–1.27	**<0.001**
No education/primary	1.31	1.22–1.40	**<0.001**	1.18	1.10–1.27	**<0.001**
Number of children						
0	Ref.					
1	1.56	1.36–1.80	**<0.001**	1.44	1.27–1.65	**<0.001**
2	1.75	1.52–2.02	**<0.001**	1.65	1.44–1.89	**<0.001**
>2	2.11	1.84–2.42	**<0.001**	1.89	1.66–2.16	**<0.001**
Partner's alcohol consumption						
No	Ref.			Ref.		
Yes	1.40	1.33–1.48	**<0.001**	1.31	1.24–1.38	**<0.001**
Family antecedent of violence						
No	Ref.			Ref.		
Yes	1.56	1.50–1.62	**<0.001**	1.49	1.43–1.54	**<0.001**

cPR: crude Prevalence ratio; aPR: adjusted Prevalence ratio.
Prevalence ratios and confidence intervals were calculated considering the survey complex sampling. p-values <0.05 are in bold.

Lima (aPR: 0.93; 95%CI: 0.88–0.98) and higher in those living in the highland's region (aPR: 1.09; 95%CI: 1.03–1.15) and the jungle (aPR: 1.07; 95%CI: 1.01–1.13).

4. Discussion

4.1. Main results

IPV is a violation of human rights that constitutes a severe problem for public health globally. This study evaluated its prevalence and associated factors in reproductive-age women in Peru. Our findings show evidence of a decrease in the prevalence of IPV during the study period. However, it is still experienced in one of every three women, being physical IPV the most frequent. Younger women living with intimate partners or married women living on the coast, excluding Metropolitan Lima, presented a lower probability of IPV. Similarly, other conditions such as: living in the highlands or the jungle, having a medium wealth index, having a secondary education, intimate partner educational level (secondary education or lower), having children, alcohol consumption by the intimate partner, and a history of family violence (the father used to beat the mother) were associated with a higher probability of experiencing IPV.

4.2. Prevalence of intimate partner violence against women

We found that the prevalence of IPV was 39.8% in 2015 and 37.8% in 2017. A previous study conducted in the United States in 2015 reported that one out of every four women had experienced IPV, being psychological violence the most frequent, followed by physical and sexual types [32]. Likewise, a study conducted in European women reported that the prevalence of psychological violence was 28.7% [14] while physical violence was the most frequent type of violence identified in contrast to previous studies reporting psychological violence as the most frequent. This could be explained by the high prevalence of alcohol consumption by intimate partners, which could be associated with more violent behavior [33].

On the other hand, the prevalence of IPV in Peru was 45% in 2009, reaching 69% in rural areas [34]. This has persisted during the last decade despite the reduction in the country's poverty rate, which has been described as an additional problem [34]. However, in rural areas poverty exceeds 50%, with a high number of Quechua speakers, who live with their intimate partners, get married very young or have low educational levels; consequently, the probability of getting a job and improving their economic situation is lower. These women are therefore more likely to be under the control of an abusive partner and also experiencing greater violence [34, 35].

4.3. Factors associated with intimate partner violence against women

Younger women had a lower probability of experiencing IPV. This is in contrast with previous studies in which a decrease in violence frequency of up to 13% was observed in 35-year-old women or older [14, 36]. However, our findings could be explained by the higher prevalence of violence being associated with a big family and a larger number of marriage years; which would therefore be less frequent in younger women [14]. In addition, we found that women living in the highlands and the jungle showed a greater prevalence of IPV, whereas women living on the coast had a lower prevalence of this outcome. This situation is closely associated with the poverty rate, extreme poverty, and illiteracy in rural areas, in which low educational levels, female unemployment and economic dependence on their intimate partners were identified. Consequently, these women tolerate abuse and IPV to preserve the family unit [34, 37]. Having a medium wealth index was also associated with IPV, but not a low level. This may be due to underreporting of violence cases among women with low socioeconomic status rather than a real context [38]. One possible explanation is economic dependence, as it has been seen in other studies that women with independent access to money have a lower prevalence of violence [39].

We found an association between the number of children and the higher prevalence of IPV, which agrees with previous studies [14]. Women with children experience greater emotional and economic dependence on their intimate partners, tolerating abuse and maltreatment. Similarly, there is a cultural belief in Peru that justifies tolerance and that women do not denounce abuse by the intimate partner to maintain the family unit [37, 40, 41]. Some studies have reported that women with higher educational levels have better job opportunities and can decide to end an abusive relationship [11, 42]. We found that women with secondary education had a higher prevalence of IPV. This could be related with a previous study that reported that womens' educational level shape a curve where the violence rate is low at the beginning (woman with no formal education), then increases until she reaches secondary education, and finally sharply decreases at the high educational level [11]. Related to this, we found that lower educational levels of intimate partners were associated with a greater prevalence of violence, which agrees with previous study findings [11, 42]. Likewise, some studies have shown that intimate partners with higher educational levels tend to develop better communication skills that help them deal with conflict resolution without resorting to violence [11].

The association between the partner's alcohol consumption and a higher prevalence of IPV has been widely studied [14, 40, 43, 44] and also in Peru [11]. Alcohol consumption could result from intimate partner stress due to workload, causing certain inhibition, and generating physical aggression towards the woman [40]. In addition, a history of family violence was another factor associated with a greater prevalence of this type of violence. This situation may be due to standardization of the abuse by the women and more passive behavior against the aggressor [11].

4.4. Relevance for public health

IPV has a multifactorial origin; therefore, interventions must be focused on improving economic, educational, and cultural levels. High poverty rates and low education levels, mainly in rural areas, may lead to a high prevalence of this problem [34]. Similarly, this type of violence might generate a decrease in women's quality of life, a more significant number of potentially productive years of life lost and, consequently, greater poverty [37]. Accordingly, a lack of job opportunities, violence, and poverty also leads to stressful situations for women, generating social isolation [37].

In 1993, law N°26260 was approved to protect Peruvian women from domestic violence. After that, the National Program to combat Domestic and Sexual Violence was developed in 2001 [11,34] and the prevalence of IPV decreased from 41% in 2001 to 37.2% in 2013 [11]. In 2017, law N°30364 was aimed at preventing, punishing, and eradicating violence against women and family members thereby increasing the interest in the fight against this multicausal phenomenon [45]. This law identified the different types of violence against women and proposed different protection measures, as well as the different actors. Similarly, as part of the Sustainable Development Goals 2030 (SDG 2030), the implementation of gender equality policies has been recommended to eliminate all types of violence against women and girls in public and private settings [46]. In fact, SDG 2030 has proposed a list of different targets (starting with addressing the risk factors) framed in a sustainable violence prevention agenda.

4.5. Strengths and limitations

Some limitations could affect the interpretation of our findings. First, the design of the ENDES does not allow the evaluation of causality among the factors studied and IPV. Second, some relevant variables for the study of IPV such as satisfaction with partner relationship, a history of sexual or physical abuse experienced during childhood, a history of depression, anxiety and relevant information about the control of chronic diseases suffered by the women most affected are not included in the measurements carried out by the ENDES [43]. Third, the information provided by women was collected by self-reporting; therefore, the intimate partner information would be very important to confirm the intensity and frequency of violence as well as the factors that bring about this outcome. Fourth, IPV reported by women corresponds to their current or last partner, then this information could vary in women with more than one partner during their life. Despite these limitations, we consider that the findings obtained in this study can provide an overview of this situation and the factors associated with its occurrence.

5. Conclusion

The prevalence of IPV decreased in Peru from 2015-2017. However, three out of every ten women still experience IPV, with this figure being higher than that estimated in other parts of the world. Physical and psychological violence are the most frequent types of IPV in Peru. We identified that a previous history of violence, the characteristics of family relationships, and area of residence are associated with IPV. These factors may be useful for determining the groups most vulnerable to this problem and the implementation of interventions aimed at reducing the prevalence of IPV in the regions most affected.

Declarations

Author contribution statement

Ruth Burgos-Muñoz and Carlos Jesus Toro-Huamanchumo: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

Anderson Soriano-Moreno, Guido Bendezu-Quispe, Diego Urrunaga-Pastor and Vicente Benites-Zapata: Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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Data availability statement

Data associated with this study is freely available at http://iinei.inei.gob.pe/microdatos/index.htm.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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