



# FACTORS ASSOCIATED WITH THE LACK OF USE OF CONTRACEPTIVE METHODS IN FEMALE ADOLESCENT IN PERU ENDES 2018-2020

FACTORES ASOCIADOS AL NO USO DE MÉTODOS ANTICONCEPTIVOS EN MUJERES ADOLESCENTES DEL PÉRU. ENDES 2018-2020

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## ABSTRACT

**Introduction:** In Peru, adolescents tend to use contraceptive methods (CM) less frequently, constituting a subgroup at risk of unwanted pregnancies and sexually transmitted diseases. **Methods:** Quantitative, observational, analytical-cross-sectional study corresponding to a secondary analysis of data from women aged 15 to 19 from the ENDES 2018-2020. To quantify the association, Poisson regression was used for robust variances, calculating the Prevalence Ratio (PR) in its crude (PRc) and adjusted (PRa) forms, with a 95% confidence interval. **Results:** 28.4% did not use MC, there was a significant association for the variables without a partner (Rpa: 2.49 CI: 1.99-3.11) and zero children (Rpa: 2.73 CI: 2.22-3.35). **Conclusions:** The factors associated with the lack of CM in female adolescents were without a partner and zero children, with a higher prevalence of the lack of CM.

**Keywords:** Adolescent; Contraceptive methods; Domestic violence. (Source: MeSH NLM).

## RESUMEN

**Introducción:** En Perú las adolescentes suelen usar con menor frecuencia los métodos anticonceptivos (MC), constituyendo un subgrupo de riesgo de embarazos no deseados y de enfermedades de transmisión sexual. **Objetivo:** Identificar los factores asociados al no uso de MC en mujeres adolescentes de 15 a 19 años de edad de la ENDES 2018-2020. **Métodos:** Estudio cuantitativo, observacional, analítico-transversal correspondiente a un análisis secundario de datos de mujeres adolescentes de 15 a 19 años de edad de la ENDES 2018-2020. Para cuantificar la asociación se utilizó la regresión de Poisson para varianzas robustas, calculando la Razón de Prevalencia (RP) en sus formas cruda (RPC) y ajustada (RPa), con un intervalo de confianza al 95%. **Resultados:** 28,4% no utilizaban MC, hubo asociación significativa para las variables no tener pareja (Rpa: 2,49 IC: 1,99-3,11) y no tener hijos (Rpa: 2,73 IC: 2,22-3,35). **Conclusiones:** Los factores asociados a no uso de MC en mujeres adolescentes de 15 a 19 años fueron no tener pareja y no tener hijos, con mayor prevalencia de no uso de MC.

**Palabras clave:** Adolescente; Anticoncepción; Violencia doméstica. (Fuente: DeCS BIREME).

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## INTRODUCTION

In 2020, the WHO estimated that every year 21 million adolescents aged 15 to 19 living in developing countries become pregnant. Some teens plan and want to get pregnant, but in many cases they don't; approximately ten million pregnancies of adolescents in this age range living in developing countries are unwanted<sup>(1)</sup>.

The promotion of the use of CM has been shown to be effective in reducing early and unwanted pregnancies, maternal and neonatal morbidity and mortality, and cases of unsafe abortions. In addition, male and female condoms offer double protection against unwanted pregnancy and sexually transmitted diseases<sup>(2)</sup>.

Regarding women, who are considered a vulnerable group to infection of sexually transmitted diseases, there are different studies that report the prevalence of frequency of CM use, as is the case of the study carried out in Congo in 2020 by Casey et al.<sup>(3)</sup> who reports a prevalence of 51.7% in the age group 15-19 years, compared to those 20-24 years of 36.5%.

In Uganda in 2020, Otim<sup>(4)</sup> carried out a study in the Central, East, Northeast and West regions of the country, in which it reports that there are high percentages in these regions of non-use of CM in women who do not have children compared to those who do (73.9; 79.9%; 91.0% and 86.7% respectively); it also observed that in the Northeast region, adolescents who had no education had a higher percentage (65.8%) of not using CM.

In the case of Latin America, Gomez et al.<sup>(5)</sup> in 2019 reported low prevalence's in Haiti (31.3%) and Bolivia (34.6%) in contrast to countries such as Brazil, Colombia, Costa Rica, Cuba and Paraguay with more than 70% of CM use. In Colombia in 2018, Angarita et al.<sup>(6)</sup> found that women who have not been victims of intimate partner violence (OR 0.75, 95%CI 0.69-0.82), physical (OR 0.87, 95%CI 0.80-0.94) and psychological (or 0.75, 95% CI 0.69-0.82) are more likely to use some CM than women who were. In Peru, a study based on the demographic and family health survey (ENDES) 2017 reports a prevalence of 52.3% for non-use of CM, and women living in rural areas have a prevalence ratio of 1.8 (95%CI: 1.5-2.1) for non-use of CM, compared to those living in urban areas<sup>(7)</sup>; However, it does not specify the types of CM or how the dependent variable was defined.

As mentioned, all these factors can influence a lower use of CM, and being adolescents a risk group of unwanted pregnancies with unattended contraceptive needs<sup>(2)</sup>, the objective of this study was to identify the factors associated with the non-use of CM in adolescent women of the ENDES 2018-2020.

## METHODS

### Study Design

An observational, analytical and cross-sectional study was carried out using the ENDES 2018-2020 database in Peru<sup>(8)</sup>. The study had a two-stage, probabilistic sampling of balanced, stratified and independent type, at the departmental level and by urban and rural area.

### Population and sample

The study population consisted of 117 476 women and the sample after applying the inclusion criteria (participants aged 15 to 19 years with complete data for the dependent variable) was 1 706 adolescents aged 15 to 19 years, which was collected based on the sample design of the ENDES 2018-2020.

### Variables

The variables were dichotomized and evaluated using the ENDES 2018-2020<sup>(8)</sup> which we did not modify. They were dichotomized in order to better represent the state of the participant and facilitate the interpretation of the coefficients of the statistical model<sup>(9)</sup>.

The dependent variable was no use of CM (question V313), dichotomized as use of CM (folkloric method, traditional method and modern method) and no use of CM (no method). The covariates were categorized into sociodemographic, reproductive and violence. Among the sociodemographic factors were considered age<sup>(10)</sup> (question V012), average adolescence (14 to 17 years) and late adolescence (18 to 21 years) were considered; area of residence<sup>(7)</sup>, (question V025), rural and urban; wealth index<sup>(11)</sup> (question V190), poor (very poor, poor) and non-poor (medium, rich and very rich); higher education<sup>(12)</sup> (question V149), higher (non-university higher, university higher and postgraduate) and non-higher (initial/pre-school, primary and secondary); and the couple<sup>(13)</sup> (question V501), having a partner (cohabiting and married) and not having a partner (single).

For reproductive factors, the number of children<sup>(4)</sup> (question V201), not having children and having one to more children (if you have live children); age at first sexual intercourse<sup>(4)</sup> (question V5125), early adolescence (11 to 13 years) and middle adolescence (4 to 17 years); and sexual partners<sup>(14)</sup> (question V836), one sexual partner (if you have had one sexual partner in your life) and two more sexual partners (if you have had several sexual partners in your life) were taken into account.

Finally, the violence factor considered domestic, economic, psychological, physical and sexual violence<sup>(15-17)</sup> (questions D101F and D103D, D101A-E and D103 A-B, D105A-G and D105H-I of the ENDES 2018-2020 respectively).

### Data analysis

For this study we used a secondary data source from the ENDES 2018-2020. Statistical processing and analysis were performed using Stata software<sup>(15)</sup>. The univariate analysis was performed from the calculation of frequency and percentage.

In the bivariate analysis, prevalence ratios were calculated, crude (ORc) and adjusted (ORa) as a measure of association, both accompanied by their respective 95% confidence intervals. A value of  $p < 0.05$  was considered. The ORc and ORa were calculated using a Poisson regression model with robust variances. All estimates were made considering the expansion factor of the sample design. A power of 99% was obtained for risk factors identified as significant, with the overall mean power of all factors being 56%.

### Ethical aspects

Approval was obtained from the ethics committee of the Institute of Biomedical Sciences of the Faculty of Human Medicine of Ricardo Palma University; however, this was a study based on secondary sources.

## RESULTS

Of the 1,706 women aged 15 to 19 years, 28.4% did not use CM. It was observed that the adolescents were mostly in late adolescence (72.5%), lived in urban areas (53.1%), were poor (77.8%), had no higher education (93.7%), had a partner (88.0%), had one or more children (82.9%), had their first sexual relationship in late adolescence (84.1%), had a sexual partner (69.2%). More than half reported domestic violence (54.4%) and psychological violence (50.1%), while the majority did not report economic, physical or sexual violence 85.4%, 80.7% and 96.9% respectively. Table 1

In the bivariate analysis, the variables not having a partner and not having children were significant ( $p < 0.001$ ). Table 2

In the multivariate analysis, it was found that not having a partner had a prevalence ratio of 2.49 (95%CI: 1.99-3.11) of not using CM with respect to having a partner; and not having children had an ORa of 2.73 (95%CI: 2.22-3.35) of not using CM with respect to having one or more children. Table 3

**Table 1.** Características generales de las mujeres adolescentes de 15 a 19 años según la ENDES 2018-2020

Variables	n	Coefficiente de variación
<b>Uso de métodos anticonceptivos</b>		
No usa métodos anticonceptivos	484	6,30%
Usa métodos anticonceptivos	1 222	3,37%
<b>Edad</b>		
Adolescencia media	469	6,70%
Adolescencia tardía	1 237	2,61%
<b>Área de residencia</b>		
Rural	800	3,83%
Urbano	906	2,70%
<b>Índice de riqueza</b>		
Pobre	1 327	3,14%

No Pobre	379	7,13%
<b>Educación superior</b>		
No superior	1 599	1,35%
Superior	107	16,01%
<b>Pareja</b>		
No tener pareja	204	13,45%
Tener pareja	1 502	1,97%
<b>Cantidad de hijos</b>		
No tener hijos	291	6,20%
Tener uno a más hijos	1 415	3,85%
<b>Edad en la primera relación sexual</b>		
Adolescencia temprana	271	8,90%
Adolescencia media	1 435	1,37%
<b>Parejas sexuales</b>		
Una Pareja sexual	1 181	3,22%
Dos a más parejas sexuales	525	6,35%
<b>Violencia doméstica</b>		
No	777	4,72%
Si	929	3,72%
<b>Violencia psicológica</b>		
No	852	4,47%
Si	854	3,98%
<b>Violencia económica</b>		
No	1 457	1,54%
Si	249	10,16%
<b>Violencia física</b>		
No	1 376	2,16%
Si	330	9,91%
<b>Violencia sexual</b>		
No	1 653	0,55%
Si	53	18,38%

a/:p valor obtenido a través de la prueba F para muestras complejas  
Fuente :INEI ENDES 2018,2019,2020

En el análisis bivariado, las variables sin pareja y cero hijos fueron significativas (valor de  $p = <0,001$ ).  
Tabla 2

**Tabla 2.** Análisis bivariado de los factores asociados al no uso de métodos anticonceptivos en mujeres adolescentes de 15 a 19 años según la ENDES 2018-2020

Factores	Uso de método anticonceptivo		Valor de p
	NO n(%)	SI n(%)	
<b>Factores sociodemográficos</b>			
<b>Edad</b>			
Adolescencia media	141(30,1)	328(69,9)	0,339
Adolescencia tardía	343(27,7)	894(72,3)	
<b>Área de residencia</b>			
Rural	229(28,6)	571(71,4)	0,827
Urbano	255(28,1)	651(71,9)	
<b>Índice de riqueza</b>			
No pobre	94(24,8)	285(75,2)	0,081
Pobre	390(29,4)	937(70,6)	
<b>Educación superior</b>			
No superior	446(27,9)	1 153(72,1)	0,090
Superior	38(35,5)	69(64,5)	
<b>Pareja</b>			
No tener pareja	125(61,3)	79(38,7)	<0,001
tener pareja	359(23,9)	1 143(76,1)	
<b>Factores reproductivos</b>			
<b>Cantidad de hijos</b>			
No tener hijos	165(56,7)	126(43,3)	<0,001
Tener uno a más hijos	319(22,5)	1 096(77,5)	
<b>Edad en primera relación sexual</b>			
Adolescencia temprana	71(26,2)	200(73,8)	0,387
Adolescencia media	413(28,8)	1 022(71,2)	
<b>Parejas sexuales</b>			
Una pareja sexual	330(27,9)	851(72,1)	0,556
Dos a más parejas sexuales	154(29,3)	371(70,7)	
<b>Factores de violencia</b>			
<b>Violencia doméstica</b>			
Si	268(28,8)	661(71,2)	0,632
No	216(27,8)	561(72,2)	
<b>Violencia psicológica</b>			
Si	249(29,2)	605(70,8)	0,471
No	235(27,6)	617(72,4)	
<b>Violencia económica</b>			
Si	75(30,1)	174(69,9)	0,507
No	409(28,1)	1 048(71,9)	
<b>Violencia física</b>			
Si	100(30,3)	230(69,7)	0,386
No	384(27,9)	992(72,1)	
<b>Violencia sexual</b>			
Si	17(32,1)	36(67,9)	0,543
No	467(28,3)	1 186(71,7)	



**Tabla 3.** Análisis multivariado de los factores sociodemográficos asociados al no uso de métodos anticonceptivos en mujeres adolescentes de 15 a 19 años según la ENDES 2018-2020

Factores	Rp crudo	IC95%	Valor de P	Rp ajustado	IC95%	Valor de P
<b>Pareja</b>						
No tener pareja	1,48	1,32-1,66	<0,001	2,49	1,99-3,11	
Tener pareja						
<b>Cantidad de hijos</b>						
No tener hijos	1,43	1,3-1,57	<0,001	2,73	2,22-3,35	
Tener Uno a más hijos						

## DISCUSSION

The research found that 28.4% of adolescents aged 15 to 19 years did not use CM, a similar result is observed in the study of Guerrero<sup>(18)</sup> where adolescents of the same age did not use contraceptives in 22.6%; However, Mejía<sup>(19)</sup> in his study in four universities in Latin America reports that only 7% do not use any CM.

It was also found that 71.6% of adolescents used CM; However, Casey et al.<sup>(3)</sup> report that only half of adolescents aged 15 to 19 years use CM (51.7%). Gomez et al.<sup>(5)</sup> found that the use of reversible long-acting contraceptives among adolescent women aged 15 to 17 years is 1.1% and in women aged 18 to 19 years 2.0%. A statistically significant association was found for the variable couple ( $p < 0.001$ ). Not having a partner had 2.49 times higher prevalence of not using CM than having a partner; while having a partner had a higher percentage of use of CM (76.1%), however, Valladares et al.<sup>(13)</sup> report association between marital status and non-use of CM, where those who never married had 63.2% non-use of CM.

These findings may be explained by the fact that adolescents without a partner may not consider the use

of CM necessary, since they would not have sex; or some of them, when they have a formal partner with an apparent stability of the relationship, abandon the use of CM, putting their sexual health and the possibility of having an unwanted pregnancy at risk.

In this investigation, a significant association was found between the variable number of children and not using CM. Not having children had a prevalence of 2.73 times of not using CM compared to having one or more children; but having one or more children had the highest percentage of CM use (77.5%), Table 2; In the study by Otim<sup>(4)</sup>, in the Northeast region of Uganda, similar results to ours are reported since adolescents with zero children have a higher percentage of non-use of CM (91%) with a significant association.

The variables age, area of residence, wealth index, higher education, age at first sexual intercourse, sexual partners, violence (domestic, psychological, economic, physical and sexual) showed no statistical significance<sup>(20)</sup>.

In other studies found significant association for these variables for example Dunn et al.<sup>(10)</sup> report significance







for the variable age, and adolescents aged 15 to 17 years have a higher percentage of non-use of CM (21.3%); Salazar<sup>(7)</sup> found significant association for area of residence, 61% of women who did not use CM lived in rural areas; Noll et al.<sup>(14)</sup> reported significance for the variable number of sexual partners, and also observed that adolescents with four or more sexual partners had a higher frequency of not using CM, such as condom (43.5%); Finally, Quispe et al.<sup>(15)</sup> found an association between women who do not use CM and domestic violence (16.4%).

Within the limitations, the frequency of use of each CM

and the evaluation of its correct use were not determined; and others specific to analytical cross-sectional studies, such as the fact that causality cannot be established; only association between the variables studied.

## CONCLUSION

An association was found between non-use of CM and the reproductive factor not having children (ORa: 2.73 CI: 2.22-3.35) and the sociodemographic factor not having a partner (ORa: 2.49 CI: 1.99-3.11). No association was found with the violence factor.

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