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SOCIAL RISK FACTORS DETERMINING THE SEXUAL AND REPRODUCTIVE HEALTH OF ADOLESCENTS IN NORTHERN PERU

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Abstract: Introduction: Teenage pregnancy is associated with significant educational disadvantages and lower-paying, less satisfying jobs. The younger a teenager is when she has her first child, the greater the likelihood of having more children, which means that the socioeconomic consequences will be more drastic. **Objective:** To identify the social risk factors that determine adolescent sexual and reproductive health in northern Peru. **Methods:** Quantitative, non-experimental study with a correlational analytical design. The sample was represented by social, economic, and health indicators expressed as ratios or proportions. The variables were compiled from official government databases, such as the Ministry of Social Inclusion's Red Informa and the Regional Information System for Decision-Making (SIRTOD). The data were analyzed using EViews 12, an econometric statistical program that generates models and scenarios. **Results:** School dropout is an indicator that is directly and significantly linked to adolescent pregnancy R2= 64.19; p value = 0.023. Access to health care with an average coverage of 33.7%, access to the comprehensive health system 66.8% and the average poverty rate of 24% are the most notable socioeconomic indicators. The adolescent pregnancy rate has been declining over the last five years (2019–2023), from 12.4% in 2019 to 8.2% in 2023. **Conclusion:** School dropout is a determining indicator of the social risk model of teenage pregnancy.
Keywords: Sexual and reproductive health, teenage pregnancy, social risk, adolescents

INTRODUCTION

Teenage pregnancy is a global phenomenon with clear origins and dangerous health, social, and economic consequences. Globally, the teenage birth rate is declining, but the rate of change is uneven across regions. There are also large differences between countries and within countries. Teenage pregnancy tends to be higher among those with lower education or lower economic status. In addition, first birth rates among teenage mothers decline more slowly for them and other vulnerable groups, creating growing inequality. Child marriage and sexual abuse of girls increase the risk of unwanted pregnancies. In many places, barriers to access and use of contraception prevent teenage girls from avoiding unwanted pregnancies. (1).

Globally, the adolescent birth rate has declined from 64.5 births per 1,000 women in 2000 to 42.5 births per 1,000 women in 2021. However, rates of change have been uneven across different regions of the world, with the largest decline in South Asia and slower declines in Latin America and the Caribbean and sub-Saharan Africa. Although declines have occurred in all regions, sub-Saharan Africa and Latin America and the Caribbean continue to have the highest rates globally, with 101 and 53.2 births per 1,000 women, respectively, in 2021 (10-2).

There are also huge differences in adolescent birth rates within regions. In Latin America and the Caribbean, for example, Nicaragua had the highest estimated adolescent birth rate, with 85.6 per 1,000 adolescents in 2021, while in Chile the figure was 24.1 per 1,000 adolescents (11-3). There are huge variations, even within the same country. For example, in Zambia, the percentage of adolescents aged 15 to 19 who have started reproducing (women who have given birth or are pregnant at the time of the interview) ranged from 14.9% in Lusaka to 42.5% in the Southern Province in 2018 (12-4). In Indonesia, this percentage ranged from 3.5% in the administrative region of the Cordillera to 17.9% in the Davao Peninsula region in 2017 (13-5).

In recent years in Peru, according to the Demographic and Family Health Survey (ENDES), 13 out of every 100 adolescents betwe-

en the ages of 15 and 19 were already mothers or were pregnant for the first time . Although this figure fell in 2020 and 2021, the problem may not be accurately assessed due to the impact of the pandemic on primary care services, which were suspended during the most difficult period of the emergency. In this context, the 2021 Endes shows that 8.9% of adolescents between the ages of 15 and 19 had ever been pregnant; of these, 6.6% were already mothers and 2.3% were pregnant for the first time. In addition, the highest incidence is found in rural areas (15.6%), mainly among those who are already mothers (15-6).

Understanding that teenage pregnancy is a public health problem, the State must intervene through all sectors and levels of government to ensure intersectoral and intergovernmental coordination and the implementation of strategies to prevent an increase in cases. To this end, health services must be differentiated and specialized in comprehensive health care for adolescents, which implies, among other measures, that personnel must be properly trained (15-7).

In many places, adolescents do not have easy access to contraceptive methods. Even when they can obtain them, they may lack the means or resources to pay for them, as well as knowledge about where to obtain them and how to use them correctly. In addition, they are often at greater risk of discontinuing use due to side effects and changing life circumstances and reproductive intentions. Restrictive laws and policies regarding the provision of contraceptives based on age or marital status are a major barrier to the provision and acceptance of contraceptives among adolescents. This is often combined with prejudice or unwillingness on the part of health personnel to recognize the sexual health needs of adolescents (7-8).

METHOD

This was a quantitative, non-experimental study with a correlational analytical design. The sample was represented by social, economic, and health indicators represented in numerical terms or proportions. The variables were compiled from official government databases, such as RedInforma (71-9), a multisectoral repository that centralizes, stores, and updates information from digital databases containing user-level records/observations on services provided by public institutions at the central government level. On the other hand, the Regional Information System for Decision Making (SIRTOD) (72-10) is a web application administered by the National Institute of Statistics and Informatics (INEI), which provides statistical information by department, province, and district on demographic, social, economic, and environmental issues. This platform provides adequate information for decision-making by regional and local governments, researchers, and users in general.

The data was entered into EViews 12, an econometric statistical program that generates models and scenarios. The variables were analyzed descriptively to understand the basic characteristics of the data, using graphs to identify trends and possible anomalies. Ethical integrity was ensured by following the guidelines of LAW No. 29733; PERSONAL DATA PROTECTION LAW; 13.1 The processing of personal data must be carried out with full respect for the fundamental rights of the data subjects and the rights conferred on them by this Law.

RESULTS

In the multivariate analysis to determine the social risk model that determines adolescent sexual and reproductive health in the Tumbes Region, school dropout is an indicator that is directly and significantly linked to adolescent pregnancy R2= 64.19; p value = 0.023 (Table 1)

On the other hand, the most notable socioeconomic conditions among adolescents in the Tumbes region are access to healthcare, with an average coverage of 33.7%, access to comprehensive healthcare, at 66.8%, and an average poverty rate of 24% (Table 2).

An analysis of the trend in the adolescent pregnancy rate in the northern region of Peru shows a decline over the last five years, from 12.4% in 2019 to 8.2% in 2023.

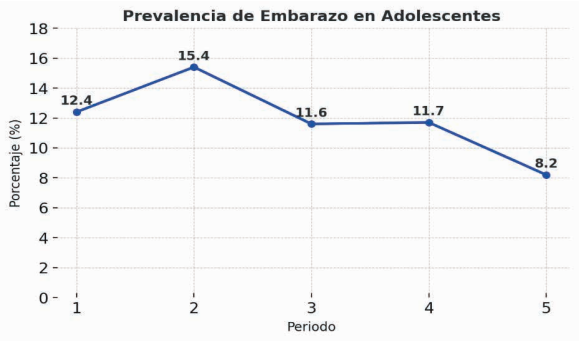

Table 3. Prevalence of teenage pregnancy in northern Peru; five-year period 2019–2023

DISCUSSION

In the multivariate analysis to determine the social risk model that determines adolescent sexual and reproductive health in the Tumbes Region, school dropout is an indicator that is directly and significantly linked to adolescent pregnancy R2= 64.19; p value = 0.023.Akinyemi AI et al (66-11) specify that, although wealth and education were important predictors of family planning (FP) use among adolescents in urban slums in southern Nigeria, only education was important in the north. However, relative inequality and slope indices further indicate that adolescents with no education and those in the lowest social status group use significantly fewer contraceptives compared to their wealthier and higher social status counterparts. Those with secondary/higher education and the highest social status group, respectively, were more disadvantaged in terms of FP use (Education: RII = 1.86, p < 0.05; 95% CI = 1.02-2.71.

On the other hand, the most notable socioeconomic conditions among adolescents in the Tumbes region are access to health care, with an average coverage of 33.7%, access to the comprehensive health system (66.8%), and an average poverty rate of 24%. Primary Health Care (PHC) is one of the levels of care provided by the Ministry of Public Health. It includes promotion, prevention, and education services and represents Cuba's contribution to the implementation and development of health care programs, with family nurses solving health problems. Issues, Communities, and Participation (61-12) This allows young people at this level to be involved through educational interventions that include teaching about the need for responsible sexual behavior and h , promoting family planning and informed parenting, and parenting with the aim of promoting sexual health and developing awareness of prevention. (62-13).

Regarding the sexual and reproductive health of adolescents in the districts of the Tumbes Region, the average coverage of female users who visited health facilities was only 12.44% (Table 3). In Latin America, Jijón M (70-14) in Ecuador 2021, in his study Predictors of pregnancy in adolescents and women. The predictive variables were education, contraceptive use, socioeconomic status, area, marital status, and age at first sexual intercourse. There were 38 cases/7587 (0.5%) cases of pregnancy in women aged 10 to 14, 714/6053 (11.8%) of pregnant women aged 15 to 18, and 1978/8599 (23%) cases of women aged 19 to 24 who had a history of teenage pregnancy. Teenage pregnancy was 2730 cases/22239 (12.28%). The variable marital status "married or in a common-law relationship" OR=2.53 (95% CI 2.50-2.56) P<0.001, sexual intercourse before age 14 OR 5.72 (95% CI 5.63-5.81) P<0.001, unmet basic needs OR = 1.57 (95% CI 1.55-1.59), schooling OR=0.87 (95% CI 0.866-0.87) P<0.001 and contraceptive use

Inter-subject effect tests

Source	Type III sum of squares	gl	Quadratic mean	F	Sig
Population aged 12 to 16 attending the secondary education level corresponding to their age	14,951	1	1	2,263	0
Net enrollment rate of females aged 12 to 16 in secondary education	1,112	1	1	0.111	0.7
School dropout rate	**64,199**	**1**	**64,199**	**18,553**	**0.02**
Poverty	3,287	1	3,287	0.043	0.849
Underemployment	7,242	1	7,242	1,908	0
Health insurance	27,994	1	27,994	0.758	0.44
Percentage of women reporting problems accessing health services (distance to health facility)	14,407	1	1	3	0
Psychological and/or verbal violence against women, perpetrated at some point by a husband or partner: some control	4,565	1	4	0.112	0.759
Percentage of women currently in union using modern methods (condoms)	0.224	1	0	0.452	0.5
Percentage of women who do not use contraception and visited a health facility in the last 12 months and discussed family planning	2.35	1	2	0	0.691

R2= 64.19; p value = 0.023

Table 1. Social risk model determining adolescent sexual and reproductive health

Year	Population aged 12 to 16 attending secondary education corresponding to their age	Net enrollment rate of females aged 12 to 16 in secondary education	School dropout rate	Poverty	Underemployment	SIS	Percentage of women who report problems accessing health services (distance to health facility)	Psychological and/or verbal violence against women, perpetrated at some point by a husband or partner: some control
2019	5	92	8	14	37.8	62.0	32.6	60.5
2020	49.0	88.4	14	33.0	42.2	67.0	31.8	48.2
2021	45.3	87.0	5.3	19.0	42.1	60.0	31.4	48.3
2022	44.3	92.9	5.0	25	39.6	71.0	35.6	48.5
2023	44.3	87.4	3	29.0	37.9	74.0	37.1	47

Data expressed in relative frequencies (%)

Table 2. Five-year socioeconomic conditions of adolescents in Tumbes, Peru

OR=0.53 (95% CI 0.525-0.537) P<0.001. The prediction equation has an accuracy of 76.1%. The study concludes that it is possible to predict teenage pregnancy, so work should be done on these variables.

In that order; Tigabu S et al (68-15), Women with primary education, belonging to households in the poorest wealth quintile who did not use any contraceptive methods and who used traditional contraceptive methods were significant spatial determinants of the spatial variation of adolescent pregnancy in Ethiopia. Detailed maps of adolescent pregnancy hotspots and their predictors were of paramount importance to policymakers for the design and implementation of adolescent--targeted programs.

The trend in the adolescent pregnancy rate has been declining over the last five years, from 12.4% in 2019 to 8.2% in 2023 (Table 5). In line with this, Birhanu BE et al (69-16) found that 2,134 (79.6%) of women aged 20 to 24 experienced pregnancy during their teenage years. Being sexually active before age 15 [AOR = 7.9; 95% CI: 4.5, 13.8]; being married before age 15 [AOR = 30; 95% CI: 16.7, 53.9] and being rural [ORA = 2.2; 95% CI: 1.4, 3.6] were positively associated with adolescent pregnancy. A woman living in a community with a lower proportion of contraceptive users [AOR = 2.3; 95% CI: 1.5, 3.5] also had a statistically significant association with adolescent pregnancy.

Similar information is reported by Nyarko SH (67-17), who found that the total prevalence of unwanted pregnancies among pregnant women in Ghana is 40%. Background characteristics such as age (OR=4.85, CI=1.48-15.84), educational level (OR=0.50, CI=0.26-1.01), marital status (OR=3.83, CI=1.67-8.75), parity (OR=0.13, CI=0.05-0.32), and region of residence (OR=0.11, CI=0.03-0.31) were significant predictors of unwanted pregnancy, net of unmet need for contraception. However, unmet need for contraception (OR = 7.13, CI = 1.57-8.91) serves as a significant independent predictor of unintended pregnancy, regardless of the background characteristics of the respondents. The study findings strongly underscore the need for significant improvement in access to contraceptive methods and family planning information in the quest to substantially reduce unintended pregnancies nationwide.

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