SOCIO-CULTURAL FACTORS THAT INFLUENCE 50-YEAR-OLD USERS FOR PAPANICOLAOU SCREENING AT A NASCA HOSPITAL

FACTORES SOCIOCULTURALES QUE INFLUYEN EN LAS USUARIAS DE 50 AÑOS PARA LA TOMA DE PAPANICOLAOU DE UN HOSPITAL NASCA

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ABSTRACT

Objective: The objective of this study was to determine the sociocultural factors in 50-year-old users for Pap smears at the Ricardo Cruzado Rivarola de Nasca hospital during the period December 2021 - February 2022. Material and Methods: Observational, analytical, and prospective study. The study population is made up of 80 50-year-old users who attend the Ricardo Cruzado Rivarola hospital for Pap tests at the gynecology-obstetrics office and the sample is 67 users, selected by non-probabilistic sampling for convenience. **Results:** For the first analysis, in simple regression, it was found that women with high levels of knowledge had a 153% higher frequency of having ever performed a PAP and women with a high level of knowledge had a 384% higher frequency of having ever performed a PAP. a PAP, compared to those with a low level of knowledge. Then, in the multiple regression it was shown that women with a high level of knowledge had a 382% greater frequency of ever having a PAP test, compared to those who had a low level of knowledge. **Conclusions:** The level of knowledge about the PAP has a relevant influence on having carried out a PAP; but also the women who had a high level were the ones who had the highest frequency of having done it. This added to the number of children; possibly because in the circles of women with children one of the topics to be discussed is about maternal health and within them the PAP.

Keywords: Pap smear, Sociocultural factors, Knowledge level. (Source: MESH-NLM)

RESUMEN

Objetivo: El objetivo del presente estudio fue determinar los factores socioculturales en usuarias de 50 años para la toma de Papanicolaou en el hospital Ricardo Cruzado Rivarola de Nasca durante el periodo diciembre 2021 – febrero 2022. **Métodos:** Realizamos un estudio observacional, analítica, y prospectivo. La población de estudio está constituida por 80 usuarias de 50 años que acuden al hospital Ricardo Cruzado Rivarola para controles de Papanicolaou al consultorio de ginecología-obstetricia. La muestra estuvo conformada por 67 usuarias, seleccionadas por muestreo no probabilístico por conveniencia. **Resultados:** Para el primer análisis, en la regresión simple, se encontró que las mujeres con nivel de conocimientos altos tenían 153% mayor frecuencia de haberse realizado alguna vez un PAP y las mujeres con nivel de conocimientos altos tenían 384% mayor frecuencia de haberse realizado alguna vez un PAP, en comparación a quienes tenían un nivel de conocimientos bajo. Luego, en la regresión múltiple se observó que las mujeres con nivel de conocimientos altos tenían 382% mayor frecuencia de haberse realizado alguna vez un PAP, en comparación a quienes tenían un nivel de conocimientos bajo. **Conclusiones:** El nivel de conocimiento sobre el PAP influye de una manera relevante al haberse realizado un PAP; pero además las mujeres que tuvieron mayor educación fueron las que tuvieron mayor frecuencia de haberlo realizado. Esto sumado a la cantidad de hijos; posiblemente porque en los círculos de mujeres con hijos uno de los temas a tratar es sobre la salud materna y dentro ellos el PAP.

Palabras clave: Papanicolaou; Factores socioculturales; Nivel de conocimiento. (Fuente: DeCS- BIREME)

INTRODUCTION

Cervical cancer is a public health problem worldwide due to its high mortality rate and resulting disability. It is a preventable disease through timely detection of the virus and/or promotion of healthier lifestyles [1].

Virus detection is related to early diagnosis, and there are several screening tests such as the Papanicolaou (PAP) [1]. However, this intervention is not effective if women do not attend places where this service is offered, as there may be sociocultural factors such as educational level, support and interest from partners, misinformation regarding the belief that the Papanicolaou test is only for young women, and the shyness of lacking privacy or trust with the healthcare professional. These factors may influence their decision to undergo the Papanicolaou test [1].

Cervical cancer is one of the neoplasms with the highest incidence worldwide, and it is mostly detected at advanced stages. Invasive cervical cancer is found in 78%, stage I in 8%, stage II in 42%, stage III in 43%, and stage IV in 7%. Therefore, we know that the Papanicolaou is one of the tests that helps detect cervical cancer in a timely manner, which is why it is crucial to undergo it annually [2]. The crude incidence rate of cervical cancer in Peru is 31.3/100.000, and the age-adjusted rate is 34.5/100.000 [3]. HPV infection is one of the most common sexually transmitted infections (STI) worldwide. It is estimated that there are approximately 440 million HPV infections globally, of which 160 million are clinical infections [3]. Also, it is estimated that of the 100 types of HPV, at least 20 are oncogenic. Among these, HPV 16 and 18 contribute to more than 70% of all cases of cervical cancer, 41% and 67% of high-grade cervical lesions, and 16% to 32% of low-grade cervical lesions [3].

On the other hand, among the factors mentioned by other studies that influence PAP testing are family income, marital status, having children, knowledge of cervical cancer symptoms, prior counseling before the test, and positive attitudes [4]. The lack of interest in undergoing Papanicolaou testing at the Hospital Ricardo Cruzado Rivarola in Nasca is quite broad as a result of various factors such as belonging to a rural area, lack of information, or personal beliefs of each individual. Therefore, the objective of this study is to determine the sociocultural factors that influence 50-year-old users in undergoing Papanicolaou testing at the Ricardo Cruzado Rivarola Hospital in Nasca during the period December 2021 to February 2022.

METHODS

Study design and area

This is an observational, analytical, and prospective study aimed at determining the sociocultural factors that influence 50-year-old users in undergoing Papanicolaou testing at Hospital Ricardo Cruzado Rivarola in Nasca during the period May 2022 to July 2022.

Population and sample

The study population consisted of 80 50-year-old users who attended the Hospital Ricardo Cruzado Rivarola in Nasca for Papanicolaou screenings at the gynecology-obstetrics office between May 2022 and July 2022. For sample selection, finite population calculation was performed, resulting in a sample size of 67 users. The sample was selected using non-probabilistic convenience sampling.

Variables and Instruments

The variables evaluated in this research are: Papanicolaou testing (yes/no) and the sociocultural factors that influence it: level of knowledge about Papanicolaou testing and marital status.

Procedures

Data was collected using a data collection form in Google Forms, divided into 3 parts: the first part contains data on Papanicolaou taking (yes/no), the second part includes general patient information, and the third part is a survey on the level of knowledge (high, moderate, low) consisting of 10 items. All patients who met the inclusion criteria were selected. To confirm the final version of the instrument, a previously validated survey was used [5,6].

Statistical Analysis

The collected data will be recorded in a matrix using Excel 2016. Statistical analysis was performed using STATA v17.0 software. Descriptive analysis was conducted with qualitative variables summarized as proportions, and quantitative variables presented as means and standard deviations, as they exhibited a normal distribution based on bias, kurtosis, and histogram analysis. In bivariate analysis, the chi-square test was used for categorical variables, and Student's t-test was chosen for the numeric variable, provided that the assumptions for each statistical test were met; otherwise, Fisher's or Mann-Whitney tests were used, respectively.

A multivariate generalized linear model from the Gaussian family (crude and adjusted) with robust variance was employed. The variables included in the multivariate model were educational level, marital status, and the number of children. These variables were selected based on literature review. The measure of association was the prevalence ratio (PR) with a corresponding 95% confidence interval (CI).

Ethical Considerations

The study was approved by the Institutional Research Ethics Committee (IREC) of the Universidad Privada San Juan Bautista (Approval No. 669-2022-IREC-UPSJB). The survey was performed on each participant after providing information about the study's objective and ensuring their anonymity. Informed consent was obtained from voluntary participants, and their privacy was maintained to enhance the trustworthiness of their responses.

RESULTS

A total of 67 women aged 50 were included in the study. It was found that the majority had completed secondary education (46.27%), less than half were in a cohabiting relationship (32.84%), and the majority had fewer than 4 children (67.16%). The proportion of socioeconomic status was approximately 30% for each subtype. The majority had never had a Papanicolaou test (53.73%). Most women had a low level of knowledge (34.33%) (Table 1).

Table 1. Sociodemographic characteristics of the women sample (n: 67).

Characteristics	n%
Education level	
Incomplete secondary	17 (25.37)
Completed secondary	31 (46.27)
Incomplete higher education	12 (17.91)
Completed higher education	7 (10.45)
Marital status	
Single	18 (26.87)
Cohabiting	22 (32.84)
Married	19 (28.36)
Widow	8 (11.94)
Number of children	
Less than 4	45 (67.16)
4 or more	22 (32.84)
Ever had a *PAP test	
No	36 (53.73)
Yes	31 (46.27)
Level of knowledge	
Low	23 (34.33)
Moderate	25 (37.31)
High	19 (28.36)

*PAP: Papanicolaou test.

Women who had fewer than 4 children had a 28.29% higher frequency of having ever had a PAP test compared to those who had 4 or more children (55.56% vs 27.27%; p=0.029). Similarly, women with high level of knowledge had a 66.82% higher frequency of having ever had a PAP test, and women with regular level of knowledge had a 26.61% higher frequency of having ever had a PAP test, compared to those with low level of knowledge (84.21% vs 44% vs 17.39%; p=0.001). Except for education level and marital status, no statistically significant associations were found (Table 2).

Table 2. Bivariate analysis of the associated characteristics on the level of knowledge about Papanicolaou in a sample of women.

Characteristics	Level of knowledge about PAP		*p
	No (n=17) n (%)	Yes (n=13) n (%)	
Education level			
Incomplete secondary	9 (52.94)	8 (47.06)	
Completed secondary	17 (54.84)	14 (45.16)	0.505*
Incomplete higher education	8 (66.67)	4 (33.33)	
Completed higher education	2 (28.57)	5 (71.43)	
Marital status			0.202*
Single	8 (44.44)	10 (55.56)	
Cohabiting	11 (50)	11 (50)	
Married	14 (73.68)	5 (26.32)	
Widow	3 (37.50)	5 (62.50)	
Number of children			**0.029****
Less than 4	20 (44.44)	25 (55.56)	
4 or more	16 (72.73)	6 (27.27)	
Level of knowledge			**0.001****
Low	19 (82.61)	4 (17.39)	
Moderate	14 (56)	11 (44)	
High	3 (15.73)	16 (84.21)	

*Conducted using Fisher's test

**Conducted using chi-square test of independence

For the first analysis, in the simple regression, it was found that women with high knowledge level had a 153% higher frequency of having ever undergone a PAP test (PR=2.53; 95% CI: 0.93-6.89), and women with moderate knowledge level had a 384% higher frequency of having ever undergone a PAP test compared to those with low knowledge level (PR=4.84; 95% CI: 1.93-12.13). Then, in the multiple regression, the observed association was preserved in terms of direction and magnitude. It was observed that women with high knowledge level had a 382% higher frequency of having ever undergone a PAP test compared to those with low knowledge level (PR=4.82; 95% CI: 2.04-11.39). Women with moderate knowledge level had a 183% higher frequency of having ever undergone a PAP test compared to those with low knowledge level (PR=2.83; 95% CI: 0.32-7.15). This was adjusted for confusing covariates of education level, marital status, and number of children (Table 3).

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Table 3. Crude and adjusted Poisson regression model to evaluate the knowledge level on Papanicolaou and having ever undergone a PAP test in a sample of women.

Characteristics	Crude Analysis			Adjusted Analysis*		
	PR	CI 95%	P	PR	CI 95%	p
Level of Knowledge						
Low	Ref			Ref		
Moderate	2.53	0.93-6.89	**0.069**	2.83	0.32-7.15	**0.027**
High	4.84	1.93-12.13	**0.001**	4.82	2.04-11.39	**0.001**

* Adjusted for education level, marital status, and number of children
** significant p-value <0.05
PR: Prevalence ratio. 95% CI: 95% confidence interval
Source: Own elaboration.

DISCUSSION
Main findings
In the present study, the results show that having a high or moderate level of knowledge about PAP smear was associated with having undergone a PAP smear test at least once, even after adjusting for covariates such as educational level, marital status, and number of children.

Comparison with other studies
According to recent studies, approximately half of Peruvian women have never undergone a PAP smear test. This is reflected in epidemiological data describing coverage rates of less than 50% in Peru, particularly in the highlands, jungle, and rural areas [7-11]. In our study, the frequency of having ever undergone a PAP smear test was 46.27%, which is similar to the findings of a study by Bendezú et al., whose study reported a prevalence of omen aged 30 to 49 years [11]. However, the trend of PAP smear testing in previous years, before 2010, ranged from 7% to 42.9% [10], while in 2018, it was reported to be 86.9% (n=6340) based on an analysis of women aged 30 to 49 years who participated in the Demographic and Health Surveys (DHS) 2018 [12]. Possible causes for the low PAP smear testing rates include a lack of knowledge about what a PAP smear is and its usefulness [9,10,13], low educational level, inadequate history of PAP smear testing, and marital status [14-17]. In our study, educational level and marital status were not found to be associated with having ever undergone a PAP smear test.

In our study, women who had fewer than 4 children had a 28.29% higher frequency of undergoing a PAP smear test, and this finding was statistically significant. This is similar to a study where women with 1 to 3 children had a 38.3% frequency of undergoing a PAP smear test, compared to mothers with 4 or more children, who had a 15.9% frequency [18]. Further research is still needed to examine this issue. Possible explanations could be that, although the latest guidelines from the Ministry of Health and EsSalud state that a PAP smear should be done every 3 years or annually starting at 21 and 18 years of age, respectively, a study considering women's opinions revealed that some believe they should start having a PAP smear after having children [18]. Therefore, it is possible that women who have ever had a PAP smear test did so during prenatal care [20,21].

Another possible explanation is that women who have children begin to discuss various health-related topics with other mothers. This was reflected in a study that found a strong belief that a PAP smear should be done after having or no longer having children, suggesting that although women knew they should have a PAP smear when sexually active, they might have delayed initiation until after having a child [18,22-25].

Women with a high level of knowledge had a 382% higher frequency of having ever undergone a PAP smear test compared to those with inadequate knowledge. This finding is similar to what was reported in other studies, such as Bendezú's, which found a 27% higher frequency among those with adequate knowledge [11]. The study by Mamani et al. also reports

that women with no knowledge about PAP smears had a 278% higher likelihood of not having had a PAP smear compared to those with knowledge [12]. Knowledge about PAP smears leads women to become aware of the risks of not getting tested (such as cervical cancer), learn about risk behaviors associated with this condition, and understand the usefulness of PAP smears at specific times in their lives [26]; Therefore, greater knowledge implies a greater willingness to undergo a PAP smear [27,28].

Recommendations

As this is a cross-sectional study, it is not possible to establish a temporal relationship between the dependent variable and the covariates of the study. Additionally, the study did not consider the attitudes, thoughts, and beliefs regarding the reasons why women may not undergo a Pap smear. However, we believe that the findings of the study are valuable in providing an overview of knowledge about PAP smears and its association with having ever undergone a PAP smear test.

Limitations
Our study has limitations.

CONCLUSIONS
The level of knowledge about PAP smears significantly influences the likelihood of having undergone a PAP smear test, and women with a high level of knowledge had the highest frequency of having done so. This, combined with the number of children they have, is possibly because discussions about maternal health, including PAP smears, are common among circles of women with children.

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