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Factors influencing compliance with cervical cancer screening guidelines among women aged 30 to 49 years in Morocco

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Abstract

Cervical cancer screening (CCS) is vital for its prevention. Morocco is implementing a screening program targeting women aged 30 to 49 years, who are invited to undergo screening tests such as visual inspection with acetic acid (VIA). This study aimed to explore the factors influencing compliance with CSS guidelines among these women. A cross-sectional study was conducted using a face-to-face questionnaire survey among women, attending health centers and recruited from the Department of Gynecology at the University Hospital Mohammed VI in Marrakech, Morocco. The study was conducted between 2024 and 2025, it included 398 women aged 30 to 49 years. The Chi-square test and binary logistic regression were used to identify factors associated with compliance. The CCS compliance rate was 7.8%. Factors associated with non-compliance included living area and fear of testing positive. Awareness campaigns and targeted interventions are recommended to increase the screening coverage among this population. (*Afr J Reprod Health* 2026; 30 [18]:28-37).

Keywords: Cervical cancer screening, Visual inspection with acetic acid, compliance, factors, Morocco

Résumé

Le dépistage du cancer du col de l'utérus (CCU) est essentiel à sa prévention. Le Maroc met en œuvre un programme de dépistage ciblant les femmes âgées de 30 à 49 ans, invitées à réaliser des tests tels que l'inspection visuelle à l'acide acétique (IVA). Cette étude visait à examiner les facteurs influençant l'observance des recommandations de dépistage du CCU chez ces femmes. Une étude transversale a été menée par questionnaire en face-à-face auprès de femmes fréquentant des centres de santé et recrutées au sein du service de gynécologie du Centre Hospitalier Universitaire (CHU) Mohammed VI de Marrakech, au Maroc. L'étude s'est déroulée entre 2024 et 2025 et a inclus 398 femmes âgées de 30 à 49 ans. Le test du Khi-carré et la régression logistique binaire ont été utilisés pour identifier les facteurs associés à l'observance. Le taux d'observance du dépistage était de 7,8 %. Les facteurs associés à la non-observance comprenaient le lieu de résidence et la crainte d'un résultat positif. Des campagnes de sensibilisation et des interventions ciblées sont recommandées pour accroître la couverture du dépistage au sein de cette population. (*Afr J Reprod Health* 2026; 30 [18]:18-27).

Mots-clés: Dépistage du cancer du col de l'utérus, inspection visuelle à l'acide acétique, observance, facteurs, Maroc

Introduction

Cervical cancer is a major public health problem worldwide. it's the fourth most frequently diagnosed cancer among women, with an estimated 660,000 new cases and approximately 350,000 associated deaths in 2022.¹ In Morocco, cervical cancer is the second most common cancer among women, with an estimated annual incidence of 2165 cases and more than 1199 associated deaths.² However, cervical cancer is largely preventable if it is diagnosed and treated early through effective cervical cancer

screening programs.³ According to estimates from the International Agency for Research on Cancer (IARC), most cervical cancer cases and deaths occur in low- and middle-income countries.⁴ Based on data from the Grand Casablanca Cancer Registry 2013–2017 in Morocco, published in 2022, cervical cancer represents 8.1% of all female cancers in Morocco, with a standardized incidence rate of 9.2 new cases per 100,000 women in the Moroccan population.⁵ Indeed, the National Plan for the Prevention and Control of Cancer (PNPCC) 2010–2019 aimed to control cervical cancer through the introduction of

HPV vaccination, and the establishment of an organized screening program for women aged 30–49 years. The PNPCC 2020–2029 builds on the achievements of the first plan and aligns with the WHO's global strategy by adopting the “90–70–90” targets, its aims to ensure that 70% of women are screened using a high-performance test at age of 35, and again at age 45 by 2030⁵. In Morocco, the program seeks to achieve a minimum annual cervical cancer screening coverage of 30%, in accordance with the objectives of the PNPCC 2020–2029.⁶ Despite the considerable efforts made by the health authorities within the framework of the National Plan for the Prevention and Control of Cancer (PNPCC), compliance with cervical cancer screening guidelines among women remains unsatisfactory in the Marrakech-Safi region. Following this, the Regional Directorate of Health in Marrakech confirmed that the annual cervical cancer screening coverage in the Marrakech-Safi region was very low in 2022, 2023 and 2024, with rates of 7.19%, 6.45% and 10.23% respectively. The objective of this study is to explore the factors influencing compliance with cervical cancer screening guidelines among these women.

Methods

The type and setting of the study

This research involved a cross-sectional study, conducted between December 2024 and November 2025 with the aim of exploring the factors influencing compliance with cervical cancer screening guidelines among women who attended health centers and the Department of Gynecology A and B at the University Hospital Mohammed VI in the Marrakech-Safi region in Morocco. Marrakech-Safi is a region located in the central-western of Morocco, with a population of 4,892,393. It covers an area of 41,404 Km² (HCP, 2024).⁷

The study population

Inclusion criteria

Women aged 30 and 49 years, without mental or physical impairments that could hinder participation in focused discussions.

Exclusion criteria

Women with a history of cervical cancer or those unable to respond to the questions were excluded.

Sampling and recruitment of participants

The sample size was calculated based on a margin of error of 5.0% and a confidence interval (CI) of 95% using SurveyMonkey's sample size calculator.

The total number of women aged 30 to 49 years in the Marrakech-Safi region of Morocco is estimated at 653 304 (Santé en chiffres, 2022). The required sample size was estimated at 385 women. To enhance the robustness of the findings and to account for potential non-responses or missing data, the sample size was increased to 398 women.

The sample (n = 398) was distributed across health centers in Marrakech, Morocco including 180 women who represented those attending the center during the study period, as well as the Department of Gynecology A and B at the University Hospital Mohammed VI in Marrakech, Morocco, including 218 women monitored in the Department during the study period, who represented all the cases recorded in this center.

The instrument for measuring and collecting data

A face-to-face structured questionnaire survey was used for data collection from participants. The first part of the questionnaire covered sociodemographic characteristics such as age, marital status, parity, living area, province, educational level of both the women and their husbands, employment status of both women and their husbands, socioeconomic level (monthly income), and health insurance status. In the second section, the participants were asked to answer specific questions about compliance with cervical cancer screening guidelines, including whether, they had ever been screened using visual inspection with acetic acid (IVA), the main reasons for not participating in early cervical cancer screening, whether they had been informed by medical staff about the importance of regular cervical cancer screening, and whether they intended to be screened in the future. This cross-sectional study was conducted in eight health centers in

Marrakech, Morocco (Akiod, Koudia, Zerkouni, Castor, Massira 2, Bahia, Maatallah, and Azzouzia). As the number of eligible women attending these centers was insufficient to achieve the required sample size, participant recruitment was extended to the Department of Gynecology A and B at the University Hospital Mohammed VI in Marrakech. These departments receive a large number of women aged 30-49 years from different provinces of the Marrakech-Safi region, thereby enhancing the geographic representativeness of the study population.

A consecutive sampling was employed. All eligible women aged 30-49 years who attended the participating health facilities during the data collection period were invited to participate until the required sample size was achieved.

Statistical analysis

The collected data were analyzed using IBM® SPSS® Statistics version 21.

The dependent variable was cervical cancer screening uptake, assessed using the following question: "Have you ever undergone a visual inspection with acetic acid (VIA) screening test?" Responses were recorded as a binary variable (Yes/No). Women who responded "Yes" were classified as having undergone cervical cancer screening, while those who answered "No" were classified as unscreened.

The independent variables included age, marital status, parity, area and province of residence, educational level of the woman and her husband, employment status of the woman and her husband, monthly household income, health insurance coverage, and medical consultation. Age was recorded as a continuous variable (years) and subsequently categorized into age groups for analysis. Marital status was categorized as single, married, divorced and widowed. Parity was defined as the number of live births and categorized as 0, 1 and ≥ 2 . Area of residence was categorized as urban or rural. Province of residence was categorized as Marrakech, Al Haouz, Rehamna, Chichaoua, Youssoufia, El Kelaa des sraghna, Essaouira, Safi. The educational level of the woman and her husband was categorized as illiterate, primary,

middle, secondary, or higher education. The employment status for the woman and her husband was categorized as employed or unemployed. Monthly household income was categorized as <3500 MAD, 3500 MAD, >3500 MAD, or "don't know". Health insurance coverage and medical consultation were recorded as a binary variable (Yes/No).

The quantitative variables were represented in frequencies and percentages.

Pearson's chi-square test (χ^2) was employed to assess the statistical significance of associations between participants' demographics and their compliance to cervical cancer screening.

In addition, binary logistic regression analyses were conducted to identify factors associated with non-compliance with cervical cancer screening guidelines in the study population.

For $P\text{-value} \leq 20$ in the bivariate analysis were considered in the binary logistic regression analyses. A significance level of $P\text{-values} < 0.05$ was used for all tests.

Ethical approval and consent to participate

The objective of the study was clearly explained to all participants prior to data collection. Data collection began after authorization was obtained from the Directorate of the University Hospital Mohammed VI, in Marrakech. Participation in the survey was voluntary, anonymous, and confidential. Ethical considerations were upheld throughout the study and verbal informed consent was obtained from all female participants. All research procedures and data collection methods were conducted in accordance with the guidelines and regulations of the Ethics Committee of Mohammed VI University Hospital in Marrakech (Approval No 113/2024).

Results

The results are organized according to participants' sociodemographic and professional characteristics, their knowledge of cervical cancer and its screening methods, the association between participant characteristics and screening uptake, and finally, the factors associated with compliance to cervical cancer screening guidelines.

Sociodemographic and professional characteristics of the participants

Participants were aged between 30 and 49 years, with a mean age of 36.45 years (SD=4.97).

The study population was predominantly composed of married women (97.5%), most of whom had more than two children (81%). More than half of the participants resided in urban areas (55.5%), and a substantial proportion lived in Marrakech (45.5%). Regarding educational attainment, 36.9% of the women had completed primary school, while 30.1% of their husbands had attained a primary level of education. Most women unemployed (89.7%), whereas the majority of their husbands were employed (87%). In terms of socioeconomic status, 53% of households reported a monthly income below 3,500 MAD. Concerning health coverage, 71.6% of the participants had health insurance, of whom 58.4% were covered by the AMO scheme. Additionally, 79.1% of the women reported receiving regular medical follow-up as shown in Table 1. The sociodemographic and economic characteristics of the 398 women who participated in the survey are presented in Table 1.

Compliance with cervical cancer screening guidelines among women aged 30–49 years

Compliance with cervical cancer screening guidelines among women aged 30 to 49 years and barriers to screening in this population are presented in Table 2. Among the 398 participants, 299 (75.1%) reported having heard about cervical cancer screening. The most common reported source of information was the mass media (radio/television) cited by 217 respondents (72.6%), followed by the internet (n=83, 27.8%) and healthcare professionals (n=82, 27.4 %) (Table 2). A total of 253 of 398 women (63.6%) correctly identified 30–49 years as the recommended age range for cervical cancer screening. Additionally, 346 participants (86.9%) reported having consulted a doctor or midwife within the previous three years. However, among these women, 83.8% stated that cervical cancer screening had not been discussed during the consultation. Overall, 351 of the 398 participants (88.2%) reported not knowing how early cervical screening is performed in healthcare facilities.

Table 1: Characteristics of the study participants

Variable	Frequency	Percentage
Age (years)		
≤ 30	41	10.3
> 30	357	89.7
Marital status		
Single/Divorced/Widowed	10	2.5
Married	388	97.5
Parity		
0	15	3.8
1	60	15.2
≥ 2	321	81
Living area		
Rural	177	44.5
Urban	221	55.5
Province		
Marrakech	181	45.5
Al Haouz	109	27.4
Rehamna	27	6.8
Chichaoua	27	6.8
Yousseoufia	21	5.3
El Kelaa des sraghna	22	5.4
Essaouira	3	0.8
Safi	8	2
Educational level of the women		
Illiterate	123	30.9
Primary school	147	36.9
Middle school	56	14
Secondary school	37	9.3
University	33	8.3
Others	2	0.6
Educational level of the husband		
Illiterate	88	23.2
Primary school	114	30.1
Middle school	79	20.8
Secondary school	46	12.1
University	41	10.8
Others	11	3
Employed women		
Yes	41	10.3
No	357	89.7
Employed husband		
Yes	346	87
No	42	10.6
Income		
< 3500 MAD	214	53.8
3500 MAD	33	8.3
≥ 3500 MAD	58	14.5
I don't know	93	23.4

Health Insurance		
Yes	285	71.6
No	113	28.4
If yes, which health insurance ?		
AMO	163	58.4
CNSS	91	32.6
CNOPS	10	3.6
Others	14	5
I don't know	1	0.4
Medical consultation		
Yes	315	79.1
No	83	20.9

Furthermore, and only 31 participants (7.8%) reported having undergone a visual inspection with acetic acid (VIA) screening test. Among the 367 participants (92.2%) who had never undergone cervical cancer screening, the most frequently reported reason for not being screened was fear of testing positive (62.3%), followed by shyness (19.8%), lack of information (14.1%), and other reasons (17.1%). Finally, 90.2% of participants expressed willingness to be screened (Table 2).

***Multiple answer question**

Bivariate analysis of the association between participation in cervical cancer screening using the Visual Inspection of the cervix with Acetic Acid (VIA) screening test (Yes/No) and participants' sociodemographic and professional characteristics is summarized in Table 3.

Significant associations were observed with the participants' age, marital status, living area, province. No significant associations were found between participation in Visual Inspection with Acetic Acid (VIA) screening test and parity, the educational level of the woman and her husband, employment status of the women or her husband, income, health insurance coverage or medical consultation as shown in Table 3. The associations between population characteristics and participation in cervical cancer screening using Visual Inspection with Acetic Acid (VIA) are presented in Table 3. *Statistically significant at $p < 0.05$. In the binary logistic regression analysis, living area was significantly associated with participation in cervical cancer screening using Visual Inspection with Acetic Acid (VIA) as shown in Table 4.

Women living in rural areas were significantly less likely to comply with cervical cancer screening guidelines than those living in urban areas (OR=0.041, 95% CI: 0.005-0.310).

In contrast, the husband's educational level (OR=0.737, 95% CI: 0.325-1.671), husband's employment status (OR: 1.119, 95% CI: 0.232-5.391) and health insurance (OR: 0.493, 95% CI: 0.179-1.356) were not significantly associated with compliance with screening guidelines. Factors influencing compliance with cervical cancer screening guidelines among women aged 30 to 49 years are presented in Table 4.

Discussion

This study aimed to assess the factors influencing compliance with cervical cancer screening guidelines among women aged 30-49 years in the region Marrakech-Safi, Morocco. We identified several significant barriers to CC screening including living area, marital status, lack of information and fear of receiving a positive test result.

Data showed that women living in rural areas were less likely to participate in cervical cancer screening (CCU). This observation is in consistent with previous studies indicating that women in rural areas face major barriers to accessing healthcare, particularly because of geographical remoteness, limited health infrastructure and lower levels of health education.⁸ These findings highlight the urgent need to improve screening and health education strategies, especially in rural areas.

Indeed, women residing in urban areas were more likely to participate in cervical screening programs. This may be explained by the fact that women in urban areas typically have better access to health information through various channels, including mass media, internet, and health promotion campaigns. Marital status appears to influence participation in cervical cancer screening programs, with married women being more likely to undergo the IVA test. This finding is supported by previous research indicating that marital status also influences early diagnosis, as married women are more likely to consult healthcare professionals regularly, likely due to marital and family support that promotes better medical adherence.⁸

Table 2: Compliance with cervical cancer screening guidelines and barriers to screening among women aged 30 to 49 years

Variables	N= 398	%
Do you know about cervical cancer screening ?		
Yes	299	75.1
No	99	24.9
If yes, what is your source of information? *		
Media	217	72.8
Hospital staff	82	27.5
Internet	83	27.9
Self-cultivation	2	0.7
Others	66	22.1
What is the recommended age to get screened for cervical cancer? *		
20-29 years old	45	11.3
30-49 years old	253	63.6
Aged 50 and over	65	16.3
I don't know	77	19.3
Have you consulted a doctor or midwife in the last three years ?		
Yes	346	86.9
No	52	13.1
If yes, did they talk to you about cervical cancer screening ?		
Yes	56	16.2
No	290	83.8
Do you have any idea about how early screening for cervical cancer is carried out in a healthcare facility ?		
Yes	47	11.8
No	351	88.2
Have you ever had a visual inspection of the cervix with acetic acid (VIA) screening test ?		
Yes	31	7.8
No	367	92.2
What are the main reasons for not participating in early screening for cervical cancer?		
Lack of information	56	14.1
No time	38	9.5
Fear of testing positive	248	62.3
No illness	29	7.3
Shyness	79	19.8
No reason	5	1.3
Other reasons	68	17.1
I don't know	11	2.8
Are you ready to get screened early for cervical cancer ?		
Yes	358	90.2
No	39	9.8

In contrast, parity, the educational level of both the woman and her husband, employment status of the women and her husband, income, health insurance coverage, and medical consultation were not significantly associated with compliance to cervical cancer screening guidelines.

Indeed, several sociocultural belief factors influence compliance with cancer screening and can be classified into three categories: individual, family-related, and environmental factors. At the individual level, these factors include fear, anxiety, and medical mistrust. Family-related factors encompass the

Table 3: Association between population characteristics and participation in cervical cancer screening using Visual Inspection with Acetic Acid (VIA).

Variable	Number (%) n= 398	Have you ever had a visual inspection of the cervix with acetic acid (VIA) screening test ?		χ^2	P-value
		Yes n (%)	No n (%)		
Age (years)					
≤ 30	41 (10.3)	0 (0)	41 (11.2)	3.861	0.049
> 30	357 (89.7)	31 (100)	326 (88.8)		
Marital status					
Single/Divorced/Widowed	10 (2.5)	1 (3.2)	9 (2.5)	12.601	0.006
Married	388 (97.5)	30 (96.8)	358 (97.5)		
Parity					
0	15 (3.8)	0 (0)	15 (4.1)	4.110	0.391
1	60 (15.2)	4 (12.9)	56 (15.3)		
≥2	321 (81)	27 (87.1)	294 (80.5)		
Living area					
Rural	177 (44.5)	1 (3.2)	176 (48)	23.161	<0.001
Urban	221 (55.5)	30 (96.8)	191 (52)		
Province					
Marrakech	181 (45.5)	29 (93.5)	152 (41.4)	31.718	<0.001
Al Haouz	109 (27.4)	1 (3.2)	108 (29.4)		
Rehamna	27 (6.8)	1 (3.2)	26 (7.1)		
Chichaoua	27 (6.8)	0 (0)	27 (7.4)		
Youssofia	21 (5.3)	0 (0)	21 (5.7)		
El Kelaa des sraghna	22 (5.4)	0 (0)	22 (6)		
Essaouira	3 (0.8)	0 (0)	3 (0.8)		
Safi	8 (2)	0 (0)	8 (2.2)		
Educational level of the woman					
Illiterate	123 (30.9)	8 (25.8)	115 (31.3)	7.761	0.256
Primary school	147 (36.9)	8 (25.8)	139 (37.9)		
Middle school	56 (14)	4 (12.9)	52 (14.2)		
Secondary school	37 (9.3)	6 (19.4)	31 (8.4)		
University	33 (8.3)	5 (16.1)	28 (7.6)		
Others	2 (0.6)	0 (0)	2 (0.6)		
Educational level of the husband					
Illiterate	88 (23.2)	5 (16.7)	83 (23.8)	10.975	0.140
Primary school	114 (30.1)	5 (16.7)	109 (31.2)		
Middle school	79 (20.8)	6 (20)	73 (20.9)		
Secondary school	46 (12.1)	5 (16.7)	41 (11.7)		
University	41 (10.8)	8 (26.7)	33 (9.5)		
Others	11 (3)	1 (3.3)	10 (2.9)		
Employed women					
Yes	41 (10.3)	4 (12.9)	37 (10.1)	0.294	0.863
No	357 (89.7)	27 (87.1)	330 (89.9)		
Employed husband					
Yes	346 (87)	28 (90.3)	318 (86.6)	9.343	0.053
No	42 (10.6)	2 (6.5)	40 (10.9)		
Income					
< 3500 MAD	214 (53.8)	16 (51.6)	198 (54)	0.692	0.875
3500 MAD	33 (8.3)	2 (6.5)	31 (8.4)		

> 3500 MAD	58 (14.5)	4 (12.9)	54 (14.7)		
I don't know	93 (23.4)	9 (29)	84 (22.9)		
Health Insurance					
Yes	285 (71.6)	26 (83.9)	259 (70.6)	2.487	0.115
No	113 (28.4)	5 (16.1)	108 (29.4)		
Medical consultation					
Yes	315 (79.1)	24 (77.4)	291 (79.3)	0.061	0.805
No	83 (20.9)	7 (22.6)	76 (20.7)		

*Statistically significant at $p < 0.05$

Table 4: Factors influencing compliance with cervical cancer screening guidelines among women aged 30 to 49 years

Variables	B	SE	P-value	OR	95% CI
Living area					
Urban (Réf)	-	1.034	0.002	0.041	0.005-0.310
Rural	3,196				
Educational level of the husband					
High education (Réf)	-	0.417	0.465	0.737	0.325-1.671
Low education	0,305				
Employed husband					
Yes (Réf)	0.113	0.802	0.888	1.119	0.232-5.391
No					
Health Insurance					
Yes (Réf)	-	0.516	0.171	0.493	0.179-1.356
No	0,707				

*Statistically significant at $p < 0.05$

influence of spouses and other family members and environmental factors involve the role of the community, healthcare professionals.⁹

The results showed that 75.1% had heard about cervical cancer screening. This finding is similar to previous studies, where 77% of participants were aware of the cervical cancer screening program in Morocco.⁹ As for the sources of information, the most dominant source was the mass media (n=217, 72.8%). This may be explained by the wide accessibility of television and radio which facilitate the dissemination of health information to the general population.

A total of women (253/398) (63.6%) reported that 30-49 years is the recommended age to get screened for cervical cancer. In contrast a study in Morocco reported that only a small proportion of participants knew the eligible age range for screening (46%).¹⁰ While (346/398) (86.9%) of women consulted a doctor or midwife in the last three years and healthcare staff didn't discuss cervical cancer screening during the consultation in 83.8% This may be explained by time constraints

faced by healthcare providers or by a lack of awareness campaigns. Strengthening the role of healthcare professionals in informing and encouraging women to undergo screening is therefore essential to improve participation in screening programs.

Interestingly, we found that only 7.8% women comply with cervical cancer screening guidelines by undergoing a visual inspection of the cervix with acetic acid (VIA) screening test. This is similar to the findings from a study in Ethiopia, which reported that a few participants had ever undergone cervical cancer screening.¹¹ The overall prevalence of cervical cancer screening practice in Africa was 20.94%.¹² In Durame town, Southern Ethiopia, cervical cancer screening practice was 13.8%,¹³ while only 15.1% of women in Butajira Town had ever been screened for premalignant cervical lesion.¹⁴ About (351/398) (88.2%) of participants had no idea how early cervical cancer screening is carried out in a healthcare facility.

Among the (367/398) (92.2%) women who had never undergone cervical cancer screening. The

reported reasons for non-participation included fear of testing positive (62.3%), shyness (19.8%), lack of information (14.1%), and other reasons (17.1%). Notably, fear is inherently distressing and can act as a significant barrier to cervical cancer screening, influencing women's decision regarding participation in screening programs. This finding agrees with previous studies indicating that the most significant barrier to women's access to screening services is a lack of knowledge and awareness, as well as not adequately prioritizing screening. Women with limited knowledge about cancer screening may not perceive it as a necessary preventive measure, reducing their likelihood of participation even when services are available.¹⁵ Furthermore, researchers indicate that women experience fears about the screening process, including concerns about injury, pain and anxiety about a possible cancer diagnosis.¹⁵ These findings align with another study showing that fear of receiving a cancer diagnosis (OR = 2.727, CI = 1.291-5.764, $p = 0.009$) was associated with higher intention to undergo screening.¹⁶

Finally, when asked about the possibility of undergoing cervical cancer screening in the future, 90.2% expressed willingness to be screened.

Strengths and limitations

This study provides valuable insights into the factors influencing compliance with cervical cancer screening guidelines among women aged 30 to 49 years across the Marrakech-Safi region. However, its cross-sectional design does not allow causal relationships to be established, and the unequal distribution of participants across provinces may have affected the representativeness of the findings.

Policy implications

The results highlight the need to strengthen cervical cancer screening programs in the Marrakech-Safi region through targeted awareness and education campaigns. Priority should be given to improving women's knowledge, reducing fear and misconceptions, and reaching underserved populations to increase screening uptake and improve early detection.

Conclusion

This study identified several significant factors influencing compliance with cervical cancer screening guidelines among women aged 30 to 49 years in the Marrakech-Safi region of Morocco. The findings revealed that living area and marital status were important sociodemographic determinants of screening uptake. Women residing in certain geographic areas were less likely to participate in screening programs. Marital status was also associated with screening behavior, suggesting that social and family circumstances may influence women's health-seeking practices. The results of this study showed the importance of implementing a communication strategy to increase women's awareness of the cervical screening program. Improving awareness is essential because women who are informed about the purpose, benefits, and availability of screening services are more likely to participate in screening.

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Conflict of interest

All authors declare that there are no conflicts of interest in this work.

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Authors' contributions

TAOUAF Jamila: conceptualization, methodology, data collection, data analysis -interpretation, and

writing/editing original draft. LOUKID Mohamed: supervision, conceptualization, methodology, validation, and reviewing/editing. LAMTALI Saloua: supervision, conceptualization, methodology, validation, and reviewing/editing.

Data availability

The data used in this study are available from the corresponding author.

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