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ORIGINAL ARTICLE

Knoweldge, Attitude and Practices of Women Towards Screening for Cervical Cancer

MUNEEZA ABDUL HALEEM[1], SALMA KHALID[2], UZMA ZIA[3], RANA ABID ALI[4], SAMEEN FATIMA[5], ANEEZA SIKANDER[6]
[1,6]Postgraduate Resident Obstetrics and Gynaecolgy Department, Central Park Teaching Hospital, Lahore
[2]Assistant Professor Obstetrics and Gynaecolgy Department, Central Park Teaching Hospital, Lahore
[3]Assistant Professor Obstetrics and Gynaecolgy Department, Avicenna Medical College, Lahore
[4]Senior Registrar Obstetrics and Gynaecolgy Department, Avicenna Medical College, Lahore
[5]Medical Student, Central Park Medical College, Lahore
Correspondence to: Muneeza Abdul Haleem, Email: drmuneezaahnif@gmail.com, Cell: +923105478384

ABSTRACT

Background: Cervical cancer poses a major health challenge, especially in low- and middle-income countries (LMICs) such as Pakistan, where public awareness, routine screening, and preventive measures remain insufficient**.**

Objective: The objective of the study is to evaluate the knowledge, attitudes, and practices (KAP) related to cervical cancer screening.

Methods: A descriptive cross-sectional study was carried out at Central Park Teaching Hospital, Lahore, from March to September 2022. A total of 371 women participated. Data was gathered through structured proforma and assessed using SPSS version 25.

Results: Only 34.8% of the participants were aware of cervical cancer screening methods, and merely 14.8% had ever undergone screening. Despite this, 74.1% considered screening important. Awareness and participation in screening were significantly higher among women with greater educational attainment, professional employment, and better socioeconomic status (p<0.001). Nevertheless, actual screening uptake remained low even within more educated groups.

Conclusion: The study identifies a significant disconnect between knowledge, attitudes, and real-world practices. These findings emphasize the urgency of designing targeted, culturally appropriate strategies that enhance awareness and ensure accessible, affordable screening services, especially for underserved and less educated populations.

Keywords: KAP study, women's health, socioeconomic disparities, cervical cancer

INTRODUCTION

Cervical cancer ranks as the most prevalent cancer among women globally. [1] Over the past three decades, the incidence of cervical cancer among younger women has shown a notable rise, ranging between 10% and 40%. [2,3] In Pakistan, data from the Karachi Cancer Registry revealed age-standardized incidence rates of 6.81 (1995–1997), 7.47 (1998–2002), and 6.02 (2017–2019) per 100,000 women. Additionally, estimates based on data from the Pakistan Atomic Energy Cancer Registries in Karachi and Punjab for the years 2015–2019 indicated an unadjusted incidence rate of 4.16 per 100,000 women (95% UI: 3.28–5.28).[4] Cultural sensitivities in Pakistan—where discussing sexual health remains taboo and formal sexual education is limited—pose unique challenges in preventing HPV-related cancers.[5]

The knowledge of cervical cancer among women is a key determinant of whether they seek preventive care. Since cervical cancer is rarely well diagnosed or prevented in Pakistan, its precise incidence and prevalence are unknown. Unfortunately, Pakistan's poor cervical cancer testing infrastructure has grown to be a serious public health issue. Cervical cancer screening is not available at many hospitals or clinics, particularly in rural locations.[6, 7] A research found that just 2.6% of Pakistani women had ever taken a screening test, and only 5% of them are aware of screening.[8] The main obstacles to doing screening in Pakistan are women's lack of confidence and families' lack of support.[9, 10]

However, studies reveal that despite awareness, negative attitudes persist due to emotional, cultural, and informational barriers. An Indian Study observed that even among nursing staff in India with relatively better knowledge, only 30% had undergone screening, indicating that knowledge alone does not guarantee action.[12] Another study demonstrated that targeted health education significantly improved attitudes in Nigerian women, correcting the misconception that screening is only needed when symptoms appear.[13] Similarly, Wong et al. (2019) found that cultural beliefs, fear of pain, embarrassment, and anxiety about diagnosis discouraged Malaysian women from getting screened.[14] These studies underscore the need for interventions that not only inform but also address the emotional and sociocultural dimensions influencing women's attitudes toward cervical cancer screening. Women's practices regarding cervical cancer screening are often poor, even among those who are knowledgeable and have access to health services. For example, a cross-sectional study by Adamu et al. (2022) in Ghana revealed that only 19.6% of women had ever undergone a Pap smear, despite 55% being aware of the procedure.[15]

Existing literature on cervical cancer screening shows key deficiencies, including limited focus on symptomatic women, underrepresentation of semi-urban populations, and lack of integration between reported knowledge and actual screening behavior. Most studies assess healthy women in urban areas and rarely capture detailed demographic or reproductive profiles. Additionally, few offer screening at the time of data collection to assess real-world acceptance.

To address these gaps, this study was conducted in a tertiary care hospital in Lahore, targeting symptomatic women aged 18–40. By assessing knowledge, attitude, and practices alongside an immediate offer of screening, the study aims to generate practical, context-specific insights to improve early detection efforts.

MATERIAL & METHOD

This cross-sectional survey was conducted at the Obstetrics and Gynecology Department of Central Park Teaching Hospital, Lahore, over a six-month period from March 15, 2022, to September 15, 2022. A sample size of 370 women was calculated using the WHO sample size calculator with a 95% confidence level, 5% margin of error, and an expected knowledge prevalence of 60.6%.[11] non-probability consecutive sampling was employed to recruit women aged 18–40 years presenting with symptoms such as lower abdominal pain, post-coital bleeding, or vaginal/cervical itching. Exclusion criteria included pregnant women, those with a history of hysterectomy, diagnosed cervical or intrauterine cancer, and severe urinary tract infections. After ethical approval and informed consent, participants were interviewed using a structured questionnaire covering demographic details and components of knowledge, attitude, and practice (KAP) toward cervical cancer screening. Participants were also offered screening during their visit. Data were recorded in a predesigned proforma and analyzed

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using SPSS version 25, with KAP results presented as frequencies and percentages.

RESULTS

A total of 371 women participated in the study, with a majority (58%) aged between 18–30 years. Most participants were uneducated (62%) and housewives (89.8%), with only 8.9% belonging to the high socioeconomic group. The majority were married (82.5%) and grand multiparous (49.3%) (Table 1).

Regarding knowledge, 40.7% were aware of cervical cancer (Figure 1), while only 34.8% had heard about cervical screening. Awareness of the HPV vaccine (3.0%) and associated risk factors (1.9%) was very limited. A higher level of awareness was significantly associated with better education ($p<0.001$), professional occupation ($p<0.001$), and higher socioeconomic status ($p<0.001$) (Table 4,5).

Table 1: Characteristics of the Study Population (n = 371)

Variable	Category	Frequency (n)	Percentage (%)
Age Group (years)	18–30	215	58.0
	31–40	156	42.0
Education Level	Uneducated	230	62.0
	Secondary	73	19.7
	Intermediate	21	5.7
	Graduate	38	10.2
	Postgraduate	9	2.4
Marital Status	Married	306	82.5
	Single	54	14.6
	Widowed	11	3.0
Parity	Nullipara	74	19.9
	Multipara	114	30.7
	Grand Multipara	183	49.3
Occupation	Housewife	333	89.8
	Laborer	7	1.9
	Professional	31	8.4
Socioeconomic Status	Low	179	48.2
	Middle	159	42.9
	High	33	8.9

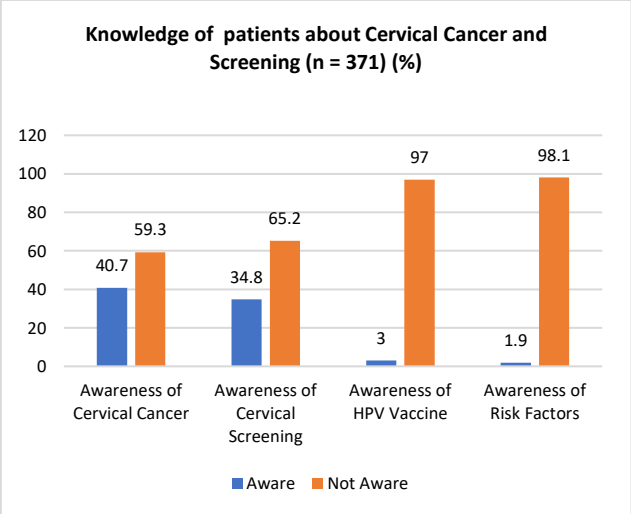

Figure 1: Knowledge and awareness of Cervical Cancer and Screening

Table 2: Attitude and Perception Towards Cervical Cancer

Variable	Response	Frequency (n)	Percentage (%)
Willingness to Undergo Screening	Willing	121	32.6
	Not Willing	250	67.4
Perception of Importance of Screening	Important	275	74.1
	Not Important	96	25.9

Attitudinally, although 74.1% perceived screening as important, only 32.6% were willing to undergo screening (Table 2). Screening practices were poor: only 14.8% had ever undergone cervical screening, and 23.2% had taken any preventive action (Table 3). Women with professional occupations and those from higher socioeconomic strata showed greater willingness and better preventive behavior compared to housewives and those from lower strata.

Table 3: Screening Practices Among Women (n = 371)

Variable	Response	(n)	(%)
History of Cervical Screening	Yes	55	14.8
	No	316	85.2
Preventive Actions Taken	Yes	86	23.2
	No	285	76.8

Table 4: Stratification Between Education Level and Awareness of Cervical Cancer

Education Level	Aware (n)	Not Aware (n)	Total (n)	p-value
Uneducated	41	189	230	0.000*
Secondary	39	34	73	
Intermediate	12	9	21	
Graduate	42	6	48	
Postgraduate	7	2	9	
Total	151	220	371	

Table 5: Stratification of Cervical Cancer Awareness, Attitude, and Practices by Occupation (n = 371)

Variable	Housewife (n = 333)	Professional (n = 31)	Laborer (n = 7)	p-value
Aware of Cervical Cancer	115 (34.5%)	28 (90.3%)	1 (14.3%)	<0.001
Aware of Cervical Screening	105 (31.5%)	22 (71.0%)	2 (28.6%)	<0.001
Aware of HPV Vaccine	8 (2.4%)	3 (9.7%)	0 (0.0%)	0.035
Willing for Screening	98 (29.4%)	20 (64.5%)	3 (42.9%)	<0.001
History of Screening	43 (12.9%)	10 (32.3%)	2 (28.6%)	0.002
Preventive Action Taken	65 (19.5%)	18 (58.1%)	3 (42.9%)	<0.001

DISSCUSSION

Our study revealed alarmingly low awareness and uptake of cervical cancer screening: only 34.8% of participants were aware of screening methods, and just 14.8% had ever undergone screening, despite 74.1% acknowledging its importance. These findings mirror trends observed across low- and middle-income countries (LMICs). Tsegay et al. (2021) reported that although 46% of Ethiopian women had some knowledge and 53% held a positive attitude toward screening, only 38% had actually been screened.[16, 17] In our study, awareness was notably lower among women from low socioeconomic and educational backgrounds, consistent with Liu et al. (2022), who found that education level and health insurance were major predictors of screening in China.[18]

While our study did not quantify cost barriers, the marked gap between willingness and actual screening suggests that financial and logistical obstacles may be significant. This is consistent with Biddell et al. (2021), who found that over 60% of low-income women in the U.S. cited cost as a major deterrent.[19] Lemp et al. (2020) also reported that lifetime cervical cancer screening coverage remains below 50% in many LMICs—further validating our observed rate of only 14.8%.[20] Interestingly, even among more educated participants in our study, screening uptake remained low, reflecting similar findings by Easwaran et al. (2023) among university students in Sub-Saharan Africa.[21,22] These trends confirm that awareness alone does not translate into preventive action unless supported by structural facilitators.

Together, these findings affirm the rationale of our study and highlight a critical public health gap. There is an urgent need for

integrated strategies that move beyond awareness campaigns to address cost, access, stigma, and system-level deficiencies. Future research should explore targeted interventions—such as community-based screening programs, mobile clinics, and insurance-backed preventive packages—tailored to vulnerable subgroups. Additionally, investigating digital health education tools and their scalability could open new avenues to bridge the awareness-practice gap and improve cervical cancer outcomes in resource-limited settings

Despite the strengths of this study, two limitations merit consideration. Firstly, as the research was confined to a single tertiary care hospital. Secondly, the reliance on self-reported data introduces the possibility of recall and social desirability bias, particularly regarding sensitive topics such as personal screening practices or perceived importance.

CONCLUSION

This study highlights a significant gap between women's knowledge, attitudes, and actual practices regarding cervical cancer screening in a tertiary care setting in Lahore. Although a large proportion of participants acknowledged the importance of screening, actual uptake was alarmingly low. Socioeconomic status, educational attainment, and occupational background emerged as key determinants of awareness and behavior. Structural interventions—such as subsidized screening programs, community-based outreach, and culturally sensitive health education—are essential to encourage early detection and mitigate the growing burden of cervical cancer in Pakistan.

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