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Dr. Anitha S
Assistant Professor, Department of
OBG, AJ Institute of Medical
Sciences, Mangalore, Karnataka,
India

Dr. Anushree Ballal K
Junior Resident, Department of
OBG, AJ Institute of Medical
Sciences, Mangalore, Karnataka,
India

Knowledge, attitude and practice towards Pap smear testing among all women attending a tertiary care centre in Dakshina Kannada

Dr. Anitha S and Dr. Anushree Ballal K

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Abstract

Introduction: Cervical Cancer is the preventable cancer among all female genital tract cancers when detected in the premalignant stage. The increasing incidence could be attributed to lack of awareness regarding screening and paucity of organised screening facilities in the country. Early detection can be done by Pap smear (PS), which is an inexpensive procedure to look for cervical cytological changes.

Aims & Objectives: This study aimed to assess the knowledge, attitude, and practice (KAP) about Pap smear, to identify the barriers that impeded women in practicing it, to find out the association between socio-demographic characteristics and their KAP of Pap smear.

Materials and Methods: A cross-sectional study was conducted on 100 women attending the gynaecology OPD in AJIMS, Mangalore from May 2022 to August 2022. Face to face interview was conducted to assess their knowledge, attitude and Practice using a structured questionnaire.

Results: Among all women who were interviewed, about 44% heard about Pap smear and 58% heard about cervical cancer. Only 8% of women had good knowledge about Pap smear, 33% of them had a positive attitude, and 13% of them practiced it. The main reason for having the Pap smear was the health provider's advice.

Conclusion: The majority of women had low knowledge of Pap smear, and a negative attitude. The study recommends strengthening of health education by health care providers and effective media to improve the level of awareness.

Keywords: Pap smear, cervical cancer, knowledge, attitude, practice, HPV

Introduction

Cervical Cancer is the preventable cancer among all female genital tract cancers when detected in the premalignant stage. Globally, cervical cancer is the second most common cancer among women. Approximately 80% of cervical cancer occur in developing countries [1]. Of the half million new cases of cervical cancer reported yearly, nearly one-fifth are detected in India alone [2]. According to WHO, the Incidence of cervical cancer in India is 18% and the Prevalence is 42.8% [3]. India ranks highest in age-standardized incidence of cervical cancer in South Asia and is one of the most common cause of cancer-related deaths in India accounting for nearly 25% of global mortality. The average 5-year survival rate is 48.7% in India [1].

It is clear that HPV infection is causally related to cervical cancer and its precursor lesions. Although HPV has a high prevalence, the rate of cervical cancer is low [4]. This cancer can be prevented because of the long pre-invasive period and its prevention and early detection by screening tests can contribute to the achievement of the Millennium Development Goals [5]. Most patients present late with advanced stage disease, in which treatment may often involve multiple modalities including surgery, radiotherapy, and chemotherapy, which markedly diminishes the chance of survival. Several factors such as educational status, financial capability, and presence of health care facilities determine the stage at which patients with cancer present to the health facility [6]. Screening for cervical cancer is essential as women often do not experience symptoms until the disease has advanced. Symptoms include abnormal bleeding per vaginum, foul smelling discharge per vaginum or blood-stained vaginal discharge. Risk factors include multiple sexual habits, reproductive factors, sexually transmitted diseases, coinfection with HIV, smoking, and high parity [1].

Cervical screening makes use of cytology to identify women at increased risk of cervical pathology aiming to detect and treat premalignant, low- or high-grade disease [4].

Corresponding Author:
Dr. Anushree Ballal K
Junior Resident, Department of
OBG, AJ Institute of Medical
Sciences, Mangalore, Karnataka,
India

The Papanicolaou test (Pap test) and the Human Papillomavirus (HPV) test are used for screening. Although it is substantially more expensive, primary prevention with vaccination against the common carcinogenic HPV strains, HPV-16 and HPV-18, is also an option. With a specificity of almost 99%, the Pap smear is a simple, inexpensive and efficient cervical cancer screening test. The sensitivity of Pap smear screening has been reported to range from 40 to 70 percent [5].

Cervical cancer screening practises that are subpar, unfavourable attitude of women, and lack of knowledge are major obstacles to lowering the prevalence of the illness [6]. The studies show that, women have suboptimal level of knowledge of Cervical Cancer and their attitude is also favourable however the uptake of actual practice is low due to social stigma. This review was undertaken because there is a paucity of literature on Indian women's knowledge, attitude, and practice (KAP) regarding cervical cancer and its screening. The results of this study provide data on existing knowledge, attitude, and screening practices that are useful for developing population-based educational programmes that will improve understanding of cervical cancer and associated screening [7].

Aims & Objectives

- This study aimed to assess the Knowledge, Attitude, and Practice (KAP) about Pap smear.
- To identify the barriers that impeded women in practicing it.
- To find out the association between socio-demographic characteristics and their KAP of Pap Smear.

Materials and Methods

- A cross-sectional study was conducted on 100 women attending the gynaecology OPD in AJIMS, Mangalore from May 2022 to August 2022.
- Face to face interview was conducted to assess their knowledge, attitude and Practice using a structured questionnaire.

Inclusion criteria: Women aged between 21-65 years, willing to participate in the study.

Exclusion criteria: Age < 21 years and > 65 years, health care workers (medical staff) and those not willing to participate in the study.

A close-ended questionnaire was used, consisting of 3 parts:

The first part aimed to collect women's socio-economic and demographic characteristics. The second part attempted to assess the KAP about Pap Smear. There were 21 close-ended

questions; a list of 9 questions to assess the women's knowledge, 9 questions to determine the women's attitude, and 4 questions to evaluate the women's experience regarding Pap Smear. The final section of the questionnaire focused on the reasons behind doing Pap smear in 4 responses and 9 responses to the barriers that precluded women in doing it.

Results

Total of 100 women from AJ Institute of Medical Sciences were interviewed in this study, majority of the women included in the study were aged between 30-39 years (41%), had 1-4 children (61%), and resided primarily in urban areas (89%). Only 47% of the women had completed their primary education, and 48% of them were housewives and were unemployed. Only 8% of the women had attended a university or had received a high degree of education.

Table 1: Distribution of women's age, parity, residency, occupation, level of education and socio-economic status (Total-100 women).

Socio-demographic characteristics	Number	Percentage
Age (Years)		
<30	35	35%
30-39	41	41%
40-49	17	17%
>50	7	7%
Parity		
Nulliparous	5	5%
1-4	61	61%
>5	34	34%
Residency		
Urban	89	89%
Rural	11	11%
Occupation		
Housewife and Unemployed	48	48%
Manual worker and Employed	44	44%
High Rank Occupation	8	8%
Level of Education		
Illiterate	9	9%
Primary School Graduate	47	47%
Secondary School Graduate	36	36%
University and High Level of Education	8	8%
Socio-economic status (SES)		
Low class	41	41%
Middle class	49	49%
High class	10	10%
TOTAL	100	100%

Only 44 (or 44%) of the participants had heard of pap smears, 4% had a history of cervical cancer in their families, and 58% had heard of cervical cancer (Table 2).

Table 2: Knowledge towards Pap smear and cervical cancer

Knowledge Towards Cervical Cancer And Pap Smear	Yes Number	%	No Number	%	Total Number	%
Heard of pap smear	44	44%	56	56%	100	100%
Heard of cervical cancer	58	58%	42	42%	100	100%
Family history of cervical cancer	4	4%	96	96%	100	100%

44 out of 100 women reported hearing about pap smears; the majority of these women (61%) learned about pap smears from friends or family members among those who have a family

history of cervical cancer; 34% learned about pap smears from doctors or nurses; and only 5% learned about pap smears from the internet or television, as shown in figure 1.

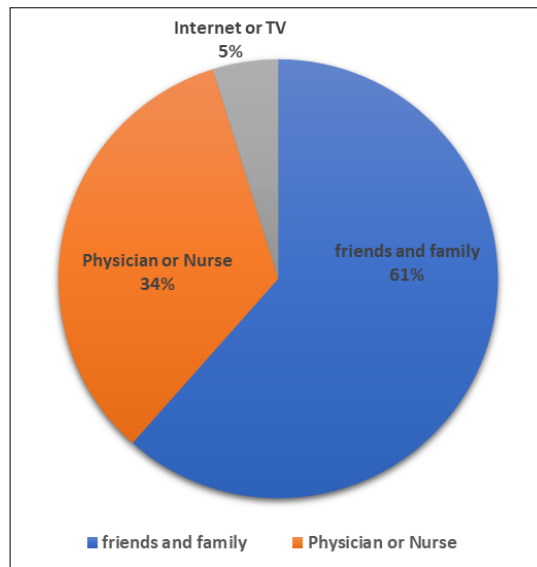


Fig 1: Distribution of women's source of information related to pap smear

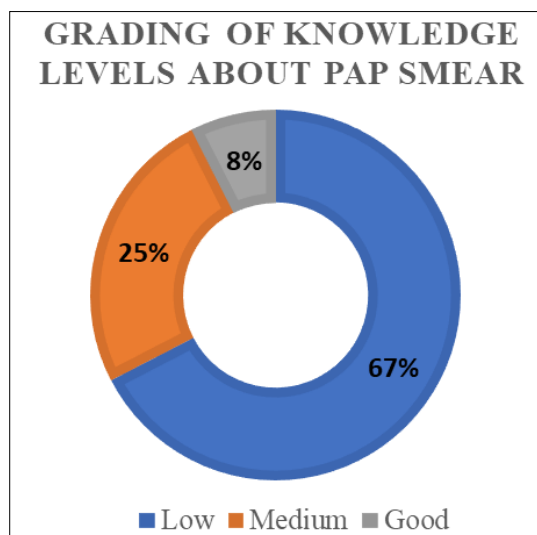


Fig 2: Demonstrates that 67% of women had only a basic understanding of pap smears.

Knowledge about pap smear

Less than half (39%) of the 44 women who had heard of pap smear also recognised that it can help detect cervical cancer early, and 12% knew that it must be performed without douching for two days. Most of them (88%) believed that pap

smears lower cervical cancer incidence and mortality, and the biggest proportion of women (50%) said that every woman should get examined every three years. The highest percentage of women said that pap smear cannot be done during pregnancy, as shown in Table 3.

Table 3: Proportion of women's knowledge about the Pap smear

Statements	True		False		I Don't Know	
	Number	%	Number	%	Number	%
Does Pap Smear help detect cervical cancer earlier?	39	39%	44	44%	17	17%
Should the first Pap Smear test be done at 21 years of age?	21	21%	33	33%	46	46%
Is Pap Smear test after age of 65 years necessary?	24	24%	45	45%	31	31%
Should a woman be tested at every 3 years?	50	50%	12	12%	38	38%
Should Pap Smear test be done by avoiding douching for two days?	12	12%	40	40%	48	48%
Can Pap Smear be done in pregnancy?	52	52%	30	30%	18	18%
Is Pap Smear successful in reducing the chance of having Cervical Cancer?	88	88%	5	5%	7	7%
Does HPV infection increase the risk of cervical cancer among women?	12	12%	15	15%	73	73%
Is Pap Smear performed on non-menstrual period?	71	71%	22	22%	7	7%

Attitude towards pap smear

Table 4 displays the woman's attitude on pap smears. Approximately 12% of women disagree that getting a pap smear is painful. Additionally, 10% of women deny that pap smears

are expensive. 15% of women believe that pap smears don't take much time. The majority of women (36%) believe that having a pap smear done does not invade their privacy. The proportion of women who concur that pap smears are required in those who

are asymptomatic are 45% and those who disagree was 12%. A pap smear is recommended when there is an infection or bleeding, according to about 38% of women. 4% of female

respondents said that the pap smear apparatus was of poor quality. About 13% of women disagree that pap smears should be performed prior to the onset of cervical cancer symptoms.

Table 4: Assessment of women’s attitude towards pap smear by frequencies and percentage

Attitude statements	Completely disagree		Disagree		No idea		Agree		Completely agree	
	Number	%	Number	%	Number	%	Number	%	Number	%
Is Pap Smear Painful?	10	10%	12	12%	22	22%	30	30%	26	26%
Is Pap Smear Expensive?	22	22%	10	10%	10	10%	46	46%	12	12%
Is Pap Smear time-consuming?	8	8%	15	15%	45	45%	12	12%	20	20%
Does performing Pap Smear disturb the privacy of women?	24	24%	36	36%	12	12%	22	22%	6	6%
Is Pap Smear necessary in asymptomatic individuals?	13	13%	12	12%	22	22%	45	45%	8	8%
Does Pap Smear have effectiveness in early detection of cervical cancer?	9	9%	19	19%	20	20%	38	38%	14	14%
Is Pap smear equipment of good quality?	4	4%	4	4%	25	25%	60	60%	7	7%
Do you prefer doing pap smear test before experiencing cervical cancer symptoms?	6	6%	13	13%	22	22%	44	44%	15	15%
Is it easy for you to talk about cervical cancer?	12	12%	24	24%	45	45%	8	8%	11	11%

Distribution of women’s attitude towards pap smear

According to the percentage of attitude towards pap smear, more

than half (67%) of women had a negative attitude about pap smear, while 33% had a positive attitude, as shown in figure 3.

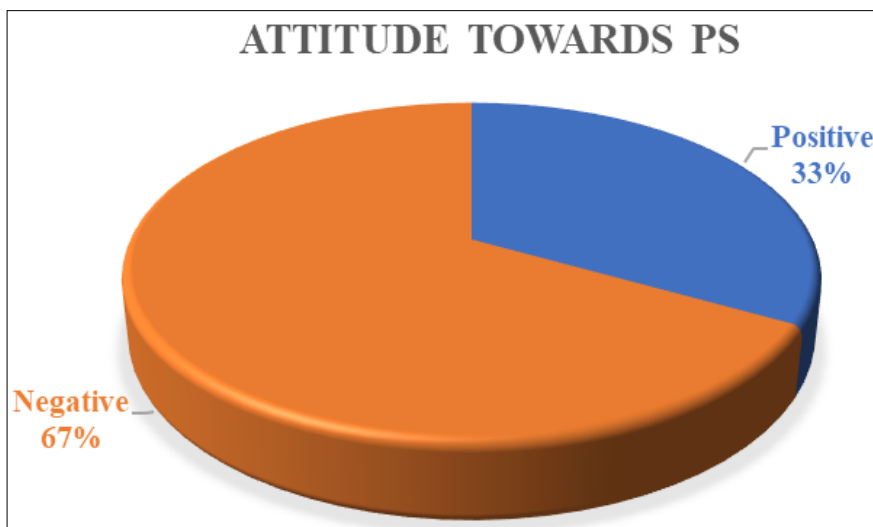


Fig 3: Grading of attitude towards Pap smear

Practice about pap smear

In terms of practising the pap smear, just a small percentage of participants (13%) had done so, while 87% said they had never done so. Only 7% of the women who had practiced the test had a normal pap smear, whereas 93% had an abnormal one. 77% of

people only practiced once, compared to 10% for those who did so twice and 13% for those who did so three times or more. According to Table 5, 36% had practiced within the previous three years, 49% within the previous six months, and 15% within the previous year.

Table 5: Practices of women towards Pap smear

ITEMS	Response	Number	Percentage
Type of practice	Have been tested	13	13%
	Never been tested before	87	87%
Been doing Pap smear	Regularly	7	7%
	Irregularly	93	93%
Frequency of doing Pap smear	One time	77	77%
	Two times	10	10%
	Three times or more	13	13%
	During the last 6 months	49	49%
When was the first Pap smear done?	Last year	15	15%
	Before 3 years	36	36%

Reasons for having pap smear

According to Table 6, of the 13 women who had their pap

smears performed, 53.9% did so on the advice of their doctor, while 4% learned about it from the media.

Table 6: The reasons for having a pap smear among women who practiced Pap smear (N=13)

Reasons	Number	Percentage
Health provider's advice	7	53.9%
Self-study	2	15.4%
Discomfort in the genital tract	0	0.0%
From the mass media	4	30.7%
Total	13	100%

Reasons for not having Pap smear

Regarding the women who had never had a pap smear, the main barrier was found to be a doctor's lack of request (100%), followed by reasons such as disregarding the test despite knowledge, lack of knowledge, and no genital tract discomfort

(51.8, 48.2, and 47.1%, respectively). Lack of consultation time (37.9%) and humiliation (25.2%) were other obstacles. 27.5% expressed concern over the outcomes, while 66.7% mentioned economic difficulties. 33.3% thought the test would be uncomfortable, as seen in Table 7.

Table 7: Barriers preventing women from doing Pap smear

Barriers	Yes	%	No	%
	Number		Number	
Lack of physician's advice	87	100%	0	0.0%
Lack of knowledge about Pap smear	42	48.2%	45	51.8%
Lack of time for consultation	33	37.9%	54	62.1%
Neglecting despite having knowledge	45	51.8%	42	48.2%
Not feeling any discomfort in the genital tract	41	47.1%	46	52.9%
Too embarrassing	22	25.2%	65	74.8%
Belief that Pap smear is painful	29	33.3%	58	66.7%
Fear of the results	24	27.5%	63	72.5%
Pap smear procedure is too expensive	29	33.3%	58	66.7%

Discussion

The majority of the 100 women who took part in the study (41%) were aged between 30-39 years, which is similar to studies done in Malaysia and Qatar, where the majority of the women were in these age ranges (51.85% and 35.2%, respectively) [8, 9].

In the current study, an extremely high percentage of women (89%) resided in urban areas. This is similar to the results of the study conducted in Duhok which was 97% [10]. These studies' differences result from the various geographic regions in which they were conducted. Similar to a study published in the United Arab Emirates [11], the majority of the women in the current study are housewives and unemployed (48%). The majority of the subjects in the current study (47%) had completed their primary education, which was slightly different from the results of prior studies carried out in Ghana [12] with results of 22.4%. The results of these studies are higher than 9.25% in another conducted in Nepal [13].

The middle class was identified as having the largest socioeconomic class proportion in this survey (49%), which is comparable to the 48.8% recorded from a study in Duhok [10].

Regarding Knowledge about Cervical cancer

About 58% of the women in the current study had heard of cervical cancer, which is comparable to the findings of 57.2% reported in Duhok and 57.4% reported among Iraqi women living outside of Iraq (Iraqi-Malaysia) [8]. It was higher than that of another Indian study that was reported [14]. These diverse findings could be the result of the study being conducted among women with various levels of education. In contrast to studies on women who had a secondary or higher level of education, the majority of women in the current study were primary school graduates. Most women were not very knowledgeable about cervical cancer. This was comparable to what was observed in Nigeria and Malaysia [15, 9], although it was far better than the 81.9% reported for women in India [16].

Knowledge about Pap smear

In this study, 44% of participants heard about pap smears, and friends and family were the most common sources of information (61%) compared to healthcare professionals (34%), and the media (5%). It was a very low percentage compared to a study done in Kuwait [17], where it was discovered that 76.9% of the women had heard of the pap smear and that the primary source of information was the gynaecologist or family doctor (42%), and to studies done in other developing nations like Brazil [18], where it was discovered that (81%) of the women had heard about the pap smear. The disparities between the studies mentioned above may be attributable to the different populations that were involved, as well as the various levels of health intervention, including screening programmes that were offered and health education provided by a doctor or other health staff that was successful in raising awareness of Cervical cancer screening Pap smear among those populations.

Regarding women's knowledge about PS in this study, the highest percentage of women had low level of knowledge (67%), close to the result 67.8% in a study conducted in Duhok [10] and 63.3% as conducted in North Eastern Brazil [19], 59.4% of women had poor knowledge in other studies one was done in the United Arab Emirates [11], and then another one in Iran [20]. About the good knowledge which was only 8%, this disagrees with the good knowledge level (52.3%) in a study in Kuwait [17]. All previous studies related to the knowledge about Pap smear were done in the PHCCs among women with different levels of occupations. So, PHCCs are considered as better areas where the nurses can be provided more information related to Pap smear in general, the purpose of its screening, and follow up, through application of screening program continuously.

Today, early Pap smear screening of women is part of the global effort to lower the incidence and mortality from cervical cancer. This screening technique has largely contributed for the decline in cervical cancer cases observed in developed nations. About 88% of the women who participated in this study agreed that the Pap smear is effective in lowering the incidence and mortality of

cervical cancer.

Attitude towards Pap smear

This study shows that only 33% of women had a positive attitude toward Pap smear. This result nearly agrees with the result of 30.6% [17], but it was very low percentage if compared with the results of other studies which clarified that 85.0%, 85.8% and 87.3% of women like to do Pap smear [8, 13, 20]. Consequently, raising awareness of screening programmes and public campaigns among women through health facilities would significantly aid in lowering this extremely avoidable malignancy. According to this study, 45% of women said Pap smear wasn't important for people who weren't experiencing any symptoms. According to 44% of women, taking Pap smear is solely necessary for gynaecological issues, according to a study from Nigeria [21]. This indicates that if the women have poor knowledge about the Pap smear, the frequencies of having it and the purpose of doing it will directly affect their attitude to do it.

Practice of Pap smear

Regarding women practicing PS in some developing countries such as Nepal [13], found that a low percentage of women practiced Pap smear and it's about 13%. Also, the low percentage of women who undergo Pap smear (12.6%) has been mentioned among Iraqi women [22]. The situation was worse in Nigeria where only 5.7% of the study population had been screened for Cervical Cancer using Pap smear [23]. The lack of frequent Cervical Cancer screening programmes or the low information level of women may be to blame for the low percentage of Pap smear practitioners in various developing nations. In contrast to developing countries, higher prevalence of practicing PS was reported in many developed countries, such as in England, where 80% of women practiced Pap Smear [24], and in the United State of America (USA) 87% of women were reported having Pap smear [25]. However, in the present study, about 53.9% of women underwent Pap smear according to their health providers' advice. This finding was supported by another study which reported that two third of Iraqi women (60.7%) had done Pap smear according to their doctor's advice, this indicated that the doctor's advice was the main reason to prevent Cervical cancer [22].

Barriers to practicing Pap smear

All of the women who didn't practice PS consider that "no physician advice" was the main barrier for not having PS, and 48.2% of them reported that lack of knowledge about the Pap smear as the main barrier to not having Pap smear. Only 25.2% of them felt too embarrassed to have Pap smear. Many studies have identified that factor "not advised to do Pap smear from health care workers" by women was the main barrier to uptake the test [26, 27]. In this study, about 47.1% of women didn't practice Pap smear because they did not feel any discomfort in their genital tract. This result might be indicating that the women do not have sufficient knowledge from the medical staff to do the Pap smear at health care facilities and this explains why women do not consider Pap smear as an important test. 33.3% mentioned that Pap smear procedure was costly for them, this result indicated that the majority of women had adequate SES, while in a tertiary care hospital in India where 6.75% of the participants reported that Pap smear procedure is too expensive [27]. Women who were knowledgeable about the Pap smear had a favourable view regarding it and consequently used it. The interaction in this study made it clear that when Pap smear knowledge increases, attitudes toward it also improve, removing

obstacles to its use.

Conclusion

The majority of women do not regularly have Pap tests, and of those who do, most only do so once in their lifetime. Lack of information about Pap smears and not receiving advice from medical professionals have been identified as the main obstacles to performing Pap smears in the study. The study recommends strengthening of health education by health care providers and effective media to improve the level of awareness.

Declaration

Conflict of interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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