Original Article

A Study on Knowledge about Screening and Prevention of Carcinoma Cervix in Women Attending Gynecology Outdoor of Fauji Foundation Hospital, Rawalpindi

Zartaj Hayat[1], Ramla Ghazanfar[2], Fizzah Alkrim[3]

[1]Professor/Head Unit II OBGYN Fauji Foundation Hospital, Foundation University Islamabad
[2]Ex Postgraduate resident Fauji Foundation Hospital, Foundation University Islamabad
[3]MBBS Final year student Foundation University Medical College Islamabad

Correspondence: *Dr. Zartaj Hayat.*
Professor/Head unit II OBGYN Fauji Foundation Hospital, Foundation University Islamabad
doczar_@hotmail.com

Abstract

Objective: To assess the knowledge regarding carcinoma cervix, its prevention and screening in women attending Gynaecology outpatient Fauji Foundation Hospital, Foundation University Islamabad.

Methodology: It was a descriptive cross-sectional questionnaire based study carried out in the department of Obstetrics and Gynaecology, Fauji Foundation Hospital, Foundation University Islamabad over a period of six months i.e. from 28-07-2020 to 27- 01-2021. A total of 250 patients were enrolled in the study by non-random consecutive sampling. Knowledge was assessed by commuting all questions and obtaining mean according to which population falling below mean had poor, on mean fair and above mean had good knowledge. The statistical software used for data analysis was SPSS version 23.0 (Statistical Package for Social Statistics). Post-stratification chi-square tests was applied, and a p-value ≤ 0.05 was considered significant.

Results: Women who had poor knowledge about cervical cancer were 172 (68.8%), fair knowledge 77 (30.8%) and only 1 (0.4%) had good knowledge about screening. None of the effect modifiers (age, education, parity, marital status) has shown statistically significant difference (p value < 0.05) between different groups signifying no effect of these modifiers on knowledge regarding the disease.

Conclusion: There is a lack of knowledge among majority of women regarding cervical cancer prevention and screening, pressing the need for increasing awareness about the importance of early detection through screening tests such as Pap smear and other methods. By addressing the root causes of the problem and implementing targeted interventions the mortality and morbidity associated with cervical cancer can be effectively reduced.

Keywords: Carcinoma, Cervix, Prevention, Screening

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Introduction

Cancer is the leading cause of mortality and morbidity worldwide affecting 14.9 billion people with 8.2 million deaths annually.[1] According to a study conducted in 2015, carcinoma cervix (CA cervix) ranked 10th at causing deaths in 50 countries and was also a commonly diagnosed cancer in 11 countries.[2] Globally, 485000 females in 2013 were diagnosed with CA cervix with the mortality rate of 85% in developed and 15% in developing countries.[1]

Cervical cancer arises from squamous and columnar cells of the cervix. It typically develops slowly over a period of several years and can be detected through screening tests such as Pap smears or visual inspection with acetic acid (VIA).

More than 50,000 women are diagnosed with CA cervix which constitutes the second leading cause of cancer deaths in women, among which South Asian countries hold one fourth of the disease burden.[3] A Study in Pakistan showed 4.04% of total malignancies in 2016

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were due to CA cervix with majority of malignancies between the ages of 45-49 years.[4] Screening can be done by visual inspection with acetic acid (VIA), Pap smear and HPV DNA test. VIA is a better alternative screening tool compared to Pap smear,[5] with 24% of women having an adequate knowledge about the screening tests.[6]

Two studies in Karachi showed VIA has a sensitivity of 81% as compared to Pap smear which is 76%, making it an appropriate test for low resource countries like Pakistan.[5,7] Pap smear test is used for early detection of CA cervix, however, the screening rate is low in Asians as compared the US, where it was 80.7% with mean age 21- 65yrs.[8] A study in Mangalore showed that 81.9% women had a poor knowledge about cervical cancer and 85.5% had low knowledge about screening as well.[9] Another study in Nigeria showed Pap smear practice was only 15.4%.[10]

CA cervix is commonly caused by Human Papilloma Virus, which is a viral infection transmitted sexually and HPV 16 is the prevalent strain in Pakistan.[11] In South Karachi the prevalence of HPV16 is 75%–93%[12] with mean age of occurrence being 50.5 years.[3] CA cervix is a preventable disease through early detection and vaccination. ACIP (advisory committee on immunization practices) recommends HPV vaccination from the age of 11-12 years followed by a second dose after 6-12 months which will be effective against 90% of the oncogenic strains of HPV.[13]

This study will assess the level of knowledge about cervical cancer and its prevention, increase the awareness among the women thereby will reduce the disease prevalence.

Methodology

This is a descriptive cross sectional questionnaire based study carried out in Fauji Foundation hospital, Foundation University Islamabad (gynaecology OPD), for a period of 6 months i.e. 28th Jul, 2020 to 28th Jan, 2021. A total of 250 patients were included in the study (with precision 5, CI 95% and prevalence of 81.5%[9]) using WHO sample size calculator. Non-random consecutive sampling technique was used for sample collection. Women between 25 years and 65 years attending gynecology OPD and willing for participation were included in the study while patients with psychiatric illness, cervical cancer and family history of cervical cancer were excluded from the study.

Informed consent was obtained from eligible participants, and a pre-designed questionnaire in both English and Urdu was used, which was approved by the hospital ethical society. Each participant was given a total of 10 minutes to fill out the questionnaire after providing their consent. To minimize bias in the data, the variables were stratified (age was divided into strata of 5, education was categorized as primary, middle, and higher, sexual status as married or unmarried, and socioeconomic status as upper, middle, or lower).

Knowledge was assessed by computing all the questions and obtaining the mean score, based on which the population falling below the mean were classified as having poor knowledge, those on the mean were classified as having fair knowledge, and those above the mean were classified as having good knowledge. The results will be presented in tabular form. A total of 15 questions were asked, and each correct response was given a score of 1 while incorrect responses were given a score of 0, resulting in a total possible score of 15. Participants who scored 0-5 were classified as having poor knowledge, those who scored 6-10 were classified as having fair knowledge, and those who scored more than 10 were classified as having good knowledge.

The statistical software used for data analysis was SPSS version 23.0. Numerical variables, such as age, were presented as mean and standard deviation (SD), while categorical variables, such as sex, socioeconomic status, marital status, and parity, were presented as frequency and percentages. Effect modifiers, such as age, education, knowledge, parity, and marital status, were controlled by stratification. The chi-square test was used to analyse the data, and a p-value of ≤ 0.05 was considered statistically significant.

Results

A total of 250 patients who fulfilled the inclusion criteria were included in the study. The mean age of patients was 44.64±12.45 years, (range from 25 to 65 years). Majority of the patients belonged to the lower socioeconomic status (60.8%), followed by the middle class (36.4%) and high class (2.8%). Majority of the patients were married (98.4%) and had parity 0-3 (72%). (Table I). Most of the patients had poor knowledge about cervical cancer, its prevention and screening (68.8%). (Table II)

The effect modifiers like age, education, parity, and marital status were stratified and compared regarding

the knowledge (poor, fair and good) of carcinoma cervix, prevention, and screening in women attending gynaecology OPD at the setup. The p-value was not statistically significant showing no effect on knowledge among different age groups, education groups and parity groups (Table III)

Among married women, 68.7% had poor knowledge, 30.9% had fair knowledge, and 0.4% had good knowledge about cervical cancer screening. Among unmarried women, 75% had poor knowledge, and 25% had fair knowledge about screening. The p-value was not statistically significant showing no effect on knowledge among married or unmarried women.

Table I Frequency and Percentage of Demographic Variable.

	N	%
AGE (YEARS)		
25-50	152	60.8
51-65	91	36.4
TOTAL	**250**	**100**
Mean SD	**44.64+-12.45**	
SOCIOECONOMIC STATUS		
Lower	152	60.8
Middle	91	36.4
High	7	2.8
TOTAL	**250**	**100**
MARITAL STATUS		
Married	246	98.4
Unmarried	4	1.6
TOTAL	**250**	**100.0**
PARITY		
0-3	180	72.0
4-5	70	28.0
TOTAL	**250**	**100.0**

Table II: Frequency and percentage of Knowledge regarding carcinoma cervix.

Knowledge	N	%
Poor	172	68.8
Fair	77	30.8
Good	1	0.4
Total	**250**	**100.0**

Discussion

In index study the most unexpected result was the poor knowledge among educated females. A low level of knowledge on HPV and cervical cancer among women, community leaders and even health professionals of developing countries (India, Peru, Uganda and Vietnam) has also been reported by researchers.[6] In our study the p-value doesn't show any statistically significant difference regarding knowledge of CA cervix among different educational status group (Table II). This may be due to the reason that health education (especially sexual health) is neither a part of curriculum nor formally addressed in schools and colleges in our country. In addition, due to cultural and social barriers girls and women never discuss their reproductive issues openly leading to lack of awareness and knowledge.

In developed countries 68% to 84% of women undergo pap smear screening as compared to India where this percentage is only 2.6% to 6.9%.[3-6] A study in USA showed pap testing rate of 80.7% in age group between 21-65 years as compared to Asian (66.8%) in the age group between 51-65 years.[8] The obtained results were due to lack of awareness about the importance and uptake of the testing by the subjects. Several other researchers have reported poor knowledge regarding cervical cancer in various studies conducted in other parts of the world.[7-11] Another study in Nigeria showed poor knowledge about disease symptoms (90.8%) as well as the screening tests (92%). [10] These results were due to lack of awareness and prevention about the disease and their results correlate with our study results.

A study in Mangalore, India, stated that all subjects were married with poor knowledge (41%) and those who were

Table III: Effect modifier with Frequency and percentage of Knowledge regarding carcinoma cervix.

	Knowledge			Total	P value
	Poor	Fair	Good		
Age					
25-50	87 (66.9%)	43 (33.1%)	0	130(100%)	0.432
51-65	85(70.95%)	34(28.3%)	1(0.8%)	120(100%)	
Total	**172**	**77**	**1**	**250**	
Education					
Primary	78(67.3%)	38(32.7%)	0	116(100%)	0.060
Secondary	75(68.8%)	38(31.2%)	0	109(100%)	
Graduate	18(78.3%)	4(17.4%)	0	23(100%)	
Masters & Above	1(50%)	1(50%)	0	2(100%)	
Total	**172**	**77**	**1**	**250**	
Parity					
0-3	130(72.3%)	50(27.7%)	0	180(100%)	0.061
4-5	42(60%)	27(38.6%)	1(1.4%)	70(100%)	
Total	**172**	**77**	**1**	**250**	

aware regarding the disease were educated through mass media. [9] Our results also coincided with this study regarding married subjects (68.8% with poor knowledge). Again we observed that cultural and social barriers apply similarly to unmarried and married women. Even after marriages they do not discuss their reproductive health or are rather unaware of its importance. This fact also highlights the role of obstetricians, gynecologists, lady health workers and community health professionals to educate the women about their reproductive health and importance of screening tests. A local study in Karachi showed that Pap smear testing was performed in only 11% of subjects, and 23% had knowledge regarding screening tests as calculated through a point scale method. They found out that majority of married females including younger population had poor knowledge.[3] This also favors our results as our majority subjects were the married females who visited our OPD either for antenatal checkups or various gynecological problems. In addition, majority didn't receive any formal education as they belong to low socio-economic status and were wives of ex-army service men. Another recent local study showed poor awareness regarding screening and prevention of cervical cancer among all demographics.[14] Our population belonged to poor socioeconomic uneducated class. There are studies in literature where even professional college students are not aware about cervical cancer.[15]

The study strengths were the selection of population, as low socioeconomic class with no formal education are the subjects who need to be addressed since they are deprived of basic knowledge and awareness. The awareness among the population needs to be addressed by promoting knowledge via mass media. This is also recommended by researchers who found out that media plays a very important role in strengthening of health education.[16] The health professionals should actively participate in educating women and take this time as window of opportunity to benefit maximum women. In addition, stakeholders should be taken on board to introduce formal education of girls in schools and colleges regarding their reproductive health and can be a part of curriculum.

The study conducted had certain limitations like; the study sample was 250 taken through non random sampling, was sufficient for the current study evaluation but could not reflect the mass population. The study results were interpreted through devising a generalized scoring criteria based upon subjective scoring cut offs. A follow up study needs to be reviewed afterwards to assess the improvement in knowledge for screening and uptake of screening test in form of pap smear.

CA cervix can be prevented by early detection and vaccination. ACIP (advisory committee on immunization practices) recommends HPV vaccines from the age of 11-12 years followed by a second dose at 6-12 months which could be effective against 90% of the oncogenic strains of HPV. [13]

Our study assessed only knowledge regarding screening and prevention of carcinoma of cervix that was poor among the subjects. Despite the study limitations, efforts need to be carried out by the medical professional and mass media by promoting awareness and the need to take the Pap Smear more frequently. This will ensure a decrease in number of cases in CA Cervix thus decreasing the disease burden.

Conclusion

In conclusion, the study findings highlight the lack of knowledge among many women regarding cervical cancer prevention and screening, which can have serious consequences on their health and well-being. The results also highlight the need for increasing awareness about the importance of early detection through screening tests such as Pap smear and other methods. This could lead to an earlier diagnosis and timely treatment, which would significantly decrease the burden of cervical cancer and reduce the associated mortality rates.

RECOMMENDATIONS: We recommend the use of mass media to disseminate information about cervical cancer prevention and screening. Additionally, healthcare professionals, including general practitioners and gynaecologists, should participate actively in educating women about the importance of screening tests, such as Pap smear, and encourage them to seek early diagnosis and treatment.

Furthermore, implementation of targeted interventions including the establishment of community-based screening programs, training and capacity building of healthcare professionals, and the provision of free or subsidized screening tests to women in low-income communities by policymakers and healthcare authorities will improve awareness, knowledge, and uptake of cervical cancer screening in low-income communities. Lastly formal reproductive health education may be a part of curriculum.

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