



Knowledge and Awareness Regarding Screening Practices of Cervical Cancer among Nurses at Lahore General Hospital, Pakistan

**Nazia Ayub¹, Mahliqa Maqsd^{2*}, Huma Tahseen³, Mehmona Sharif¹,
Naheed Waris⁴ and Aliezeh Fatima Rai⁵**

¹*(LGH/PGM/AMC), Lahore, Pakistan.*

²*Lady Atchison Hospital, KEMU, Lahore, Pakistan.*

³*Azra Naheed Medical College, Lahore, Pakistan.*

⁴*Lady Willingdon Hospital, KEMU, Lahore, Pakistan.*

⁵*CMH Lahore Medical College, Lahore, Pakistan.*

Authors' contributions

This work was carried out in collaboration among all authors. Author NA designed the study. Author MM wrote the protocol and wrote the first draft of the manuscript. Author HT managed the analyses of the study. Author MS managed the analyses of the study. Author NW managed the analyses of the study. Author AFR contribution in data collection. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JPRI/2020/v32i730453

Editor(s):

(1) Dr. Mohamed Fathy, Assiut University, Assiut, Egypt.

Reviewers:

(1) Jacilene Silva, State University of Ceará, Brazil.

(2) Ibrahim Mohammed, Usmanu Danfodiyo University Sokoto, Nigeria.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/53919>

Received 10 November 2019

Accepted 16 January 2020

Published 18 May 2020

Original Research Article

ABSTRACT

Objective: To determine the knowledge and awareness regarding screening practices of cervical cancer among nurses at Lahore general Hospital, Lahore, Pakistan.

Materials and Methods: This cross-sectional, interview based study was conducted on 250 nurses at Lahore general Hospital, Lahore, Pakistan. The duration of this study was one year from 2017 to 2018. All the cases underwent interview based information regarding cervical cancer. The questionnaire was applied to assess the knowledge, awareness and screening practices about cervical cancer among nurses. Data was collected via self-made proforma.

Results: Most of the study participants were less than 35 years. 72% nurses were married and 28% were unmarried. Most of the study participants 96% knew that cervical cancer is the abnormal growth of cervical cells and few were unaware regarding it. According to causes of cervical cancer,

*Corresponding author: E-mail: drmahliqamaqsd@yahoo.com;

70% to 75.6% participants agreed that early marriage and multiple sex partners are the causative factors of cervical cancer, while others relate it to smoking, infection and hereditary causes. Most of the nurses 42.8% answered that cervical cancer can occur at menopausal age while 25.5% opted for any age. 75.6% to 95.5% nurses were in the favor of scanning, pap smear test and cervical biopsy methods. 34% of the participants said that it is a preventable disease via vaccination, early diagnosis and safe sex activities.

Conclusion: It was concluded that nurses had satisfactory knowledge regarding screening practice of cervical cancer at Lahore general Hospital.

Keywords: Knowledge; awareness; cervical cancer; screening.

1. INTRODUCTION

Cervical cancer remains among the leading factors of death in females of developing countries [1]. The frequency of cervical cancer is 1/4th of the burden of all cervical cancers [2]. Most of the patients of cervical cancer present in late advanced stage. The data is largely unknown in Pakistan. The local studies showed that cervical carcinoma accounts for 3.6% deaths from cases of cancers [3]. The facility of pap-smear and other screening methods of cervical cancer are not available in every part of country. A study reported that just 5% of Pakistani females had knowledge of screening for cervical cancer [4]. It was also found in a study that only 2.6% of females had undergone screening for cervical cancer via pap-smear once in a life time [4]. There are many causes of cervical cancer but HPV is most widely investigated etiological factor [5,6]. There are many methods to screen out cervical cancer such as visual inspection, DNA testing and liquid based monolayer cytology, but the pap-smear method is simplest to use and has high sensitivity (50-75%) and specificity (98%) [7,8]. There are many preventive methods for cervical cancer that include vaccines and other secondary preventive methods. The early detection of cervical cancer needs high cost infrastructure and properly trained health workers. In a randomized trial, the treatments pay attention towards radiotherapy combinations, revealing highly significant advantage of hyperthermia in general survival, local-relapse-free survival, and disease-free survival [9]. Considering a large workforce of nursing and paramedic staff in Pakistan, it is very imperative to know the knowledge, awareness and screening practices regarding cervical cancer among nurses. Very few studies have been conducted so far to reveal the knowledge, awareness and screening practices about cervical cancer in Pakistani nurses [10]. Following this rationale, it is important to investigate the current knowledge, awareness

and screening practices regarding cervical cancer in nurses at tertiary care hospitals of Lahore, Pakistan. Current systematic reviews synthesize awareness and developments for several key objectives within greater efforts to prevent and treat cervical cancer, e.g., cervical cancer biomarkers [11,12], HPV vaccination for young adolescent females, and feasible approaches to screen and treat adult women in low resource settings [13-16]. To the best of our knowledge, so far no such study has been carried out regarding knowledge, awareness and screening practices regarding cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan. Therefore, the aim of current study was to find out the knowledge, awareness about screening practices of cervical cancer among nurses at Lahore general hospital, Lahore, Pakistan.

2. MATERIALS AND METHODS

This cross-sectional, interview based study was conducted after taking ethical approval and informed consent of nurses at Lahore general Hospital, Lahore, Pakistan. The duration of this study was one year from 2017 to 2018 and convenient sampling technique was used. All nurses working at Lahore general Hospital, with practice duration of more than 3 years who agreed to participate in the study were included. Male nurse and those who had experience less than 3 years were excluded. The questionnaire was applied to assess the knowledge, awareness and screening practices of cervical cancer among nurses. The questionnaire consisted of close-ended questions regarding knowledge, and awareness of nurses regarding cervical cancer, as well as questionnaire also consisted of questions about current screening practices of Hospital nurses for screening and prevention of cervical cancer. The questionnaire involved 3 parts, first was regarding demographic data (like, age, gender, marital status, etc.), second part was about the questions on the

Table 1. Socio-demographic data (N=250)

Variable	Frequency	Percentage (%)
Age		
20-24	110	44%
25-34	115	46%
35-40	25	10%
Religion		
Muslim	165	66%
Christian	70	28%
Hindu	15	6%
Marital Status		
Un-married	70	28%
Married	180	72%
Socio-economic status		
Lower	48	19.2%
Middle	189	75.6%
Upper	13	5.2%

Table 2. Knowledge of nurses regarding cervical cancer and its causes (N= 250)

Variable	Frequency	(%)
What is CA cervix?		
Infection of cervix	01	0.4%
Ordinary disease	02	0.8%
Abnormal growth of cervical cell		
Don't know	240	96.0%
	02	0.8%
Is it common in our country?		
Yes	12	4.8%
No	144	57.6%
Don't know	94	37.6%
How does one get Ca Cervix?		
Early marriage		
Yes	189	75.6%
No	28	11.2%
Don't know	33	13.2%
Smoking?		
Yes	92	36.8%
No	28	11.2%
Don't know	130	52.0%
Hereditary?		
Yes	16	6.4%
No	76	30.4%
Don't know	158	63.2%
Infection?		
Yes	38	15.2%
No	34	13.6%
Don't know	178	71.2%
Multiple sex partners?		
Yes	175	70.0%
No	26	10.4%
Don't know	49	19.6%

Table 3. Knowledge and awareness of nurses about spread of disease (N= 250)

Variable	Frequency	(%)
Which age group is likely to get Ca Cervix		
Any age group	64	25.6
Reproductive age group	28	11.2
Menopausal age group	107	42.8
Don't know	51	20.4
CA cervix is common in which type of women?		
Rich		
Yes	48	19.2
No	174	69.6
Don't know	28	11.2
Poor		
Yes	174	69.6
No	48	19.2
Don't know	28	11.2
Sex-workers		
Yes	144	57.6
No	08	3.2
Don't know	98	39.2
Any women		
Yes	39	15.6
No	163	65.2
Don't know	48	19.2

Table 4. Knowledge and awareness of nurses about prevention (N=250)

Variable	Proportions (n)	Percentage (%)
How can Ca cervix be detected		
Blood test		
Yes	42	16.8
No	91	36.4
Don't know	117	46.8
Paptest		
Yes	189	75.6
No	20	08
Don't know	41	16.4
Scanning		
Yes	239	95.6
No	2	0.8
Don't know	9	3.6
HPV testing		
Yes	44	17.6
No	111	44.4
Don't know	95	38
Cervical biopsy		
Yes	238	95.2
No	10	04
Don't know	2	0.8
Cervical cancer can often be prevented		
Yes	85	34
No	153	61.2
Don't know	12	4.8
If yes to above question, how can it be prevented?		
Via vaccination	73	85.0%
Early diagnosis	84	98.8%
Via safe sex	52	61.1%

knowledge and awareness about multiple areas of cervical cancer, and the third part had questions regarding the screening components and prevention of cervical cancer. Data was analyzed by using SPSS version 20.

3. RESULTS

Most of the nurses were less than 35 years and 10% were over the age of 35 years. 72% nurses were married and 28% were unmarried. 75.6% nurses had middle socioeconomic status, 19.2% were poor and only 5.2% had upper socioeconomic status Table 1.

Most of the study participants 96% knew that cervical cancer is the abnormal growth of cervical cells, 0.8% said it is ordinary disease, one replied that it is an infective disease and two nurses were unaware regarding it. According to causes of Ca cervix, 70% to 75.6% participants agreed that early marriage and multiple sex partners are the causative factors of cervical cancer, while others relate it to smoking, infection and hereditary causes. Table 2.

On the question of the age relation with cervical cancer, majority of nurses 42.8% stated that it can evolve at menopausal age, 25.5% of the nurses answered that it can occur at any age, 11.2% opted for reproductive age, and 20.4% had no idea regarding age relation with Ca cervix. Majority of the participants said that it is most common in poor and sex worker women Table 3.

According to the screening practice, most of the nurses 75.6% to 95.5% were in the favor of scanning, pap smear test and cervical biopsy, while 16.8% said that blood test may help in the diagnosis of cervical cancer. 34% of participants said Ca cervix is a preventable disease via vaccination, early diagnosis and safe sex activities Table 4.

4. DISCUSSION

In developing countries, females at greatest risk for cervical malignancy are least liable to be screened. Lack of the consciousness and access to preventive approaches are the leading causes of it. In our study, 75.6% to 95.5% favored the scanning test, pap smear test and cervical biopsy methods, while 16.8% said that blood test may help in the diagnosis of cervical cancer, in comparison Singh E et al., [17] reported that 74%

believed the Pap smear was used to detect cervical cancer, however just 59% believed it could detect both precancerous and cancerous cervical lesions. Just 18% of participants knew regarding the vaccine against human papillomavirus. Our findings are similar to Turkish study conducted by Ertem G et al. [18] which shows that nearly all participants had heard of Pap smear, however only half felt sure that it could detect both precancerous and cancerous cervical cancer lesions. The rest claimed that it is only in symptomatic cases that established cancer is identified and pap smear is needed to be done. In spite of substantial knowledge of a link between sexual activity and cervical cancer, and also the role of sexually transmitted diseases, only 54% of participants had heard of HPV; whereas most were ill informed of the HPV vaccine.

In this study, 70% to 75.6% participants agreed that early marriage and multiple sex partners are the causative factors of cervical cancer, while others relate it to smoking, infection and hereditary causes. In comparison to our results, study conducted by Jain SM et al. [19] reported that 42.3% were not aware of any risk factor and 27.6% were not aware of any symptom of cancer cervix. Some of the risk factors for development of cervical cancer are early sexual intercourse, multiple sexual partners, sexually transmitted infections and smoking. A substantial number of our study subjects thought they had an idea about risk factors for cancer cervix.

In this series, 25.5% nurses answered that it can occur in any age group, 11.2% replied that it mostly occurs in reproductive age group, 42.8% were agreed with menopausal age group and 20.4% had no idea regarding age relation with Ca cervix. Majority of the participants said that it is most common in poor and sex worker women. Mupepi SC et al. [20] reported that 91% had never undergone cervical screening and 81% had no prior acquaintance with cervical screening assays. Similar results were observed in the study of William MS et al. [13]. Another study conducted by Donmez S et al. [15] also reported similar results. There is no systematic screening program in our country and expected practice is the opportunistic screening of eligible women coming to hospital for other reproductive services. Responsibility then falls upon health worker to either screen women themselves or refer them to other unit where screening is being done.

In this study, most of the study participants 96% knew that cervical cancer is the abnormal growth of cervical cells, 0.8% said it is ordinary disease, one replied that it is an infective disease and two nurses were unaware regarding it. Thus, even though knowledge about the disease exists, but low awareness about availability of screening precludes early detection. The work force is aware that early detection helps for a cure, but since they lack in knowledge about availability of screening facilities, directing patients to avail these facilities is an issue leading to lesser use of screening practices. Such ignorance in nursing staff is a matter of concern for the society.

5. CONCLUSION

It was concluded that nurses had satisfactory knowledge regarding screening practice of cervical cancer. Hospital-based constant medical education sessions are suggested to increase the knowledge, awareness and know-how of screening strategies of cervical cancer among the nurses of Lahore general Hospital.

CONSENT AND ETHICAL APPROVAL

This cross-sectional, descriptive, interview based study survey was conducted after taking informed consent from nurses at Lahore general hospital, Lahore, Pakistan.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray F. Cancer incidence and mortality worldwide: Sources, methods and major patterns in GLOBOCAN 2012. *Inter J Cancer*. 2015;136(5):E359-86.
2. Chen W, Zheng R, Baade PD, Zhang S, Zeng H, Bray F, Jemal A, Yu XQ, He J. Cancer statistics in China, 2015. *CA: Cancer J Clin*. 2016;66(2):115-32.
3. Bhurgri Y, Nazir K, Shaheen Y, Usman A, Faridi N, et al. Pathoepidemiology of cancer cervix in Karachi South. *Asian Pac J Cancer Prev*. 2007;8:357-362.
4. Imam SZ, Rehman F, Zeeshan MM, Maqsood B, Asrar S, et al. Perceptions and practices of a Pakistani population regarding cervical cancer screening. *Asian Pac J Cancer Prev*. 2008;9:42-44.
5. Cui T, Enroth S, Ameer A, Gustavsson I, Lindquist D, Gyllensten U. Invasive cervical tumors with high and low HPV titer represent molecular subgroups with different disease etiology. *Carcinogenesis*. 2018;11.
6. Doshi D, Reddy BS, Karunakar P, Deshpande K. HPV, cervical cancer and pap test related knowledge among a sample of female dental students in India. *Asian Pac J Cancer Prev*. 2015;16(13):5415-20.
7. Lönnberg S, Hansen BT, Haldorsen T, Campbell S, Schee K, Nygård M. Cervical cancer prevented by screening: Long term incidence trends by morphology in Norway. *Inter J Cancer*. 2015;137(7):1758-64.
8. Doldo E, Costanza G, Agostinelli S, Tarquini C, Ferlosio A, Arcuri G, Passeri D, Scioli MG, Orlandi A. Vitamin A, cancer treatment and prevention: The new role of cellular retinol binding proteins. *BioMed Res Inter*. 2015;11.
9. Pesti L, Dankovics Z, Lorencz P, Csejtei A. Treatment of advanced cervical cancer with complex chemoradio-hyperthermia. In *Conference Papers in Science*. Hindawi. 2013;2013.
10. Ali SF, Ayub S, Manzoor NF, Azim S, Aff M, Akhtar N, Jafery WA, Tahir I, Farid-ul-Hasnain S, Uddin N. Knowledge and awareness about cervical cancer and its prevention amongst interns and nursing staff in Tertiary Care Hospitals in Karachi, Pakistan. *PloS One*. 2010;5(6):e11059.
11. De Freitas AC, Coimbra EC, Leitão Mda CG. Molecular targets of HPV oncoproteins: Potential biomarkers for cervical carcinogenesis. *Biochim Biophys Acta*. 2014;1845(2):91-103.
12. Flepisi BT, Bouic P, Sissolak G, Rosenkranz B. Biomarkers of HIV-associated cancer. *Biomark Cancer*. 2014;3:11-20.
13. Williams MS, Kenu E, Dzubey I, Dennis-Antwi JA, Fontaine K. A qualitative study of cervical cancer and cervical cancer screening awareness among nurses in Ghana. *Health Care for Women International*. 2018;39(5):584-94.
14. AbdAllah AA, Hummeida ME, Elmula IM. Awareness and attitudes of nursing students towards prevention of cervical cancer. *Cervical Can*. 2016;1(2):107.

15. 16. Dönmez S, Öztürk R, Kısa S, Karaoz Weller B, Zeyneloğlu S. Knowledge and perception of female nursing students about human papillomavirus (HPV), cervical cancer, and attitudes toward HPV vaccination. *Journal of American College Health*. 2019;67(5):410-7.
16. Schaffer P, Batash R, Ertl-Wagner B, Hofstetter A, Asna N, Schaffer M. Treatment of cervix carcinoma FIGO IIIb with Photofrin II as a radiosensitizer: A case report. *Photochemical & Photobiological Sciences*. 2019;18(5): 1275-9.
17. Singh E, Seth S, Rani V, Srivastava DK. Awareness of cervical cancer screening among nursing staff in a tertiary institution of rural India. *Journal of gynecologic oncology*. 2012;23(3):141-6.
18. Ertem G. Awareness of cervical cancer risk factors and screening behavior among nurses in a rural region of Turkey. *Asian Pac J Cancer Prev*. 2009;10:735-738.
19. Jain SM, Bagde MN, Bagde ND. Awareness of cervical cancer and Pap smear among nursing staff at a rural tertiary care hospital in Central India. *Indian J Cancer*. 2016;53:63-6.
20. Mupepi SC, Sampelle CM, Johnson TR. Knowledge, attitudes, and demographic factors influencing cervical cancer screening behavior of Zimbabwean women. *Journal of Women's Health*. 2011; 20(6):943-52.
21. Dönmez S, Öztürk R, Kısa S, Karaoz WB, Zeyneloğlu S. Knowledge and perception of female nursing students about human papillomavirus (HPV), cervical cancer, and attitudes toward HPV vaccination. *J American Col Health*. 2018;1-8.

© 2020 Ayub et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/53919>