Original Research Article

Knowledge and Attitude Among Para-Medical and Non-Medical Staff in a Tertiary Care Teaching Hospital on Cervical Cancer Screening and Diagnosis

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Abstract

Introduction: Cervical cancer is the fourth most common cancer and also the fourth leading cause of cancer-related deaths in women globally. To improve the participation of women in the cancer screening program.**Materials and methods**:This Questionnaire based observational cross-sectional study was conducted in Department of Obstetrics and Gynaecology at a tertiary care teaching hospital. These individuals working in the hospital are in constant access to health-related information and are a bridge between the health care and society.The subjects were asked to fill a pre-planned questionnaire. The questionnaire included demographic enquiries and twenty questions regarding knowledge and attitude about cervical cancer screening and diagnosis. A verbal questionnaire was read out to subjects who were unable to comprehend the question and then responses were recorded verbatim immediately.The responses were analysed using descriptive analysis regarding their knowledge and attitude about cervical cancer, its associated problem, its screening and diagnosis.**Conclusion:** It is also alarming that a very small proportion of the participants had correct information regarding the age group and the sex to be vaccinated. The results of our study demonstrate a need for increased awareness of Human papillomavirus (HPV) and the HPV vaccine to increase vaccine uptake rates. Continuing medical education programs for health professionals; doctors and nursing staff should be conducted at the hospital level to spread knowledge about cervical cancer prevention.

Keywords: Cervical cancer, Sexually transmitted diseases, Human papillomavirus.

Introduction

Cervical cancer is the fourth most common cancer and also the fourth leading cause of cancer-related deaths in women globally [1]. Several common risk factors recognized to be associated with cervical cancer worldwide include sexually transmitted diseases (mainly HPV and others human immunodeficiency virus, herpes simplex virus), reproductive and sexual factors (multiple sexual partners, early age at the first sexual intercourse, early age at first delivery, parity, and oral contraceptive pills), behavioral factors (smoking and obesity), and host factors (genetic sensitivity) [2]. Abnormal vaginal bleeding, foul smelling vaginal discharge, and contact bleeding are recognized as the major signs of cervical cancer, and in many cases, women with cervical cancer report no symptoms. Almost all cervical cancers are caused by HPV and, therefore, are largely preventable [3].

Over the past several decades, the incidence of cervical cancer has decreased in developed countries [4]. This is mainly attributed to increased awareness and more effective screening and prevention strategies employed in these countries [5]. In addition, the HPV vaccine has contributed to a decline in the incidence rate of cervical cancer. Three types of tests are currently available and are widely used for the screening of cervical cancer. These include tests for HPV,cytology-based Papanicolaou test (Pap test), and unaided visual inspection with acetic acid (VIA) [6].

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However, public awareness of these tests especially in developing countries is limited. HPV 16 and 18 are the most common subtypes of HPV causing cervical cancer and are responsible for most of the cervical cancers worldwide [7]. The association of cervical cancer and HPV infection implies that cervical cancer can be prevented by HPV vaccination. Consequently, HPV vaccines have been developed [8]. While all these developments in the prevention and screening of cervical cancer are taking place, it is imperative that the benefits are utilized by all women including those living in the developing countries. Having good knowledge and awareness will help in ensuring that the disease burden does not increase. One concerning aspect is that most patients with cervical cancer in India present at advanced stages leading to adverse outcomes [9]. Moreover, it has been found that the cost of treating late-stage cervical cancer is substantially higher than that of early-stage cancer [10].

Screening helps in the detection of cancer at an early stage when it can be treated more effectively. The late presentation of patients with cervical cancer in India could be due to lack of knowledge and awareness leading to inadequate screening virtually nonexistent screening mechanisms for early detection [11]. Moreover, the decision to undergo screening highly depends on the healthcare professionals involved as well as the patient [12]. Prognosis can be improved if screening is embraced and widely employed. For this, it is important that the healthcare workers are educated and well aware so that they can influence the beliefs and actions of the general public. Many studies have been conducted in other developing countries to gauge the knowledge and awareness about cervical cancer and to study the extent of utilization of the screening methods [13]. Healthcare workers can play a central role in raising awareness of the general public, and therefore, their knowledge needs to be assessed and updated on a regular basis. In addition, in Indian

country, in particular patients seeking medical care prefer to have women as their caregivers with several studies providing traditional and religious beliefs as the main reason. Women are most likely to feel comfortable to talk about their symptoms with a female only. Even female healthcare providers are hesitant to talk about these issues with male physicians.

Materials and Methods

This Questionnaire based observational and cross-sectional study was conducted in Department of Obstetrics and Gynaecology at tertiary care teaching hospital. These individuals working in the hospital are in constant access to health-related information and are a bridge between the health care and society.

The subjects were asked to fill a pre-planned questionnaire. The questionnaire included demographic enquiries and twenty questions regarding knowledge and attitude about cervical cancer screening and diagnosis. A verbal questionnaire was read out to subjects who were unable to comprehend the question and then responses were recorded verbatim immediately.

The responses were analysed using descriptive analysis regarding their knowledge and attitude about cervical cancer, its associated problem, its screening and diagnosis.

Result

Table 1: Demographic characteristics of study participants

Age group	Para-medical n=70	Non-medical staff n=120
<20 years	19	36
21-30 years	31	49
31-40 years	15	23
41-50 years	3	7
51-60 years	2	5

Table 2: Distribution of gender of the participants

Gender	Para-medical n=70	Non-medical staff n=120
Male	23	71
Female	47	49

Table 3: Distribution of Education of the participants

Education	Para-medical n=70	Non-medical staff n=120
Matric	6	12
Higher secondary	29	47
Graduate	13	59
Postgraduate	1	2
GNM	21	0

Table 4: Distribution of Marital status of the participants

Marital Status	Para-medical n=70	Non-medical staff n=120
Married	29	48
Unmarried	41	72

Table 5: Basic knowledge of cervical cancer among Para-medicaland Non-medical staff

Characteristic	Para-medical n=70	Non-medical staff n=120
Cervical cancer is the commonest cancer amongst women		
Yes	**19**	**67**
No	**51**	**53**
HPV is identified in >50% cases of cervical cancer		
Yes	**48**	**51**
No	**13**	**46**
Don't know	**9**	**23**
Sign and symptoms of cervical cancer		
Intermenstrual bleeding	**21**	**31**
Foul smelling discharge P/V	**16**	**23**
Postmenopausal bleeding P/V	**12**	**19**
Postcoital bleeding P/V	**11**	**17**
Excess vaginal discharge	**7**	**17**
Itching in vagina	**3**	**13**
Screening for cervical cancer		
PAP smear	**33**	**33**
HPV testing	**11**	**31**
Visual inspection of cervix	**9**	**22**
PAP and HPV testing	**7**	**12**
HPV testing and visual inspection of cervix	**3**	**9**
PAP smear and visual inspection of cervix	**2**	**7**
All	**5**	**6**

Table 6: Attitudes among Para-medical and Non-medical staff about Cervical Cancer Screening

Attitudes	Para-medicaln=70	Non-medical staffn=120
Responses for not Screening Patients [a]		
Absence of Indication	**31**	**26**
Lack of vaginal speculum	**19**	**20**
Pap smear is a doctor's procedure	**11**	**31**
Not applicable	**9**	**43**
Reasons for not getting self-pap smear		
No reason	**19**	**37**
Not feeling at risk	**13**	**21**
Lack of symptoms	**11**	**19**
Feeling shy to have pap smear	**9**	**17**
Afraid of outcome	**9**	**13**
If I am destined to get pap smear, I will	**6**	**12**
Not applicable [b]	**3**	**11**

[a] More than one answer possible for each participant (sum>100%). [b] underwent Pap testing at least once in lifetime

Discussion

Correct knowledge and awareness about a disease and its prevention is a basic step to develop positive approach towards the disease. Early screening is known to prevent up to 80% of the invasive cervical cancer cases. [14] However, educational barriers and behavioral patterns have been acknowledged as major reasons for low screening prevalence in developing countries. [15] Knowledge plays an important role in deciding preventive behaviors. Hence, this study aimed at determining the knowledge about HPV and cervical cancer among Para-medical staff and Non-medical staff in a medical college. We tried to establish an ideal cluster to conduct this awareness study by including Para-medical staff and Non-medical staff. Medical teaching impacts the understanding of cervical cancer, its etiology, preventive measures, availability of the vaccine and its protective efficacy. As 60% of the respondents were non-medical staff, this group involves people who are yet to have first sexual experience thereby establishing an ideal cluster for immunization programme and also ideal candidates to conduct an awareness study. The staff nurses group was added as they come in contact equally with patients and attendants and form an important group in popularizing a strategy.More than 60% of the participants correctly thought that cervical cancer was not the commonest cancer in women and that HPV had a causal association with cervical cancer. A study by Pandey et al from India showed that majority of the participants were well aware (89.6%) of several risk factors of cervical cancer development and its causal relation with HPV. [16] Another study among the female educated youths in India concluded that the awareness of cervical cancer was 66% in India. [17] It is worrisome to note that only 7.5% of all participants knew that all techniques namely PAP smear, HPV testing and visual inspection of the cervix could be used for screening purpose. It is also alarming that 54.5% of all para medical staff thought that PAP was the only modality available for screening. In the present study, the male staff had more knowledge regarding cervical cancer than the female staff and similar knowledge regarding HPV vaccine. In contrast, an Australian study showed that 62.8% of women and only 38.3% of men had heard of HPV. [18] Despite the fact that all the participants were from para medical background, only 80% of the respondents had correct knowledge regarding HPV. Our data shows better results than a study from Taiwan conducted in 953 undergraduate women aged 17-36 years, which showed that only 49% were having HPV awareness. [19] In another study from India conducted on female dental students only 18% of the study population had high level of total correct knowledge, but majority of them (63%) had average level of correct total knowledge. [20] Mehta et al had similar observations among Indian medical students wherein they reported that the level of awareness about HPV and HPV vaccine was low. [21] Findings by Pandey et al, in another cohort of medical students revealed that most of the students were well-aware about preventable nature of cervical cancer and its viral etiology. [22] In our study, around 80% of the participants had average knowledge regarding HPV but surprisingly above 90% of the participants felt that HPV can cause bowel and lung cancer. This finding may be of concern as even in such an erudite population the information regarding HPV was low. In spite of the proven efficacy of HPV vaccine, the uptake of HPV vaccination is very low in many developing countries, including India. Lower perceived risk of cervical cancer, non-availability of vaccine, high cost are the common reasons but lack of complete knowledge about causative role of HPV in carcinoma cervix is one of the most important determining factors for poor uptake of vaccination. [22] In our study surprising only 38.25% of the participants had complete knowledge regarding HPV vaccine. Hussain et al represents that overall HPV vaccine awareness is very low both in female and male as well as dwellers of rural and urban origin. [23] But in contrast, few studies reported that high vaccine acceptance among parents and adolescents in the general population. [24]A study by Massey et al indicated low awareness of HPV; among those who had heard of HPV, just 28% were willing to receive the HPV vaccine. [26] Overall vaccination rates were very low in our sample cohort. Only 5.5% of the participants had been vaccinated against HPV. This proportion is far lower than in European and North American studies. [27] In many European countries, almost 80% of the target population has been vaccinated; however, in developing countries, vaccination rates are disappointing. [28] The most common reasons for not getting vaccinated were no knowledge regarding the availability and safety of the vaccine. Studies have demonstrated that the proportion of subjects with intention to vaccinate themselves or their kids range from about 70% to 100% once they are educated about the vaccine. [29] It is also alarming that a very small proportion of the participants had correct information regarding the age group and the sex to be vaccinated. The results of our study demonstrate a need for increased awareness of HPV and the HPV vaccine to increase vaccine uptake rates. Continuing medical education programs for health professionals; doctors and nursing staff should be conducted at the hospital level to spread knowledge about cervical cancer prevention. Priority should be given to new concepts like HPV vaccine for primary prevention of cervical cancer so that it is well propagated into the society. Finally, further research is needed to explain the reluctance of eligible healthcare workers to go for screening despite knowledge about the problem and ready access to screening facilities. Healthcare workers need to be targeted first because of their pivotal role in any screening program. Health care providers comprise a trusted source of health information and are one of the preferred personnel for receiving HPV, cervical cancer, and vaccine knowledge and education.

Conclusion

Therefore, training of health providers in developing countries is a way to raise awareness of the HPV vaccine among the general population and also provides a feasible mechanism for vaccine

delivery. In conclusion, awareness of cervical cancer and prevention by screening showed several gaps in the knowledge and misconceptions. In order to reduce the burden of cervical cancer and implementation of vaccination program, awareness is required which can be achieved by print and electronic media, conducting free camps in rural sectors for cancer screening and prevention. The provider and the recipient will amalgamate this concept in practice only with its increased understanding. Thus, there is a need with immediate effect to educate and aware the young population about ill- myths associated with cervical cancer vaccination program in India.

References

1. Bruni L, Albero G, Serrano B, Mena M, Gómez D, Muñoz J, Bosch F, de Sanjosé S. ICO/IARC Information Centre on HPV and Cancer (HPV Information Centre). Human Papillomavirus and Related Diseases in Africa. Summary Report 17 June 2019. 2019.
2. Ganju SA, Gautam N, Barwal V, Walia S, Ganju S. Assessment of knowledge and attitude of medical and nursing students towards screening for cervical carcinoma and HPV vaccination in a tertiary care teaching hospital. Int J Community Med Public Health. 2017;4:4186–4193.
3. Information and Utilization of Papanicolaou (PAP) Smear for Cervical Cancer screening among. Female Nurses in Southwest Nigeria Part 1 Prevention and Infection Control. 2015;1:1–8.
4. Benemariya E, Chironda G, Nkurunziza A, Katende G, Sego R, Mukeshimana M. Perceived factors for delayed consultation of cervical cancer among women at a selected hospital in Rwanda: An exploratory qualitative study. Int J Afr Nurs Sci. 2018; 9:129–35.
5. Liu T, Li S, Ratcliffe J, Chen G. Assessing Knowledge and Attitudes towards Cervical Cancer Screening among Rural Women in Eastern China. Int J Environ Res Public Health. 2017;14(9):967.
6. Rudd P, Gorman D, Meja S, Mtonga P, Jere Y, Chidothe I. Cervical cancer in southern Malawi: a prospective analysis of presentation, management, and outcomes. Malawi Med J. 2017; 29(2):124–9
7. Heena H, Durrani S, Al Fayyad I, Riaz M, Tabasim R. Knowledge, attitudes, and practices towards cervical Cancer and screening amongst female healthcare professionals: a cross-sectional study. J Oncol. 2019: 5423130.
8. Abdallah A,Hummeida ME, Elmula I. Awareness and Attitudes of Nursing Students towards Prevention of Cervical Cancer. Cervical Cancer. 2016;1:106–106.
9. Nakisige C, Schwartz M, Ndira AO. Cervical cancer screening and treatment in Uganda. Gynecol Oncol Rep. 2017;20:37–40.
10. Mwaka ADGC, Were EM et al. Social, demographic and healthcare factors associated with stage at diagnosis of cervical cancer: cross-sectional study in a tertiary hospital in northern Uganda. BMJ Open. 2016;6.
11. Canfell K, Kim JJ, Brisson M, Keane A, Simms KT, Caruana M, Nguyen DTN, Bénard É et al. Mortality impact of achieving WHO cervical cancer elimination targets: a comparative modelling analysis in 78 low-income and lower-middle-income countries. Lancet. 2020; 395(10224):591–603
12. Brisson M, Kim JJ, Canfell K, Drolet M et al. Impact of HPV vaccination and cervical screening on cervical cancer elimination: a comparative modelling analysis in 78 low-income and lower-middle-income countries. Lancet. 2020; 395 (10224):575–90.
13. Malamba SS, Muyinda H, Spittal PM, Ekwaru JP,Kitandwe PK, Katamba A, Jongbloed K et al. "The CangoLyec Project - healing the elephant": HIV related vulnerabilities of post-conflict affected populations aged 13-49 years living in three mid-northern Uganda districts. BMC Infect Dis. 2016; 16(1):690
14. Randall TC, Ghebre R. Challenges in prevention and care delivery for women with cervical Cancer in sub-Saharan Africa. Front Oncol. 2016; 6(160):160.
15. Tsu VD, Njama-Meya D, Lim J, Murray M, de Sanjose S. Opportunities and challenges for introducing HPV testing for cervical cancer screening in subSaharan Africa. Prev Med. 2018;114:205–8.
16. Mukama T, Ndejjo R, Musabyimana A, Halage AA, Musoke D. Women's knowledge and attitudes towards cervical cancer prevention: a cross sectional study in eastern Uganda. BMC Womens Health. 2017;17(1):9.
17. Mays DC, O'Neil EJ, Mworozi EA, Lough BJ, Tabb ZJ, Whitlock AE, Mutimba EM, Talib ZM. Supporting and retaining village Health teams: an assessment of a community health worker program in two Ugandan districts. Int J Equity Health. 2017;16(1):129.
18. Nanyonjo A, Kertho E, Tibenderana J, Källander K. District Health Teams' readiness to institutionalize integrated community case Management in the Uganda Local Health Systems: a repeated qualitative study. Global Health SciPract. 2020; 8(2):190–204.
19. Acup C, Bardosh KL, Picozzi K, Waiswa C, Welburn SC. Factors influencing passive surveillance for T. b. rhodesiense human African trypanosomiasis in Uganda. Acta Trop. 2017; 165:230–9.
20. Dulla D, Daka D, Wakgari N. Knowledge about cervical cancer screening and its practice among female health care workers in southern Ethiopia: a crosssectional study. Int J Women's Health. 2017;9:365–72.
21. Ndizeye Z, Vanden Broeck D, Vermandere H, Bogers JP, Van. Knowledge and practices of general practitioners at district hospitals towards cervical cancer prevention in Burundi, 2015: a cross-sectional study. Glob Health. 2018;14(1):4.
22. Anyebe EE, Opaluwa SA, Muktar HM, Philip F.Nurse's knowledge and Awareness Regarding Cervical Cancer and its Prevention in Different Hospitals of Quetta, Pakistan. Res Pharm Health Sci. 2018; 14(1):436–41.
23. Umuago IJ, Obiebi IP, Eze GU, Moeteke NS. Improving primary health care workers' knowledge of cervical cancer and visual inspection screening techniques through competency-based training: prospects for expanding coverage in developing countries. Int J Commun Med Public Health. 2020; 7(5):8.
24. Gharoro EP, Ikeanyi EN. An appraisal of the level of awareness and utilization of the pap smear as a cervical cancer screening test among female health workers in a tertiary health institution. Int J Gynecol Cancer. 2006;16(3):1063.
25. Eze GU, Obiebi IP, Umuago IJ. Perspectives of cervical cancer and screening practices among staff of a teaching hospital in South-South Nigeria. J Cancer Res Pract. 2018;5(2):67–73.
26. Yörük S, Açikgöz A, Türkmen H, Ergör G. Risk factors and relationship between screening periodicity and risk of cervical cancer among nurses and midwives. A cross-sectional study. Sao Paulo Med J. 2019;137:119–25.
27. Gebreegziabher M, Asefa NG, Berhe S. Factors affecting the practices of cervical Cancer screening among female nurses at public Health institutions in Mekelle town, northern Ethiopia, 2014: a cross-sectional study. J Cancer Res. 2016;2016:7.
28. Gol I, Erkin O. Knowledge and practices of nurses on cervical cancer, HPV and HPV vaccine in Cankiri state hospital, Turkey. J Pak Med Assoc. 2016; 66(12):1621–6
29. Nakisige C, Schwartz M, Ndira AO. Cervical cancer screening and treatment in Uganda. Gynecol Oncol Rep. 2017;20:37–40.

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