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Knowledge about Cervical Cancer among Women of Reproductive Age Attending a Tertiary Level Hospital in Bangladesh

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Abstract

Background: *Cervical cancer is the fourth mostfrequent malignancy in women worldwide. The highest rate of this cancer incidence and mortality are in low- and middle-income countries. It is thesecond leading cause of cancer-related deaths among women in Bangladesh. To assess the level of knowledge among women of reproductive age about cervical cancer.*

Materials and methods: *This descriptive cross-sectional study was conducted from September 2019 to December 2019 in the Gynecology and Obstetrics Outpatient Department (OPD) of Sir Salimullah Medical College and Mitford Hospital. The sampling technique was purposive. A total of 300 women of reproductive age (15 to 49 years) were interviewed using a pretested semi-structured questionnaire.*

Results: *Most participants (75%) did not know aboutcervical cancer. Only 34.7% of women reported understanding symptoms and one-fourth (25%) knew the causes of cervical cancer.*

Conclusion: *Knowledge about cervical cancer among women was revealed to be remarkably poor. Health education and community-based intervention should focus on informing risk factors, symptoms, screening and cervical cancer vaccination. In the future, this study will assist with planning various strategies including sexual health, participation in screening and preventive services.*

Key words: Cervical cancer; HPV vaccine; Human Papilloma Virus (HPV); Knowledge; Screening.

INTRODUCTION

Cervical cancer is the fourth most common cancer in women worldwide. Around 660,000 new cases and 350,000 deaths occurred due to cervical cancer in Low- and Middle-Income Countries (LMICs) in 2022.[1] The highest rates of incidence and mortality are in Sub-Saharan Africa (SSA) Central and South America, the Caribbean and South-East Asia. Rates are lowest in the Middle East,China, and Australia.[1,2] Regional differences in the cervical cancer burden are related to disparities in access to vaccination, cervical screening and treatment services, risk factors including HIV prevalence, and social and economic determinants such as poverty, sex,and gender biases.[1] Women with HIV are six times more likely to develop cervical cancer compared to the general population and an estimated 5% of all cervical cancer cases are attributable to HIV.[1,3] Cervical cancer disproportionately affects younger women, and as a result, 20% of children who lose their mother to cancer do so due to cervical cancer.[4] The annual number of global new cases of cervical cancer has been projected to increase between 2018 and 2030 from 570,000 to 700,000 and the annual number of deaths is projected to increase from 311,000-4,000,000.[5]

Bangladesh is a highly populated nation, home to 165,158,616 people as of the 2022 census. Among them, 83,347,206 are female and 113,063,587 live in rural areas.[6] As per GOLOBOCAN 2020, the age-standardized incidence rate of cancer in Bangladesh was calculated as 106.2 and the caseload of cancer was 1,56,775 and death was 1,08,990.[7] In Bangladesh, it is the second most common cancer of female (12%).[7] The prediction was that without any intervention a total of 505,703 women in Bangladesh would die from cervical cancer by the year 2070 and the number will rise to 1,042,859 by 2120.[8] In India, cervicalcanceris a major public health problem and is also second most common gynecological cancer. Atotal incidence of 23.5/100000 has been observed. It is uncommon in women who are sexually not active (Nuns, virginal women). Male circumcision is partially protective against cervical carcinogenesis.[9]

The causative agent of cervical cancer is Human Papilloma Virus (HPV).[10] HPV commonly affects the skin, genital area and throat. Almost all sexually active people may be infected in their lifetime, usually without symptoms. In most cases, the immune system clears HPV from the body. Persistent infection with high-risk HPV (About 15 genotypes) of the cervix if left untreated, causes 95% of cervical cancers. Of these, HPV-16 and HPV-18 genotypes account for about 70% of global cervical cancer cases.[1,4] Typically, it takes 15–20 years for abnormal cells to become cancer.[11] Risk factors for cancer development comprise the grade of oncogenicity of the HPV type, immune status, the presence of other sexually transmitted infections, number of births, young age at first pregnancy, hormonal contraceptive use and smoking.[1] It is more prevalent amongst comparatively young women, the incidence increasing rapidly from the age of 25 to 45 years, then reaching a steady rate and finally falling again.[12]

Normal epithelium<-->Dysplasia<-->Cancer in situ<-->Invasive cancer.

Figure: Hypothetical model of the natural history of cervical cancer[12]

A cervical lesion may be visible on inspection as a raised, friable condyloma-like area, a tumor, or an ulceration. Cancer within the cervical canal may be occult.[13] Symptoms of cervical cancer include irregular or continued vaginal bleeding, offensive vaginal discharge, pelvic pain, leg edema, bladder symptoms (Frequency of micturition, dysuria, hematuria) rectal involvement (diarrhea, rectal pain, bleeding per rectum, rectovaginal fistula), ureteral obstruction. As the lesion progresses, complications may occur such as hemorrhage, frequent attacks of ureteric pain due to pyelitis, and pyelonephritis and hydronephrosis, vesicovaginal fistula, rectovaginal fistula.[9,13] It is completely preventable disease as different screening, diagnostic and therapeutic measures are effective.[13] High risk females are: women with high risk HPV infection, early age of first pregnancy, high parity, too many births or too frequent births, long term use of combined oral contraceptives, low socioeconomic status, poor maintenance of genital hygiene. Sexual behavior such as early sexual intercourse, multiple sexual partners, no use of condom are also risk factors.[9] Papanicolaou (Pap) smear has reduced the incidence by nearly 80% and death by 70.HPV vaccine is effective and safe. It can reduce the incidence of cervical cancer by 90-100%.[13] But it requires excessive resources such as laboratories, equipment, trained personnel.Visual Inspection with 5% Acetic acid (VIA) is an alternative screening method that is more cost effective.[12] Cervical cancer could be treated in the preinvasive phase because it lasts several years before it becomes invasive and curable.[13] Ideally the management of the patient is a team approach. Due consideration should be given to general condition of the patient stages, facilities available: Surgical and radiotherapy involvement of a gynecologic oncologist and radiation oncologist.[9]

The Government of Bangladesh (GOB) is giving high emphasis to Non Communicable Diseases (NCDs) to achieve the target of Sustainable Development Goal (SDG) where cervical cancer management is considered as a significant element of NCD. Both the government and private sectors are working jointly to fight against cervical cancer.[14] The objective of this study was to assess knowledge on cervical cancer among women attending the OPD of a tertiary level hospital in Bangladesh.

MATERIALS AND METHODS

This descriptive cross-sectional study was carried out in Gynecology & Obstetrics Outpatient Department (OPD) of Sir Salimullah Medical College and Mitford Hospital during the period of September 2019 to December 2019. The study population comprises of women of reproductive age (15-49) years.Sampling technique was purposive. The purpose of the study was explained to the respondents so that they could understand aim of the study and meaning of the questions of the questionnaire. After short discussion of the study, 300 respondents were face to face interviewed using pretested semi-structured questionnaire. Data were analyzed by MS Excel program.

RESULTS

Regarding the age of the respondents, age group (25-35) years were slightly more than age group (15-25) years (46.7% vs. 40.0%). About one-third (32.3%) of the respondents passed primary education. A large number (42.3%) of the respondent's monthly income was within 10,000-20,000TK. (Table I). Three-quarters (75%) of the respondents did not know about cervical cancer, while the rest (25%) possessed basic knowledge about the disease (Figure 1). Regarding knowledge about causes of cervical cancer out of 75, 33.3% mentioned about early age at marriage, 26.7% poor hygiene, 13.3% early sexual activity, 14.7% early age at first childbirth and 12% multiple sexual partners (Table II).

Table I Socio-demographic characteristics of the respondents (n=300)

Characteristics	Number	Percentage (%)
Age		
15-25	120	40.0
25 -35	140	46.7
35-49	40	13.3
Level of education		
Illiterate	62	20.7
Primary passed	97	32.2
Secondary attended	56	18.7
Secondary passed	41	13.7
Higher secondary	32	10.7
Degree and above	12	4.0
Occupation		
Housewife	269	89.7
Day laborer	11	3.7
Service holder	4	1.3
Others	16	5.3
Family members		
1-4	157	52.3
5-8	114	38.0
9-12	29	9.7
Monthly family income (TK)		
<10,000	66	22.0
10,000 -20,000	127	42.3
20,000 -30,000	82	27.3
>30,000	25	8.4
Total	300	100.0

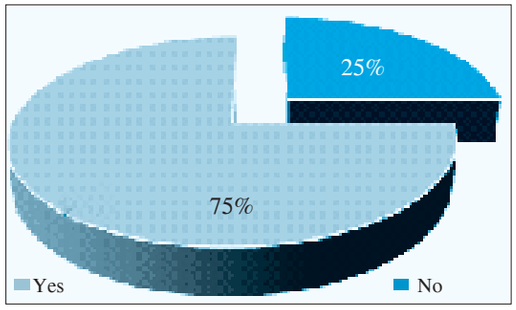

Figure 1 Knowledge regarding cervical cancer of the respondents

Table II Knowledge about causes of cervical cancer (n=75)

Causes of cervical cancer	Number	Percentage (%)
Early age at marriage	25	33.3
Early sexual activity	10	13.3
Age at first child birth	11	14.7
Multiple sexualpartner	09	12.0
Poor hygiene	20	26.7

Knowledge of respondents regarding symptoms of cervical cancer, the majority (65.3%) did not know (Figure 2). Half (50%) of them mentioned about irregular vaginal bleeding. Others mentioned foul-smelling vaginal discharge (19.2%), pelvic pain (17.0%), urinary problems (9.6%) and other problems(3.9%) (Table III).

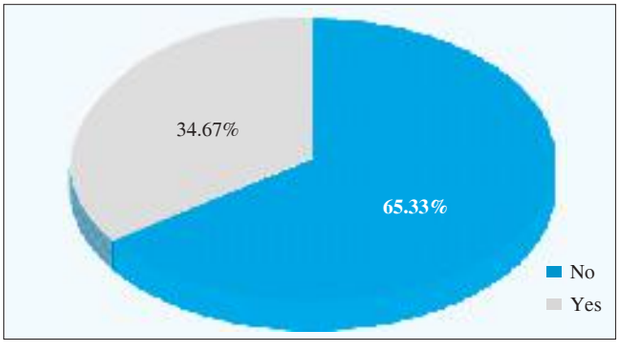

Figure 2 knowledge about the symptoms of cervical cancer of the respondents

Table III Knowledge about the symptoms of cervical cancer of the respondent by (n=104)

Symptoms of Ca cervix	Number	Percentage (%)
Irregular vaginal bleeding	52	50.0
Foul smelling vaginal discharge	20	19.2
Pelvic pain	18	17.3
Urinary problem	10	9.6
Others	4	3.9

More than two-thirds (71.7%) of the respondents did not know the diagnosis of cervical cancer. When asked 26.3%of respondents claimed that they knew about the treatment of cervical cancer. Knowledge regarding the diagnosis of cervical cancer, 54.1% of respondents mentioned ultrasonography, 34.1% VIA test, 9.4% biopsy and 2.35% pap smear. The majority (54.4%) of the respondents knew medical treatment followed by 41.8% who hadan idea about surgical treatment and 3.8% who hadan idea about chemotherapy (Table IV).

Table IV Knowledge about diagnosis and treatment of cervical carcinoma

Characteristics	Number	Percentage (%)
Diagnosis of cervical carcinoma (n=85)		
Ultrasonography	46	54.1
Biopsy	8	9.4
Pap smear	2	2.4
VIA test	29	34.1
Treatment of cervical carcinoma (n=79)		
Medical treatment	43	54.4
Surgical treatment	33	41.8
Chemotherapy	03	3.8
Radiotherapy	0	0.0

DISCUSSION

Out of 300 respondents, a large number (46.7%) belonged to the age group 25 to 35 years. Information on the educational status of the women revealed that a large number (32.3%) of them were primary passed and 32.3% were illiterate. Most (89.7%) of them were housewives.

Three-quarters of respondents (75%) said that they did not know carcinoma cervix. Nation-level information on knowledge of cervical cancer and attitudes towards the HPV vaccine among Bangladeshi women are basic for resources allotment of cervical cancer primary prevention program and to identify target groups for future educational programs. Among Bangladeshi women, one previous report has documented high (81%) awareness of cervical cancer; however, the majority (74%) of this data was collected from rural women.[15] A study carried out in Duval County, Floria, USA stated that among 296 participants, half (50.3%) of them had heard of HPV which can cause cancer and had lower knowledge about all HPV-associated cancers.[16] Another cross-sectional study was conducted in India among 100 professional college female students to obtain information about their knowledge on cervical cancer and found that the majority (70%) of them were not aware of cervical cancer.[17] Researchers showed that the level of knowledge about HPV and cervical cancer among school teachers in Kitui County, Kenya was moderate (48%, SD=10.9).[18] Another study among Kenyan women found that they knew little about cervical cancer and HPV vaccine.[19]

According to this study, about the cause of carcinoma cervix, most respondents (30.67%) mentioned early age at marriage, 28% mentioned poor hygiene, 14.67% indicated about early age at first childbirth, 13.33% mentioned early sexual activity whereas 12% mentioned about multiple sexual partners.A study carried out in Lagos, Southwest, Nigeria stated that Half of the respondents (51.4%) had only one lifetime sexual partner. About forty percent had their first childbirth at less than 20 years of age.[20] Regarding knowledge about symptoms of carcinoma cervix, 65.3% mentioned that they had no knowledge about the symptoms. Another study conducted in Nigeria showed that only 3.2% had heard of cervical cancer. Most of the women did not know the symptoms (99.4%), or risk factors (99.7%) of cervical cancer, and 96.8% had not heard about cervical cancer screening. [21]

In this study, 71.67% of respondents did not know the diagnosis of Ca cervix. More than half of respondents (52.94%) mentioned ultrasonography, 34.1% VIA test, 9.4% biopsy and the rest 3.5% mentioned Pap smear.About 97% of respondents had not heard about cervical cancer screening. A study carried out among women residing in urban slums of Nigeria showed that only 12.8% had heard about cervical cancer. Knowledge of cervical cancer, screening, and Human Papilloma Virus (HPV) immunization was poor.[20] When asked one-fourth (25.7%) respondents claimed that they knew about the treatment of carcinoma cervix. In Bangladesh, the National Institute of Cancer Research & Hospital (NICRH), BSMMU and Dhaka Medical College Hospital are the three main government centers. A few private hospitals also have designated gynecological oncology departments offering this service.[14] Primary treatment options may include surgery or a concurrent chemotherapy regimen consisting of cisplatin-based chemotherapy with external beam radiotherapy and brachytherapy.[22] Capacity for diagnosis and treatment of pre-cancerous lesions is high in high-income countries, but completion of treatment remains a problem, especially for black and Hispanic women and those with low incomes, in the US.[23, 24]

The GOB introduced the HPV vaccine in the country in 2016 with the support of Global Alliances for Vaccination and Immunizations (GAVI). A pilot project of school-based vaccination was undertaken to vaccinate 10-year-old girls in primary school at selected Upazilas.[25] The GOB took a policy decision to incorporate HPV vaccination as a part of the Expanded Program on Immunization (EPI) in the middle of 2023.[14]

CONCLUSION

Detailed knowledge about risk factors, symptoms, and preventive measures regarding cervical cancer is significantly low. These findings suggest the necessity for culturally appropriate health education programs andaccess to informationto improve knowledge regarding the risk factors of cervical cancer and its prevention.

DISCLOSURE

All the authors declared no competing interest.

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