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Knowledge about Carcinoma Cervix among the Females of Reproductive Age Group in Selected Urban Communities in Bangladesh

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Abstract

Objective: Despite the fact that cervical cancer is a preventable disease, it remains the second most common cancer in Bangladeshi women. This study investigated the knowledge of the risk factors, symptoms, and detection and prevention methods of carcinoma cervix among the females of reproductive age group in two urban areas of Dhaka, Bangladesh.

Methods: A descriptive type cross sectional study was conducted involving 118 randomly selected women aged 15-49 years using structured interview questionnaire.

Results: Majority of the population were married with low parity and well educated. 84.8% women had heard of cervical cancer, which was mostly from a friend (23.7%) or newspaper (19.5%). 34.8% had no knowledge of risk factors for the disease, and 35.6% thought that multisexual partnership was a cause. 84.8% women believed that sterile materials should be used and 77.1% believed in the use of pad during menstruation. 48.3% of the respondents believed that post coital bleeding was a symptom but 32.2% had no knowledge about it. Only 16.1% respondents were aware of cervical cancer screening. VIA and Pap smear tests were known to only 10.2% and 7.6% of the participants but not a single person had had any of the tests. 51.7% participants felt that condom could save from cervical cancer. That the vaccination can prevent cervical cancer was known to only 11% respondents, and the vast majority (88.1%) had no knowledge about the preventive measures. 25.4% of respondents supported that cervical cancer could be fully cured if diagnosed early and 37.3% agreed that it could not be cured at an advanced stage.

Conclusion: Low level of knowledge on risk factors, symptoms, screening and prevention strategies about cervical cancer were demonstrated among these urban females. Findings highlight the importance of developing policies on health education and promotion, targeting the particular fields where knowledge is deficient.

Keywords: Cervical cancer; Knowledge; Respondents; Symptom; Risk factor; Screening; Prevention

Introduction

Cervical cancer is one of the major public health problems throughout the world. It is the fourth most common malignancy in women [1]. The overwhelming majority, about 85%, are seen in developing parts of the world [2]. Almost 9 out of 10 deaths occur from cervical cancer in less developed countries [3]. In Bangladesh, cervical cancer has been the second most common cancer in women, with 11,956 new cases diagnosed and 6,582 deaths annually [3,4]. Globocan forecasts that 15,220 females will be diagnosed and 8,515 females will die of cancer cervix in 2020 [3].

Cancer of the cervix is largely preventable. The risk can be minimized by promotion of sexual risk reduction behavior and genital hygiene [5,6]. Further prevention can be achieved by screening, using Visual Inspection with Acidic Acid (VIA) or Pap smear test, which can detect precancerous lesions early so as to prevent progress towards invasive cancer by timely treatment [7,8]. Unlike many cancers, vaccine is available that works against 100% of human papilloma virus (HPV)-16 and-18, the genotypes responsible for about 70% cervical cancer cases [9,10]. Prevention and early diagnosis have markedly reduced incidence and mortality due to cervical cancer in many developed countries [11]. In the United States, the introduction of the Pap smear has decreased 90% deaths from cervical cancer [12]. Such is the case in Australia; since the introduction of the National Cervical Cancer Screening Program in 1991 deaths from cervical cancer have decreased, at about 2.8% per year [13].

Nonetheless, in Bangladesh, it remains one of the top ranked killers. In fact, most of the deaths were preventable if they were detected early. Study shows that 80% of cervical cancers are diagnosed in the advanced stages and even many cases left undiagnosed, leading subsequently to death [12]. The reasons behind this are lack of knowledge about the disease and ignorance about screening services [14]. Hence it is crucial to make general people aware of required knowledge.

Unfortunately, very few studies to date in Bangladesh have assessed the characteristics of cervical cancer patients and even fewer have assessed the knowledge of, and attitude towards, cervical cancer among the urban people. In order to develop health promotion intervention

strategies aimed at the prevention of cervix cancer, it is essential to know the level of knowledge of general people. Thus the purpose of our project was to assess the knowledge of symptoms, risk factors, and detection and prevention methods of carcinoma cervix among the females of reproductive age group in two selected urban communities in Bangladesh. This study aimed to determine how much knowledge the general population possessed about cervical cancer and the specific field in which they lacked the knowledge.

Materials and Methods

This was a descriptive type of cross sectional study conducted in two upper/middle class areas of Dhaka city named Dhanmondi and Malibag. The population under the study were all females of reproductive age group (15-49 years) residing in these two areas. The duration of the study was February, 2011 to March, 2011. A total of 118 residents were included in the study by simple random sampling technique. The research instrument was a structured questionnaire which was designed on the basis of extensive literature review. Data were obtained by face to face interview using the questionnaire. Ethical Clearance was received before the commencement of the study and informed written consent was taken from all participants.

Results

Between the overall time period 118 patients were interviewed. Mean age of the respondents was 32.5 years. Personal and sociodemographic characteristics of the respondents are summarized in Table 1.

Variables	No. of respondents (%)
Age (years)	
Mean (±SD)	32.54 (±8.5)
Range	15-49
15-24	25 (21.2)
25-34	43 (36.4)
35-44	40 (33.9)
45-49	10 (8.5)
Religion	
Muslim	101 (85.6)
Hindu	11 (9.3)
Christian	06 (5.1)
Educational qualification	
Primary	12 (10.2)
Secondary (SSC)	12 (10.2)
Higher secondary(HSC)	28 (23.7)
Undergraduate	38 (32.2)
Postgraduate	28 (23.7)
Monthly income	
Not an earning member	66 (55.9)
<5,000BDT	6 (5.1)
5,000-10,000 BDT	8 (6.8)
10,000-25,000 BDT	26 (22)
25,000-40,000 BDT	12 (10.2)
Marital status	
Single	37 (31.4)
Married	78 (66.1)
Divorced	2 (1.7)
Widowed	1 (0.8)
Parity	
0	55 (46.6)
1	19 (16.1)
2	24 (20.3)
3	13 (11)
4	5 (4.2)
>4	2 (1.7)

Table 1: Personal and sociodemographic profiles of the respondents (n=118).

Considering the specific objectives of the study, knowledge of the respondents was assessed in three subcategories. Knowledge about awareness, etiology and menstrual hygiene are illustrated in Table 2. Overall, 84.8% of the participants had heard the name of cervical cancer and the majority knew it from a friend (23.7%). Most of the respondents thought that cervical cancer occurred because of multisexual partnership (35.6%). When asked questions about menstrual hygiene, the majority (84.7%) gave the opinion to use sterile materials, most likely pad (77.1%), during menstruation. Here total percentage exceeded due to multiple responses.

Variables	No. of respondents (%)
Awareness of cervical cancer	
Aware	100 (84.8)
Unaware	18 (15.2)
Source of information	
Newspaper	23 (19.5)
TV	7 (5.9)
Internet	6 (5.1)
Friend	28 (23.7)
Relative	18 (15.3)
Books	3 (2.5)
Physician/nurse/other health care providers	7 (5.9)
School	1 (0.8)

Others	7 (5.9)
Risk factors	
By contact	2 (1.7)
Hereditary	13 (11)
Congenital	10 (8.5)
Multisexual partnership	42 (35.6)
Multiple pregnancy	3 (2.5)
Early marriage	17 (14.4)
Lack of genital hygiene	3 (2.5)
No idea	41 (34.8)
Tasks to be done for genital hygiene during menstruation	
Use of sterile materials	100 (84.7)
Cleaning genitalia	38 (32.2)
Clean after defecation	8 (6.8)
Use of articles during period	
Pad	91 (77.1)
Piece of cloth	17 (14.4)
Cotton	9 (7.6)
Short pent	0 (0)
Others	1 (0.8)

Table 2: Distribution of the respondents by their knowledge of awareness, etiology and menstrual hygiene regarding cervical cancer (n=118).

Respondents' knowledge about symptoms and screening of cervical cancer are shown in Table 3. Nearly half of the respondents (48.3%) believed that post coital bleeding was a symptom of cervical cancer. A very small number of people (16.1%) were aware of cervical cancer screening and even smaller knew about VIA (10.2%) and pap smear test (7.6%). None of the interviewee had undergone screening test in their lifetime. Here total percentage exceeded due to multiple responses.

Variables	No. of respondents (%)
Symptoms	
Post coital bleeding	57 (48.3)
Post menopausal bleeding	4(3.4)
Menorrhagia	3 (2.5)
Lower abdominal pain	20 (17)
Whitish discharge per vagina	33 (28)
Pain during coitus	5 (4.2)
No idea	38 (32.2)
Screening can detect cervical cancer before symptoms appear	
Yes	19 (16.1)
No	99 (83.9)
VIA test	
Aware	12 (10.2)
Unaware	106 (89.8)
Pap smear test	
Aware	9 (7.6)
Unaware	109 (92.4)
History of VIA test	
Yes	0 (0)
No	118 (100)
History of pap smear test	
Yes	0 (0)
No	118 (100)

Table 3: Distribution of respondents by their knowledge regarding symptoms and screening of cervical cancer (n=118).

Respondents' knowledge regarding the prevention of cervical cancer is illustrated in Table 4. 51.7% of the participants thought that condom could prevent cervical cancer but 42.4% had no idea about it. Most participants (89%) believed that vaccination could not be an aid for cervical cancer prevention and 88.1% did not know anything about prevention of cervical cancer. The concept that cervical cancer can be cured 100% if diagnosed early and it cannot be cured at an advanced stage was agreed upon by 25.4% and 37.3% of the participants respectively. Here again total percentage exceeded due to multiple responses.

Variables	No. of respondents (%)
Contraceptive method helpful for cervical cancer prevention	
Oral pill	5 (4.2)
Injection	2 (1.7)
IUD	0 (0)
Condom	61 (51.7)
No idea	50 (42.4)
Vaccination for cervical cancer prevention	
Helpful	13 (11)
Not helpful	105 (89)
Prevention strategy	
No intercourse during, just before and after period	8 (6.8)
Having a lot of nutritious food	9 (7.6)
Repeated pap smear test	8 (6.8)

VIA test	6 (5.1)
Vaccination	13 (11)
No idea	104 (88.1)
Consequences of cervical cancer	
Can be prevented 100% if diagnosed early	30 (25.4)
100% death	14 (11.9)
Cannot be cured at an advanced stage	44 (37.3)
Can be cured at any stages	3 (2.5)
No idea	35 (29.7)
Treatment of cervical cancer	
Surgery	77 (65.3)
Oral medication	7 (5.9)
Chemotherapy	23 (19.5)
Radiotherapy	9 (7.6)
No idea	40 (33.9)

Table 4: Distribution of respondents according to their knowledge regarding cervical cancer prevention (n=118).

Discussion

The study was limited to reproductive age female (15-49) at two urban areas of Dhaka named Dhanmondi and Malibag. In this study the level of knowledge about cervical cancer was sought to establish mainly by assessing the risk factors, symptoms, and its diagnostic and preventive procedures. 118 women completed the survey questionnaire.

The personal and sociodemographic information showed that most study people were in the age group of 25-44 and that 85% were Muslims. The majority of the people were highly educated having undergraduate (32.2%) or postgraduate (23.7%) degrees. About half of the samples (55.9%) were not earning members in their families and a quarter of the samples (22%) earned an average of 10,000- 25,000 Tk monthly. Two-third of the study population was married and the majority of them had a maximum of two children (Table 1). All these indicate that the present study was a perfect reflection of enlightened areas of Dhaka city where the majority of dwellers were well-educated and conscious of family planning.

About 85% of the respondents had heard about cervical cancer. The statistics is high when compared to the studies done in other prevalent areas of cervical cancer around the world; the disease is known to only 31.6% women in central region of Ghana [15], 42% female undergraduates in South Africa [16] and 67% residents of a city in Nigeria [17]. However, knowing only the name of a disease does not mean an adequate knowledge in all its aspects which was pretty proven in a Malaysian study where most had heard of cervical cancer but not aware of its prevention [18]. In the present study, when asked about the source of the awareness, friends (23.7%) and newspaper (19.5%) were replied by most of the respondents. Books (2.5%) and schools (0.8%) were the least common source of information which emphasizes addition of literatures about cervical cancer in Bangladeshi text books. The role of healthcare providers with regards to the source of awareness was also minimal (5.9%) which could be explained by the following findings of a quantitative study done among the healthcare professionals in United States. Here Tessarro et al. argued that most healthcare professionals had adequate knowledge about the etiology of cervical cancer but the preventive counseling and educational information on risk factors of the disease were considered less important to them [19]. Therefore, sharing information about the etiological factors with the patients is suggested to healthcare providers in order to use this useful knowledgeable manpower.

Although one third (34.8%) of the study population had no idea about the risk factors of cervical cancer, the majority knew at least one of it. Multisexual partnership was answered by the highest number of respondents (35.6%). But this is obvious that knowledge of only one etiological factor is not sufficient; rather one has to be aware of at least few ways of occurring the disease in order to judge his knowledge to be good. In an Indian study Anantharaman et al. considered knowledge of cervical cancer as good if a respondent was able to correct at least three risk factors [20]. Some people in the present study had misconception about the etiology, like congenital (8.5%) and hereditary (11%). In a qualitative study done in America, frequent use of tampons was shown as a common misconception regarding the cause of cancer cervix [21]. Thus the risk factors of this major burden of Bangladesh are very poorly known. This finding is in agreement with the studies done in other prevalent regions of cervical cancer, like Nigeria and Ghana, where only 26.5% and 6.4% of the participants had appreciable knowledge about the risk factors [15,17].

Because cervical cancer is directly related to menstrual and genital hygiene, we distributed the respondents according to their knowledge of the articles to be used during menstruation. More than three-fourth of the respondents (77.1%) suggested that pad should be used during menstruation; this indicates that they had fair knowledge regarding this. We wished to know the awareness of genital hygiene during menstruation among the study population and found that there was appreciable general knowledge about it. Many people believed that use of sterile materials (84.7%) and cleaning genitalia (32.2%) both were essential, although some respondents considered single of the variables as sufficient. In a similar study, neglected genital hygiene was found in 26.1% cases by Dutta et al. in India [22]. Because of the deficiency of water, appropriate sanitation and affordable sanitary pad, menstruation is not well managed in poor communities [6]. Drakshayani and Venka discovered in an Indian study that unhygienic particles, mostly old clothes, were used during menstrual period [23]. Probably poor socioeconomic status reflects poor genital hygiene which could be attributable in a developing country like Bangladesh. In our study, however, the high socioeconomic status of majority of the study population made the knowledge regarding menstrual and genital hygiene good.

Post coital bleeding (48.3%) and whitish per vaginal discharge (28%) were the two frequently answered symptoms of cervical cancer by the respondents. Where many participants correctly answered two of the symptoms, one-third (32.2%) did not know any of it. Thus the finding demonstrated poor knowledge of symptoms among the study population which was somewhat similar to the study done in Nigeria where 29.5% had some knowledge and only 4.5% had good knowledge about cervical cancer [17]. Therefore, knowledge regarding the symptoms of cervical cancer needs to be increased a lot in order to detect the disease early.

That the cervical cancer can be detected by screening was known to only 16.1% respondents. In fact, most of the studies conducted globally reviewed lack of knowledge about cervical cancer screening [18]. The present study found that women were very poorly aware of VIA and Pap smear test; only 10.2% and 7.6% respectively. With regard to whether VIA and Pap smear were experienced, no participant replied positively. The finding is more or less similar to the study conducted in central Ghana (2.3% had heard about Pap smear and 0.8% had done it in their lifetime) [15]. A similar study conducted among undergraduate university students in South Africa reported that 41.9% participants had heard about Pap smear test and 9.8% had had it [16]. Research shows that in most cases the proportion of women who had ever had a screening test was far less than half of the women who reported an awareness of the screening test [16]. It is usually unaware to women that the VIA and Pap smear tests are for the early diagnosis of cervical cancer. Many women believe that VIA or Pap smear test is performed only once they became symptomatic [18]. Women in many cases do not go for the screening test simply because they do not think themselves to be at risk for developing cancer cervix [16]. In a South African study, women were found to have misconception about the purpose of Pap smear, like diagnosis of infections or infertility and also cleaning the uterus after miscarriage or severe vaginal bleeding [24]. Obstacles behind the Pap smear are also due to fear of the procedure, lack of time, embarrassment, and stigma, as reported by Chirenje et al. and Abrahams et al. in two South African studies [25,26]. Research shows that unawareness of screening and its low utilization are existent irrespective of the participants' educational level [16,18,27]. In poor territories like Bangladesh, money should not be a factor because this is almost cost-free [16]. In African countries, 95% of the medical institutions have got the basic facilities for performing cervical cancer screening [28]. The aforementioned information implies that there is an immense need for extensive health education and making the community aware of the importance of cervical cancer screening, regardless of race, socioeconomic status and educational level.

Cervical cancer is caused by persistent infection with HPV which is a sexually transmitted disease and the partial protective effect of condom use against this virus infection is well-documented [11,16,22]. This is why we investigated the knowledge of contraceptive use to be helpful for cervical cancer prevention amongst the study people. About half a percent (51.7%) responded that the disease could be prevented by using condom whereas 42.4% did not have any clue about it. This indicates that the knowledge about the causal association of HPV with cervical cancer is poor which should definitely be improved. This may be due to the fact that a lot of people cannot imagine that cancer can occur even by a virus which can be transmitted sexually. In an American study Vail-Smith and White found that 72% females of a university were unaware of HPV infection and its related risk to cervical cancer [29]. A small proportion (4.2%) of the population in the present study thought that oral pill would help prevent cervical cancer which is basically the reverse of actual knowledge.

Very few women of the study population had preventive knowledge of cervical cancer. Only 11% of the respondents knew about the vaccination of carcinoma cervix. Beliefs regarding prevention of cervical cancer were generally inaccurate as can be seen from Table 4. Repeated

Pap's smear, VIA test, vaccination and no intercourse just before, during and just after menstruation were believed by the respondents quite insignificantly. The study showed that vast majority (88.1%) of the participants had no idea about the prevention method, indicating very low level of knowledge as compared to similar studies done as in South Africa, where Hoque et al. reported that 58.8% of the participants were not aware of the cervical cancer prevention [16]. Wong et al. also reported in their study conducted among Malaysian women that most of the participants were not aware of the prevention of cervical cancer although they had heard about this disease [18].

In the present study maximum women were generally aware of the consequences of cervical cancer. The consensus that cervical cancer cannot be cured at an advanced stage and cervical cancer can be prevented 100% if diagnosed early were believed by 37.3% and 25.4% of the participants respectively, indicating fair knowledge among most of the people. Nonetheless, having no knowledge about it among 29.7% females signifies that much effort should be taken to raise the level of knowledge regarding this.

Although one-third of the study population (33.9%) had no idea about the treatment of cervical cancer, majority had some knowledge about it. People usually believed surgery, chemotherapy and radiotherapy for the treatment. In fact, the actual treatment is dependent on the stage of the cancer in which the patient is. However, grading and staging of cervical cancer is not a spoken issue in the present study.

Limitation of this study was that knowledge of the participants was assessed in general level. Therefore, association between knowledge and sociodemographic and reproductive characteristics was not determined.

Conclusion

The study revealed limited knowledge of study population in various aspects of cervical cancer such as risk factors, symptoms, and detection and prevention strategies. Considering the burden of the disease in Bangladesh, significant efforts to reduce cervical cancer incidence and mortality must focus on every field in which people lack knowledge. The finding of the poor knowledge in this study predicts how useful it will be in reducing the burden of the disease if proper attempts are taken to increase the knowledge.

Further randomized trials with large sample sizes can be embarked on in rural areas of the country or in the places where cervical cancer is more prevalent. Association between knowledge and sociodemopgraphic and reproductive characteristics of the participants can be investigated by appropriate grouping of the participants and using appropriate statistical formula, the result of which may be a further concern of preventive health policy. Qualitative study should also be done to explore an in-depth understanding of cervical cancer, with special emphasis on screening. The study also calls for investigations to address the misconceptions in specific aspects of knowledge and in incorrect practices in screening services.

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