

“Knowledge about Risk Factors of Carcinoma Cervix among the Women Attending for VIA Test in a Selected Hospital”

Article by Syeda Sadia Farzana¹, Shampa Saha², Abu Sayem Md Shahin³, Ismat Ara⁴, Turani Talukder⁵, Irin Hossain⁶

¹Post graduate Student of Health Management, The University of Otago, Dunedin, NZ

²Dhaka Shishu Hospital

³Plan International Bangladesh ^{4,5,6}National Institute of Preventive and Social Medicine, Mohakhali, Dhaka

Email: irin.hossain@gmail.com⁶

Abstract

A cross-sectional descriptive study was conducted with the aim to find out the level of knowledge about the risk factors of the cervical cancer among the women attending VIA room of Gynae Out Patient Department, BSMMU on 106 patients selected by purposive sampling technique. Data were collected using pretested, semi-structured questionnaire by face to face interview in May, 2008. Mean age of the respondents was 42.9+6.5 years, 83.0% were Muslim. Majority (17.0%) of the respondents had Primary education. More than one third of the respondents' monthly income was taka 5001-10,000. Mean age at first marriage was 13.96+2.4 years and 26.4% of them were married for 20-24 years, 40.6% of the patients had history of first birth during their adolescence period. High parity (more than 2 children) was present in 65.0%. Child birth at lower age (94.44%), Multiparity (96.29%) and smoking (66.66%) were the major risk factors mentioned by the respondents. Thirteen percent gave history of Sexually transmitted diseases which is another remarkable risk factor & among them (42.8%) took treatment from MBBS doctor and by Doah-Tabiz (28.6%). The respondents mentioned as main symptoms were lower abdominal pain (98.0%), irregular per vaginal bleeding (57.69%), postcoital bleeding (32.69%) followed by post-menopausal vaginal discharge (26.92%). The findings suggest that programmatic approaches to increase the age at first marriage and first child birth, health education about cervical cancer, its risk factors, symptoms and its treatment will be more effective to reduce cervical cancer in Bangladesh.

Keywords: Knowledge, risk factors, carcinoma cervix, VIA test.

Introduction

Worldwide, cervical cancer is the fifth most deadly cancer in women. It affects about 1 per 123 women per year and kills about 9 per 100,000 per year. In the United States, it is only the 8th most common cancer of women. Cervical carcinoma stands as the first cause of death among the Mexican female population with 14 deaths per 100,000 women with 15 years old or more, representing 34.2 % of all new female cancer cases reported. High risk human papilloma virus (HPV) infection is considered to be the most important risk factor associated with the development of this tumor, and is present in 99.7% of the invasive cervical tumors worldwide [1]. Epidemiologists working in the early 20th century noted that: Cervical cancer was common in female sex workers. It was rare in nuns, except for those who had been sexually active before entering the convent. It was more common in the second wives of men whose first wives had died from cervical cancer. It was rare in Jewish women. In 1935, Syverton and Berry discovered a relationship between RPV (Rabbit Papillomavirus) and skin cancer in rabbits. (HPV is species specific and therefore cannot be transmitted to rabbits). Cervical cancer is vastly more common in developing nations than it is in developed nations, and it is fairly rare in the United States. In the U.S., it is expected that 13,000 women will develop cervical cancer in 2002; and 4100 women will die of cervical cancer in 2002. This puts cervical cancer as the 12th most common cancer that women develop, and the 14th most common cause of cancer death for women in the U.S. However, cervical cancer is the 2nd most common cause of cancer death in developing nations, with about 370,000 new cases annually having a 50% mortality rate. There has

been a 75% decrease in incidence and mortality from cervical cancer in developed nations over the past 50 years. Most of this decrease is attributed to the effective institution of cervical cancer screening programs in the wealthier nations [2]. Most cervical cancers start in the transformation zone (Where ectocervix and endocervix meet) [1]. There are 2 main types of cervical cancers: squamous cell carcinoma and adenocarcinoma. Usually, cervix cancer is very slow growing, although in certain circumstances it can grow and spread quickly. About 80% to 90% of cervical cancers are squamous cell carcinomas. The remaining 10% to 20% of cervical cancers are adenocarcinomas. Less commonly; cervical cancers have features of both squamous cell carcinomas and adenocarcinomas. These are called adenosquamous carcinomas or mixed carcinomas. There are a few other very rare types like small cell and neuroendocrine carcinoma. Cervical intraepithelial neoplasia (CIN) is the term used to describe these abnormal changes. CIN is classified according to the degree of cell abnormality. Low-grade CIN indicates a minimal change in the cells and high-grade CIN indicates a greater degree of abnormality [3]. The early stages of cervical cancer may be completely asymptomatic. As a tumor grows in size, it can produce a variety of symptoms. In advanced disease, metastases may be present in the abdomen, lungs or elsewhere.

Cervical cancer risk factors include: 1. Human papilloma virus infection: The most important risk factor for cervical cancer is infection by the human papilloma virus (HPV). Epidemiologic and clinical data indicate that HPV, especially HPV-16 and HPV-18, play a major role in the etiology of cervical cancer [4]. Expression of HPV-specific oncoproteins, E6 and E7, are considered essential in maintaining malignant growth of cervical cancer cells [5]. 2. Smoking: Women who smoke are about twice as likely as non-smokers to get cervical cancer. 3. Immunosuppression: Human immunodeficiency virus (HIV), the virus that causes AIDS, damages the body's immune system and seems to make women more at risk for HPV infections. This may be what increases the risk of cervical cancer in women with AIDS. In women with HIV, a cervical precancer might develop into an invasive cancer faster than it normally would. 4. Chlamydia infection: Chlamydia is a relatively common kind of bacteria that can infect the reproductive system. It is spread by sexual contact. Some studies have seen a higher risk of cervical cancer in women whose blood test results show past or current Chlamydia infection (compared with women with normal test results). 5. Diet: Women with diets low in fruits and vegetables may be at increased risk for cervical cancer. Also overweight women are more likely to develop this cancer. 6. Oral contraceptives (birth control pills): There is evidence that taking oral contraceptives (OCs) for a long time increases the risk of cancer of the cervix. Research suggests that the risk of cervical cancer goes up the longer a woman takes OCs, but the risk goes back down again after the OCs are stopped. In a recent study, the risk of cervical cancer was doubled in women who took birth control pills longer than 5 years, but the risk returned to normal 10 years after they were stopped. 7. Multiple pregnancies: Women who have had many full-term pregnancies have an increased risk of developing cervical cancer. 8. Low socioeconomic status: Poverty is also a risk factor for cervical cancer. 9. Family history of cervical cancer: Cervical cancer may run in some families. If your mother or sister had cervical cancer, your chances of developing the disease are increased by 2 to 3 times. Some researchers suspect that some instances of this familial tendency are caused by an inherited condition that makes some women less able to fight off HPV infection than others [6]. Cervical cancer is considered as a preventable disease. The importance of regular cervical cancer screening cannot be overstated [7].

Pap test: The current hallmark of cervical cancer screening is the Pap test. Pap is short for Papanicolaou, the inventor of the test, who published a breakthrough paper back in 1941. A Pap test is easily performed in doctor's office. Many women find the exam uncomfortable, but rarely painful. Although the Pap test is highly effective, it isn't a perfect test. Sometimes, the test may miss cells that have potential to become an invasive cancer.

Visual inspection with acetic acid (VIA); VIA, also known as direct visual inspection or cervicospoty, can be an alternative to cytological testing or can be used along with Pap screening. VIA involves applying 3% to 5% acetic acid (vinegar) to the cervix using a spray or a cotton swab and observing the cervix with the naked eye after one minute. If characteristic, well-defined aceto-white areas are seen adjacent to the transformation zone, the test is considered positive for precancerous cell changes or early invasive cancer. An additional advantage of VIA not offered by

Pap or HPV DNA tests is that it allows providers to identify the small proportion of positive lesions that are unsuitable for treatment with cryotherapy, a mode of treatment well suited to limited-resource settings. VIA might not work as well in postmenopausal women because the transformation zone recedes into the cervical canal at menopause.

Invasive cervical cancer is more common in economically disadvantaged developing countries, in which 78% of worldwide cervical cancers occur [1]. These account for 15% of all cancers in women. The associated lifetime risk of invasive cervical cancer in such countries is about 3%. In developed countries, the disease accounts for 4.4% of all new cancers in women, and it is associated with a lifetime risk of about 1.1%. This disparity is attributed to the lack of effective screening programs in developing countries that have a high incidence of cervical cancer [8].

However, invasive cervical cancer is second only to breast cancer as a leading cause of worldwide cancer-related mortality in women. Approximately 190,000 deaths per year occur worldwide as a result of cervical cancer; these account for 8.5% of all cancer deaths in women. In the United States, an estimated 3670 women died from cervical cancer in 2007. Nearly 40% of cervical cancer deaths in developing countries occur in South Central Asia, a heavily populated region that includes India, Pakistan and Bangladesh.

Background

Cervical cancer is the second most common cancer in women worldwide and the leading cause of cancer deaths in women in developing countries. It is a disease of unfortunate inequities but also of exciting opportunities. The fight against cervical cancer, a disease that is preventable, can be regarded as both a health issue and a human rights and ethical issue. Current tools can tackle this problem and help to give more women, their families, and their communities a future without cervical cancer.

Bangladesh has a population of 44.78 million women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 12931 women are diagnosed with cervical cancer and 6561 die from the disease. Cervical cancer ranks the 1st most frequent cancer in women in Bangladesh, and the 1st most frequent cancer among women between 15 and 44 years of age. Very few data are available on HPV burden in the general population of Bangladesh. However, in Southern Asia the region Bangladesh belongs to, about 6.6% of women in the general population are estimated to harbour cervical HPV infection at a given time, and 75.1% of invasive cervical cancers are attributed to HPVs 16 or 18 [9].

However, with the improved screening, diagnostic and preventive technologies described herein—and yet to come—the world has an opportunity to make a real difference in women's lives and to enhance the strength and survival of families and communities [10]. Data obtained from key statistics of Bangladesh shows that 44.78 million women are at risk of cervical cancer, 12,931 cases diagnosed annually and 6561 deaths due to cervical cancer annually [9]. Considering the situation, Government of Bangladesh has started VIA at different settings of health care delivery systems.

Cervical cancer ranks the 1st most frequent cancer in women in Bangladesh, and the 1st most frequent cancer among women between 15 and 44 years of age.

Population
Women at risk of cervical cancer (Female population aged ≥ 15 yrs) in millions 44.78
Burden of Cervical cancer
Number of cervical cancer cases diagnosed annually 12931
Number of deaths due to cervical cancer annually 6561
Burden of cervical HPV infection
HPV prevalence (%) in general population (in women with normal cytology) 6.6a
Prevalence (%) of HPV 16 or HPV 18 in women with cervical cancer 75.1a

Screening practices
Cervical screening coverage -
Other factors contributing to cervical cancer
HIV rate (%) in adults (15-49 years) <0.1
Smoking prevalence in women (%) 26.70
Fertility rate (live births per women) 3.4
Oral Contraceptive Use (%) 26.2
Other relevant factors for HPV vaccine introduction
Vaccination coverage (%) in 2005 of DTP (3rd dose completed) 88
Immunization system performance (% of districts \geq 80% DTP3 coverage) 84

This statistic is a Southern Asia regional estimate [9]. Fortunately, there are several actions that women can take to decrease the risk of dying from cervix cancer. The first of these is undergoing regular Pap testing. Pap tests will be discussed further in the next section, but the reason that women have had such a drastic drop in cervical cancer cases and deaths in this country has been because of the Pap test and annual screening. Millions of women worldwide ever undergo cervical cancer screening, and hundreds of thousands die prematurely without ever knowing why they were ill. This preventable disease kills an estimated 274,000 women every year, affecting the poorest and most vulnerable women and sending a ripple effect through families and communities that rely heavily on women's critical roles as providers and caregivers. Every year, some 83 per-cent of the world's new cases and 85 percent of all cervical cancer deaths occur in developing countries. In most of these countries, cervical cancer is the leading cause of cancer deaths among women [11]. Clinical trials show that HPV vaccines are effective for four and a half to five years at a minimum (the duration to date of the trials), but they very well might be effective for much longer [10] [12].

Methods

Study design and sample

This study was conducted to find out the level of knowledge about the risk factors of the cervical cancer among the women attending VIA room of Gynae Out Patient Department, BSMMU according to the following methodologies:

This cross-sectional study was conducted from March to June; 2008. This study was conducted at VIA room of Gynae outdoor of Bangabandhu Sheikh Mujib Medical University among the patients who came only for VIA test at BSMMU. From the patients the sample was taken by non-probability purposive sampling. Among the patients, those who were willing to participate in the interview were interviewed at the VIA room total 106 women were interviewed. A semi structured questionnaire was used as research instrument. The questionnaire development: based on the specific objectives of the study, at first variables were identified. Then appropriate scales of measurements for these variables were drafted. After adequate correction and thorough checking, the questionnaire was then divided into four parts; part a. contained the questions related to the socioeconomic status, part b. contained the questions related to their reproductive health, part c. contained about personal history and part d. contained questions to assess their knowledge on carcinoma cervix and VIA test. Data were collected by face to face interview, by asking them questions as per the written questionnaire at the VIA room. The study populations were interviewed one after another without disturbing their routine works. The interview was taken by the researcher herself at the site of the study.

Analysis

Collected data were analyzed after thorough checking, cleaning, editing and compiling by using the SPSS (Statistical package for social science, version 12.0 for windows) software and scientific calculator. The data were presented in different Tables, charts. The data were presented in different tables in order to the variables. Frequency tables according to the variables. Cross tables to see the level of knowledge according to the socio-demographic variables. Chi-square test was done to see the relationship between level of knowledge and some selected variables. The test statistics was used to analyze the data are descriptive statistics and inferential statistic according to the demand of the study with 95% confidence interval. Level of significance was set at 0.05. Qualitative data were analyzed on the basis of themes.

Scoring and grading of respondent's knowledge on carcinoma cervix were made on the basis of following procedures; for the question no.29 and 31 total score was taken as 5 and 4 on the basis of correct answer given by the respondents. Then, based on this scale of scores, the following grades were categorized. Good knowledge: The respondent who obtained 4-5 marks. Poor knowledge: The respondent who obtained <4 marks.

Result

This was a cross sectional study, conducted in the VIA Room of Gynecology Outpatient department of Bangabandhu Sheikh Mujib medical University (BSMMU), Dhaka. The main objective of the study was to assess the knowledge about the risk factors of carcinoma cervix among the women attending for VIA test. A total of 106 patients were interviewed.

Socio-demographic status of rural mothers

The mean age of the respondents was 42.9 ± 6.5 yrs ranging from 32-60 years. Highest percentage, 34.9% of the respondents were in the age group of 35-39 years. Data shows that majority of the respondents were Muslim (83%) followed by 13.2% respondents were Hindus & the rest (3.8%) were Christian & Buddhist (3.8%). The Highest percentage of the respondents were illiterate, i.e., 32.1%, followed by 17% of the respondents had primary level of education, 14.2% had secondary & S.S.C, 11.3 % respondents had graduate and master's level. Regarding the husband's level of education, highest Percentage of the husband were illiterate (20.8%) followed by primary level of education (9.4%), SSC passed (16.0%), HSC passed (14.2%), graduate 17.9%. Highest percentage of the interviewed respondents were housewife (85.9%) followed by 6.7% were service holders and others were occupied in business, garments work, as day labourer and doctor. Out of 106 respondents, 36.8% of the husband were service holder, 18.9% were businessman, 16.0% were farmer, 11.3% found as garments worker, Rest were followed by 4.7%-day labourer, 7.5% unemployed, and 4.7% occupied in other jobs. The family income of the respondents was taka. $12,614 \pm 8,478$ ranging from taka 2500 - 50,000. 17.1% respondent's family income was 5000 takas. More than one third of the respondents' monthly income taka 5001-10,000 followed by 21.0% had monthly family income taka 10,001-15,000, 12.4% had 15001-20,000-taka income and 8.6% had monthly family income taka 20,000-25,000.

Table 1. Socio-demographic characteristics of the respondents n=106

Characteristics	Frequency	Percent %
1. Age (Years)		
30-34	3	2.8
35-39	37	34.9
40-44	27	25.5
45-49	23	21.7
50& above	16	15.1
2. Religion		

Islam	88	83.0
Hinduism	14	13.2
Others	4	3.9
3. Respondent's education level		
Illiterate	34	32.1
Primary	18	17
Secondary and SSC	15	14.2
Graduate and Masters	12	11.3
4. Respondent's Husband Education level		
Illiterate	22	20.8
Primary	10	9.4
SSC	17	16
HSC	15	14.2
Graduate	19	17.9
5. Occupation of the Respondents		
House wife	91	85.9
Service Holder	7	6.7
Business	3	2.8
Garments' worker	2	1.8
Day labourer	2	1.8
Doctor	1	0.9
6. Occupation of the Respondents' Husband		
Service holder	39	36.8
Business Man	20	18.9
Farmer	17	16.0
Garments' worker	12	11.3
Day labourer	5	4.7
Unemployed	8	7.5
Doctor	1	0.9
Others	4	3.8

Reproductive characteristics of the respondent n= 106

The mean age at first marriage was 13.96 ± 2.4 years ranging from 10-20 years. more than two third of the respondents was married at the age less than 15 years followed by 25.5% at the age 15-17 years, 10% was married at the age of >17 years. Among the respondents; 106 had history of live birth mean age at first birth was 16 ± 2.4 years, ranging from 12-25 yrs. 40.6% were in the age group 12-14 years during their first child birth followed by 34.9% in the 15-17 years, 22.6% in the 18-20 years.

Table 2. Reproductive characteristics of the respondent n= 106

Characteristics	Frequency	Percent %
1. Age at First Marriage (Years)		
10-14	68	64.2
15-17	27	25.5
18-20	10	9.4
20& above	1	0.9
2. Age at first pregnancy (yrs)		
12-14	43	40.6
15-17	37	34.9
18-20	24	34.9
21& above	2	1.9

Distribution of respondents by reason for visiting the VIA centre n= 106

The table shows that among 106 respondents, 57 women came to do the VIA test, 41 women came for the treatment of carcinoma cervix & rest 8 women for other purposes.

Table 3. Distribution of respondents by reason for visiting the VIA centre

Reason for Visiting	Number	Percentage (%)
To have VIA test	57.00	55.66
Treatment for Ca Cervix	41.00	38.67
Others (fever-1, P/V whitish discharge-1, cervical tumour-2, Cancer investigation-4)	08.00	07.54

Distribution of respondents by Knowledge on the different type of risk factors of carcinoma cervix

The highest percentage 96.26% of the respondents mentioned multiparity, 94.44%, child birth at lower age & 46.29% of the respondents as long time oral contraceptive use & 27.77%, having multiple sex partners, sixty six percent as smoking as the causes of carcinoma cervix. The table shows that 49.1% of the respondent knows the symptoms of ca-cervix. The main symptoms of carcinoma cervix were severe lower abdominal pain 98.0% & excessive per vaginal bleeding during menstruation were 57.69%, others included excessive bleeding following cohabitation and discharge following menopause. This table shows that 92.4% of the respondents had gained the knowledge on carcinoma-cervix from the doctors, 6.7% from media & 1% from the relatives.

Table- 4. Distribution of respondents by knowledge on the different type of risk factors of carcinoma cervix

Characteristics	Frequency	Percent (%)
Knowledge on type of risk factors of carcinoma cervix. n= 54 **Multiple responses		
Child birth at lower age	51	94.44
Multi-parity	52	96.29
Use of oral contraceptives for long time	25	46.29
Multiple sex partner	15	27.77
Smoking	36	66.66
Knowledge about symptoms of carcinoma cervix n= 52 **Multiple responses		
Severe abdominal pain	51	98.0
Excessive bleeding during menstruation.	30	57.69
Excessive bleeding following cohabitation	17	32.69
Excessive discharge following menopause	14	26.92
Others	1	1.92
Source of knowledge on carcinoma cervix n= 105		
Doctor	97	92.4
Relatives	1	1.0
Media	7	6.7

Distribution of respondents by knowledge about VIA test

Table shows that 95.23% of the respondents know about VIA test & 4.76% had no information regarding VIA test. The highest percentage of the respondents (100.0%) mentioned BSMMU, 22.8% DMC & four percent from Mohammadpur fertility centre where VIA test is done. Among the respondents 77.0% knew that VIA test should be done within 25-64yrs of age & 71.0% of the respondents correctly answered that VIA test should be done every 3 yearly.

Table 5. Distribution of respondents by knowledge about VIA test

Characteristics	Frequency	Percent (%)
Knowledge about VIA test n= 105		
Yes	100	95.23
No	5	4.76
Knowledge about place of VIA test n= 100 **Multiple responses		
BSMMU	100	100
DMC	22	22.8
Mohammadpur Fertility Center	4	4.0
Private Clinic	1	1.0
Knowledge on selection criteria of VIA test n=100, *Correct answer		

**Multiple responses		
Who should do VIA test (Age 25-64 yrs)*	77	77
VIA Test Interval (3-yearly)*	71	71

Relationship of respondents' knowledge on risk factors of carcinoma-cervix with their educational status, monthly family income, occupation

The table shows that relationship of knowledge on risk factors of carcinoma-cervix with education. Regarding good knowledge 2(33.3%) were illiterate, 22(45.8%) was literate. Poor knowledge was found in 4(66.7%) who were illiterate, 26(54.2%) were literate. So, good knowledge was more among the respondents who were literate 22(45.8%) and poor knowledge were more among 26(54.2%) respondents. Statistically there was no significant relationship between educational status & respondents' knowledge on risk factors of carcinoma-cervix ($p=0.885$). This table shows good knowledge on risk factors of carcinoma-cervix was found high among the respondents' monthly income taka 15,000 & above 13(52.0%), poor knowledge was high 12(70.6%) among respondents earning taka upto 10,000. Statistically, there was no significant association between knowledge of risk factors of carcinoma cervix & the respondents' monthly family income, ($p=0.277$). The table shows that knowledge on ca-cervix with occupation reveals that maximum respondents had poor knowledge. Good knowledge was more in housewives 18(42.9%), 6(50.0%) in others. Poor knowledge was in housewives 24(57.1%), in others 6(50.0%). Total result shown that among 54 respondents' 24(44.4%) had good knowledge and 30(55.6%) had poor knowledge. As $p>0.05$ no statistically significant difference was found between occupation & respondents' knowledge on carcinoma-cervix.

Table 6. Relationship of respondents' knowledge on risk factors of carcinoma-cervix with their educational status, monthly family income, occupation n= 54

Knowledge on risk factors of carcinoma-cervix	Education		Total	
	Illiterate	Literate		
Good	2(33.3%)	22(45.8%)	24(44.4%)	
Poor	4(66.7%)	26(54.2%)	30(55.6%)	
Total	6(100%)	48(100%)	54(100%)	
$\chi^2 = 0.021, df = 1, p= 0.885$				
Knowledge on risk factors of carcinoma-cervix	Occupation group		Total	
	House wife	Others		
Good	18(42.9%)	6(50.0%)	24(44.4%)	
Poor	24(57.1%)	6(50.0%)	30(55.6%)	
Total	42(100.0%)	12(100.0%)	54(100.0%)	
$\chi^2 = 0.193, df = 1, p= 0.661$				
Knowledge on risk factors of carcinoma-cervix	Family Income status			Total
	Up to 10,000	10,001 - 15,000	15,001 & above	
Good	5(29..5%)	6(54.5%)	13(52.0%)	24(45.3%)
Poor	12(70.6%)	5(45.5%)	12(48.0%)	29(54.7%)
Total	17(100.0%)	11(100.0%)	25(100.0%)	53(100.0%)
$\chi^2 = 2.564, df = 2, p= 0.277$				

Discussion

Cervical cancer is an important public health problem among adult women in developing countries. Organized screening services like VIA test, Pap's smear contributed much to the decline of the cervical cancer incidence and mortality over the past 50 years in developed countries. Early detection of precancerous lesions and early cancer will contribute a lot to improve the quality of women's life. Over 95% of patients with early cancer of the cervix can be cured if preventive measures are taken. This cross-sectional study was conducted among 106 women who attended at VIA Room of Bangabandhu Sheikh Mujib Medical University (BSMMU) Hospital, Gynae Out Patient Department for VIA test. The study tried to find out the knowledge about risk factors of carcinoma cervix among the women who attended for VIA test. The study also aimed to find out socio-demographic status of the patients as well as their knowledge on cervical cancer.

According to this study who came for VIA test the mean age of them was 42.9 ± 6.5 years ranging from 32 to 60 years. Highest percentages of the patients were in the age group 35-39 years (34.9%) followed by age group 40-44 years. Although cervical cancer is associated with a broad age range, it usually occurs in the fifth or sixth decade, at a mean age of 54 years [13] [14]. In contrast, intraepithelial lesions (CIN), which are the precursors of invasive disease frequently occur in younger women (often under 40 years of age) [15]. So, here we saw that in VIA test that age group were included who had the chance of having CIN and invasive cervical cancer. In this study the family income of the respondents was Tk. 12,614 + 8,478 that mean most of them were from low socio-economic condition which is one of the risk factors for cervical cancer. Descriptive and analytic studies have demonstrated that cervical cancer predominantly affects women in low socio-economic classes [16] [17].

Data analysis of the present study indicated that 95.3% of the respondents and 74.5% of their husband had single marriage. However, data showed that the multiple marriages were higher among the husbands than their wives. Studies in the region identified 40% of the respondents had more than five sex partners (of both men and women) and which act as one of the main risk factor [18]. In this study the mean age at first marriage was 13.96 ± 2.4 years ranging from 10 to 20 years. More than half of the respondents started married life below 15 years of age. About half (40.6%) of the respondents had history of first birth at the age of 12-14 years. (1.9%) gave first birth at 21 years and above. According to a case control study, among behavioral measure 52 cases and 24 control, early age at first intercourse and early age at birth of first child are significantly associated with high cervical cancer rate [19] [20]. So it is consistent with this study. In this study group 27.6% respondents had history of live birth 5 or more times followed by 4 births (16.2%) and 26.7% had 2 live births. For decades, high parity has been suspected of being associated with an increased risk of cervical cancer [20]. Fifty six percent of the cases and 41% of the controls had two or more children which supports for high parity as a major risk factor for carcinoma cervix [21]. The risk of cervical cancer was increased by more than two-fold in women who had four children or more compared with those who had one or none [22]. In this study who were selected for the VIA test among them 47.2% had history of oral contraceptive use and 34% had use of oral contraceptives less than 5 years and 66% had history of use for 5 years and above. In this study group about one third 11.3% of the respondents had history of smoking and among them 75% had a history of smoking for more than 5 years. In a case control study, the cases included 43% of smoking women, while the controls indicated only 23%. Cervical cancer was 2-5 times more frequent in smoking women [23] [24].

In this study 14(13.2%) of the respondents had STD & all of them received treatment. A case control study of Cuba shows, 31% of the cases and 11% of the controls were at risk. Women with STD may have carcinoma cervix up to 11 times higher [25]. So, it may be said that, respondents seem to be aware of STD. Patients who came for VIA test, highest percentage of them had complaints of severe lower abdominal pain (98.0%) followed by Excessive per vaginal bleeding (57.69%) during menstruation, post coital bleeding (32.69%) and others were post-menopausal bleeding, whitish discharge, painful sexual intercourse, painful menstruation, infertility etc. Abnormal vaginal bleeding is the most common symptom of invasive cancer. Other symptoms are whitish vaginal discharge, post coital bleeding and lower abdominal pain [26] [27]. Here, who were selected for the VIA test about 95.23% of the respondents were aware about the screening test and place where they are done.

Doctors informed them about the test. The main source of knowledge was 92.4% from the doctors followed by from media (6.7%) and relatives (1.0%). That is also similar finding of other case control study on carcinoma cervix of USA [28] [29]. Most (99.1%) of the respondents had knowledge on cervical cancer. 51.4% had knowledge about the risk factors of cervical cancer. Among them 96.29% of the respondents mentioned multiparity & 94.44% as giving child birth at lower age are the main risk factors followed by 46.29% of the respondents as long time oral contraceptive use, 27.77% as having multiple sexual partner & 66.66% as smoking habit. Among 49.1% respondents had knowledge on symptoms of cervical cancer. In some regional studies it is shown that women also have little knowledge of the risk factors associated with cervical cancer like 52% cases had knowledge about child birth at lower age (<18 years), 56% told multiparity as a risk factor in case of women who had more than 5 children, 20% as prolong OCP use for at least >10 years and 40% women thought having multiple sex partner (>5) as risk factors of cervical cancer [30] [31] [32]. Literate respondents had good knowledge 45.8. % & had poor knowledge 54.2% on risk factors of Carcinoma cervix than illiterate counterpart. Who were other than housewife had better knowledge (50.0%) on cervical cancer. Women from family of monthly income Taka 15001 and above had better knowledge (52.0%), than low income family. There were no association of knowledge about risk factors and symptoms of carcinoma cervix with age of the respondents and age at first marriage. So it can be concluded that VIA test in BSMMU Hospital at Gynae Out Patient Department, a small proportion of the patients were selected for screening who had several risk factors. That means mainly high-risk population is their target population. But the level of distribution of knowledge about cervical cancer and its prevention is low among the respondents.

Conclusion

This study was conducted among the patients attending BSMMU Gynae OPD to assess the knowledge about risk factors for the development of cervical cancer among the women attending for the VIA test. The majority of the respondents were from lower socio-economic class with less education. Mean age of the patients was middle aged that corresponds with the average age of the development of CIN and cervical cancer. This age group of patients with less education and low socio-economic condition were selected for VIA test as they were more prone to develop CIN and as well as cervical cancer. In this study, it was observed that the respondents, who came for VIA test, had been assessed by the doctors about the risk factor of the cervical cancer. Such as -early age at first intercourse and first child birth, high parity, and multiple sexual partners, long term oral contraceptive use, smoking & they were also informed regarding screening tests. STD also was one of the risk factors for the patients as this increases the risk of cervical cancer development. In this study It was found that knowledge about causes of carcinoma cervix of the respondents mostly corresponds with the risk factors of cervical cancer. Among the respondents, knowledge about risk factors of cervical cancer was low. Even who were selected & came for the VIA test, were informed about the test but not well-informed regarding risk factors. Patients with higher education and higher monthly family income had good knowledge about prevention, risk factors and regular screening test.

Acknowledgement

I owe my all gratitude to almighty Allah, the most merciful that by his endless grace I have been able to complete this dissertation. With great pleasure I express most sincere appreciation to the honorable Chairman Dr. Afroza Begum, Associate Professor, Department of Maternal and Child Health of NIPSOM to whom I am deeply indebted and highly grateful for her sincere, kind co-operation and constructive advice and criticism for the preparation of this dissertation and without whose help I would not be able to complete the dissertation.

Reference

- [1]. About cervical cancer_RHO cervical cancer www.rho.org
- [2]. Anderson SM. Human Papilloma virus and cervical cancer. an update. *Advance*. June 2005; p: 92-96.
- [3]. American International cancer Institute. What you need to know about cervix cancer. www.cancer.gov.
- [4]. Alan it: Decherney, Lauren Nathan. *Current Obstetric & treatment*. 9th ed.2003. P-894
- [5]. Cervical intraepithelial neoplasia (5) CIN3.jpg from Wikipedia, the free encyclopedia.
- [6]. Cervical Cancer: The Basics www.oncolink.com
- [7]. Cervical Cancer Original Source: www.Oncologychannel.com
- [8]. Chromosomal imbalances in four new uterine carcinoma derived cell lines <http://www.biomedcentral.com>
- [9]. Cervix, Cancer Faysal a Saksouk, MD. www.emedicine.com Feb 7, 2008.
- [10]. Cervical cancer Screening in Developing countries, report of a WHO consultation, Geneva
- [11]. Cervical cancer; by Paul S. Frame, MD. (*J Am Board fem. pract* 11(2): 47-95, 1998 (c) 1988 American Board of Family Practice
- [12]. Cervical cancer control in developing countries, memorandum from a WHO meeting.
- [13]. Cramer DW, Cutter SJ. Incidence and histopathology of malignancies of the female organs in the united states *Am J Obstet Gynecol* 1974; 118: 443-460.
- [14]. Das DK, Nurthy NS, Bhatnagar P. Efficacy of a hospital-based cytology screening program. *Indian Journal of Medical Sciences*
- [15]. Detailed Guide Cervical Cancer. What Are the Risk Factors for Cervical Cancer? www.cancer.org
- [16]. Detailed Guide: Cervical Cancer (Revised: 03/26/2008) www.cancer.org
- [17]. Drain PK; Holmes KK, Hughes JP. Determinants of cervical cancer rates in developing countries. *Int. J. cancer*. 2002 Jul 10; 100(2): 199-205
- [18]. Harry H. W. infectious Disease Service Multifactorial Etiology of Cervical Cancer. *A Hypothesis MedGenMed* v.7(4); 2005-p:2
- [19]. HPV and cervical cancer-summary report, Bangladesh-2007. WHO & MOH & FP, Govt. of the Peoples Republic of Bangladesh, 7-9 August, 1993, p-23
- [20]. Linda Bren Cervical cancer screening FDA consumer magazine January-February 2004 Issue
- [21]. Liquid based cervical screening June 2002. Physicians Reference laboratory web site. Available at: <http://www.Prlnet.com>
- [22]. . Accessed July 25, 2007.
- [23]. Lagos T. L, MD, Prevalence and risk factors in positive cervix cytology, *MEDICC Review* 2006.
- [24]. Murthy NS et al. Estimations of reeducti9on in life time risk of cervical cancer through one life-time screening. *Neoplasma*, 1993, 40: 255-258.
- [25]. NHS Cervical Screening Programme info@cancerscreening.nhs.uk
- [26]. Parking Dr. Laara E, Muir CS. Estimates of the world-wide frequency of sixteen major cancers in 1980. *Int. J. cancer* 1988; 41:148-97 P.
- [27]. Probhakar AK, cervical cancer in India strategy for control. *Indian Journal of cancer*, 1992, 104; 29-32 P.
- [28]. Preventing cervical cancer worldwide-Population Reference Bureau-www.prb.org. [12] Alan it: Decherney, Lauren Nathan. *Current Obstetric & treatment*. 9th ed.2003. P-894.
- [30]. Victor Mornero, F Xavier Bosch. Effect of oral contraceptive on risk of cervical cancer in women with HPV infection. A case control study. *The lancet* Vol. 359, Number 9312. March-30, 2003.
- [31]. What are the Risk factors for cervical Cancer? Detailed guide: Cervical cancer Information. 06/11/2007
- [32]. Web MDC cervical cancer: September 1998; <http://my.Webmd.com/cantent/dmk/dmkarticle40017>
- [33]. What you need to know about-Cancer of the cervix: National Cancer Institute www.cancer.gov