



Assessment of Knowledge on Cervical Cancer among Bangladeshi Women. “A Hospital Based Cross Sectional Study”

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Received Date: October 08, 2021

Published date: November 01, 2021

DOI: [10.1027/maroy.2021.0137](https://doi.org/10.1027/maroy.2021.0137)

Abstract

Backgrounds: *The aim of this study was to assess the level of knowledge of cervical cancer among Bangladeshi women and to determine the source of information.*

Methods: *A total of 250 women aged 17 to 55 years, were interviewed using a structured questionnaire. It is a population-based, cross-sectional survey which was conducted in a tertiary cancer hospital, National Institute of Cancer Research and Hospital (NICRH), Mohakhali, Dhaka, Bangladesh from September 2017 to March 2018. Data on socio-demographic characteristics, knowledge of cervical cancer and source of information were collected. The bivariate analysis was completed using a quantitative data collected.*

Results: The majority of our study participants reported to have very poor Knowledge about cervical cancer. Mostly it is related with women's low level of formal education, illiterate (OR: 5.653, 95% CI: 0.021-0.257, p-value <0.001). Very few women reported to have detailed knowledge about cervical cancer (Education above primary level P- value< 0.001). Other factors associated with poor knowledge were Occupation (OR: 6.543, 95% CI: 2.213-19.206, p-value <0.001) monthly family income (p-value<0.001), Husband's education level (p-value <0.001). We found age of the women was significantly responsible for poor knowledge, women aged more than 40 years (p-value <0.005) old having cervical cancer were unaware about cervical cancer.

Conclusions: Knowledge about cervical cancer is found to be poor among Bangladeshi women, unlike findings in developed countries. There is need to educate our women on the early warning signs of cervical cancer as failure to recognize the early symptoms and signs contribute to the late presentation and poor prognosis.

Keywords: Cervical cancer, Knowledge, Bangladesh.

Introduction

In Bangladesh Cervical cancer is the 2nd most common female cancer in women aged 15 to 44 years. It is estimated that 11,956 new cervical cancer cases were diagnosed in 2012 in Bangladesh [1], whereas cervical cancer is the fourth most common cancer among women in the world with an estimated 528,000 new cases in 2012 [2] Majority of cervical cancer occurs in women of under developed countries..

Cervical Cancer is predicted to be an increasingly important cause of morbidity and mortality in Bangladesh in the next few decades [6,39]. The estimated incidence of 12.7 million new cancer cases will rise to 21.4 million by 2030. More than two-thirds of the total expenditure on health is through out-of-pocket payments. According to the Bangladesh Bureau of Statistics, cancer is the sixth leading cause of death. International Agency for Research on Cancer has estimated cancer-related death rates in Bangladesh to be 7.5% in 2005 and 13% in 2030 [39]. According to WHO, at least 30–40% of all cancer deaths are preventable and the rates are extending as more people live to an old age and as much lifestyle change originate in the developing world [7]. Several factors have been attributable to increase incidence of Cervical cancer in Bangladesh such as early age marriage, multiple marriages, high parity and illiteracy. In developing countries, women's knowledge about risk factors of cervical cancer is very limited. Throughout the world, prevention, control and treatment of cervical cancer have been a public health priority. The world pattern of cervical cancer indicates that this is predominantly a problem of

low-resource setting countries. Unlike developed countries, cervical cancer prevention programmes have failed to meet their objectives in developing countries due to financial, social and logistical problems [9,10].

Among Bangladeshi women, there are very few studies done on in-depth knowledge on cervical cancer, such as risk factors or symptoms. Data on knowledge of cervical cancer among a more representative sample, including those residing in urban areas and younger populations, are needed. Therefore, our study aims to assess the knowledge and awareness of cervical cancer among Bangladeshi women. We collected the samples between women of

Methods:

Study Design and setting

We conducted a hospital based cross sectional study in tertiary cancer hospital, National Institute of Cancer Research and Hospital, (NICRH) Mohakhali, Dhaka during September 2017 to March 2018. Study subjects were women with invasive cervical cancer and diagnosis was confirmed with histopathology reports at the department of pathology of NICRH. All respondents were in a sufficiently good physical and mental condition to provide reliable answers.

Sample Size

The Study was conducted in 245 female Patients aged 17- 55 years old and who were admitted or attended NICRH for consultation.

Sampling procedure:

It was a cross sectional interview-based study. A quantitative cross sectional descriptive design was used to conduct to assess the knowledge and attitude of cervical cancer among patients 17-55 years old. The participants were all women who came for consultation or got admitted into the hospital (NICRH) for treatment. Participants were selected by convenience sampling method.

Data collection

Data collection took place among 250 patients in indoor and outdoor of National Institute of Cancer Research and Hospital Mohakhali, Dhaka (NICRH). Participant's written informed consent before participating and confidentiality and anonymity was ensured at every stage.

Participation was voluntary and women were allowed to withdraw from the research at any stage if they wish to, without having to give a reason. Data were collected on knowledge about cervical cancer, its socio-demographic factors and behavioral factors. Questionnaire was designed based on the study subjects taking help from the previous literature and study available on this topic. The questionnaire was completed after obtaining verbal consent from the participants. The completed questionnaires were collected on a daily basis to check for its consistency and completeness. Data were entered into Fox pro and analyzed using Statistical Package for Social Science (SPSS version 18). Percentage was calculated for all the variables. Relevant tables and graphs were computed. Descriptive data analyses were used to describe the knowledge factors for cervical cancer. Different frequency tables, graphs and descriptive summaries were used to describe the variables.

Study Variables

Dependent variables are knowledge of respondents towards cervical cancer among Bangladeshi women. Independent variables are socio-demographic related factors.

Results

Socio-demographic characteristics

Majority age group (37.6%) were more than 40 years old with mean age 37.84.(Table-1) Almost all of the respondents were married (96.4%). Most of the respondents were Muslims (82.8%), few were Hindus and other religions (17.2%). Most of them were from a low socio-economic background (26.8). Respondent's educational background was mostly illiterate or primary (74%). Majority of women were housewives (86.4%). Only 26% had the background of above primary education. The educational backgrounds of the husbands were mostly below primary level (55.5%). Most of them were from agriculture background (43.6%), 44% were from other occupation. 62.4% of respondents were living in rented houses where as 37.6% respondents had their own houses.

Respondents characteristics	Frequency	%
Age of the women's in years		
<30	63	25.2
31-40	93	37.2
>40	94	37.6
Mean (SD)	37.84 (10.542)	

Marital status		
Married	241	96.4
Unmarried	9	3.6
Religion		
Muslim	207	82.8
Hindu	43	17.2
Type of family		
Nuclear	55	22.0
Joint	195	78.0
Education of respondent		
Illiterate+ primary	185	74
Above primary	65	26
Education of husband		
Illiterate+ primary	139	55.5
Above primary	111	44.4
Occupation of Respondent		
Housewife	216	86.4
Others	34	13.6
Occupation of Husband		
Agriculture	109	43.6
Others	141	56.4
House condition		
Rent	156	62.4
Own	94	37.6
Monthly family income in taka		
<25000	183	73.2
>25000	67	26.8
Mean (SD)	1.27(0.444)	

Table no 1: Socio-demographic characteristics.

Knowledge of women on cervical cancer

The result shows that (Table 2) majority of women thinks that cervical cancer is a disease (45.6%). Few of them also thought it is as a curse from God (28.4%). Around 26% had no knowledge about cervical cancer. Almost half of the respondents had no idea about the cause of this cancer (50%). Whereas 47.2% respondents had proper knowledge about the site of cervical cancer. Some even thought that it is a cancer of only males (36.0%)

knowledge	Frequency	%
Cervical cancer is -		
A disease	114	45.6
Curse from God	71	28.4
Don't know	35	26
Cause of cervical cancer –		
Caused by virus	35	14
Curse from God	90	36
Don't know	125	50
Site of cervical cancer is-		
Uterus	6	2.4
Vagina	118	47.2
Bladder	46	18.4
Abdomen	80	32.0
Sufferers of cervical cancer-		
Both male and female	62	24.8
Only males	2	0.8
Only females	90	36.0
Don't know	96	38.4
Cervical cancer transmitted mostly by sexually		
Yes	44	17.6
No	206	82.4

Table no 2: Frequency distribution of knowledge on cervical cancer

Socio-demographic factor affecting Knowledge on cervical cancer

Table 3 shows the association of knowledge with socio-demographic and other factors. The bivariate analysis shows that knowledge about the cervical cancer was found to be associated with respondent's poor education (OR: 5.653, 95% CI: 0.021-0.257, p-value <0.001), occupation (OR:6.543, 95% CI: 2.213-19.206, p-value <0.001), monthly family income (OR: 5.073, 95% CI: 2.291-11.235 p-value <0.001), house condition (OR: 0.035, 95% CI: 0.011-0.012, p-value <0.001) and member of family (OR: 0.207, 95% CI: 0.076-0.567, p-value 0.002). Age was one of the significant factor for cervical cancer. Majority of respondent's age was above 40 (p-value<0.001). We found some other factors also significant like Husbands education (p-value <0.001), occupation (p-value <0.001), type of family (p-value 0.001).

Background variable	Categories variable	Poor knowledge N (%)	Good knowledge N (%)	Total knowledge N (%)	P-value
Respondents age In years	>30	36 (20.9)	27 (34.6)	63 (25.2)	0.027
	31-40	66 (38.4)	27 (34.6)	93 (37.2)	
	Above 40	70 (40.7)	24 (30.8)	94(37.6)	
Marital status	Married	170 (98.8)	71 (91.0)	241(96.4)	0.005
	Unmarried	2 (1.2)	7 (9.0)	9(3.6)	
Religion	Muslim	129 (75.0)	78 (100)	207(82.8)	0.000
	Hindu	43 (25.0)	0	43(17.2)	
Respondent occupation	Housewife	159(73.6)	57(26.4)	216(86.4)	0.000
	Others	13(38.2)	21(61.8)	34 (13.6)	
Respondents education	Illiterate+ Primary	156 (90.7)	29 (37.2)	185(74)	0.000
	Above primary	16 (9.3)	49 (62.8)	65(26)	
Husbands occupation	Agriculture	96 (55.8)	13 (16.7)	109(43.6)	0.000
	Others	76 (44.2)	65 (83.3)	141(56.4)	
Husbands education	Illiterate+ Primary	110(79.1)	29(20.9)	139(55.6)	0.000
	Above primary	62(55.9)	49(44.1)	111(44.4)	
Monthly income	≤ 25000	153(89.0)	30(38.5)	183(73.2)	0.000
	≥ 25000	19 (11.0)	48(61.5)	67(26.8)	
Family member	≤= 4 members	34 (19.8)	26 (33.3)	60(24)	0.016
	> 4 members	134 (18.2)	52 (66.7)	186(74.4)	
House condition	Own house	84 (48.8)	72 (92.3)	156(62.4)	0.000

	Rented house	88 (51.2)	94 (37.6)	182(72.8)	
Type of family	Nuclear	25 (14.5)	30 (38.5)	55(22)	0.000
	Joint	147 (85.5)	48 (61.5)	195(78)	

Table no 3: Association of socio-demographic characteristics with poor knowledge.

Sources of information

Doctors or hospital staffs (62.1%) were the most important source of information (Table 4). While TV/radio (39%), Newspaper (30.9%) and internet (22.3%) were other sources of information. Mother (2.6%), sister (13%) and Friends (8.6%) could be also information source.

Source	No	%
Mother	7	2.6
Sister	35	13.0
Friends	23	8.6
TV/Radio	105	39.0
Newspaper	83	30.9
Doctor/Hospital staff	167	62.1
Internet	60	22.3

Table no 4: Source of information

Discussion:

From our result we observed that there is a significant association of illiteracy with poor knowledge about cervical cancer. Those whose education level was above primary had better knowledge (62.8%) than education level below primary or illiterate (38%). This relation between education and knowledge has also been reported in previous studies in Arab and Hispanic women. People with below primary level had very poor knowledge. Most of the respondent's husband's education was also either illiterate or below primary. They literally had no idea about this cancer. In this study we also observed that age, marital status, level of occupation, monthly income, family member and house condition were significantly associated with factors affecting the knowledge on cervical cancer. Majority of respondent's age was above 40 and they had only 30.8% knowledge about cervical cancer.

Second common age group with poor knowledge was from 31 to 40 years old with 34.6% knowledge. Very few women were below 30 and they had poor knowledge about 20.9%. So age also showed

significant relation associated with knowledge with cervical cancer. Ninety eight percent of married women had poor knowledge about cervical cancer. Previous studies have shown that low level of education and low socioeconomic status are responsible for increasing incidence of cervical cancer. Future research is needed to explore the level of knowledge of cervical cancer in other populations at high risk. There is a clear need of sharing information of cervical cancer through education and educational campaigns.

Conclusions

This study provides the probably first hospital-based assessment of knowledge about cervical cancer among Bangladeshi women. The findings from this study provide the necessary country-specific evidence for the development of cervical cancer awareness program. Low levels of awareness of cervical cancer, in-depth knowledge of causes of cervical cancer and how it can be prevented is alarming sign for the health of women. These findings underscore the necessity for culturally appropriate and targeted educational interventions to improve knowledge of cervical cancer causes and its primary prevention measures.

Reference

1. Mutambara J, Mutandwa P, Mahapa M, Chirasha V, Nkiwane S, Shangahaidonhi T. Knowledge, attitudes and practices of cervical cancer screening among women who attend traditional churches in Zimbabwe. *Journal of Cancer Research and Practice*. 2017 Jun 1;4(2):53-8.
2. Sogukpinar N, Saydam BK, Can HO, Hadımlı A, Bozkurt OD, Yücel U, Kocak YC, Akmese ZB, Demir D, Ceber E, Ozentürk G. Assessment of cervical cancer risk in women between 15 and 49 years of age: case of Izmir. *Asian Pacific Journal of Cancer Prevention*. 2013;14(3):2119-25.
3. Bathija GV, Mallesh S, Gajula M. A study on awareness of cervical cancer among women of reproductive age group in urban slums of old Hubli, Karnataka, India. *International Journal Of Community Medicine And Public Health*. 2016 Dec 24;3(9):2579-83.
4. Islam JY, Khatun F, Alam A, Sultana F, Bhuiyan A, Alam N, Reichenbach L, Marions L, Rahman M, Nahar Q. Knowledge of cervical cancer and HPV vaccine in Bangladeshi women: a population based, cross-sectional study. *BMC women's health*. 2018 Dec;18(1):15.
5. Geremew AB, Gelagay AA, Azale T. Comprehensive knowledge on cervical cancer, attitude towards its screening and associated factors among women aged 30–49 years in Finote Selam town, northwest Ethiopia. *Reproductive health*. 2018 Dec;15(1):29.

6. Papri FS, Khanam Z, Islam F, Hakim MM. Knowledge and Awareness About Risk Factors of Cervical Cancer, Its Screening and Vaccination Among the Women Attending Chittagong Medical College Hospital. *Chattagram Maa-O-Shishu Hospital Medical College Journal*. 2015 Nov 16;14(2):57-60.
7. Sharmin T, Parvin S, Islam MA, Islam MM, Das SK, Gosh B, Al-Bari MA. Current Status and Prospective Of Cancer Disease in Bangladesh: A Cross-Sectional Survey.
8. Finocchiaro-Kessler S, Wexler C, Maloba M, Mabachi N, Ndikum-Moffor F, Bukusi E. Cervical cancer prevention and treatment research in Africa: a systematic review from a public health perspective. *BMC women's health*. 2016 Dec;16(1):29.
9. Ochomo EO, Atieli H, Gumo S, Ouma C. Assessment of community health volunteers' knowledge on cervical cancer in Kadibo Division, Kisumu County: a cross sectional survey. *BMC health services research*. 2017 Dec;17(1):675.
10. Franceschi S, Rajkumar T, Vaccarella S, Gajalakshmi V, Sharmila A, Snijders PJ, MUnoz N, Meijer CJ, Herrero R. Human papillomavirus and risk factors for cervical cancer in Chennai, India: A case-control study. *International journal of cancer*. 2003 Oct 20;107(1):127-33.
11. Siddharthar J, Rajkumar B, Deivasigamani K. Knowledge, awareness and prevention of cervical cancer among women attending a tertiary care hospital in puducherry, India. *Journal of clinical and diagnostic research: JCDR*. 2014 Jun;8(6):OC01.
12. Darlin L. Cervical cancer studies on prevention and treatment. Department of Obstetrics and Gynecology, Lund University; 2013.
13. Haque N, Uddin AF, Dey BR, Islam F, Goodman A. Challenges to cervical cancer treatment in Bangladesh: The development of a women's cancer ward at Dhaka Medical College Hospital. *Gynecologic oncology reports*. 2017 Aug 1;21:67-72.
14. Ramathuba DU, Ngambi D, Khoza LB, Ramakuela NJ. Knowledge, attitudes and practices regarding cervical cancer prevention at Thulamela Municipality of Vhembe District in Limpopo Province. *African journal of primary health care & family medicine*. 2016;8(2):1-7.
15. Nwankwo KC, Aniebue UU, Aguwa EN, Anarado AN, Agunwah E. Knowledge attitudes and practices of cervical cancer screening among urban and rural Nigerian women: a call for education and mass screening. *European journal of cancer care*. 2011 May 1;20(3):362-7.
16. Aweke YH, Ayanto SY, Ersado TL. Knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Hadiya zone, Southern Ethiopia: Community-based cross-sectional study. *PloS one*. 2017 Jul 25;12(7):e0181415.
17. World Health Organization. Reproductive Health, World Health Organization. Chronic Diseases, Health Promotion. Comprehensive cervical cancer control: a guide to essential practice. World Health Organization; 2006.
18. Bosch FX, Burchell AN, Schiffman M, Giuliano AR, de Sanjose S, Bruni L, Tortolero-Luna G, Kjaer SK, Muñoz N. Epidemiology and natural history of human papillomavirus infections and type-specific implications in cervical neoplasia. *Vaccine*. 2008 Aug 19;26:K1-6.

19. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray F. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. *International journal of cancer*. 2015 Mar 1;136(5).
20. Huchko MJ, Bukusi EA, Cohen CR. Building capacity for cervical cancer screening in outpatient HIV clinics in the Nyanza province of western Kenya. *International Journal of Gynecology & Obstetrics*. 2011 Aug 1;114(2):106-10.
21. Shakya S, Karmacharya BM, Afset JE, Bofin A, Åsvold BO, Syversen U, Tingulstad S. Community-Based Health Education has Positive Influence on the Attitude to Cervical Cancer Screening among Women in Rural Nepal. *Journal of Cancer Education*. 2016 Sep 1;31(3):547-53.
22. Rosser JI, Njoroge B, Huchko MJ. Knowledge about cervical cancer screening and perception of risk among women attending outpatient clinics in rural Kenya. *International Journal of Gynecology & Obstetrics*. 2015 Mar 1;128(3):211-5.
23. Fylan F. Screening for cervical cancer: a review of women's attitudes, knowledge, and behaviour. *Br J Gen Pract*. 1998 Aug 1;48(433):1509-14.
24. Bosch FX, Munoz N, De Sanjosé S, Izarzugaza I, Gili M, Viladiu P, Tormo MJ, Moreo P, Ascunce N, Gonzalez LC, Tafur L. Risk factors for cervical cancer in Colombia and Spain. *International journal of cancer*. 1992 Nov 11;52(5):750-8.
25. William M, Kuffour G, Ekuadzi E, Yeboah M, ElDuah M, Tuffour P. Assessment of psychological barriers to cervical cancer screening among women in Kumasi, Ghana using a mixed methods approach. *African health sciences*. 2013;13(4):1054-61.
26. Mutyaba T, Mmiro FA, Weiderpass E. Knowledge, attitudes and practices on cervical cancer screening among the medical workers of Mulago Hospital, Uganda. *BMC medical education*. 2006 Dec;6(1):13.
27. Marlow LA, Waller J, Wardle J. Public awareness that HPV is a risk factor for cervical cancer. *British journal of cancer*. 2007 Aug;97(5):691.
28. Raychaudhuri S, Mandal S. Socio-demographic and behavioural risk factors for cervical cancer and knowledge, attitude and practice in rural and urban areas of North Bengal, India. *Asian Pacific Journal of Cancer Prevention*. 2012;13(4):1093-6.
29. Daley E, Perrin K, Vamos C, Hernandez N, Anstey E, Baker E, Kolar S, Ebbert J. Confusion about Pap smears: lack of knowledge among high-risk women. *Journal of women's health*. 2013 Jan 1;22(1):67-74.
30. Rosser JI, Zakaras JM, Hamisi S, Huchko MJ. Men's knowledge and attitudes about cervical cancer screening in Kenya. *BMC women's health*. 2014 Dec;14(1):138.
31. Yörük S, Açıkgöz A, Ergör G. Determination of knowledge levels, attitude and behaviors of female university students concerning cervical cancer, human papiloma virus and its vaccine. *BMC women's health*. 2016 Dec;16(1):51.

32. Mulhim& NK, Saad Morsi AM. Knowledge about cervical cancer early warning signs and symptoms, risk factors and vaccination among students at a medical school in Al-Ahsa, Kingdom of Saudi Arabia. *Asian Pacific Journal of Cancer Prevention*. 2014;15(6):2529-32.
33. Lim JN, Ojo AA. Barriers to utilisation of cervical cancer screening in Sub Sahara Africa: a systematic review. *European journal of cancer care*. 2017 Jan 1;26(1).
34. Daley E, Perrin K, Vamos C, Hernandez N, Anstey E, Baker E, Kolar S, Ebbert J. Confusion about Pap smears: lack of knowledge among high-risk women. *Journal of women's health*. 2013 Jan 1;22(1):67-74.
35. Wongwatcharanukul L, Promthet S, Bradshaw P, Jirapornkul C, Tungsrihong N. Factors affecting cervical cancer screening uptake by Hmong hilltribe women in Thailand. *Asian Pac J Cancer Prev*. 2014 Jan 1;15:3753-6.
36. Mohanty G, Ghosh SN. Risk factors for cancer of cervix, status of screening and methods for its detection. *Archives of gynecology and obstetrics*. 2015 Feb 1;291(2):247-9.
37. Maree JE, Kaila I. Zambian women's experiences and understanding of cervical cancer: A qualitative study. *International Journal of Gynecological Cancer*. 2014 Jul 1;24(6):1065-71.
38. Simayi D, Yang L, Li F, Wang YH, Amanguli A, Zhang W, Mohemaiti M, Tao L, Zhao J, Jing MX, Wang W. Implementing a cervical cancer awareness program in low-income settings in Western China: a community-based locally affordable intervention for risk reduction. *Asian Pacific Journal of Cancer Prevention*. 2013;14(12):7459-66.
39. Hussain SA, Sullivan R. Cancer control in Bangladesh. *Japanese journal of clinical oncology*. 2013 Oct 25;43(12):1159-69.