

Knowledge, Attitude and Practice of Cervical Cancer Screening through Visual Inspection with Acetic Acid

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ABSTRACT

Detection of the cervical cancer requires practice of screening that will increase survival rates from the disease. Visual Inspection with Acetic Acid (VIA) is an alternative to screening for cervical cancer. This study aims to assess the knowledge, attitude, and practice towards VIA screening among adult women. We used a cross-sectional study in urban areas of Bangladesh with a sample of 285 respondents those were interviewed through semi-structured questionnaire. Analyses have done by targeting the objectives and considering the indicators with appropriate test statistics. About 56.1% respondents aged between 18 and 35 years with majority had at least secondary education including 29.5% were from affluent group. Though the highest majority of women had the knowledge of cervical cancer but only quarter was aware of VIA. A few of the respondents adopted any screening test for detecting cervical cancer and this lower coverage could be due to, among other reasons, lack of knowledge, accessibility, and service availability. The results also indicated that higher educational level of respondents is the predictor of improving knowledge on the disease and early adoption of available test procedure. An awareness building program should be designed for women of early detection of cervical cancer using VIA procedure.

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1. INTRODUCTION

Cervical cancer is the third commonest cancer among women worldwide [1],[2]. In 2012, statistics showed that 528,000 new cases and over 266,000 deaths occurred due to the disease [3]. The low- and middle income countries suffer almost 90% of cervical cancer burden [4]. In Bangladesh, cervical cancer is the second most common cause of cancer deaths in women [1]. Annually, over 50 million women are at risk for cervical cancer, with 17,686 cases diagnosed and 10,362 deaths each year in Bangladesh [5]. It is projected that by 2025, these numbers will increase to over 31,000 new cases each year and over 18,000 deaths [6]. These deaths often occur in relatively young women, who are raising children, caring for their families, and contributing to the communities.

Reported mortality rates in developed countries with successful screening programmes seldom exceed 5 per 100,000 women [7]. Cervical screening can possibly incredibly lessen deaths from cervical cancer; it is vital challenge for developing countries to strengthen the scope of cervical screening. One of the most important methods of prevention of cervical cancer is early detection, which includes routine cervical screening that can lead to diagnosis and treatment of cervical lesions before their progression to cervical cancer [8],[9]. By doing early treatment and cervical cancer screening, numerous countries have lessened their morbidity and mortality [10]. Bangladesh government including various development partners and NGO's

(non government organization) has taken programmatic steps towards controlling cervical cancer. By developing cervical cancer screening program Visual Inspection with Acetic Acid (VIA) have already been recommended for women.

In spite of economic support, conservative society unable to provide proper health awareness to the women of Bangladesh that causes massive threat for the whole society. Regarding successful prevention of invasive cervical cancer Bangladesh still facing some challenges like infrastructure constrains, its importance, patient noncompliance, etc. On the other hand, low screening coverage could be due to lack of knowledge on cervical cancer and screening, especially in Urban setting where VIA screening is available. Knowledge regarding cervical cancer is essential for identifying this diseases; thus women should cautious, motivate and having positive approach to practice of screening for cervical cancer. Not much is known about Bangladeshi women knowledge, attitude and practice towards cervical carcinoma screening.

Bangladesh Government has taken programmatic steps towards controlling cervical cancer by developing cervical cancer screening program [11]. Also various development partners and NGO's are working in this field. There is media campaign for awareness development. Screening methods including VIA have already been recommended for women. Accurate information and knowledge about cervical cancer screening importantly influence women's cervical screening participation. Cervical screening, particularly VIA attendance is likely to be affected by knowledge, health perception of women. For the screening methods to be fully utilized, women need to be aware of the availability of the methods and to have knowledge of the screening methods. Detection of the cervical cancer requires knowledge on the disease so that women are aware, as well as motivation and hence have positive attitude towards practice of screening for cervical cancer. Not much is known about Bangladeshi women knowledge, attitude and practice towards cervical carcinoma screening. Even few academic researches on cervical cancer screening exist in Bangladesh, which needs to undertake this research on the above title of the research mentioned issue. This study aimed to looking on how knowledge able on this screening was, what was therefore their attitude and practice on screening for cervical cancer. Information obtained from this study should alert authorities and service providers so that proper measures can be taken to save the lives of Bangladeshi women by educating them on the importance of the screening services available in many places.

This study aims to assess the level of knowledge, attitude and practice on cervical cancer screening through VIA among women in urban area of Bangladesh.

2. METHOD

2.1. Study area

The study was incorporated the sample population in representative way and the entire population of different school premises where women were gathered, garments factories, slum areas, some residence areas, university campus, organization's offices and corporate office premises. The research participants were the adult residents of Dhaka urban area which were recruited purposively on the basis of inclusion and exclusion criteria. In inclusion criteria respondents must be female residing at Dhaka urban area and their age must be 18 years and above, eventually their participation should be voluntary. Co-morbid mental problems and residents who were travelling of the city must be excluded. The entire study duration was between November 2015 and July 2016. However the data collection period was November 2015 to January 2016.

2.2. Sample size determination

A representative sample size was determined by using the standard statistical formula: $n = z^2pq/d^2$, Where n =sample size, $z=1.96$ (95% confidence interval), p =prevalence of women knowledge, attitude and perception towards VIA screening, which is unknown (50%, i.e. 0.50), $q=1-p$ and d = margin of error 6%, i.e. 0.06. That produced an approximate sample size 267. Excepting some non-response during data collection, considered 10% additional sample as non responses, which has given the sample size 294, so the required total sample for this study should be approximately 295. It is mentionable that after completion of data collection, questionnaire checking has initially been done for ensuring completeness, as well as for quality information. In this process, a total of 10 question-answers of respondents were excluded and finally the study included 285 samples for analysis.

2.3. Sampling technique

As the VIA screening is available in many public and private health service facilities in Dhaka city, the respondents were selected from different women gathering of Dhaka city areas. The variation of the respondents in different areas was dependent on the gathering and accessibility of respondents during data collection of the respective study areas.

2.4. Development of Research instrument

In this study data was collected by using semi-structured questionnaire. A questionnaire was developed after rigorous review of the available research documents and was pretested for gathering feedback on the suitability and appropriateness of the question. Before finalization of the questionnaire, English version was translated into Bengali. Informed of written consent was taken from the participants and ethical clearance obtained from the Department of Public Health under the faculty of Allied Health Sciences, Daffodil International University, Bangladesh.

2.5. Statistical analysis

The collected data were then edited, coded and entered into the computer through a designed data capturing format in SPSS software. Analyses have done by targeting the study objectives and by considering the indicators. Descriptive analyses of all relevant variables were done by using Measures of Central Tendency, Depression, Confidence Interval, etc. Association and differentiation within/between variables were tested by using appropriate test statistics.

3. RESULTS

3.1. Socio demographic characteristics

Socio demographic factors were arranged in the Table 1 according to participants' marital status, age, education, occupation, monthly family income and number of children.

	Frequency	%
Marital Status		
Unmarried	35	12.3
Married	243	85.3
Divorced	3	1.1
Others	4	1.4
Age		
18-23	30	10.5
24-29	59	20.7
30-35	73	25.6
36-41	44	15.4
42-47	42	14.7
48-53	21	7.4
54 & Above	16	5.6
Education		
Illiterate	41	14.4
Primary	43	15.1
Under graduate	93	32.6
Graduate and above	100	5.1
Others	8	2.8
Occupation		
Service	144	50.5
Business	6	2.1
Unemployed	11	3.9
Housewife	124	43.5
Monthly Family Income (in thousands) Tk.		
0-10	75	26.3
11-20	47	16.5
21-30	23	8.1
31-40	21	7.4
41-50	35	12.3
51 & Above	84	29.5
No. of Children		
0	63	22.1
1	60	21.1
2	101	35.4
3	39	13.7
4	15	5.3
5	3	1.1
6	4	1.4

The results showed that most of the respondents (85.3%) were married. The major portions of the respondents were in reproductive age. The results indicated that more than half of the women (56.8%) who

participated in the study were either young or young adults (aged 18-35 years). Regarding respondents' education, it is indicated that the majority of the respondents (67.7%) were highly educated in our country context, even a lower proportion of illiterate women participated in this study.

3.2. Knowledge and practice towards screening of VIA for cervical cancer

Figure 1 documented that the majority of study respondents have had the knowledge about cervical cancer but only a little higher than one-quarter of the respondents heard about VIA test for cervical cancer.

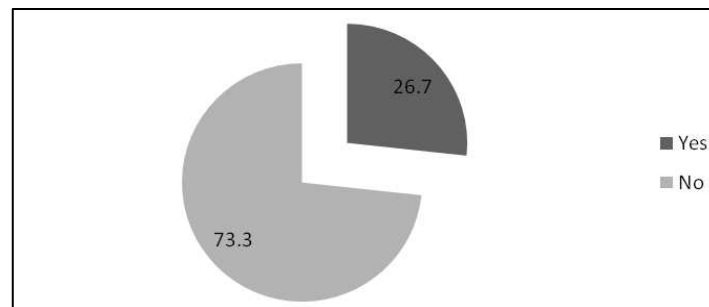


Figure 1. Ever heard about VIA test for cervical cancer (%; n=285)

Figure 2 shows that only 8.1% (n=6) of respondents who heard about the VIA test had practiced the same procedure for detecting cervical cancer, while a large proportion of respondents (91.9%) knew about the procedure but had not yet been tested through VIA.

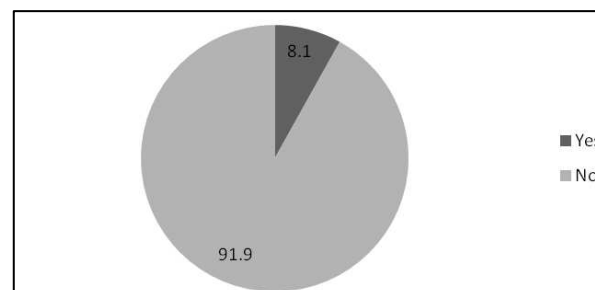


Figure 2. Ever been tested VIA for cervical cancer (%; n=79)

Even respondents of this study were asked about the adoption of any other screening or testing for cervical cancer, and a lower proportion (21.1%) of them have the positive answer compared to a large proportion (78.9%) of their counterparts as shown in Figure 3.

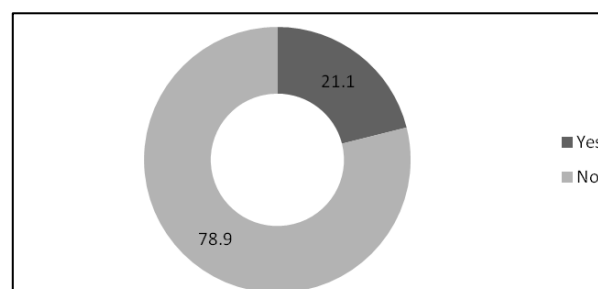


Figure 3. Ever been screened or adopted any other test for cervical cancer (%; n=285)

Figure 4 shows that about three quarter (75.8%) of respondent did not have knowledge about the purpose of VIA test; on the contrary, only about a quarter (24.2%) of respondent knew the reason to do VIA test.

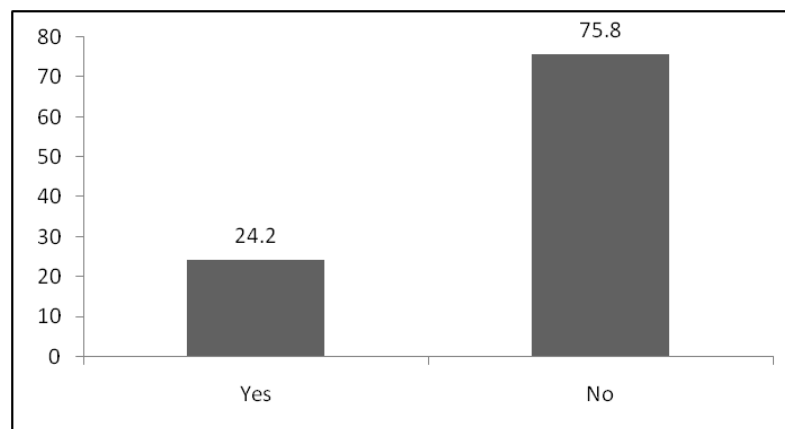


Figure 4. Knowledge on the purpose of VIA test (% , n=285)

Even more than three quarter (77.2%) of the respondent did not know where the VIA screening take place; however, less than a quarter (22.8%) of respondent had the information of the place of VIA test as shown in Figure 5.

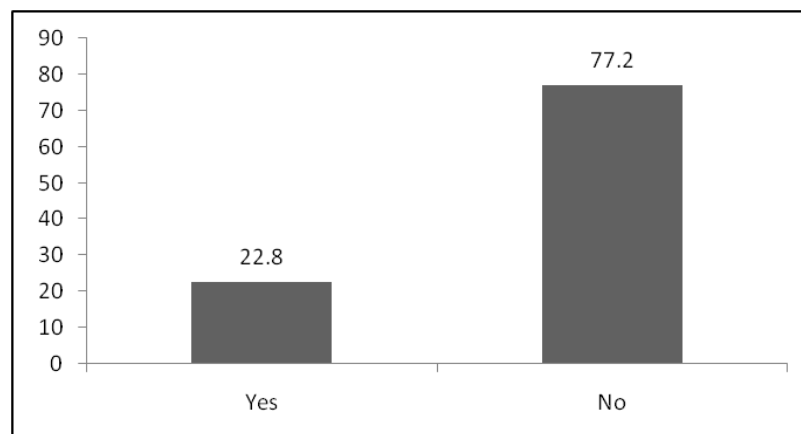


Figure 5. Familiarity with the place of VIA test (% , n=285)

3.3. Knowledge and attitude towards screening of VIA for cervical cancer

Respondents' knowledge and attitude towards VIA test was summarized Table 2. The table shows that 72.3% respondent did not know that VIA test can identify cervical cancer; at the same time, about three quarter of the respondents did not know that free of cost VIA test is available in government and urban hospitals. Moreover, 71.9% respondent had no idea that through the screening of VIA cervical cancer can protect.

Table 2. Knowledge and Attitude of VIA Test (n=285)

	Frequency	%
VIA test can identify cervical cancer		
Strongly disagree	2	0.7
Disagree	1	0.4
Neutral	6	2.1
Agree	52	18.2
Strongly agree	18	6.3
Don't know	206	72.3
Knowledge on free of cost of VIA test available in government and urban hospital		
Strongly disagree	3	1.1
Disagree	5	1.8
Neutral	12	4.2
Agree	40	14
Strongly agree	10	3.5
Don't know	215	75.4
VIA Test should be done only by female healthworker		
Strongly disagree	1	0.4
Disagree	2	0.7
Neutral	13	4.6
Agree	35	12.3
Strongly agree	24	8.4
Don't know	210	73.7
Health workers performance is worthy in creating awareness of VIA test		
Strongly disagree	3	1.1
Disagree	6	2.1
Neutral	8	2.8
Agree	48	16.8
Strongly agree	19	6.7
Don't know	201	70.5
Women with menopause are not required of VIA test		
Strongly disagree	18	6.3
Disagree	22	7.7
Neutral	10	3.5
Agree	15	5.3
Strongly agree	5	1.8
Don't know	215	75.4
VIA Test is not important for healthy woman		
Strongly disagree	24	8.4
Disagree	34	11.9
Neutral	10	3.5
Agree	10	3.5
Strongly agree	3	1.1
Don't know	204	71.6
VIA test is needed only those who have family history		
Strongly disagree	6	2.1
Disagree	8	2.8
Neutral	5	1.8
Agree	45	15.8
Strongly agree	24	8.4
Don't know	197	69.1
Cervical cancer can be protected through VIA test		
Strongly disagree	2	0.7
Disagree	6	2.1
Neutral	5	1.8
Agree	53	18.6
Strongly agree	14	4.9
Don't know	205	71.9

*Scaling questionnaire were presented to the participants for knowledge and attitude of VIA test

3.4. Factor associated with cervical cancer screening through VIA test

Some bi-variate analyses was done with the respondent's knowledge on cervical cancer for VIA test and availability of services according to women' marital status, number of children, education and economic condition. Appropriate statistical test was done to see the association and differentiation of independent with dependent variables. Respondent's knowledge on VIA test for cervical cancer was varied by their marital status that showed in Table 3.

Table 3. Factors Associated with Cervical Cancer Screening through VIA Test (n=285)

	Yes	No	Significant level (Chi-square)
Knowledge of VIA test for cervical cancer by respondent's marital status			
Never married	45.70%	54.30%	0.008
Ever married	24.00%	76.00%	
Total	76	209	
Knowledge on service availability of VIA test by respondent's marital status			
Never married	37.10%	62.90%	0.03
Ever married	20.80%	79.20%	
Total	65	220	
Knowledge about VIA test for cervical cancer by living children			
< 3 Children	27.70%	72.30%	0.286
3+ Children	23.00%	77.00%	
Total	76	209	
Knowledge on the service availability of VIA test by living children			
< 3 Children	22.30%	77.70%	0.413
3+ Children	24.60%	75.40%	
Total	65	220	
Knowledge about VIA test by respondent's level of education			
No formal education	16.30%	83.70%	0.049
Had formal education	28.80%	71.20%	
Total	76	209	
Knowledge of Service Availability on VIA test by level of education			
No formal education	12.20%	87.80%	0.035
Had formal education	25.00%	75.00%	
Total	65	220	
Knowledge about VIA test for cervical cancer by family income			
Low income family	16.00%	84.00%	0.018
Medium income family	34.10%	65.90%	
High income family	25.00%	75.00%	
Total	76	209	
Knowledge on service availability of VIA test by family income			
Low income family	13.30%	86.70%	0.01
Medium income family	31.00%	69.00%	
High income family	19.00%	81.00%	
Total	65	220	

Table 3 shows that the never married respondents have the knowledge on cervical a significant differences ($p < 0.01$) was found to the respondent's knowledge on VIA test for cervical cancer with their marital status where a higher proportion (45.7%) of never married have the knowledge on VIA test compared to their counterpart ever married women (24.0%). Again, the prevailing better knowledge of VIA test among never married women is probably because of more exposure to the procedure through better publicity in recent time on the examination of women cervical cancer. Once more, a significant differences ($p < 0.05$) was found to the respondent knowledge on the availability of VIA test for cervical cancer with their marital status where a higher proportion (37.1%) of never married have the knowledge on the availability of VIA test compared to their counterpart ever married women (20.8%). The prevailing better knowledge on the availability of VIA test among never married women was due to the reasons of comparative better sources of knowledge as of married women. On the other hand, respondent's knowledge on service availability on VIA test was significantly ($p < 0.05$) differences between women level of education. Respondents who had no formal education were less knowledgeable (12.2%) than women who had some formal education (25.0%). Again, Respondent's knowledge on VIA test for cervical cancer according to their family income level showed a significant differences ($p < 0.05$) between low income family and medium income or high income family. Respondent's knowledge on service availability of VIA test for cervical cancer according to respondent's family income showed in same table. Respondents from low income family had less knowledge (13.3%) on the service availability of VIA test than their counterparts medium (31.0%) and high income (19.0%) respondents, which difference is statistically significant ($p < 0.05$).

4. DISCUSSION

Detection of the cervical cancer requires knowledge on the disease so that women are aware, as well as motivation and hence have positive attitude towards practice of screening for this. Though screening methods including VIA have already been recommended for women and number of studies documented that the VIA procedure has been set up as a successful other option to cytology based screening with its high

sensitivity, economical if patients have knowledge about the disease and low level of health care [12]. Moreover, the level of consciousness and early approach of patients towards procedure increased the chance of disease by detecting for treatment [13]. A study conducted in Ghana revealed that accurate information and knowledge about the screening importantly influence women's cervical screening participation [14] and Bangladeshi women are not exceptional of this consensus. This descriptive study was gathered information on women's knowledge, attitude and practice of VIA screening. The study results showed that more than half of the respondents of this study were aged 18-35 years. A highest majority of respondents was married with at least some formal education and had the knowledge of cervical cancer including its primary protection. The study revealed that both print and electronic media enriched women's on the disease and way of prevention.

The results also showed that majority of the women felt encouragement to do the screening or make any test for detecting the cervical cancer if the procedure of screening is either less costly or completely free even having convenient location. The study result is comparable with the other study e.g. factors like specific information on how to prevent the disease as well as service availability of its screening; even cervical cancer screening services within short distances of women dwelling place are significantly influencing woman participation to cervical cancer screening [15]. Again, due to lack of motivations and unknowingness influence women's to receive any screening to detect the disease [16] which is also importance of the detection of cervical cancer by adopting any procedures available in the any service provisions. A study in South Africa showed that in spite of having knowledge and availability of services about 87% of women from higher society and educational backgrounds did not go through for cervical screening [17], [18]. The study results also revealed that only one-quarter of the respondents heard about the screening test VIA that detect cervical cancer and can be taken necessary measure beforehand. Moreover, a higher proportion of respondents still believed some the misconceptions like test not done by female providers, healthy and menopause women need not to adopt any screening procedure; family history of this disease is not a matter, etc. All these were assertive factors that women are not adopting any screening or test procedure to protect cervical cancer. The inferential analysis of the study documented that respondent's knowledge on VIA screening method was significantly varied by their marital status. Never married respondents have the higher proportion of knowledge on VIA test and available sources compared to their counterpart ever married women. Some studies have found that single women are more likely than married women to have pap screening [19]. Again educational level of respondents was significantly associated with some of dependent variables, e.g. respondents who had no formal education were less knowledgeable about screening procedures and service availability than the respondents who had at least some formal education. The prevailing knowledge on procedure and its availability was better among never married and educated women is probably because of more media exposure through better publicity in recent time on the examination of women cervical cancer. The study conducted in Nepal revealed that lack of education and confusing attitude towards gynecological symptoms is responsible for delay diagnosis of cervical cancer [20], [21]. The prevailing knowledge on procedure and its availability was better among never married and educated women is probably because of more media exposure through better publicity in recent time on the examination of women cervical cancer.

5. CONCLUSION

The study results indicated that majority of the study respondents were not adopting the screening procedure to avoid morbidity and mortality from cervical cancer due to misconception and fear. Awareness building program should be designed for this segment of women for protecting them from this diseases through early detection screening procedure like VIA test. Even, the implementation of behavior change communication program by the government would be familiarized the procedures of screening for cervical cancer among women. In prevailing cultural conservative society in Bangladesh, women who are poor to disease should more aware on the severity of cervical cancer. Moreover, through diversified exposure like publicity over media that could increase woman's knowledge on the test procedure for protecting them from the same disease. Further in-depth study should be initiated conserving various aspects perceived barriers towards the screening cervical screening.

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