

# Assessment of Cervical Cancer Knowledge, Perception and Prevention Attitude among Female Students Of Reproductive Age (16 – 49) In Four Tertiary Institution Within Bauchi Metropolis

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## ABSTRACT

Cervical cancer is preventable and avoidable, but its incidence among women in Bauchi town is on the increase, due to the lack of awareness and low participation of the target group in effective prevention techniques. The objective of this study is to assess the knowledge, preventive attitude, and perceived barriers to screening of cervical cancer among female students of reproductive aged (16 – 49), in four selected tertiary institutions in Bauchi metropolis. Convenient cross sectional survey research design was adopted in this study through the use of questionnaire developed by the researcher. Cronbach's alpha reliability test (0.85) was obtained. The collected data was analyzed using descriptive and inferential statistics such as frequency distribution and percentages. Overall, the results obtained from the 300 respondents suggest that with awareness alone, the participants will be highly receptive to free cervical cancer screening (92%, Table 3). Women with knowledge of the preventive attitudes and purpose for screening were more likely to identify themselves as at risk for cervical cancer. Similar study should be conducted so as to served as a means of bridging the knowledge gap and also, to create awareness of this highly preventable but tragic disease.

**Keywords** Assessment, Cervical, Cancer, Prevention Attitude, Female, Reproductive

## 1 Introduction

Cervical cancer is a disease of public health concern worldwide. Cervical cancer is a type of cancer that occurs in the cells of the cervix that is the lower part of the uterus that connects to the vagina [1]. Cervical cancer has claimed the lives of many women worldwide and it is estimated that about 80% or more of the world burden of cervical cancer is in the developing countries [2]. Availability of prophylactic vaccine as well as screening programmes lead to decline in death rate from cervical cancer [3]. When exposed to HPV, a woman's immune system typically prevents the virus from doing harm [1]. This preventable cancer has a long precancerous stage, however, the virus survives for years, contributing to the process that causes some cells on the surface of the cervix to become cancer cells and during this interval, screening could be done, and any precancerous lesions identified could be adequately treated to prevent progression to the invasive cancer stage [4]. Human papilloma virus (HPV), a sexually transmitted virus has been implicated as the causative agent. The new prevention strategy for cervical cancer is directed at immunization against this HPV infection prior to the first sexual exposure as a form of primary prevention, or to screen for evidence of pre-invasive lesions of the cervix, as a form of secondary prevention [1].

is based on a value-expectancy concept, where the "value" is the desire to avoid illness and the "expectancy" is the belief that a health action would prevent illness [9]. In accordance with the health belief model, people take action to prevent or alleviate an illness or condition if;

Despite the fact that, cervical cancer is preventable and avoidable, its incidence among women in Bauchi town is becoming high and on the increase, this can be attributed mainly due to the lack of awareness and low participation of the target group in effective prevention techniques [5]. The number of women in Bauchi town that actually had cervical cancer knowledge is very low [6]. This has become a real threat to the women well being, as more of them keep on presenting with cervical cancer at a later stage of their lives and eventually dies from it [7]. This study was therefore conducted to assess the level of knowledge of female students on cervical cancer, its preventive attitude, and perceived barriers to screening, of female students of reproductive aged (16 – 49) in the four selected tertiary institutions in Bauchi metropolis.

## 1.2 Theoretical Framework: Health Believe Models

Various health beliefs models attempt to predict behaviour. For example, attitudes towards cervical screening and HPV vaccines and other preventive health actions can be explained by the health belief model. Developed in the 1950's, the health belief model was developed to explain why people chose to participate or not to participate in disease detection and prevention programs (such as cervical cancer screening programs) [8]. The model

- 1) They consider themselves as susceptible (perceived susceptibility) to the condition,
- 2) They believe the condition to have serious consequences (perceived severity),

- 3) They believe the available course of action would alleviate their susceptibility or the severity of the condition, and
- 4) They believe the benefits of the suggested action outweigh barriers or costs [9].

Cervical cancer is the second most common cancer among women worldwide, with an estimated 493,000 new cases and 274,000 deaths annually [10], and is largely preventable through screening, immunization, early detection and prompt treatment of detected precancerous lesions, and risk free practice [11]. The incidence of cervical carcinoma in Africa is on the rise. Nonetheless, the true incidence of cervical cancer in many African countries is unknown as there is gross under-reporting. Very few countries have functioning cancer registries and record-keeping is minimal or non-existent [12]. The findings of the reviewed literature are presented below according to the construct of the chapter, which is preceded by the overview of cervical cancer and other related relevant topics in sequence.

### 1.3 Knowledge on Cervical Cancer

Justification for proposed preventive interventions should be grounded in knowledge about the causes of health and disease. In general, causality is fundamental in relation to two basic components of evidence-based prevention:

1. Demonstrating the causes of a given health problem
2. Furnishing insight into the likelihood and character of causal relations between an intervention and its effect.
3. In a variety of cultures with low resource settings, lack of cervical cancer knowledge and awareness has been cited as a significant barrier in the uptake of it prevention among women.

Several approaches have been widely used to understand why an individual chooses to participate in a health promoting and prevention behavior, such as cervical cancer screening and vaccination. Participation in preventive health behaviors, such as screening, can be explained by psychosocial factors, including perceived susceptibility to and severity of the target disease and perceived benefits and costs of participating in the preventive health behavior.

### 1.4 Preventive Attitude of Cervical Cancer

In relation to health, the basic aim of preventive work is to hinder the emergence and development of diseases and thereby promote well-being through such means as strengthening the individual, socio-economic and physical determinants of health and health-related behaviors.

Prevention typically takes its point of departure in the notion that health and disease are functions of a dynamic interplay between personal lifestyles, living conditions, and the general way society functions. To these elements circumstances such as sex, certain genetic factors, and biological age must be added. Ensuring optimal planning, implementation and evaluation of preventive interventions aimed at specified health related problems calls for the linkage of a number of scientific and professional fields with specified methods, theories and

world views.

### 1.5 Perceived Barriers of Cervical Cancer Screening

Factors associated with perceived barriers of cervical cancer screening are complex and varied. Previous studies highlighted concerns about safety, but evidence on the influence of parental knowledge, the preventive health practices of the mother and socio-cultural context is considered.

In a recent meta-analysis of studies dealing with attitudes towards HPV screening showed that being concerned about the potential risk of cancer and believing their daughters might contract HPV and related diseases were drivers for HPV screening. However, parents would prefer to screen older children and those who were sexually active. In addition, because HPV is sexually transmitted, acceptance of the screening raises issues, including the perceived risk of promoting risky sexual behaviour which is broader and quite distinct from those raised by other vaccines.

### 2. Methodology

A descriptive survey research design, through the use of questionnaire was used in this study to assess the cervical cancer Knowledge, perception and prevention attitude among female students of reproductive age (16-49) in four tertiary institution within Bauchi metropolis. All the female students of the four selected tertiary institutions formed the population of the study. Three hundred (300) respondents were conveniently selected from the four selected institutions based on the population of the institution. 100 respondents were drawn from Federal Polytechnic and Abubakar Tafawa Balewa University, Bauchi. 75 respondents were from Abubakar Tatari Ali Polytechnic and 25 from Bauchi State University, making the total of 300 respondents. The research instrument was questionnaire which was developed by the researcher and pre-tested. To ensure the reliability of the test instrument, it was tested using Cronbach's alpha reliability test. The Cronbach's alpha value (0.85) was determined with the aid of SPSS 15. The collected data was analyzed using descriptive and inferential statistics such as frequency distribution and percentages.

### 3. Discussion of Findings

The results were presented in descriptive statistics, while the overall objective of the study was to assess the knowledge and attitude of cervical cancer prevention among female students. The knowledge of cervical cancer and prevention attitudes was calculated for each table using 5 Likert's scale.

**Table 1: Level of Knowledge on cervical cancer (N = 300)**

Question	Options N (%)				
	1	2	3	4	5
Cancer of the cervix is the commonest cancer of the Female reproductive tract.	53 (18)	14 9 (50)	78 (26)	10 (3)	10 (3)
The development rate of cervical cancer is high in the state	10 (3)	50 (17)	10 5 (35)	85 (28)	50 (17)
Cervical cancer can be transmitted from one person to another	18 (6)	52 (18)	14 4 (48)	56 (19)	30 (10)

**Key:-** 1- Strongly agree 2- Agree 3- Undecided 4- Disagree 5- Strongly Disagree

It could be observed in table 1 above, that the majority of the respondents 50% agreed, 18% strongly disagree, 26% undecided, 3% disagree respectively. There is no significant difference between the respondents with the statement that, cancer of the cervix is the commonest cancer of the Female reproductive tract. This could be attributed to the information received from friends, media or health workers on cervical cancers. This finding is similar to studies conducted in Dar es Salaam that awareness of cervical cancer as the commonest cancer of the female reproductive tract was found to be high as three quarters of the respondents were aware of carcinoma of the cervix [13]. Similar studies in Hong Kong found that participants' knowledge on the topic was good but mixed with misconception [14].

Table 1 above shows that 35% of the respondents were undecided, 28% disagree, while, 17% strongly disagree respectively with the statement development rate of cervical cancer is high in the state. The findings here indicates that, majority of the respondents are not aware of cervical cancer incidence in the state, which is not in conformity with the Society for Family Health (SFH) an international non-governmental organization, affirmation of the increase in the incidence of cervical cancer within Bauchi state [5], which is one of the reason why they provided cervical cancer screening for 15,300 women from 30 to 49 years in Bauchi state, so as to curtail the increase rate of cervical cancer infection in the state [5]. A report of the World Health Organization [10] indicates that in Nigeria, for instance, about 14,000 new cases of cervical cancer occur every year, resulting in the death of not less than 9,000 women. In more specific terms, the WHO report says that in 2008, 529,409 new cases of cervical cancer and 274,883 cervical cancer-induced deaths were recorded in developing countries [15].

**Table 2: Preventive Attitudes of Cervical Cancer (N = 300)**

Question	Options N (%)				
	1	2	3	4	5
Cervical cancer can be prevented by vaccination.	49 (16)	110 (37)	132 (44)	9 (3)	0 (0)
Mass media interventions may play a key role in influencing the use of healthcare interventions.	171 (16)	102 (34)	0 (0)	27 (8)	0 (0)
Vaccinating girls and women before sexual debut prevent cervical cancer	91 (30)	127 (42)	62 (20)	20 (7)	0 (0)

**Key:-** 1- Strongly agree 2- Agree 3- Undecided 4- Disagree 5- Strongly Disagree

In table 2 above, it could be seen that majority of the respondents, 44% of them were undecided, 37% agreed, 16% strongly agreed, while 9% strongly disagree. There is no significant difference with the statement, that cervical cancer can be prevented by vaccination. The statement was collaborated with a study conducted in Sweden, where 59% of the respondents believed that cervical cancer can be prevented by the annual screening and vaccination against HPV infection [16]. It was also in agreement with the findings of another study, that vaccine should be included in the National immunisation program and at a subsidized rate [17]. Although, [18] indicated that HPV vaccine was accessible at private hospitals and some public hospitals in the country at an affordable rate, the study showed that awareness was poor because vaccines could only be found at few locations and at relatively high cost.

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Moreover in table 2 majority of the respondents 42% agree, 30% strongly agree, 7% disagree, while 20% were undecided with the statement that vaccinating girls and women before sexual debut prevent cervical cancer. HPV vaccine is included is routinely provided via school-based programs for girls and boys 12–13 years of age, before sexual debut. Catch-up vac-

ination is available for males aged 14–15 years in 2013 and 2014 [19].

**Table 3: Perceived Barriers of Cervical Cancer Screening (N = 300)**

Question	Options N (%)				
	1	2	3	4	5
Screening can help in preventing cancer	49 (16)	110 (37)	132 (44)	9 (3)	(0)
You will attend cervical cancer screening if it is free, available and harmless	91 (30)	127 (42)	62 (20)	20 (8)	0 (0)
Fear of pain is one of the reasons for not having cervical cancer screening.	40 (30)	163 (54)	17 (16)	57 (19)	23 (8)
Cervical cancer screening could be avoided if it is expensive.	37 (10)	164 (55)	45 (15)	29 (10)	31 (11)

**Key:-** 1- Strongly agree 2- Agree 3- Undecided 4- Disagree 5- Strongly Disagree

In table 3 above, majority of the respondents 60% agreed, 13% strongly agree, 22% undecided, while 4% disagree with the statement that, screening can help in preventing cervical cancer. A study in South Eastern Nigeria revealed that about two third of females studied knew about Pap smear, a screening for cervical cancer [20]. Three quarters of respondents in a study conducted in Tanzania agreed that screening is important in prevention of cervical carcinoma. This finding was rather similar to the finding in a study in Ghana where 87%of respondents agreed that screening is important [21].

Moreover, majority of the respondents 42% agree, 30% strongly agree, 7% disagree, while 20% were undecided with the statement that, if screening is free, available and harmless, you will attend. In other studies barriers toward screening were embarrassment, pain, or the procedure being bothersome. Others were psychological fear and physiological pain [22].

The findings of this study suggest that it is important to provide information about the value of cervical cancer screening and to eliminate barriers to it. Hence it is obvious that screenings test for cervical cancer will not increase unless knowledge is improved and barriers eliminated [23].

Table 3 above reveals that 54% of the respondents agreed, 13% strongly agreed and 19% strongly disagree. There is no significance difference that fear of pain is one of the reasons for not having cervical cancer screening. This studies shows that barriers toward screening were embarrassment, pain, or the procedure being bothersome. Gichangi, [22] reported that other barriers to cervical cancer screening were psychological fear, shy and pain [22].

Majority of the respondents 55% strongly agreed, 12% undecided, 10% disagree while 10% disagreed with the statement that, cervical cancer screening could be avoided it is expensive.

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In table 8 above, majority of the respondents 52% agreed, 26% strongly agreed, 12% were undecided, and 10% strongly disagree with the statement, that ignorance is one of the reasons why cervical cancer screening is avoided. Peter, et al., [21] opined that ignorance of cervical cancer affect it prevention practice, as it is difficult for the women to go for screening and/or vaccination if they have no knowledge of it.

Table 3 above indicate that majority of the respondents 57% agreed, 19% strongly agreed, 16% were undecided and 4% disagreed with the statement, that pain during intercourse and vaginal bleeding are signs of cervical cancer. This finding is similar to the finding in a study done in Tanzania, that vaginal bleeding was the commonly mentioned symptom among study participants [13].

### 3.1 Research Findings

Generally, findings of these analyses present a new insight about the potential influence of cervical cancer awareness, knowledge, and perceived susceptibility on attitude toward screening participation, and prevention attitudes of the female students. Furthermore, the findings, suggest a possible relationship between cervical cancer knowledge and perceived susceptibility to cervical cancer. Exploratory analyses such as these provide a basic understanding of potential psychosocial factors influencing participation in health promoting behaviors in a cross-cultural setting. Overall, the results of this study suggest that with awareness alone, the participants will be highly receptive to free cervical cancer screening (92%, Table 3). Women with any level of knowledge about cervical cancer, especially knowledge of the preventive attitudes and purpose for screening, were more likely to identify themselves as at risk for cervical cancer.

### 3.2 Summary

This study was conducted to assess the cervical cancer Knowledge, perception and prevention attitude among female students (16-49 years) attending tertiary institutions in Bauchi metropolis. Questionnaire through survey research design was used in this study. 300 respondents were conveniently selected from the four schools. It was discovered that most of the respondents were not aware of the increased rate of cervical cancer within the state, which was contrary to a report by the Society for Family Health (SFH) that affirmed the increase in the incidence of cervical cancer within Bauchi state [5]. Moreover, most of the respondents agreed that screening and vaccination can prevent cancer of the cervix.

### 4. Conclusion

This study revealed limited knowledge on the causes, barriers to screening and general prevention techniques of cervical cancer. It is not surprising that the women’s reluctance to undergo cervical cancer screening appears to be based on lack of knowledge on the eligibility and availability of the immunization against HPV. Education, communication and reassurance are required to overcome such resistances. Women’s attitude

was generally positive as most of them showed a positive attitude towards screening for cervical cancer. This attitude however did not improve practice and this could have been contributed by barriers such as lack of knowledge, that resulted to their thinking that screening is costly, and perception that the procedure is painful and other barriers as shown in the results.

#### 4.1 Recommendations

1. Efforts to increased awareness and knowledge of cervical cancer through health education targeting barrier-specific counseling as well as community-based interventions approach.
2. Government should increase health care budget and prioritize cervical cancer prevention through establishing national awareness campaign, to promote screening services all over the country.
3. Further research should be conducted to explore the hitches to this highly preventable, but tragic condition.

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