

Original Research Article

# Awareness of Cervical Cancer Screening Among Female University Students in Nigeria and Sudan: A Comparative Study

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## ABSTRACT

**Background:** Cervical cancer is one of the leading causes of deaths in women worldwide. In western countries, the incidence of and mortality associated with cervical cancer has reduced substantially following the introduction of effective cervical screening programmes. This is in contrast to what is obtainable in developing countries such as Nigeria and Sudan where cervical cancer screening is rudimentary or nonexistent. Aim: This study seeks to determine the knowledge and attitude of female students towards cervical cancer screening in Nigeria and Sudan.

**Methods:** A total of 240 questionnaires were distributed to study participants based in two tertiary institutions of learning (Usmanu Danfodiyo University Sokoto [UDUS], Nigeria and Ahfad University for Women [AUW], Sudan). The questions were designed to capture the objectives of the study.

**Results:** A total of 83.3% of the questionnaires were duly completed and returned with minimum age of respondents being 15 year old. Overall, 77% of respondents (35.5% in UDUS and 41.5% in AUW) have heard about cervical cancer, while only 53% of the respondents (22% in UDUS and 31% in AUW) were aware of cervical cancer screening Nigeria and Sudan respectively. There is a statistically significant association between age group and knowledge of cervical cancer amongst the respondents in both UDUS ( $\chi^2=26.642a$ ,  $P=0.0001$ ) and AUW ( $\chi^2=10.566a$ ,  $P=0.005$ ).

**Conclusion:** The study shows that awareness of cervical cancer screening was low amongst study participants compared to their awareness and knowledge about cervical cancer. There was an association between age group, marital status and knowledge of cervical cancer screening amongst respondents. Overall, a greater proportion of the respondents had little or no knowledge of cervical cancer screening. Therefore, there is need for increase advocacy and awareness about cervical cancer and its screening among females in Nigeria and Sudan.

**Keywords:** Knowledge, attitude, cervical cancer, screening, Nigeria, Sudan.

## INTRODUCTION

Cervical cancer is the second most common cancer among women worldwide, with an estimated 528,000 new cases and 266,000 deaths among women each year. [1] A disproportionate number of these cases

(85 %) and deaths (87 %) occur among women living in low and middle income countries. [1] Women living with HIV are at increased risk of developing cervical cancer [2-4] and experience more rapid progression of the disease. [5-7] Since 1993, cervical

cancer was classified as an AIDS-defining illness. [8]

Nearly all cases (99.7 %) of cervical cancer are caused by human papillomavirus (HPV), [9] particularly types 16 and 18 which cause more than two-thirds of all precancerous cervical lesions and cervical cancers. [10,11] HPV is one of the most common sexually transmitted infections, with up to 75 % of sexually active people estimated to be infected at some point during their lives. [12]

Carcinoma of the cervix is associated with the following risk factors; early age at first sexual intercourse, multiple male sexual partners, male sexual partners who have had multiple partners, early age at first birth, multiparity, smoking, long-term use of oral contraceptive pills, immunosuppressed states. [13] Nigeria is the most populous country in sub-Saharan Africa, with over 150 million inhabitants, a life expectancy at birth of 49.3 years in men and 50.8 years in women, child mortality rate of 57.3 and 56.5 5 per 1,000 in males and females respectively. [14]

The incidence rate of cervical cancer in Nigeria is 25/100,000 while the reported prevalence rates for Human Papilloma Virus (HPV) in the general population and HPV in women with cervical cancer 6 are 26.3% and 24.8% respectively. [15] Cervical cancer is the second most prevalent cancer in Sudanese Women; breast cancer forms between 29 - 35% of female cancers while Ca Cervix forms 12 - 16%. [16]

It is one type of cancer that can be prevented and cured if detected early enough. The long transition time from a premalignant lesion to frank cancer of the cervix affords ample time for early detection and nearly complete cure even in secondary health care centres. [17] Early detection is important in the management of cervical cancer. However most of the women in developing nations present with advanced disease when nothing can be done for them. [18] Several reasons for the late presentations have been noted, namely ignorance about the symptoms, fatalistic attitude (fear of

death from the disease), readiness to associate neoplastic disease to supernatural causes thereby resulting in delays in seeking help, fear of confirmation of suspicion and of course the perennial problem of low coverage of the population by health centre services especially the rural areas. [19,20]

Cervical cancer is very much preventable and an important aspect of its prevention is the detection of the pre malignant form by cervical screening. [21] A number of studies have shown that effective screening programmes have significantly reduced the incidence of cervical cancer in developed countries. The incidence of cervical cancer in the United Kingdom (UK) decreased significantly after the introduction of a national screening programme. [22]

This study seeks to compare the knowledge and attitude of female students of Usmanu Danfodiyo University Sokoto, Nigeria, and Ahfad University for Women towards cervical cancer and its screening.

## METHODS

### Study Design and Area

This was a cross-sectional study carried out among female students in Usmanu Danfodiyo University Sokoto (UDUS), Nigeria and Ahfad University for women (AUW) Omdurman, Sudan.

AUW is a private women's university in Omdurman, Sudan. [23] that was founded in 1966. It serves approximately 4,785 students who come from all regions of the Sudan and several neighboring countries. Students are enrolled in one of six schools, which are organized along practical professional lines, rather than the traditional academic fields. In addition, AUW offers graduate programs in Human Nutrition, Gender and Development.

The Usmanu Danfodiyo University, Sokoto (formerly University of Sokoto) is one of the seven second generation Universities established by the Federal Government of Nigeria in September 1975. It currently has ten Faculties. In addition, it has a Postgraduate School and 4 research centers (Centre for Islamic Studies, Centre

for Hausa Studies, Centre for Energy Research, Centre for Environmental Studies, and Centre for Peace Studies). It serves approximately 6,000 students who come from across Nigeria and West Africa. [24]

### Study Population / Sampling

Female students from Usmanu Danfodiyo University Sokoto, Nigeria and Ahfad University for Women, Sudan within the age group of 15-49 years were recruited for this study using convenient sampling method. A total of 40 female students were excluded (most of them were either less than 15 years old or greater than 49 years old).

### Data collection

A 21-item self-administered questionnaire were designed to assess the knowledge, and the attitude of female students in UDUS and AUW towards cervical cancer and its screening based upon similar studies conducted elsewhere and literature review. [25] The questionnaire was used to obtain information on the socio-demographic characteristics of the respondents, knowledge and attitude about cervical cancer and its screening.

In this study, knowledge is defined as having previously heard of the cervical cancer. Specific questions regarding risk factors, causes of cervical cancer and screening were asked. Knowledge about cervical cancer is considered good if a respondent is able to identify at least three of the known risk factors and symptoms correctly. The questionnaires were administered by the researcher to a total of 240 participants (120 in UDUS and 120 in AUW) after explaining the research to them and obtaining their consent. Respondents were given a free hand in response to questions and were only guided in their responses when they voluntarily called for assistance. They were also assured that the information provided would be kept confidential.

### Statistical analysis

Data were entered and analyzed using SPSS version 16 (SPSS Inc. 233 South Wacker

Drive, 11th Floor Chicago, IL 60606-6412). Appropriate statistical test such as descriptive statistics were used to analyze the data.

### Ethical Consideration

Approval to carry out this study was obtained from relevant authorities. Informed consent was obtained from study participants and confidentiality was ensured

## RESULTS

The minimum and maximum ages of the respondents were 15 and 49 years respectively. The lowest frequencies were reported for age groups 40-49 years (0.5%), 30-39 years (3%), and 15-19 years (23%). Majority (73.5%) of study participants fall in the age group of 20-29 years (Figure 1).

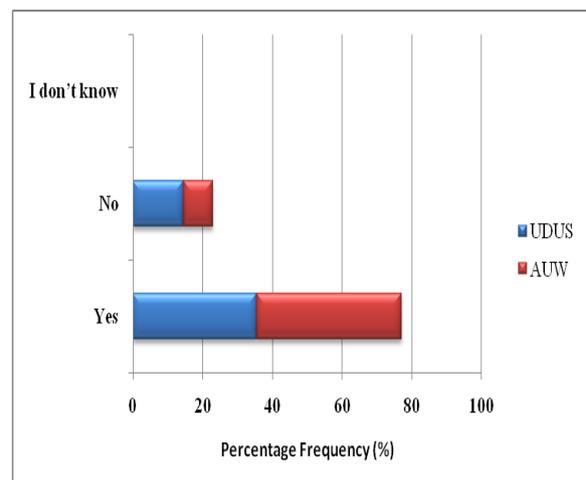
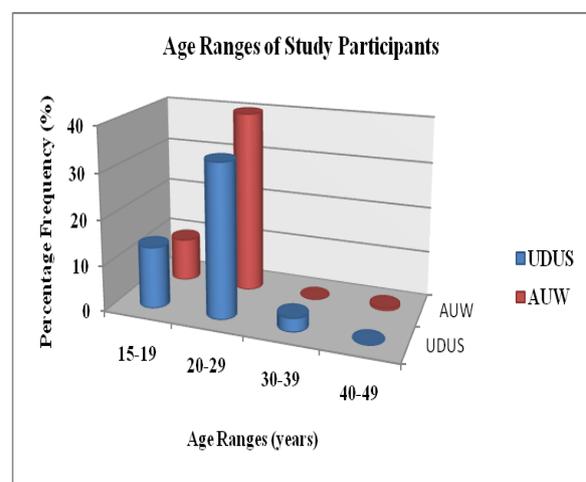


Figure 1: A 3-D Cylinder Chart Showing Age Groups of Study Participants in UDUS and AUW

Figure 2: Pie chart Showing the responses of Study



Participants regarding whether they have ever heard of cervical cancer or not.

Overall, a total of 23% of the study participants (8.5% in UDUS and 14.5% in AUW) has never heard of cervical cancer. This means that a high percentage (77%) of respondents have heard of cervical cancer (Figure 2). As to whether the respondents know the causes of cervical cancer, (58.5%) do not know the causes of cervical cancer (Figure 3)

Table 1: Cross tabulation comparing age group of study participants in UDUS with their knowledge on cervical cancer.

Count		Heard of cervical		Total
		Yes	No	
Age	15 – 19	27	0	27
	20 – 29	44	23	67
	30 – 39	0	6	6
Total		71	29	100

### CHI-SQUARE FOR UDUS.

	Value	P. value)
Pearson Chi-Square	26.642 <sup>a</sup>	0.000
No of Valid Cases	100	

Table 2: Cross tabulation comparing age group of study participants in AUW with their knowledge on cervical cancer.

Count		Heard of cancer		Total
		Yes	No	
Age	15-19	11	8	19
	20-29	71	9	80
	40-49	1	0	1
Total		83	17	100

### CHI-SQUARE FOR AUW

	Value	P. value
Pearson Chi-Square	10.566 <sup>a</sup>	0.005
No of Valid Cases	100	

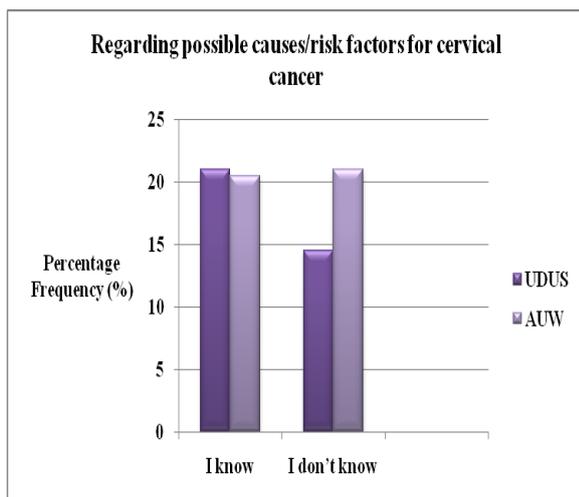


Figure 3: A 2D Column Chart Showing Responses of Study participants regarding Knowledge of Possible Causes/Risk Factor of Cervical Cancer.

However, more than half of respondents in AUW (31%) and less than half of respondents in UDUS (22%) have heard of cervical cancer screening (Figure 4).

Among the respondents that knew about cervical cancer, few of them knew about possible causes or risk factors (Figure 3).

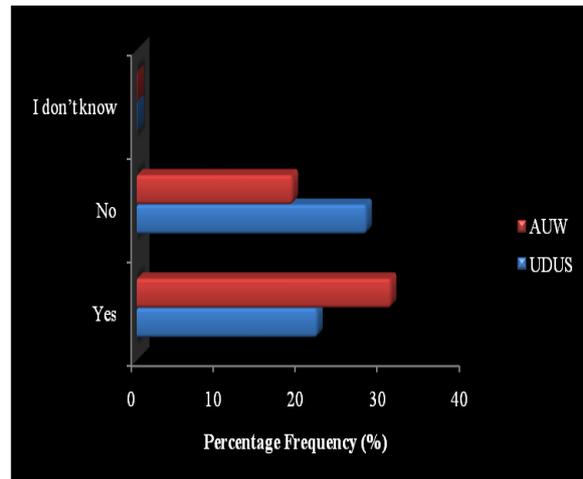


Figure 4: A Bar Chart showing knowledge on cervical cancer screening among participants.

## DISCUSSION

This study was sought to determine the level of knowledge and awareness about cervical cancer and its screening among female University students in Nigeria and Sudan. Overall, 77% of the respondents were aware of cervical cancer (Figure 2). This high percentage may be attributable to the fact that females in both universities are within the university environment and have access to information mostly through the electronic media (TV, radio, internet, DVD etc). A similar pattern of awareness was recorded in a Nigerian research in Ibadan where the study of 421 undergraduates in the University of Ibadan found that 71% were aware of cervical cancer. [26]

Findings from this present study however contrast with the low level (42.9%) recorded among female University students in South Africa. [27]

Despite the large number of the participants aware of cervical cancer, majority of them were not aware of the possible causes or risk factors (Figure 3).

This is not good enough because it shows that the pattern of awareness is not effective and the proper message is not being passed. It can also be due to the fact that females within this age group do not see cervical cancer as a major health issue.

Among the 53% that have heard of the screening, the major source of information among the respondents were electronic media (TV/radio/internet) and through health professionals. This goes to show that the role of media campaigns should be considered as these are known to work best in promoting knowledge about cervical cancer and screening when multiple media are used. It also emphasizes the importance of health professionals in raising awareness.

## CONCLUSION

Conclusively, our findings suggest fairly good knowledge of cervical cancer among female University students in Nigeria and Sudan but with inadequate knowledge about it causes and screening more notable in Nigerian students. Thus, there is a need for the University authorities as well as Government of both countries to improve in raising awareness about cervical cancer. The Federal Governments of the countries (Sudan and Nigeria) need to put in place a policy on screening for cervical cancer with appropriate screening guidelines.

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## Conflict Of Interest

No conflicts of interest declared.

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