KNOWLEDGE, ATTITUDE AND PRACTICE CONCERNING CERVICAL CANCER SCREENING AMONG MARKET WOMEN IN YOLA-METROPOLIS, ADAMAWA STATE

BY

JAMES VASUMU JACOB
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DECLARATION

I Dr. James Vasumu Jacob declared that this work is original and has not been submitted to any institution/organization or medical journal for publication.

_____   _____

James Vasumu Jacob   Date

CERTIFICATION

This project titled "Knowledge, Attitude and Practice Concerning Cervical Cancer Screening among Market Women in Yola-Metropolis Adamawa State" authored by James Vasumu Jacob meets the regulation governing the award of Master in Public Health of Ahmadu Bello University Zaria and is approved for its contribution to medicine and literature presentation.

_____   _____
Dr. A.A. Aliyu (MBBS, MPH, FMCPH)   Date
Supervisor

_____   _____
M.N. Sambo (MBCH, MIAD, FWACP)   Date
Head of Department

_____   _____
External Examiner   Date

DEDICATION

This work is dedicated to all Nigerian Women.

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Praise be to God for the gift of life, knowledge to undertake this research work. I am forever indebted to my untiring, humble supervisor Dr. A.A. Aliyu. It is indeed a privilege to learn from such personality. My gratitude goes to my brother and friend Dr. Suleiman Bashir for his encouragement. I thank all my teachers in the department.

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LIST OF ABBREVIATIONS

HIV   -   Human Immunodeficiency Virus

AIDS -   Acquire Immunodeficiency Syndrome

HPV   -   Human Papiloma Virus

CIN   -   Cervical Intra Neoplasia

VIA   -   Visual Inspection with Acetic Acid

VIAM -   Visual Inspection with Magnification

DNA   -   Deoxyribonucleic Acid

LGA   -   Local Government Area

ABSTRACT

Background: cervical cancer is a spectrum that ranges from dysplasia to invasive cancer. The late stage of the disease result with distant metastasis involving surrounding tissues and deposits in organs like the liver, lungs and bones. Poor public health awareness has contributed to late diagnosis of this disease, therefore there is need to assess the knowledge, attitude and practice with regards to cervical cancer screening. Market women continue to be the economic driving force of families in many parts of Nigeria. The awareness will therefore reduce the burden of the disease.

Methodology: A cross-sectional descriptive study was carried out by using systematic sampling to collect data through administered questionnaires to 253 market women in Yola metropolis.

Result: The result showed majority of the market women have heard about cervical cancer (74.0%), 74.9% of them heard about screening, there was also good attitude, however the practice was poor. Women with formal education have taken up cervical cancer screening than those with non formal education, it was statistically not significant (x^2 = 4.248, P = 0.120). As only 72 women have carried out cervical cancer screening.

Conclusion: The study established that level of knowledge on cervical cancer screening was high but practice was low as 28.5% of the respondents ever had cervical cancer screening. Therefore, sustained public health awareness should be encouraged in order to increase the utilization of screening service in all health facilities.

INTRODUCTION

Cervical Cancer

Cervical cancer is a spectrum that ranges from Dysplasia to invasive cancer. Dysplasia describes an abnormal organization of cells i.e. premalignant changes in the squamous epithelium. It is graded as mild, moderate or severe. Cervical intraepithelial neoplasia is a closely related nomenclature that covers the entire spectrum of changes are graded CIN 1, CIN 2, and CIN 3 according to the third of the epithelium (Upper, Middle, Lower) respectively in which changes occur; corresponding to mild, moderate and severe[1].

Invasive cancer is characterized by invasion of deeper tissues. It usually takes three forms; fungating (commonest), ulcerating and infilterating. Histologically, 95% of cells are large cell type either keratinized (well differentiated) or non keratinized (moderately differentiated). Adenocarcinoma arises from endocervical glance, situated anywhere from the internal to the external os. The late stage of the disease usually results into distant metastasis but however, local spread can occur either upward to involve all the cervix, downward to extend into the vaginal vault, laterally, it involves the ureters and anteriolly to involve the bladder, posteriolly to involve the rectum. Lymphytic spread occurs early, while haematogenous spread occurs through systemic circulation mainly depositing in the liver, lungs and bones[1].

Pathogenesis of Cervical Cancer

Cervical cancer arises in the so-called transformation zone of the uterine cervix. This is the area which undergoes physiological metaplasia from glandular to squamous epithelium at the onset of adolescence. Human Papiloma Virus (HPV) is very common after the onset of sexual activity, and when it persists, the viral oncoprotein produce perturbation of the cell-cycle controls,

resulting in CIN. At their mildest (CIN 1), these lesions are generally no more than manifestation of HPV infection, but at their most severe (CIN 3), the risk of progression to cancer, if not detected and treated, is high. Fortunately, the transmission to cancer usually takes years, thus allowing the opportunity for detection by exfoliative cytology. The peak incidence of HPV occurs at the age of 20, the peak incidence/detection of CIN 3 occur about age 30, and the peak incidence of cancer occurs in the 40s. It is estimated that without secondary preventions, cervical cancer would occur in around 1% of women who acquire an HPV infection. Although for every cancer that occurs, a far larger number of CIN lesions develop, of which the majority probably regress. Most of the pre-malignant and marlignart lesions are of squamous type but around 15% are of glandular. HPV 16 and 18 are the dominant oncotypes in the squamous but type 18 is relating more important in glandular lesion[2].

Risk Factors for Cervical Cancer

The most important risk factors in the development of cervical cancer is infection with a high risk strain of human papilloma virus (HPV). The virus cancer risk works by triggering alterations in the cells of the cervix, which can lead to development of cervical intraepithelial neoplasia that can lead to cancer. There are numerous types of HPV, but some are classified as high risk types (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 73 and 82), low risk types are 6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81). However, types 16 and 18 are generally acknowledged to cause about 70% of cervical cancers cases[3].

Other risk factors increasing risk of exposure to the disease are:

Early age of first sexual intercourse [3,4].

Multiple sexual partner

Male sexual partners who themselves have multiple sexual partners [3,4]

Early age at first birth[4].

Low social class[4]

Immunosuppressed states like HIV/AIDS, lymphoma's [4]

Multiparity

Clinical Features of Cervical Cancer

Most of the time, early cervical cancer has no symptoms. Symptoms that may occur include:

Continuous vaginal discharge which may be pale, watery, pink, brown, bloody or fowl smell.

Abnormal vaginal bleeding between periods, after intercourse or after menopause.

Periods become heavier and last longer than usual.

Any bleeding after menopause.

However in advanced cervical cancer, symptoms may include:

Loss of appetite

Weight loss

Fatigue

Pelvic pain

Leg pain

Heavy bleeding from the vagina

Leaking of urine or faeces per vaginum

Bone fracture [5]

Cervical Cancer Screening Methods

Cervical screening has been demonstrated to be effective in reducing the mortality and morbidity of cervical carcinoma[6]. The following are types of screening method.

1. Papanicolaou Smears (Pap Smear)

A pap smear is a cytological test designed to detect abnormal cervical cells. The procedure involved scrapping cells from the cervix and the fixing them on a glass slide. The slide are taken to a cytology laboratory and evaluated by a trained cytology technician. This multistage process can take several weeks before the results are available to the client. Studies of cytology-based programs have resulted in a broad range of sensitivity and specificity data, the pap smear is considered to be specific with regard to detection of high grade lesion and cancer [1,5,7].

2. Visual Inspection with Acetic Acid (VIA)

This involves swabbing the cervix with an acetic acid (3-5%) solution prior to visual examination. The difference in absorption of precancerous cells structure and absorption rates make abnormal cells temporarily turn white when exposed to the solution. On the alternative, the use of iodine based solution as a means of staining normal cells brown, leaving the abnormal cells yellow or unstained appearance. The advantage of this screening method is that it is a promising approach for use in low resource setting, it is relatively simple, non-physicians can perform the procedure provided they receive adequate training, results can be available immediately. Accuracy of VIA has been found to be reasonable from several studies. However, the drawback to VIA is, it is less effective in screening women in their fifties because of tendency of the squamuo-columnar junction to recede into the cervical as making observation of lesson difficulty[8].

3. Visual Inspection with Magnifications (VIAM)

This uses the aviscope to examine the cervix after application of acetic acid. A small Indonesian evaluation of an early version of the device indicated that VIAM may achieve sensitivity and specificity of over 90 percent in identifying pre-invasive cervical lesion. Preliminary findings from an ongoing study in Calcutta, India, indicate that VIAM has a sensitivity of 69 percent and specificity of 82 percent[9].

4. New-Screening Technologies

Several effective strategies for cervical cancer prevention have been identified, including cervical cytology using either conventional or liquid based methods. High risk Human Papilloma Virus (HPV) DNA testing, and a variety of iterations of direct visual inspection of the cervix follen application of acetic acid or lugol's iodine.

The new screening technologies with their benefits and limitations is given in the table below[10].

Technology	Benefits	Limitations
HPV genotyping	Discrimination of HPV 16/18 from other high risk types may have greater positive predictive value. May differentiate sequential infection with different types from persistent infection with the same type. Useful for test of cure amenable to use with self sampling. Compatible with many collections buffers. Objective output.	Moderate to high complexity even with standardized commercial reagents. Very difficult to establish consensus primet-based genotyping denovo with adequate quality control. Algorithms may be too complicated to be readily translated into clinical practice. High cost.
HPV MRNA	Potential to increase specificity. Objective output.	Moderate to high complicity RNA less stable, not compatible with some common collection buffers. Compatibility with self-sampling unknown. High cost.
HPV Viral Load	Potential to increase specificity. Objective and quantitative output.	High complexity not prognostic (except HPV-16) require type-specific quatitation.
HPV Integration	Potential to increase specificity. Objective output.	Moderate complexity for DNA methods. Very high complexity to detect integrated transcripts integrated DNA may not be transcriptionally active. Requires type specific assay. Common occurrence of mixed episomal of integrated HPV in cervical intraepithelial nerplasia. High cost.
P 16-enzyme linked immunosorbent assay	Single analyte (P 16 protein) to detect infection with any high-risk HPV. May increase specificity by detecting active infection. Objective output cost may be lower than HPV DNA/RNA/St	Moderate complexity. Compatibility with self sampling unknown. Not compatible with all collection buffers order of sampling may affect performance. Low specificity.
Methylation profile	As a marker of disease and not infections. Compatible with urine sampling. Objective output.	High complexity. Sensitivity limited; questionable reproductivity. High cost.
TERC-gain	As a marker of disease and not infection, may increase specificity. Subjective output (requires expert interpretation) may be useful as a prognostic marker.	High complexity. High cost.
E 6 strip test	Low cost. Objective output. Results available at time of screening visit.	Unknown compatibility with self sampling. At present, only detects HPV-16. Compatibility with self collection unknown.

Cervical cancer is the most common malignancy among women in developing countries.[11]

Carcinoma of the cervix is a global public health problem responsible for an estimated 258,000 deaths in the year 2001 worldwide.[12]

The estimated incidence in Africa is 70/100,000 – 100/100,000 population. The commonest cancer in men is Kaposi sarcoma (15.5%) with cancer of the cervix representing 22.2% of all cancers among women. Most cases present at advanced stages when curative measures may be unsuccessful.[13]

The incidence of cervical cancer in Nigeria is 25/100,000, while reported prevalence rates for human papiloma virus (HPV) in the general population and human papiloma virus (HPV) in women with cervical cancer are 26.3% and 24.8% respectively. High risk HPV types 16, 31, 35, 56 were found with infections involving more than one HPV type and high prevalence of HPV in all age groups.[13,14]

The recorded decrease in incidence and mortality rates of 70-80% of cervical cancer in western countries over the years is largely due to widespread screening. The papanicolaou (pap) smear introduced in 1943 for the detection of precancerous and cancerous changes in the cervix is widely recognized as the most effective cancer screening test yet devised and serves as a model for screening for other malignancies.[16]

Pap smear screening has a specificity of approximately 90%. It is better for high grade and invasive lesions. The test is less specific for low grade (CIN) and partly due to its inability to distinguish between low grade CIN from HPV infection. The sensitivity of the papsmear screening has been reported to range from 40-70 percent.[17]

In general, awareness about cervical cancer, availability of effective screening programmes and improvement of existing health services could reduce its burden among women. One of the huge differences between in its incidence and mortality between developed and developing countries is lack of awareness among the population, health care providers, policy makers.[18]

Statement of the Problem

Cervical cancer kills 270,000 women each year mainly in developing countries, and in the prime of their productive lives, yet cervical cancer is preventable by screening asymptomatic women for precancerous lesion and treating the lesion before it progresses to invasive disease. Studies suggest that if a woman were screened for cervical cancer between the ages of 30 and 40 her risk of cancer will reduce by 25-36%.[19]

Market women are sometimes looked at as the economic driving force of the family economy more especially in the majority of tribes found in Adamawa state. Therefore their knowledge, attitude and practice to this issue may positively or negatively influence the family and the society at large. It is therefore important to know whether the knowledge, attitude and practice is associated with or determined by certain demographic factors.

Justification

Market women are heterogeneous group of people with different background and therefore likely to represent the general population. Lack of enough data necessitated this study which will form a baseline for subsequent comparison and intervention.

Research Questions

    i.   What is the level of knowledge of cervical cancer and screening amongst market women in Yola metropolis?

ii.   What is their attitude towards cervical screening?

iii.   What is their practice of cervical cancer screening?

Aims and Objectives

General Aim

To assess the general knowledge, attitude and practice of cervical cancer screening among market women in Yola metropolis.

Specific Objectives

i.   To assess the level of knowledge of cervical cancer and cervical cancer screen among market women in Yola metropolis.

ii.   To determine the attitude of market women in Yola metropolis towards cervical cancer screening.

iii. To determine the practice of cervical cancer screening among market women in Yola metropolis.

LITERATURE REVIEW

Worldwide, cervical cancer is diagnosed annually in more than 500,000 women and it is known to account for 270,000 deaths[20]. In 2009, estimated new cases and deaths from cervical cancer in the United States of America were 11,270 and 4,070 respectively[21]. eighty percent of deaths resulting from cervical cancer occur in developing countries[22].

The highest age standardized incidence rate of cervical cancer has been reported in southern Africa, Eastern Africa, South America, Central America, the rater are over 40 percent per 100,000 women[23].

The incidence is increasing in sub-Saharan Africa with age-standardized rates of 35.7 percent per 100,000 in Bamako, Mali and 41.7 percent in Kyadondo, Uganda. In Nigeria, it is the commonest malignancy of female genital tract. The estimated incidence is 25 percent per 100,000 and 8,000 new cases are expected to occur yearly[24]. However, the knowledge, attitude and perceptions concerning cancer screening is still low.

A study conducted on the perception of risk and barrier to cervical cancer screening at Moi Teaching and Referral hospital, Edirch Kenya, revealed that of the 219 women interviewed, 12.3% of participants had screened before, while 22.8% felt that they were at risk of cervical cancer, 65% of participants nevertheless wished to be screened[25].

A study on cervical cancer attitude and belief in a Cape Town community showed that more than half of the participants never had a pap smear or had one more than ten years ago. One third did not know what a pap smear was. Lengthy waits and fatalistic beliefs also affected screening behavior. Ethnicity was associated with differences in beliefs[26].

Another study conducted on knowledge, attitudes and practice of cervical cancer screening among medical workers of Mulago Hospital, Uganda with a response rate 92% (285) of these, 93% considered cancer of the cervix a public health problem and knowledge about pap smear was 83% among respondents. Less than 50% knew risk factors for cervical cancer eligibility for screening interval of the female 65% didn't feel susceptible to cervical cancer and 81% had never been screened of the female respondents. Only 26% had partners who had ever been screened. Only 14% of the final year medical students felt skilled enough to use a vaginal speculum and 87% had never performed a pap smear[27].

A study on awareness of cervical cancer screening amongst students of health science at the university of Kebangsaan, Malaysia showed a significant association between grade of knowledge and year of education (P < 0.01). A NOVA test also showed highly significant correlation between mean score and year of education (P<0.001). There was significant association between grade of knowledge and the different programme P = (0.003). There was also significant association of mean score with races (P=0.004) and faculties (P=0.048) for knowledge for prevention, a year of education showed significant correlation with grade of knowledge (P=0.001) and with median score (P=0.005) significant correlation of grade of knowledge and median score also existed for race (P=0.010) and P = 0.013 respectively.

On awareness and source of information, 85% were aware of cervical cancer while remaining 15% were not. Mass media was the most popular source of information for the respondent (59.1%), followed by education (48.6%) and posters in university campus (39.4%).

Attitude, there is no significant correlation between attitude and faculties (P=0.315) and year of education (P=0.749)[28].

A study on cervical cancer and pap smear screening in Botswana, knowledge and perceptions showed that knowledge of cervical cancer and pap smear test was inadequate among women with low incomes of the 18 women who had test at least one pap smear test in their lifetime, eight (44%) had opportunistic testing as a result of having gynecological symptoms, twelve (40%) had never had pap smear test, major barriers to pap smear screening included inadequate knowledge about pap smear testing, providers negative attitudes and limited access to doctors[29].

In Tanzania, a study on knowledge of cervical cancer and screening practices of nurses at a regional hospital revealed that less than half of the nurses had adequate knowledge regarding cervical cancer. There was significant association between knowledge of cervical cancer and age. Knowledge was more adequate among the young nurses (P=0.027) and knowledge differed significantly between cadres. Registered nurse had more adequate knowledge than enrolled nurses (P=0.006)[30].

In Nigeria, a study on the knowledge, practice and screening for cervical cancer among female students of tertiary institution in South Eastern Nigeria showed that out of the 220 students involved in the study 60.9% of the student had knowledge of cervical cancer and about two-thirds (2/3) did not know about pap smear. This low participation in screening was attributed to several reasons including ignorance of existence of such a test, lack of awareness of centres where such services are obtainable, ignorance of important of screening and the risk factors to development of cervical cancer[31].

Another study on knowledge, attitudes and practices of cervical cancer screening among urban and rural Nigerian women showed that only 15.5% of the respondents were aware of availability of cervical cancer screening services, the awareness varies with level of education (P<0.0001),

only 4.2% had ever done pap smear test and all were referred for screening. The most important factor hindering the use of available cervical cancer screening services were lack of knowledge (49.8%) and feeling they had no medical problems (32.0%)[32].

A study of cervical cancer screening among nurses in Lagos University Teaching Hospital, showed that 92% of respondents were aware of the causative organisms of cervical cancer (Papilloma viruses), the major sources of information were through the electronic media (43.9%) and health professional (37.4%), 91% of respondents were quite aware of pap smear as one of the screening techniques and had good attitudes (89%), but 75% of them had never done it before. The study showed that most respondents had good knowledge of cervical cancer but limited knowledge of the types of cervical cancer screening technique[33].

A study on Gynecological cancer in Zaria, Northern Nigeria revealed that carcinoma of the cervix accounted for 66.7% of histologically confirmed gynecological cancers[34]. The highest incidence was also observed in Maiduguri, North Eastern Nigeria with 72.6% of Gynecological cancers[35]. A high incidence was also recorded in Ibadan South West, Nigeria with 62.7%[36].

A study in Zimbabwe found an incidence rate of 54 per 100,000 and in Guinea 46 per 100,000.[37]

According to another study on awareness and determinant of cervical cancer screening among market women by Ogunbode et al in Aleshinloye market Ibadan, majority (79.5%) of the women were sexually active and one hundred and eighty six (38.5%) had early sexual debut and 163 (33.7%) had multiple sexual partners. Only 197 respondents (40.8%) were aware of cervical cancer of pap smear of a screening test.[38]

Another study in Ibadan by Ayinde et al on awareness and utilization of cancer screening among female undergraduates showed that the percentage of sexually active respondents, was 81.5%

sexually exposed before the age of 20 years occurred is 51.7%, fifty seven percent had multiple sexual partners but only 38.1% used condoms. Seventy percent were aware of cervical cancer, while only 23.5% were aware of papanicolaou smear. Awareness were found to be more among medical and the married ones.[39]

In Sagamu, Adetunje studied the knowledge and practice of cervical screening among female health professionals. He found that there were 187 respondents, 78.3% were found to have knowledge of papnicolaou (pap smear). [40] A similar study among female health workers in Ilorin by Aboyeji et al showed that 337 (69.8%) knew about pap smear as a screening procedure for cervical cancer while 146 (30.2%) had no such knowledge.[40] The commonest source of information about pap smears were school lecturers (35.3%), textbook (25.2%) and medical journal (10.7%). Another study in Sokoto found out that knowledge about cervical cancer screening was high among female health workers [41]. In Nnewi, Udigwe surveyed female nurses and that 122 (87%) were aware if the existence of screening services, although, 9.3% had lost relations to cervical cancer.[42]

A community based study by Ezem in Owerri on the awareness of cervical cancer screening found out that 52.8% are aware of cervical cancer sreening. The major source of information were health facilities (31.3%) and friends (30.9%). A study by Feyi-Waboso et al in Aba on the awareness and risk factors showed that majority of respondents were married (92%) and sexually active have initiated sexual activity at a young age (17.3 ± 2.5 years). There was a high prevalence of the major risk factors for cervical cancer. This include initiation of coitus before 19 years (43.5%), multiple sexual partners (63.5%) and male partners with other female partners (2.5%). Also, a previous history of sexually transmitted disease (58.5%) and vulval warts (48%). Their overall role of cervical cancer was low and only 32 women (16%) had any knowledge of

pap smear services. Also, there was poor appreciation of personal risk of cervical cancer and safer sexual practice.[43]

In other parts of Africa, survival studies were carried out. Weltensiek et al, studied knowledge and utilization of cervical cancer screening in South Africa. The study showed that majority of patients from lower socio-economic class with multiple risk factors were not aware of cervical screening or facilities available for this purpose. Most patients resided within a 12 kilometer radius of a facility that either provided or could potentially provide screening[44].McFarland studied the knowledge and perception about cervical cancer and pap smear in Botswana, the study showed knowledge of cervical cancer and pap smear test was inadequate among women with low income.[45]

In United Arab Emirates, the study of knowledge, attitude and practice of pap smear among local school teachers showed that although the teachers had a good knowledge about pap smear test, they were not commonly practicing it. This study clearly demonstrates that there are no statistical relationship between age, husband's education and marriage duration and the woman's knowledge and attitude. The major source of information about papanicolaou smear test has been delivered via a Gynaecologist which represent 53.5% whereas, information distributes through the family physician represents 3.6% only.[46]

Correlate of cervical cancer screening among Hispanic and African American women was done by Bazargan et al and revealed only 62% of the sample had received a screening for cervical cancer within one year. Yet, 29% of the sample claimed that no health care provider had told them that they needed a screening test for cervical cancer.[47]

Attitudes and beliefs about cervical smear test in every married women in Jordan was studied by Amarin et al. This study observed that knowledge of cervical cancer and pap smear test was inadequate in less educated and older parents.[48]

The practice of cervical cancer screening has been poor. Ogunbode et al studied awareness and determinants of cervical cancer screening among market women with only 5.2% of the respondents having had previous pap smear done[38]. Similar study by Ayinde et al among female undergraduates in Isade showed that only 8.3% of those sexually active have had pap smear.[39]

CHAPTER THREE

METHODOLOGY

Background Information to Study Area

Adamawa state is one of the 36 states of the Federal Republic of Nigeria including the federal capital territory, Abuja. It is one of the six states in the North East geo-political zone of Nigeria. It was created in August 1991 from the old Gongola state and has 21 local government areas (LGAs). Adamawa state is bounded in the north by Borno state, in the south by Taraba state, while to the east is the Republic of Cameroun and to the west by Gombe state. Adamawa state has three distinct climates: a hot and dry scorching sun from February to May, rainy seasons from June to September and harmattan from October to February. The state is mainly agrarian with numerous indigenous tribes, the main ones being Fulani, Higgi, Badama, Verre, Batta, Kilba, Chanbi. Islam and Christianity are the main religion in the state. The modes of transportation are by road and by air. Communication is achieved through electric and print media as well as telephone LAN, mobile and internet[85].

The state has a total population of 3, 168, 101 made up of 1,606, 123 males and 1,561,978 females[86]. The state covers a land mass of 42,800 km^2 while the state capital is 881km from the federal capital, Abuja. The metropolis is made up of two local government areas, Yola North and Yola South, with the headquarters of the local government at Jimeta and Yola town respectively. Yola north is situated in the northern part of the state, while Yola South is situated in the southern part. The major occupations of the people are farming, cattle rearing, trading, fishing and civil service. However, the socio-economic situation is poor.

Yola North has five major markets, however the new ultra modern market built is the largest and has a more heterogeneous mix of various ethnic groups and large number of female population.

Variety of items sold in the markets are foodstuff, electronics, meat and poultry products, plastic materials, fish (both fresh and dry), among others. Yola South has 3 major markets, however unlike the Yola North, the markets are not properly arranged but most of the traders sell outside under canopies. In addition to what is sold in Yola North, Yola South has cow milk sold in different varieties.

Study Design

This is a descriptive cross-sectional study

Study Population

The study population was market women, aged 15 years and above in markets within Yola metropolis markets.

Inclusion Criteria

Only female shops owners/traders/attendants age 15 years and above: who consented to participate were included.

Exclusion Criteria

1. Shop owners/attendants less than 15 years
2. Street hawkers

Pre-Testing Tools

Administered questionnaires through research assistants written in English

Sample Size Determination

A minimum sample size was obtained using the formula.

$$\left[n = \frac{z^2 pq}{d^2} \right]$$

n   =   minimum sample size

z   =   standard normal deviation

p   =   proportion of the population with a positive knowledge, attitude and

practice concerning cervical cancer screening

Based on the study carried out Knowledge, attitude and practice concerning cervical cancer screening among rural and urban women in Nigeria[32].

z   = $(1-\alpha/2) = 1.96$

p   =   15.5% = 0.115

q   =   1-0.155 = 0.843

d   =   precision = 0.05

Therefore n = $\dfrac{z^2 Pq}{d^2}$

$$n = \frac{(1.96)^2 \, x0.155 \, x0.0843}{(0.05)^2}$$

$$n = \frac{0.50315356}{0.0025} = 201.26$$

$$n = 201$$

25% was added to make up non response responses. Therefore, final sample size of 253was used.

Sampling Methods

Systematic random sampling technique was used to select respondents.

Data Collection

Data was collected using interviewer administered questionnaire (open ended) with the help of four Research assistants (RAs). The Research Assistants (RA) were trained for two weeks on Appropriate skills of an interview, and questionnaire administration in line with the objectives of the study by the researcher. Role play was done to ascertain the proficiency and understanding of the RA.

Data Analysis

Data collected was checked daily for correctness and completeness. Then it was coded and analyzed using statistical package for social science (SSPS version 20.0) findings were presented using an appropriate charts and tables. Tests of significance was done where necessary. All tests were analyzedat the confidence interval, $\alpha=0.05$. the significant level (p value) was $\alpha=0.05$.for part B and C, each correct answer was given one mark and no mark was given for the wrong answer. For the knowledge level on cervical cancer the total mark were 13. The classification is as follows:

Level of Knowledge	Score of correct answers
High	10-13
Intermediate	7-9
Low	0-6

Meanwhile, for knowledge level on prevention, the classification is as follows:

Level of Knowledge	Score of correct answers
High	4-5
Intermediate	2-3
Low	0-1

Attitude of respondents was divided into positive, neutral and negative. Score of 19-25 was categorised as positive, 13 neutral and 0-12 negative.

Ethical Issues

A letter of introduction/notification was obtained from the department of community medicine. Permission for the study was sought from the market management and the Market women union for their co-operation. Verbal informed consent was obtained from the study participants who were assured of confidentiality of information collected.

CHAPTER FOUR

RESULTS

4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

Table 1 Socio-demographic characteristics of respondents (n=253)

Characteristics	Frequency	Percent (%)
Age (in years)		
16-20	41	16.2
21-25	33	13.0
26-30	50	19.8
31-35	25	9.9
36-40	34	13.4
41-45	26	10.3
46-50	23	9.1
51+	21	8.3
Ethnic group		
Hausa	51	20.2
Higgi	29	11.5
Igbo	25	9.9
Kilba	24	9.5
Bachama	23	9.1
Fulani	20	7.9
Chamba	18	7.1
Margi	14	5.5
Yoruba	9	3.6
Other	40	15.8
Educational level		
Non-formal	69	27.3
Primary	81	32.0
Secondary	103	40.7
Marital status		
Single	72	28.5
Married	133	52.6
Divorced	10	4.0
Separated	6	2.4
Widowed	32	12.6
Religion		
Islam	103	40.7
Christianity	150	59.3

The mean age of the study participants was 33±11.05 years. 19.9%of them were between the ages 26-30 years. Most of the respondents (20.2%) were Hausa and only 3.6% were Yoruba, and 15.8% constituted other tribes respectively. Majority (59.3%) were Christians, married (52.6%) and had secondary school education (40.7%) respectively.
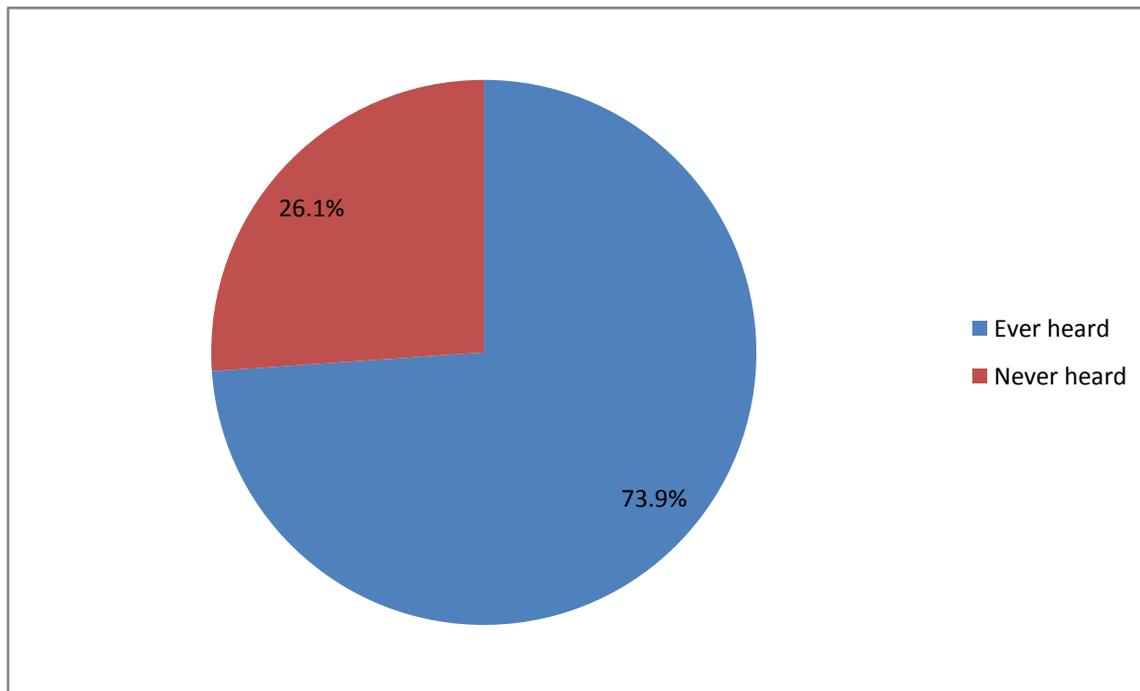

Figure 1: Distribution of respondents by ever heard of cervical cancer

Majority of the respondents 73.9% reported that they have heard about cervical cancer while 26.1% have not heard about cervical cancer.

Figure 2: Source of information on cervical cancer among respondents

Among those who have heard about cervical cancer, 91 (48.7%) reported health workers as the source of information.

Table 2: Respondents perception on occurrence of cervical cancer n=187

	Frequency	**Percent (%)**
Common occurrence	90	48.1
Not common	73	39.0
Don't know	22	11.8
No response	2	1.1
Total	187	100.0

Almost half (48.1%) of respondents agreed that cervical cancer is a common cancer among women.

Figure 3: Knowledge of Risk factors for cervical cancer known among respondents (n=286)

The commonest risk factors for cervical cancer identified by respondents respectively multiple sexual partners 98 (52.4%), early marriage 60 (32.1%) and having a relative that had cervical cancer 54 (28.9%).

Figure 4: Respondents awareness of causes of cervical cancer

The causes of cervical cancer as identified by the respondents include lack of personal hygiene 90 (48.1%), germs 83 (44.4%), and infection with HIV/AIDS 37 (24%).

Figure 5: Respondents awareness of signs and symptoms associated with cervical cancer

Majority 138 (73.8%) of the respondents believed cervical cancer is presented with abnormal vaginal bleeding while 46 (24.6%), 1(0.5%) respectively believed post-coital bleeding and waist pain are other modes of presentation.

Table 3: Misconceptions about cervical cancer by respondents (n=36)

Perceived causes of cervical cancer	Frequency	Percent (%)
Shaking hands with someone that has the disease	2	5.60
Inhaling from air	8	22.20
Poor hygiene	23	63.90
Sexual intercourse	13	36.10
Other	2	5.60

Among those who agreed that the disease can be transmitted from one person to another, majority (23, 63.9%) identified poor hygiene while 13 (36.1%) implicated sexual intercourse as one of the transmission methods.

Table 4: Perception by respondents on whether cervical cancer is curable

Perception about cure for cervical cancer	Frequency	Percent (%)
Curable	90	48.1
Not curable	56	29.9
Don't know	29	15.5
No response	12	6.4
Total	187	100.0

Majority of the respondents 90 (48.1%) believe it is curable while 50 (29.9%) believe it is not and 29 (15.5%) said they do not know.

Awareness of Cervical cancer Screening

Figure 7: Distribution of respondents who were aware of cervical cancer screening

About two third (74.9%) of the respondents had heard about cervical cancer screening while 18.2% of the women interviewed had not heard of cervical cancer screening.

Table 5: Distribution of respondents by sources of information about cervical cancer screening

(n=244)

Sources of information	Frequency	Percent (%)
Health workers	71	47.7
Media (TV, Newspaper)	64	43.0
Friends	59	39.6
Public lectures	39	26.2
Other	11	7.4

Among those who have heard of cervical cancer screening, 47.7% were informed at the health centre while 43.0% got to know about cervical cancer screening from the media like television, radio, and 39.6%, 26.2% and 7.4% got to know about cervical cancer screening form friends, lecture and other sources respectively.

Table 6: Respondents awareness of activities done during cervical cancer screening (n=149)

Activities at cervical cancer screening	Frequency	Percent (%)
Taking samples from the cervix for examination	95	63.8
Ultrasound	42	28.2
Urine	41	27.5
Blood test	39	26.2
Operation	17	11.4
X-ray	17	11.4
Other	2	1.3

Most of the respondents (63.8%) admitted that samples are taken from the cervix for examination during cervical cancer screening and 28.2% said ultrasonography is the activity mainly carried out at cervical cancer screening.

Table 7: Respondents perception on periodicity of cervical cancer screening

	Frequency	Percent (%)
Once in a year	78	41.1
Every three years	32	17.1
Every five years	4	2.1
Other	8	4.3
Do not know	53	28.3
No response	12	6.4
Total	187	100.0

Seventy eight (41.1%) of the respondents believed that cervical cancer screening should be done once every year while 17.1% said the test should be done once in every three years and 2.1% actually believed it should be done once in every five years.

Table 8: Awareness of cervical cancer screening based on age of respondents

Characteristics	Awareness of cervical cancer screening		Total	Statistics
	Yes	No		
Age				
16-20	25 (64.1)	14 (35.9)	39	χ^2=5.537
21-25	17 (56.7)	13 (43.3)	30	P=0.595
26-30	25 (54.3)	21 (45.7)	46	
31-35	15 (65.2)	8 (34.8)	23	
36-40	20 (65.2)	12 (37.5)	32	
41-45	16 (66.7)	8 (33.3)	24	
46-50	17 (81.0)	4 (19.0)	23	
51+	14 (70.0)	6 (30.0)	20	
Educational level				
Non-formal	36 (58.1)	26 (41.9)	62	χ^2=1.328
Primary	52 (67.5)	25 (32.5)	77	P=0.515
Secondary	61 (63.5)	35 (36.5)	96	
Marital status				
Single	42 (60.0)	28 (40.0)	70	χ^2=3.676
Married	76 (62.8)	45 (37.2)	121	P=0.452
Divorced	5 (50.0)	5 (50.0)	10	
Separated	4 (80.0)	1 (20.0)	5	
Widowed	22 (75.9)	7 (24.1)	32	
Religion				
Islam	52 (53.1)	46 (46.9)	98	χ^2=7.750
Christianity	97 (70.8)	40 (29.2)	137	P=0.005
Heard of cervical cancer				
Yes	140 (80.5)	34 (19.5)	174	χ^2=84.036
No	9 (14.8)	52 (85.2)	61	P=0.001

Assessment of age of respondents and whether they have heard of cervical cancer was found not to be statistically significant (p=0.595).Also educational and marital status were also found not to be statistically significant (p=0.515 and 0.452 respectively).

However, religious beliefs and whether respondents have heard about cervical cancer was significant (p=0.005 and 0.001 respectively).

Attitude of respondents to cervical cancer screening

Table 9: Perception of respondents on the importance of cervical cancer screening

	Frequency	Percent (%)
Important	218	86.2
Not important	19	7.5
Do not know	9	3.6
No response	7	2.8
Total	253	100.0

Majority (86.2%) of the respondents admitted that cervical cancer screening is important for every woman, 7.5% said the screening is not important.

Figure 9: Reasons why women did not go for cervical cancer screening (n=19)

Among the 19 women who do not see screening as being important 52.6% were more concern about the cost of the screening while 31.6% submitted that the place for screening was not available and 10.5% of the respondents admitted that screening is not accepted by their religion.

Table 10: Will you encourage your friends and relative to go for cervical cancer screening

Will you encourage your friends and family to go for screening	Frequency	Per cent (%)
Yes	229	90.5
No	13	5.1
No response	11	4.3
Total	253	100.0

Among the 253 respondents, 90.5% said they will encourage their friends and relatives to take up cervical cancer screening services while 5.1% would not encourage friends and relatives of theirs to take up screening.

Figure 10: Factors that will motivate respondents to accept cervical cancer screening services

Most (75.1%) of the respondents who admitted that cervical cancer screening is beneficial agreed that health education on cervical cancer screening will encourage the utilization of the screening services.

Table 12: Relationship between Age and Attitude to cervical cancer screening (n=253)

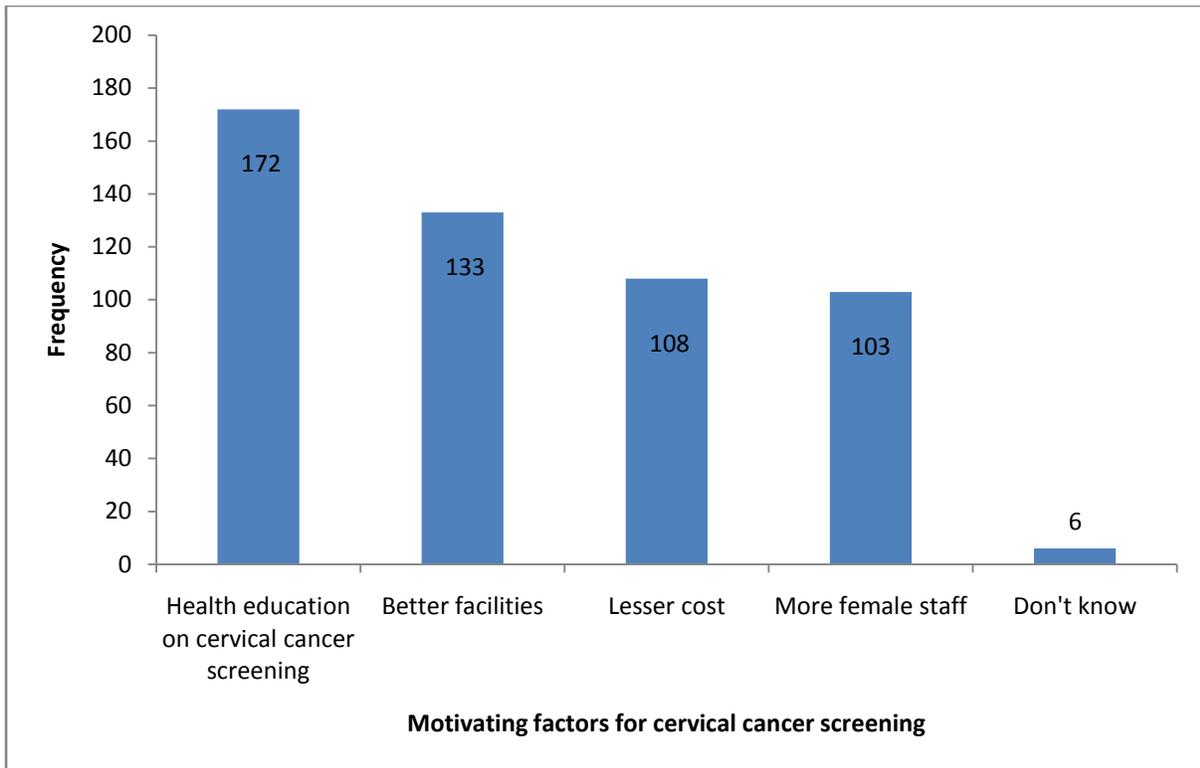| Variables	Attitude to cervical cancer screening		Total	Statistics
Age in years	Poor	Good		
16-20	1 (2.4)	40 (97.6)	41	X^2=10.450
21-25	5 (15.2)	28 (84.8)	33	P=0.164
26-30	7 (14.0)	43 (86.0)	50	
31-35	1 (4.0)	24 (96.0)	25	
36-40	3 (8.8)	31 (91.2)	34	
41-45	1 (3.8)	25 (96.2)	26	
46-50	-	23 (100.0)	23	
51+	1 (4.8)	20 (95.2)	21	
Educational level				
Non-formal	6 (8.7)	63 (91.3)	69	χ^2=0.836
Primary	5 (6.2)	76 (93.8)	81	P=0.358
Secondary	8 (8.5)	95 (92.2)	103	
Marital status				
Single	6 (8.3)	66 (91.7)	72	χ^2=1.063
Married	9 (6.8)	124 (93.2)	133	P=0.900
Divorced	1 (10.0)	9 (90.0)	10	
Separated	1 (16.7)	5 (83.3)	6	
Widowed	2 (6.2)	30 (93.8)	32	
Religion				
Islam	8 (7.8)	95 (92.2)	103	χ^2=0.017
Christianity	11 (7.3)	139 (92.7)	150	P=0.898
Heard of cervical cancer				
Yes	11 (5.9)	176 (94.1)	187	χ^2=2.734
No	8 (12.1)	58 (87.9)	66	P=0.098

Assessment of age of respondents on the attitude to cervical cancer screening was not statistically significant (p=0.165). Also the assessment of the attitude of respondents to cervical cancer screening based on level of education attained and marital status were also found not to be significant (p=0.358 and p=0.900 respectively).

Practice of cervical cancer screening

Figure 12: Practice of Cervical cancer screening by respondents

Among the 253 respondents, just over one-quarter (29.0%) had been tested previously for cervical cancer.

Table 13: Place where cervical cancer screening was taken by respondents (n=72)

Place of screening	Frequency	Percent (%)
Government hospital	49	68.0
Private hospital	23	31.9

Among those who had taken the test previously, 68.0% did that in Government owned health facility while 31.8% took the test at private health facility.

Figure 13: Distribution of respondents by reasons for taking cervical cancer screening (n=72)

About 43.1% of respondents had cervical cancer screening for voluntary reason while for about a third (30.6%) it was prescribed. In one fifth (20.8%) it was suggested by a friend.

Table 14: Number of previous cervical cancer screening taken by respondents (n=72)

Number of previous screenings	Frequency	Percent (%)
Once	44	61.1
Twice	16	22.2
Thrice	5	6.9
Four times	2	2.8
More than four times	1	1.4
No response	4	5.6

More than half (61.1%) of the women who had taken cervical cancer screening previously did it just once, while 22.2% had taken the test for two times and only 1.4% of the women had taken the test for more than four times.

Table 15: Duration since last screening for cervical cancer screening by respondents (n=72)

Duration since last screening	Frequency	Percent (%)
Less than one year ago	10	13.9
One year ago	21	29.2
Two years ago	18	25.0
Three years ago	14	19.4
Other	2	2.8
No response	7	9.7

While 13.9% of the respondents had taken the test less than a year ago, 29.2% took the test one year before the study was conducted and one-quarter (25%) of the tested women did the screening two years ago as at the time this study was conducted.

Figure 14: Desire for regular cervical cancer screening among the respondents

Among the women who had been tested before, 70.8% expressed their desire for regular cervical

cancer screening while 27.8% would not want regular cervical cancer.

Figure 15: Distribution of respondents by reasons for not having regular cervical cancer
screening

Reasons given by respondents for not having regular cervical cancer screening include may not be able to keep to appointment (19.4%), do not like male staff touching me (9.7%) and the discomforting nature of the procedure (8.3%).

Figure 16: Ever advised someone to take up cervical cancer screening

About half (49.7%) of the respondents who have heard about cervical cancer had before the time of the study advised some other women to take up the screening test while 44.4% had not advised anyone to go for cervical cancer screening.

Table 16: Practice of cervical cancer screening based on socio-demographic characteristics and knowledge of cervical cancer screening

Age (years)	Ever had cervical cancer screening		Total	Statistics
	Yes	No		
16-20	14 (51.2)	26 (65.0)	40	χ^2=3.769
21-25	9 (30.0)	21 (70.0)	33	P=0.806
26-30	10 (21.3)	37 (78.7)	47	
31-35	6 (24.0)	19 (76.0)	25	
36-40	10 (32.3)	21 (67.7)	31	
41-45	10 (38.5)	16 (61.5)	26	
46-50	6 (27.3)	16 (72.7)	22	
51+	7 (33.3)	14 (66.7)	21	
Educational level				
Non-formal	14 (20.6)	54 (79.4)	68	χ^2=4.248
Primary	27 (36.0)	48 (64.0)	75	P=0.120
Secondary	31 (31.3)	68 (68.7)	99	
Marital status				
Single	16 (23.5)	52 (76.5)	68	χ^2=4.147
Married	43 (33.9)	84 (66.1)	127	P=0.386
Divorced	2 (20.0)	8 (80.0)	10	
Separated	3 (50.0)	3 (50.0)	6	
Widowed	8 (25.8)	23 (74.2)	31	
Religion				
Islam	25 (25.0)	75 (75.0)	100	χ^2=3.438
Christianity	47 (33.1)	95 (66.9)	142	P=0.064
Heard of cervical cancer				
Yes	68 (37.6)	113 (62.4)	181	χ^2=20.994
No	4 (6.6)	57 (93.4)	61	P=0.000

Statistical test to determine the practice of cervical cancer screening by respondents based on age was not significant (p=0.806). Also practice of cervical cancer screening based education level and marital status were not significant (p=0.120 and p=0.386 respectively).

CHAPTER FIVE

DISCUSSION

The mean age of the respondent was 33±11.05 years. However, 19.8%of the market women involved in this study were between the ages 26-30 years. Most of these women (66.3%) were from the minority ethnic groups like Fulani, Bachama, Higgi, Kilba, Margi, Chamba and other minority tribes while the major Nigerian ethnic groups accounted for 33.7% of the study group. Majority of women have attained secondary education and were married (40.7% and 52.6% respectively) while 27.3% not had any formal education. Christianity is the dominant religion practices by more than half (59.3%) of the women in this study. These findings described the typical North-Eastern settlement were "minority" ethnic groups are more commonly found than the typically dominant ethnic groups in Nigeria. The age distribution, marital status, and level of education of the women in this study is similar to findings by other studies[37, 48, 55] who have all reported similar distribution of these demographic characteristics.

Among the 74.0% of market women who have heard about cervical cancer, 74.9% of them had also heard about the screening. This finding contrasts previous reports on the awareness of cervical cancer screening from previous studies. Ogunbode et al[37] reported that only 19.7% of market women in Ibadan were aware of cervical cancer screening. Similarly, in a study in Aba[39] only 16% of respondents were aware of cervical screening services. It was also higher than the finding among rural women in Osun state where awareness was 39.2%[54] as well as 23.5% awareness obtained by Ayinde et al in Ibadan[39]. The finding on awareness of cervical cancer and cervical cancer screening were similar to the finding by Ahmed et al[48] among market women in Zaria where 66.9% of the women were aware of cervical cancer out of which 68.9% had knowledge of the screening services. Similar high awareness had been observed in studies

involving female health workers.[43] which reported awareness of 69.8%, and in another study in Nnewi, 87% of female health workers were reported to have been aware of cervical cancer screening.

In Sokoto, Oche et al[45] reported that 90.5% of the health workers interviewed were aware that cervical cancer can be detected by cytological screening.

The major source of information about cervical cancer screening was health workers (47.7%) with media, friends, lecture and other sources all accounting for 43.0%, 39.6%, 26.2% and 7.4% as sources of information on cervical cancer. This finding agrees with that by Ahmed et al[48] among market women in Zaria who also identifies healthcare personnel as the major source of information on cervical cancer but, however, contrast that of Ayinde et al[39] where the media was identified as the major source of information about cervical cancer.

More than half (65.8%) of the respondents who have heard about cervical cancer screening had a good knowledge (knowledge score of 10-13). This contrast the report by Ahmed et al[100] who reported that 62.5% of the respondents believed sexually transmitted infections was a risk factor as only 24.6% of the respondents in this study shared a similar belief. Abnormal vaginal bleeding, smelling vaginal discharge, abdominal pain and post-coital bleeding were all similar to reports among women in Ogun[47]and Zaria[48]. Similar findings have been reported by Magda et al[72] in Saudi where most of the young females interviewed had knowledge of the symptoms and risk factors of cervical cancer.

Generally, there was positive attitude to cervical cancer screening (the majority had attitude score of 19-25) by majority (92%). While majority (86.2%) of the women interviewed in this study admitted that cervical cancer screening is important for every woman, 87.0% of the women

were willing to avail themselves for screening. Also, majority (81.4%) of the respondents agreed the cervical cancer screening is beneficial and 90.5% of the respondents in this study were willing to advice their friends and relatives to go for cervical screening. Ahmed et al[48] reported that among market women in Zaria, majority (77.2%) of them were willing to screen for cervical cancer and that majority of the women felt the screening was of benefit.

Cost of screening, ignorance about the place of screening and religious beliefs were the commonest reasons that militated against cervical cancer screening in this study. These findings are similar to that obtained by Adufye[73] who identified ignorance of location of service centre as one of the major reasons that limited the uptake of cervical cancer screening services. Aboyeji et al[43] also identified religious belief, fear of positive outcome and spouse permission as some of the major factors that stood against utilization cervical cancer screening services.

As noticed by previous works, practice of cervical cancer screening was similarly poor. Only 29.8% of the women interviewed had ever taken cervical cancer screening at least once in their entire life. This finding similar to that by Ahmed et al[48] who also reported that about one-third (32.7%) of the market women in Zaria had ever taken cervical cancer screening. The findings however contrast those in Ibadan where only 8.1% of women who had heard about cervical cancer had earlier been screened[39]. Also a similar study in Owerri reported that only 7.1% of the women who had heard about cervical cancer screening services had actually utilized the services[35]. Most of the women (61.1%) received the services at government owned health facility and 43.1% went for the screening voluntarily while others took the test as a result of medical prescription and advice from friends. A good number (70.8%) of the women who have been tested previously expressed desire for regular screening. Regular and voluntary cervical cancer

screening has been identified as the most effective step towards the control of cervical cancer so that cases can be detected on time and appropriate management measures instituted.

Majority (51.2%) of the women who had ever been screened for cervical cancer were within the age of 16-20 years old. Also 38.5% of those who had tested were 41-45 years of age. Only 21.3% of the women between 26-30 years had ever tested for cervical cancer screening and the association was not statistically significant (p>0.05).

More women with formal education (36.0% for primary and 31.3% for secondary) had ever taken up cervical cancer screening than those without formal education (20.6%). However, this test was not statistically significant.

CONCLUSION AND RECOMMENDATION

This study was able to establish that the level of knowledge of cervical cancer and cervical cancer screening is high (73.9% and 74.9% respectively) among market women in Yola metropolis. In addition the attitude to cervical cancer screening was also good as (86.2%) admitted that cervical cancer screening is important to every woman while the practice of cervical cancer screening was low as only 28.5% of the respondents have ever had cervical cancer screening.

RECOMMENDATION

1. There is need for sustained public awareness on the benefits of cervical cancer screening as well as location of screening centres.

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QUESTIONNAIRES

DEPARTMENT OF COMMUNITY MEDICINE, AHMADU BELLO UNIVERSITY, ZARIA

Knowledge, Attitude and Practice of Cervical Cancer Screening among Market Women in Yola Metropolis, Adamawa State

Please kindly read and answer the following questions. The information obtained will be strictly for academic purposes and will be kept confidential.

Section A
Socio-Demographic Data

1) Age:_____

2) Ethnic group: 1-Hausa (   ) 2-Igbo (   ) 3-Yoruba (   ) 4-Fulani (   ) 5-Bachama (   ) 6-Higgi (   ) 7-Kilba (   ) 8-Margi (   ) 9-Chamba (   )
10-Others _____

3) Educational Level: 1-Non-formal (   ) 2-Primary (   ) 3-Secondary (   ) 4-Tertiary (   )

4) Marital Status: 1-Single (   ) 2-Married (   ) 3-Divorced (   ) 4-Separated (   )
5-Widowed (   )

5) Religion: 1-Islam (   ) 2-Christianity (   ) 3-Others_____

Section B
Knowledge of Cervical Cancer/Cervical Cancer Screening

1) Have you ever heard of cancer of the neck of womb? 1-Yes (   ) 2-No (   )

2) If yes, what is your source(s) of information? 1-Radio (   ) 2-Television (   ) 3-Health Workers (   ) 4-Fellow market women (   ) 5-Family/Friends (   ) 6- Neighbour (   )
7-Others (specify)_____

3) Is cancer of the cervix a common cancer? 1-Yes (   ) 2-No (   ) 3-Don't know (   )

4) What are the risk factors for the disease
    1. Having a relative that had the disease   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    2. Having HIV/AIDS   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    3. Having multiple sexual partner   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    4. Early marriage   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    5. Poverty   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    6. Others (specify)_____

5) What is the cause of the disease?
   1. Infection with HIV/AIDS   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   2. Infection with Human papillona virus   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   3. Lack of personal hygiene   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   4. Others (specify)_____

6) How do patient present with cancer of cervix?
   1. Abnormal vaginal bleeding   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   2. Bleeding after intercourse   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   3. Smelling vaginal discharge   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   4. Pain while urinating   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   5. Abdominal pain   1-Yes ( ) 2-No ( ) 3-Don't know ( )
   6. Others (specify)_____

7) Do you think cervical cancer can be contacted from one person to another?
   1-Yes ( ) 2-No ( )

8) Is cervical cancer curable? 1-Yes ( ) 2-No ( ) 3-Don't know ( )
   If yes, how?
   1-In hospital
   2-Traditional healers
   3-Others (specify):_____

9) Can cancer of the cervix be prevented?
   1-Yes ( ) 2-No ( ) 3-Don't know ( )

10) How can cancer of the cervix be prevented?
    1. Antibiotic use   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    2. Cervical screening   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    3. Immunization   1-Yes ( ) 2-No ( ) 3-Don't know ( )

11) Have you heard of cervical cancer screening? 1-Yes ( ) 2-No ( )

12) What is (are) the source(s) of your information?
    1. Lecture   1-Yes ( ) 2-No ( )
    2. Media   1-Yes ( ) 2-No ( )
    3. Friends   1-Yes ( ) 2-No ( )
    4. Health centre/doctor   1-Yes ( ) 2-No ( )
    5. Others (specify)_____

13) What is done in cervical cancer screening?
    1. Blood test   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    2. Urine test   1-Yes ( ) 2-No ( ) 3-Don't know ( )
    3. X-ray   1-Yes ( ) 2-No ( ) 3-Don't know ( )

4. Ultrasound   1-Yes ( ) 2-No ( ) 3-Don't know ( )
5. Operation   1-Yes ( ) 2-No ( ) 3-Don't know ( )
6. Taking a sample from the cervix for examination/test.1-Yes ( ) 2-No ( )
     3-Don't know ( )
7. Others (specify)_____

14)   When should a woman have her first cervical cancer screening?
     1. As early as she become sexually active: 1-Yes ( ) 2-No ( ) 3-Don't know ( )
     2. < 15 years ( )   3.30-50 years ( )   4. Above 50 years ( )
     5. Others (specify)_____

15)   How often should it be carried out?
     1. Once a year ( )
     2. every three years ( )
     3. Every five years ( )
     4. Don't know ( )
     5. Others specify_____

Section C
Attitude towards Cervical Cancer Screening

1)   Do you think it is important for every woman to go for cervical cancer screening?
     1-Yes ( ) 2-No ( ) 3-Don't know ( )

2)   If no, why
     1-Not accepted by my religion ( ) 2- May be expensive
     3-Place of screening not available ( ) 4-Others specify_____

3)   Would you go for screening if you were asked to go? 1-Yes ( ) 2-No ( )
     If no, what are your reasons? _____

4)   Do you think cervical cancer screenings is of any benefit? 1-Yes ( ) 2-No ( )
     If yes, what are its benefits? _____

5)   a. Will you encourage your friends and relatives to go for screening?
     1-Yes ( ) 2-No ( )
     b. If yes, what factors do you think will encourage the utilization of screening services?
     1. Health Education on Cervical Cancer screening 1-Yes ( ) 2-No ( )
     2. Better facilities   1-Yes ( ) 2-No ( )
     3. More female staff   1-Yes ( ) 2-No ( )
     4. Lesser cost   1-Yes ( ) 2-No ( )
     5. Don't know ( )

Section D
Practice of Cervical Cancer Screening

1)   Have you ever heard of cervical cancer screening? 1-Yes ( ) No 2-( )

2)   If yes, where did you do it?
      1. Government hospital (   )
      2. Private hospitals (   )
      3. Others specify _____

3)   What was the reason(s) for screening?
      1. It was prescribed (   )
      2. It was voluntary (   )
      3. Suggested to me by a friend (   )
      4. Others (specify)_____

4)   How many times have you had cervical cancer screening before?
      1-Once ( ) 2-Twice ( ) 3-Thrice ( ) 4-Four times ( ) 5-More than four times ( )
      6-Others specify_____

5)   When last did you have screening for cervical cancer? 1-This year ( )
      2- Last year (   ) 3- 2 years ago (   ) 4- 3 years ago (   )
      5- Others specify:_____

6)   a. Would you like to have regular screening for cervical cancer?
      1-Yes ( ) 2-No ( )
   b.   If No, what are your reasons?
      1- I may not keep to appointments ( )
      2- I don't like it, the procedure is discomforting ( )
      3- I don't like male staff attending to me ( )
      4- Others specify_____

7)   Have you ever advised someone to go for cervical cancer screening?
      1-Yes ( ) 2-No ( )
      If no why_____