KNOWLEDGE, ATTITUDES AND PREDICTORS OF CERVICAL CANCER SCREENING UPTAKE AMONG WOMEN IN OYO STATE, NIGERIA

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CERTIFICATION

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DEDICATION

This work is dedicated to the glory of Almighty God, and in loving memories of my parents: Late Deaconess Caroline Odunola Kolade and Late Pa Samson Ayanrinola Kolade.

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ABSTRACT

Cervical Cancer (CC), a preventable malignant tumour in women's cervixes, is one of the most common causes of maternal deaths in developing countries. Despite its preventability through regular Cervical Cancer Screening (CCS), it is the second most common cancer responsible for gynaecological morbidity and mortality in Nigeria. Studies on CC have largely focused on its biomedical contexts, with little attention paid to the social contexts affecting the knowledge and attitudes towards the uptake of Cervical Cancer Screening (CCS). This study, therefore, investigated the awareness, knowledge, attitudes, perceptions of risks, and the socio-cultural factors influencing the uptake of CCS among women in Oyo State, Nigeria.

The Health Belief Model was adopted, while the mixed methods, comprising a cross-sectional survey design, was utilised. Oyo State was purposively selected based on the availability of a functional cancer registry. Two Local Government Areas (LGAs) were randomly selected from each of the three senatorial districts. Using Leslie Kish's (1965) formula, a sample of 960 respondents was determined based on the projected 2019 population of these LGAs. A questionnaire on the socio-economic, attitude, knowledge, perception of the risk factors, and accessibility to screening centres and health workers was systematically administered to women (aged 20-60 years) in the selected LGAs - Oluyole (189), Oyo West (126), Irepo (109), Ogbomosho North (178), Ibarapa-North (91) and Ibadan South-West (267) LGAs. Questionnaire was proportionally administered based on the LGAs' population. In-depth interviews were conducted with six community leaders, six women and eight religious leaders. Key informant interviews were conducted with four physicians and 12 nurses\midwives. Three focus group discussions were held with married men. The quantitative data was analysed using descriptive statistics, Chi square and multiple regression at $p \leq 0.05$, while the qualitative data were content-analysed.

The respondents' age was 34.67±11.91 years, 86.0% earned below ₦45,000 monthly, and 65.3% were married. Awareness of CC was low (38.0%) based on the misconception of its causes, and it varied by income (χ^2=14.92), education (χ^2=36.77) and employment (χ^2=54.87) status. Knowledge about the causes of CC was poor, as 49.3% had knowledge about its symptoms. Socio-cultural factors jointly predicted uptake of CCS (R=0.21, R^2=0.05, Adjusted R^2=0.04, ($F_{(4,929)}$ =10.90). Knowledge of CC insignificantly contributed to CCS uptake (β=0.02). Perceived benefit (β=0.54), perceived severity (β=-0.02) and cervical cancer risk perception (β=0.21), independently contributed to the uptake of CCS. More than half (60.0%) had negative attitude towards CCS uptake. Womanhood (62.6%), promiscuity (56.3%), smoking habit (53.7%), and family history (47.0%) were the reported risk factors for CC. A majority of the male discussants associated *jejere enu ile-omo* with prostitution. The use of herbs, role of diviners, spousal support, and religious beliefs influenced uptake of CCS. The cost of CCS, location of CCS centres, fear of stigmatisation, and perceived pains limited CCS uptake.

Poor knowledge and awareness of cervical cancer negatively influenced attitudes towards cervical cancer screening among women in Oyo State, Nigeria. A multi-stakeholder holistic framework to motivate positive awareness and uptake of cervical cancer screening is recommended.

Keywords: Cervical cancer screening, Perception of cervical cancer, Risk factors of cervical cancer.

Word count:492

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LIST OF ACRONYMS

ANOVA	Analysis of Variance
CC	Cervical Cancer
CCS	Cervical Cancer Screening
CSC	Cancer Screening Centre
FGDs	Focus Group Discussions
FMoH	Federal Ministry of Health
GPS	Geographic Position System
HBM	Health Belief Model
HPV	Human Papillomavirus
IBCR	Ibadan Cancer Registry
IDI	In-Depth Interviews
KII	Key Informant Interviews
LGAs	Local Government Areas
MoH	Ministry of Health
NBS	National Bureau of Statistics
NGOs	Non-Governmental Organizations
NPC	National Population Commission
OCs	Oral Contraceptives
ODK	Open Data Kit
RAs	Research Assistants
SD	Senatorial Districts
SMoH	Social Model of Health
SSA	Sub-Saharan Africa
SSHREC	Social Sciences and Humanities Research Ethics Review Committee
STDs	Sexually Transmitted Diseases
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate
UCH	University College Hospital
UN	United Nations
WHA	World Health Assembly
WHO	World Health Organizations

CHAPTER ONE

INTRODUCTION

1.1   Background to the study

Cancer is one of the world'smost dreadful diseases in recent decades (World Health Organisation, WHO, 2017). Cancer is characterised by the unrestrained growth and spread of anomalous cells, which wreak havoc on the human body. If improperly managed, cancer may degenerate, break down the body systems and culminate in death (Gakiduo, Nordhagen, and Obermeyer, 2008). There are different types of cancers according to the body parts. Thus, the types are named after the body parts affected. For instance, colon cancer affects the colon, breast cancer affect the breast while cervical cancer affect the cervix. Cancer may not be localised to a specific body part due to the tendency of malignant cells to spread to other areas, with diverse signs. For patients and their loved ones, a cancer diagnosis has life-changing implications including enormous social and economic burdens arising both from the diseased condition and treatment dynamics, which affect and disrupt everyday life.

According to WHO (2019), the most common cancers worldwide include cancer of the lung, breast, colorectal, prostate, stomach and non-Hodgkin lymphoma (a type of blood cancer). Although cervical cancer (CC) is not among the common cancers, it constitutes approximately 12% of all cancers in women after breast cancer making it the second most common cancer in women worldwide and the commonest in developing countries (WHO, 2019). Although there is presently no known cure for cancers generally, screening has been recognised as the most effective approach to CC control (Curry, Byers, and Hewitt, 2003; McGraw and Ferrante, 2014). Cervical cancer is not endemic and does not have serious mortality rate in developed countries; since cervical cancer screening (CCS)is adopted by these countries, 65% of mortality rate is cut off. This is at variance in developing countries. According to Frank and Ehiemere (2017), inadequate facilities, materials, and personnel constitute major challenges to CC oncological services.

Cervical cancer can be defined as a malignant neoplasm of the cervix uteri. In developing countries and some other regions like the South and Central America, Sub-Sahara Africa (SSA), South Asia, CC is a major challenge to women's public health and is the most common type of 1 cancer (Parkin, Forman and Bray, 2014). Cervical cancer as of now is one of the top ten cancers affecting women and the fourth most common cancer globally. There are 1.5 million clinically identified CC cases globally as at 2015 (Ferlay, Soerjomataram, Dikshit, Eser, Mathers, Rebelo, Parkin, Forman and Bray, 2015). Not lesser than 50 million Nigerian women are at risk of CC with an annual CC rate of 14, 089, and an annual mortality of 8240 (Nigeria HPV and Related Cancer Fact Sheets, 2017). Cervical cancer is almost always caused by the Human Papillomavirus (HPV) infection; 23.7% of women harbour this virus worldwide (American Cancer Society, 2016). Mainly, stereotypes 16, and 18 are causative organisms. Many are also spread through sexual relations.

In the same vein, wide coverage of screening, and vaccination against CC have been identified as proven methods for drastically reducing both morbidity and mortality, due to the menace in developed countries of the world (McGraw and Ferrante, 2014). About eighty-five percent of mortality due to CC is still domiciled in developing countries like Nigeria (Maine, Hurlburt and Greeson, 2011). The prevalence of CC is primarily influenced by diverse socio-cultural factors (Ferlay *et al.*, 2015). This is one of the impetuses of this study.

A resolution of 58.22 was adopted in 2005 by the World Health Assembly (WHA). This resolution urges member states to fight cancer through the creation of National Cancer Control Programmes. Nigeria, with its intent to reduce morbidity and mortality associated with cancer as well as its socio-economic impacts, developed a National Cancer Control Programme in 2008. Embedded on this blueprint is a Cervical Cancer Control Plan established by the Federal Ministry of Health (FMoH). The plan focuses on early detection of CC, and processes for vaccination of young girls between 9-15 years of age to prevent Human Papillomavirus (HPV). However, the level of implementation of this plan has not been effective (Ndikom and Ofi, 2012; Nwobodo and Ba-Break, 2015). Therefore, the effect of this has not yet played out in the reduction of morbidity and mortality rates of cancer in Nigeria.

Several studies on African countries like Uganda, Kenya, Malawi, Tanzania, Egypt and Nigeria have identified poor knowledge of the disease both of which cuts across socio-economic categories. For instance, scholars have reported a low uptake rate of 5.3% across the country as opposed to 75.0% in developed nations (Nwobodo, 2015; Idowu, Olowookere, Fagbemi and Ogunlaja, 2016). In the few cases where women's awareness and knowledge level about CC are high or on the average, knowledge level seems not to translate into improving screening uptake. Two of the leading determinants of low cervical screening uptake: low disease knowledge levels and inadequate prevention practices, are attributable to health care provision, and policy deficiency (Arulogun and Maxwell, 2012; Nwobodo, 2015). This partly explains why the Federal Government of Nigeria developed a national policy on cancer control plan, and the Oyo State Government followed suit when she launched her policy on April 23, 2018.

Additionally, socio-cultural factors significantly influence women's perception of CC (Nwobodo, 2015). Matsuyana, Grange, Lyckholm, Utsey and Smith (2007) summarized the way culture colours perceptions, communication and information requirements thus playing a key role in providing effective care to ethnically diverse cancer patient. Several studies have attributed the ineffectiveness of CC screening to religious beliefs, low community involvement, lack of spousal support, poor health-seeking behaviour and passivity of opinion leaders (Ntekim, 2012; Modibbo, Dareng, Bamisaye, Jedy-Agba, Adewole, Oyeneyin, Olaniyan and, 2016; Frank and Ehiemere, 2017). Nigeria is a patriarchal society, where male dominance pervades every sphere of the society, including the health-seeking behaviour of women. Similarly, significant others such as mothers-in-law, religious leaders and community leaders may impact screening uptake in socio-culturally defined ways. Unmarried ladies who are vulnerable to CC may not be able to discuss such issues with their parents at the onset of disease, when it could be easily nipped in the bud. Among other cultural factors is the inability of women to freely discuss sexual health issues with their spouses, due to power dynamics, and the sacredness with which such discourse is viewed in Africa.

In most of the developing countries, misperception about the disease, stigmatisation and discrimination may also hinder early diagnosis and discourage the screening of women. Like other health problems requiring specialised care, access (availability,

proximity and affordability) to cancer services have enormous socio-economic dynamics (Amzat and Razum, 2014). This is more worrisome in a resource-constrained region like Nigeria. The location of health facilities is urban-based (Jegede, 2010), whereas most women are in rural areas where the majority are poor, with low literacy rates and with low health information, awareness, and knowledge (Nwobodo, 2015). Consequently, the generality of the people is disadvantaged in relation to affordability of screening and treatment of cervical cancer; this translates into low uptake (Modibbo *et al*., 2021). The aftermath of this low uptake results in women presenting in the late stage of the disease, as well as increased morbidity and mortality of cervical cancer. Therefore, this study investigates the socio-economic and cultural dynamics of CCS uptake.

1.2 Statement of the Problem

Cervical cancer remains one of the easily preventable cancers among the myriads of cancers confronting humanity. However, 86.0% of global cervical cases are still domiciled in developing regions like Nigeria, despite the possibility of early detection and prompt treatment achieved already in many developed nations (Olubodun, Balogun, Odeyemi, Odukoya, Ogunyemi, Kanma-Okafor and Osibogun, 2022). Nigeria is yet to achieve a strategically organised, and routine CCS that is accessible and affordable, especially to the vulnerable population. The challenges to treatment and management of diseases are the health seeking behaviour of the people. The health seeking behaviour of the people largely depend on their level of awareness and knowledge of the disease. Most people have wrong perceptions about the causes and cure for CC. This influenced their choice of uptake of cervical screening.

Oyo State is a political seat of the old Western Region and a cultural melting pot of the Yoruba people. In effect, this is an archetypical context to interrogate some of the key cultural factors shared by other sub-Saharan African communities, in terms of patriarchy, stereotypes and women's role and place in society. The people's perceptions are influenced by the prevailing cultures of the people. The health seeking behaviour of the people is largely influenced by perceptions. The perceptions of the people about CC, risks associated with the diseases, treatment options, benefits of adopting uptake cervical cancer and utilisation of available facilities are often

influenced by the people's culture. Religion sometimes influences the prescribed treatment methods for diseases, including uptake of CCS.

Oyo State currently has four major screening centres that are tertiary institutions, non-governmental organisations, or privately owned facilities. These, of course, cannot be sufficient for the population of women that are at CC risk. The available screening centres are urban-based; whereas the majority of vulnerable women are rural-based and cannot be easily reached. The economic downturn in Nigeria also seriously impinges on the awareness and knowledge of cervical cancer thereby disallowing an improved uptake. Previous studies have focused mainly on perceptions about causes and treatment of CC with little efforts at looking at multi-causal hindrances to adopting Uptake of cervical and utilisation of screening facilities by the people infected with cervical cancer.

Previous studies on CC have largely focused on its biomedical contexts with little attention paid to the social contexts affecting the knowledge and attitudes towards the uptake of CCS. This study, therefore, investigated the awareness and knowledge of CCS among women of Oyo State as well as examined the socio-economic and cultural factors influencing the uptake of CCS in the state. To this end, this study considered the following research questions below;

1.3 Research questions

i. What is the level of awareness and knowledge of cervical cancer screening among women in Oyo State?
ii. What are the socio-economic, and cultural factors that influence the uptake of cervical cancer screening in Oyo State?

1.4 Objectives of the study

General objective: The general objective of this study is to assess the level of awareness, knowledge, and socio-cultural factors influencing uptake of cervical cancer screening among women in Oyo State.

Specific objectives: The specific objectives are to:

a) Assess the awareness of women about cervical cancer;
b) determine the knowledge of women about cervical cancer;

c) explorewomen's perception of risks associated with cervical cancer;

d) assess the perception of women about cervical cancer screening;

e) examine women's attitude to uptake of cervical cancer screening;

f) identify socio-cultural determinants of women's uptake of cervical cancer screening;

g) identify the socio-economic factors impinging on women's uptake of cervical cancer screening;

h) identify factors influencing utilisation of available facilities for cervical cancer screening.

1.5   Significance of the study

A study of this nature is highly significant given the important roles that findings will play in policy formulation and implementation. The findings provide deep contextual insights into the socio-cultural and economic dynamics of CCS uptake. Consequently, the study contributes to the available existing body of knowledge in CC control. Evidence emanating from the study is useful for policymakers on a specific cancer control plan.

The study promoted the ideal of health equity while reducing morbidity and mortality, due to CC. The availability of screening, its affordability and appropriate geographical spread of screening centres, both in rural and urban centres, can be more strategically addressed based on the findings of this study.

Furthermore, this study explored the significance of demographic and associated social factors such as educational status, occupational status, poverty, positive test result, and lack of knowledge, among others. Understanding socio-cultural determinants of uptake of CCS are important in determining the health seeking behaviour of the people in relations to CC. It helps to also situate the factors that affect the rate of utilisation of available healthcare facilities in the study locations. Findings from this study are significant in determining ways of improving CCS uptake. Also, increase in women's perception, awareness, and knowledge level will positively influence the overall percentage of women who will access screening. Findings from the study will further facilitate the development of new strategies while consolidating on the existing ones towards the improvement of women's access to CCS.

1.6 Scope of the study

Oyo State was purposively selected for the study because it has one of the oldest cancer registries in Nigeria, established in 1960 at the University College Hospital, Ibadan. The study adopted the existing senatorial districts in the State for a good geographical spread to account for the generalisation of the result of the study. This helps to situate the socio-cultural issues affecting the health seeking behaviour of the people with shared tradition and values.

Women within the range of 20-60 years were studied because the incidence of CC is common among this population (American Cancer Society, 2017). Participants for the interviews included, health workers, nurses, and policymakers in the ministry, as resource persons concerned with CCS services.Community opinion leaders, married men and religious leaders across Christianity, Islam, and traditional religions were also selected as participants in key informants' interviews (KII) and in-depth interviews (IDIs) for this study. Married men were included in the Focus Group Discussion Sessions (FGDs) as the main actors in decision-making in the home which includes health-seeking behaviour.

The study did not attempt any bio-medical interrogation; rather the focus was on adoption of social model of health (SMoH) in determining barriers to health care services such as uptake of CCS

1.7 Definition of concepts

The following concepts are defined below, as they are used within the context of this study:

Cervical cancer: This refers to the malignant neoplasm of the cervix uterine. It is cancer that develops in tissues of the cervix (the organ connecting the uterus, and vagina or neck of the womb). Cervical Cancer is popularly known as "*jejereenuile-omo*" among the Yoruba people.

Socio-economic factors: These are factors that relate to the use of income, wealth, and commodity.

Cervical Cancer Screening: is the use of a simple test across a population to identify individuals who have the disease(CC) but do not have symptoms yet.

ScreeningUptake: is the proportion of persons eligible for cervical screening within a population, and has ever been screened.

Socio-cultural factors: include a set of concepts, beliefs, customs, practices, structures, myths, perceptions and behaviours that characterise the life of the Yoruba people of Oyo State, Nigeria.

Socio-demographic factors: These are factors that relates to the personal characteristics of respondents such as age, gender, religion, place of residence, marital status etc.

Socio-economic factors: These are factors that affect financial status of respondents or their families. It includes such factors as education, occupation, work status and income/salary.

Knowledge: Knowledge encompasses facts, understanding and insights that an individual possesses about the signs and symptoms of Cervical Cancer and Cervical Cancer Screening. Knowledge is said to be high if the obtainable score is higher than 70%, average if the obtainable score falls in a range of 50%-69% and low if the obtainable score is lower than 50%.

Attitude: This refers to an individual's predisposition or mental state that influences their uptake of cervical cancer screening. The attitude of an individual is said to be positive if the obtainable score is above 50% and an individual's attitude is negative if the obtainable score is less than 50%.

Predictors: These are the variables or features used in making estimates about the uptake of cervical cancer screening. They include the independent variables that are used to predict changes in the dependent variable environment.

CHAPTER TWO

LITERATURE REVIEW

2.0   Chapter Overview

This chapter reviews the literature related to socio-cultural, and economic factors influencing the uptake of cervical cancer screening from global, national, and local perspectives. The areas reviewed include an overview of CC level of awareness from global, national, and local contexts, knowledge of women aboutCC, level of CCS uptake among women, social, and cultural factors influencing uptake of CCS, and strategies for promoting cervical cancer screening uptake among women.

2.1   Conceptual Review

2.1.1 Overview of Cervical Cancer

The uterine cervix connects the uterus to the vagina, which is the uterus's lowest section (womb). Cervical cancer is defined by the United Nations (2016) as a disease that causes abnormal growth in the tissues of the cervix (the opening of the uterus to the vagina) and is caused primarily by the Human Papillomavirus (HPV), a sexually transmitted infection (STI). Early sexual intercourse, taking of birth control pills, and having several sexual partners can all increase the risk of contracting Human Papillomavirus (HPV), which increases the risk of cervical cancer (American Cancer Society, 2016). In addition, women who began sexual activity within a year of their menstrual periods or who have been diagnosed with HPV are likely to develop cervical cancer (Panatto, Amicizia, Trucchi, Casabona, Luigi Lai, Bonanni, Boccalini, Bechini, Tiscione, Zotti, Coppola, Masia, Meloni, Castiglia, Piana, and Gasparini,2012). However, early detection and treatment provide opportunities for preventing cervical cancer which is slow-growing through its progression during precancerous changes.

Cervical cancer, a malignant tumour of the cervix uteri, is the fourth most feared cancer in women, and it is growing geometrically. Ferlay *et al.* (2015) reportthat

528,000 new cases occur globally each year. This is a severe public health worry for women in many low- and middle-income nations in South and Central America, Sub-Saharan Africa, and South and Southeast Asia, where breast cancer is the most common type of cancer among women (Bidwell, Slaney, Withana, Forster, Cao, Loi, and Parker, 2012).

According to the American Cancer Society (2016), cervical cancer mortality has decreased by 50% in the previous 40 years, compared to 50-60 years before, when American women died in large numbers from the disease. The use of a device known as a pap smear, which detects alterations in the cervix cells in their precancerous state and also diagnoses cervical cancer in its most treatable state, resulted in a lower death rate. The virus primarily affects women in their forties and fifties, and it is uncommon to encounter a woman under the age of 20 who is infected. More than 15% of affected women are above the age of 65, according to records; nevertheless, those who are examined on a regular basis are always found to be healthy (American Cancer Society, 2016).

Cervical cancer stemmed from persistent infection with the Human Papillomavirus (HPV) in more than 70% of cases (American Cancer Society, 2016). When compared to other types of cancer, cervical cancer can be avoided. The major method of preventing cervical cancer is to eradicate the Human Papillomavirus (HPV), a sexually transmitted infection that causes the disease; this will help to reduce cancer related mortality. HPV infection is more difficult to prevent in the first place than most other sexually transmitted illnesses. Infected women with the human papillomavirus are usually asymptomatic. HPV is easily transferred, and there are no cures for the underlying illness (Akpo, Deji, Idiake, Otohinoyi and Medavarapu, 2016).

Cervical cancer incidence in the United States of America follows this pattern, with Hispanics, African-Americans, Asians, Pacific Islanders, and Whites having the highest risk, while American Indians and Alaskan natives had the lowest risk (American Cancer Society, 2018). Invasive cervical cancer was detected in 12,820 new cases in 2017, with 4,210 deaths (American Cancer Society, 2018). Every year, 3,224 new instances of CC are diagnosed in the United Kingdom, with 890 deaths. Cervical cancer affects women all over the world, but the highest rates of incidence and mortality are seen in Eastern, Western, and Southern Africa, as well as South-

central Asia and South America. Despite the threat that cancer poses to public health in Sub-Saharan Africa   (SSA), few countries in the region have processed data on cancer incidence. The majority of modern cancer incidence data in SSA is based on reports.

Despite the challenges of cancer registration in underdeveloped countries, these cancer records offices have steadily produced incidence statistics for the previous 10–20 years. According to Jedy-Agba, Curado, Ogunbiyi, Oga, Fabowale, Igbinoba, Osubor, Otu, Kumai, Koechlin, Osinubi, Dakum, Blattner, and Adebamowo (2012), Malawi has the highest prevalence of cervical cancer by age-standardised rate of 75.9, followed by Mozambique with 65.0, Comoros with 61.3, and Zambia with 5. In the same vein, Uganda, Mali, and Nigeria each had 44.4, 41.2, a 29.0 respectively. Cervical cancer is also the second most common malignancy among women aged 15 to 44 in Uganda, Mali, Nigeria, and Zimbabwe.

According to Jemal, Bray, Center, Ferlay, Ward, and Forman (2011), the majority of women (60-75%) who live in rural areas, where there is inequality or a lack of access to health care, are the most affected by this cancer at a time in their lives when their contributions are most needed in the family and community. In Nigeria, a similar study is being conducted since around 50 million women are at risk of developing cervical cancer. According to Abiodun, O. A., Olu-Abiodun, O. O., Sotunsa, J. O. and Oluwole, F. A., 2014, 14,089 women are diagnosed with cervical cancer each year, with 8,240 dying as a result of the disease.

Cervical cancer is the main cause of death among women in poor nations, according to Ndejjo, R., Mukama, T., Musabyimana, A. and Musoke, D. (2016), with 86 percent of cervical cancer deaths occurring in developing countries each year. In Nigeria, the use of cervical cancer screening for the prevention of the illness is still low. The low figure of women who use screening services, despite its presence in a colposcopy facility of University College Hospital, Ibadan's antenatal clinic, is supported by Arulogun and Maxwell (2012). It was documented that between 2005 and 2007, only 3,038 women were screened out of the vast number of women who visited the antenatal clinic and the hospital as a whole. Therefore, CCS should ideally be a standard part of a woman's health care since it can detect cancer or abnormalities that may progress to cervical cancer. As a result, routine Pap smear screening can considerably lower cervical

cancer mortality risks (Ebu, Mupepi, Siakwa, and Sampselle, 2015). Cervical cancer is avoidable, according to Ndejjo *et al*. (2016), and good screening programmescan minimize morbidity and mortality rates.

2.1.2 Overview of Cervical Cancer Screening

Cervical cancer screening is a vital component of women's healthcare aimed at detecting precancerous changes or early-stage cervical cancer. Screening programmeshelp identify women at risk so that appropriate interventions can be implemented to prevent the development of invasive cervical cancer. The availability and implementation of screening programmesvary across countries and regions, influenced by factors such as healthcare infrastructure, resources, and national policies.

Screening for cervical cancer is crucial because symptoms often do not appear until the disease has advanced. Detecting pre-invasive lesions or precancerous lesions early can lead to a near 100% five-year survival rate. Current treatment methods can effectively cure these lesions. In the absence of screening, a significant number of cervical cancer cases in India are diagnosed in advanced stages (III and IV). Without timely intervention, the 5-year relative survival rate for cervical cancer is approximately 50%, and nearly 20% of women with cervical cancer die within the first year of diagnosis. (Ferlay J, Shin HR, Bray F, Forman D, Mathers C, Parkin DM). The goal of screening for cervical cancer is to find precancerous cervical cell changes, when treatment can prevent cervical cancer from developing. Sometimes, cancer is found during cervical screening. Cervical cancer found at an early stage is usually easier to treat. By the time symptoms appear, cervical cancer may have begun to spread, making treatment more difficult.

Prognosis can be improved if screening is embraced and widely employed. For this, it is important that the healthcare workers are educated and well aware so that they can influence the beliefs and actions of the general public. Many studies have been conducted in other developing countries to assess the knowledge and awareness about cervical cancer and to study the extent of utilization of the screening methods (Jassim, G., Obeid, A. and Al-Nasheet, A., 2018).

2.2 Empirical Review

2.2.1 Awareness about Cervical Cancer Screening

Cancer of the cervix is the leading cause of cancer-related death in developing countries (Palikhe, B., and Pokhrel, S., 2022). Nigeria, India, China, Brazil, and Bangladesh represent over 50% of the global burden of cervical cancer deaths (Cervical Cancer Fee Coalition), Therefore, cervical cancer screening is a vital component of women's healthcare aimed at detecting precancerous changes or early-stage cervical cancer. Screening programmes help identify women at risk so that appropriate interventions can be implemented to prevent the development of invasive cervical cancer. The availability and implementation of screening programmesvary across countries and regions, influenced by factors such as healthcare infrastructure, resources, and national policies.

Developed nations havebeen able to implement HPV-based organized screening programmes(eg, Australia, the United Kingdom, and the Netherlands) including the use of self-sampling as a collection option which hasgreatly controlled the surge of cervical cancer(Maver, P. J., and Poljak, M., 2020). In a study by Caird, H., Simkin, J., Smith, L., Van Niekerk, D., and Ogilvie, G. (2022), it was reported that for more than 50 years, the Pap smear test has been used to routinely screen women in Canada for cervical cancer. The majority of Canadian jurisdictions have established screening programmes, and each province and territory has recommendations that urge screening starting at age 21 or 25 every one to three years, Caird et. al, 2022 further stated.

Poor cervical cancer screening awareness in Canada has been noted as a major deterrent to screening in groups including immigrant women and communities of ethnic minorities. Recent systematic reviews have revealed certain attitudes and beliefs regarding HPV testing as both impediments and enablers of HPV test acceptance. High perceived advantages of the HPV test, for instance, were linked to higher acceptance of the test, but negative emotions (such as embarrassment associated with testing for a STI) were linked to reduced acceptability of the test (Tatar, O., Thompson, E., Naz, A., Perez, S., Shapiro, G. K., Wade, K., and Rosberger, Z., 2018).

Poor understanding about cervical cancer screening was a recurring concern in all focus group discussions in a qualitative research including women from two Serbian

cities (Markovic, M., Kesic, V., Topic, L., and Matejic, B., 2005). In contrast, most of the respondents in a research conducted in rural areas of Eastern Uganda recognized that cervical cancer could be avoided and they could name at least one effective preventive intervention. The greater awareness of cervical cancer prevention in the Ugandan research may be due to stronger media efforts there, since the majority of study participants learned about the disease via radio as reported by Mukama, T., Ndejjo, R., Musabyimana, A., Halage, A. A., and Musoke, D., 2017).

Due to the implementation of the national cervical screening programme in 1988, the incidence of cervical cancer reduced from 22 to 13 per 100,000 people in England between 1972 and 2012 but in Australia, the incidence and mortality were reported to be 10 and 2 per 100,000 people in 2015 as reported by (Fabiano, G., Marcellusi, A., Mennini, F. S., Sciattella, P., and Favato, G., 2023). Additionally, it has been observed that referrals for cervical cancer screening and orientation during gynaecological appointments greatly increase screening uptake. Uptake of cervical cancer screening differs significantly according to the developmental stride of individual countries.

To remove these obstacles, the health system must be equipped to execute swiftly implemented clear policies and procedures. Gender equality, as well as the development of women's and girls' health and rights, should be supported by the policies. In order to successfully address the unequal burden of cervical cancer in Low middle income countries LMICs, community-wide information distribution, engagement and advocacy, as well as focused additional research on obstacles to care across varied populations and circumstances, are required. The goals of the WHO's worldwide plan to eradicate cervical cancer as a public health concern will only be achieved by lowering the barriers to cervical cancer screening that so many women still encounter (Petersen, Z., Jaca, A., Ginindza, T. G., Maseko, G., Takatshana, S., Ndlovu, P., and Moyo, S., 2022).

Stopping the progression from pre-cancer to invasive cancer is the aim of cervical cancer screening to reduce the incidence and death linked to cervical cancer. HPV tests, Pap smears, cytology, and visual inspection with acetic acid (VIA) are the suggested screening procedures (World health organization, 2014). According to the results of a 2012 World Health Organization study, the "see and treat" or "single visit" VIA and cryotherapy technique is a workable and efficient strategy that may be used

in low-resource situations like Nigeria. It may be used at a basic healthcare centre and ensures treatment adherence soon after diagnosis. Some North African nations, including Morocco, which had 3,388 new cases and 2,465 fatalities in 2019 compared to the 12,075 new cases, have adopted this strategy as posited by Safaeian, F., Ghaemimood, S., El-Khatib, Z., Enayati, S., Mirkazemi, R., and Reeder, B., 2021.

If cervical cancer is to be eradicated every country should achieve the 90-70-90 targets by 2030 according to the Global Strategy for Cervical Cancer Elimination adopted in 2020 by the World Health Assembly or better explainedas "90% of girls fully vaccinated with the HPV vaccine by the age of 15, 70% of women screened using a high-performance test by the age of 35, and again by the age of 45, 90% of women with pre-cancer treated, and 90% of women with invasive cancer managed" (Olubodun et al., 2022). Prognosis can be improved upon if screening is embraced and widely employed. For this, it is important that the healthcare workers are educated and well aware so that they can influence the beliefs and actions of the general public (Jassim et al., 2018).

2.2.2 Women's knowledge about cervical cancer screening

Women who are most affected by cervical cancer need to be well-informed about the disease's incidence, prevention, and treatment. The Human Papillomavirus (HPV) is the most rampant virus infecting the female reproductive tract, and it is the leading cause of cervical cancer in people that engage in sex actively. Because of the risk of re-infection, HPV is one of the most difficult sexually transmitted infections for women. Cervical cancer is one of the most preventable types of cancer in women. Lack of knowledge about the disease and its risk factors, perceptions about the disease, and poor access to preventive services all influence the decision to be screened.

The American Cancer Society classified smoking and long-term use of oral contraceptives (OCs) as risk factors for cervical cancer in 2018. Aweke, Ayanto, and Ersado (2017) discovered that 46.3 percent of the people in their research population had a poor perception of cervical cancer. In the study population, a lack of knowledge is linked to a lack of positive views. According to studies by Nwabichie, Manaf, and Ismail (2018), citing Ferlay*et al*. (2012), the top 20 countries with the highest

incidence of cervical cancer in 2012 were Malawi (75.9%), Mozambique (65.0%), Comoros (61.3%), Zambia (58%), Zimbabwe (49.3%), Bolivia (49.7%), Guyana (46.9%), Madagascar (44.6%), and Uganda (44.6%).

According to Sowemimo, Ojo and Fasubaa's (2017) report, CC rates in Nigeria are concerning, and if significant gains are to be made in the future, efforts must be made to scale-up screening facilities in all parts of the country. A far-reaching nationwide cervical cancer screening programmewith an objective of covering more than (80%) of the population at risk would be the most effective way to achieve this. In April 2018, the Federal Government of Nigeria launched a nationwide plan to combat cervical cancer, and the state government of Oyo followed suit by launching its own on (April 23rd, 2018).

The public's and healthcare practitioners' education about cervical cancer, its risk factors, and prevention techniques is critical to the disease's control. This will go a long way toward enhancing screening uptake and, if appropriate, adherence to treatment recommendations. In Nigeria, incorporating a single-visit screening and treatment technique into routine primary health care services will ensure that underserved groups are reached. This will ensure that services are decentralized and that rural-urban coverage is ideal. According to Ndikom, Ofi, and Omokhodion (2014), young women in Nigeria are uninformed of their vulnerability to cervical cancer, therefore roughly half of them are sexually exposed early in life. While studying female undergraduates in Ibadan, the authors concluded that sexual exposure and experience were common among young women under the age of 20. Before that time, 51.7 percent of the study group had been exposed to sex. This puts them at higher risk, particularly if no precautions are taken.

Several studies have identified poor, inadequate, or insufficient understanding as a barrier to screening adoption. Sawadogo, Le Douaron, Maciuk, Bories, Loiseau, Figadère, Guissou, Nacoulma (2012) discovered inadequate knowledge in the study population in Burkina Faso and Zimbabwe, which is verified by Sawadogo *et al.* (2012) in Burkina Faso and Zimbabwe. According to Jia, Li, Yang, Zhou, Xiang, Hu, Zhang, Chen Ma, and Feng (2013), proper understanding about cervical cancer can reduce anxiety and stigma associated with screenings, resulting in increased

participation. Women's knowledge of the disease is influenced by socio-demographic characteristics and access to health care, according to Aweke *et al.* (2017).

According to Geremew, Gelagay and Azale (2018), women's strong understanding of CC and screening is linked to screening uptake. As a result, pre-cancerous lesions can be identified before they progress to the malignant stage, lowering disease death rates. In a study conducted in Ethiopia, women's educational level is associated to their understanding about cervical cancer (Mitiku and Tefera, 2016). In a similar vein, Ahmed, Sabitu, Idris and Ahmad (2013) found that general knowledge of cervical cancer screening was good, while attitudes were fair; however, this did not translate to good practice in their study in Northern Nigeria. Abiodun, Fatungase, Olu-Abiodun, Idowu-Ajiboye, and Awosile, J. O. (2013)made a similar claim with other researchers, with the exception that when participants appear educated, their knowledge level increases to moderate or high, albeit further research is needed to establish if knowledge translates to practice.

As Mthepheya and Chepuka (2017) noted, more than three-quarters of respondentshad no knowledge of the signs and symptoms of CC. This is by implication suggesting that the knowledge of women about CC is quite low. Even when knowledge is readily available, it may not always translate into excellent behaviours. However, this study assesses the level of women's knowledge of CC in Oyo State for this reason. According to Zahedi, Martius and Ay (2013), expertise is inadequate even among healthcare workers in simple, cost-effective "screen-and-treat" programmesthat might have a significant impact on the population's general health; thus, health workers must be trained and retrained. According to Jassim *et al*. (2018), the religious and traditional aspects of culture are a barrier to approaching a male doctor; also, society frowns on unmarried women seeking reproductive care, such as screening. Promiscuity, according to some, is what motivates women to seek CCS.

2.2.3   Level of Cervical Cancer Screening Uptake among Women

Cervical screening uptake is influenced by a variety of factors. According to Population Services International (2016), evidence from a variety of contexts suggests that a number of characteristics are linked to a higher likelihood of being screened for cervical cancer. Higher levels of education, older age, and higher income, greater

parity, and knowing someone who has been screened or diagnosed with CC are all examples. Previous studies have also highlighted the links between low risk of CC and screening, according to Rasul, Cheraghi, and Moqadam(2015). The study's participants emphasized their physicians' and healthcare providers' decision to access or not access screening. The role the doctors played in uptake, and non-uptake is significant. For example, a participant's verbatim report goes thus:

> Our health care system does not push us or force us to go, and have a Pap smear. For instance, if I have a gynecology problem, I go to a gynecologist. However, my doctor never asks if I have had a check-up. She never tells me that it is good to do this test. She would never ask this question to encourage us to come, and have the test (Rasul *et al.,* 2015, p. 23).

The poor involvement rates of women in cervical cancer screening programmeshave been attributed to the following reasons: lack of information and awareness of cervical cancer, which are the most common barriers to cervical cancer screening programmes. Other obstacles include a lack of financial means, a long commute to a health institution, and significant wait times for a Pap test appointment. Cervical cancer screening, on the other hand, is linked to a higher education level and a white-collar work. Furthermore, screening experiences are highly and positively connected with health insurance coverage and access to knowledge through education and the media.Tiruneh, De Cock, Spector and Elen (2017) also identified certain variables that contribute to women's low engagement in cervical cancer screening programmes, including a lack of education and awareness about the disease.

Higher education, meaningful employment, health insurance coverage, access to information through education, and media are all favourable aspects that can help with screening. The autonomy and decision-making of women when it comes to cervical cancer screening are equally crucial. Gender norms and values, gender challenges, women empowerment, and other important subjects. Women's mobility and decision making are influenced by norms and values, as well as access to and use of sexual reproductive health care. Low level autonomy of women in the community can influence cervical cancer screening through cultural ideas and practices. Most cultural norms place a high priority on autonomy, which will obstruct women's access to cervical cancer screening and treatment, as well as their health-seeking behaviour.

In their submission, Tiruneh *et al.* (2017) stated that if women's levels of awareness are to be positively influenced, policymakers and health care providers must consider all of these barriers. Gender norms and values continue to have great impact on access to and utilization of sexual reproductive health treatments in most developing countries, according to Corroon, Speizer, Fotso, Akiode, Saad, Calhoun and Irani (2014). Gender norms may have an impact on women's mobility and decision-making authority when it comes to health care. Women's empowerment in the context of their household, as well as their relationships with their partners, can have a significant impact on their use of reproductive health services. Women's low autonomy can influence CCS at the community level through cultural ideas and behaviours. Most cultures regard women seeking health care outside their homes to be inappropriate, especially in rural areas, where women are not expected to visit health care facilities alone; these women are less likely to use reproductive health care services.

Men's perceived unwillingness to participate in women's reproductive health issues is based on cultural and economic factors; otherwise, if properly informed, they can be eager collaborators. Spousal participation is a major factor of screening uptake in these areas in this case. Cervical cancer screening is expected to be routine, thus policymakers and healthcare planners should bolster women's trust in present health-care units that provide other reproductive health-care services like prenatal, postnatal, and family planning. These units serve as the screening entry point (Mutyaba, Faxelid, Mirembe, and Weiderpass, 2007). Not being aware of cervical cancer screening services, health facility-related challenges such as distance to health facilities and costs of the service, and individual perceptions related to; having no signs and symptoms of the disease, not being at risk, lack of time, and fear of test outcomes were all identified as barriers to screening by Ndejjo *et al*. (2016).

According to Idowu *et al*. (2016), despite the fact that screening is a well-known and cost-effective technique for lowering the global burden of cervical cancer, its acceptance, particularly in developing countries, is still poor. One of the barriers to access has been that most cervical cancer screening services in Nigeria (offered by both government and non-government organizations) have been inconsistent and poorly organized. The bulk of services are provided in cities; rural and semi-urban residents are often overlooked. Another issue is women's lack of knowledge about

cervix cancer and cervical cancer screening, as well as late presentation at advanced stages when the prognosis is bad. They also stated that screening services are largely accessible in government-owned tertiary and secondary health facilities, with assistance from a few non-governmental organizations. The exorbitant cost of screening, which can reach up to nine thousand naira (25 USD) adds to an already precarious situation, especially in a nation like Nigeria where the majority of people live in poverty and the healthcare system is heavily reliant on out-of-pocket expenditure.

According to Frank and Ehiemere (2017), lack of necessary screening facilities, reagents, and equipment in various clinical settings; non-availability of female health care providers; lack of adequate skills required by health care providers; believing oneself not to be at risk of developing cervical cancer, fear of cancer detection, pain, embarrassment, poverty, and economic reasons; the generally poor attitude toward preventive health measures; and the fact that some religious and cultural groups do not discuss sex and sexual organs publicly because they believe their cultural and religious values are being endangered. Poor education is one of the barriers to screening; women with less education were less likely to participate in screening.Also, the relationship between education and participation demonstrates the difficulties that women with less education have in understanding the benefits of cervical cancer screening (CCS). Education influences screening behaviour through its effect on income and its link with individual knowledge about cancer screening, according to previous study on the relationship between socioeconomic characteristics and the use of health services.

2.2.4   Socio-cultural factors, and uptake of cervical screening

In the last two decades, scholars all over the world have stated that socio-cultural factors, as well as intrapersonal, interpersonal, organizational community, and social issues, are barriers to cervical cancer awareness (Goodman, 2013). Despite the availability of screening programmesand cancer treatment facilities, some women refuse to use them, according to Goodman's extensive study of the social ecology of cervical cancer in affluent countries. According to the study, there are several social and cultural explanations behind this. Earlier investigations from several nations have come up with nearly identical conclusions.

According to Leinonen, Schee, Jonassen, Lie, Nystrand, Rangberg, Furre, Johansson, Tropé, Sjborg, Castle and Nygrd (2017), a number of demographic, psychological, and social factors influence whether or not to attend a screening. Even among people who have a positive attitude about screening, practical obstacles can still prevent them from attending. Traditional Zimbabwean churches, according to Mutambara, Mutandwa, Mahapa, Chirasha, Nkiwane and Shangahaidonhi (2017), discourage women from obtaining medical help, urging them to have faith and let God heal them. Traditional churches (Apostolic Churches) have an indigenous origin, with local Zimbabwean founders; as a result, their practices are quite similar to traditional cultural practices. The majority of these churches forbid their adherents from seeking medical help. These Apostolic churches place a strong emphasis on faith healing and strict obedience to church teachings and practices, all of which are detrimental to modern health treatment. Community-level factors influence cervical cancer screening behaviour, according to Tiruneh *et al* (2017). The geographical distribution of medical resources, media exposure to health information, career possibilities, health insurance coverage, and women's sexual autonomy as well as community education, all have a role in their screening behaviour.

However, community involvement provides motivation for both access to screening and strategies to increase screening uptake. Community involvement, spousal involvement, and user centre initiatives have all been shown to improve cervical cancer screening uptake in a few studies (Adegboyega, Aleshire, Dignan and Hatcher, 2019). Furthermore, cervical cancer is common between the ages of 40 and 55 in women who are already susceptible to high parity and who live in a poor rural community or, worse yet, a camp for internally displaced people, especially in these days of terrorism, making the subject matter one that should be prioritized (Ndikom *et al*., 2012; Nwobodo, 2017).

Women with learning difficulties have lower rates of cervical cancer screening in the United Kingdom. In Italy, higher levels of cervical cancer screening were connected with education and occupation as compared to jobless women (Damiani, Federico, Basso, Ronconi, Bianchi, Anzellotti, and Ricciardi 2012). Education was recognized as a key component among the socio-demographic and reproductive drivers of CC in low-resource settings by Konathala, Mandarapu and Godi (2017). In India, increased

public awareness, improved living circumstances, and the installation of a CCSprogramme have all contributed to a remarkable reduction in the high prevalence of cervical cancer in slum regions. This strategy could be implemented in Nigeria as well. The occupation was the next most important factor in determining whether or not cervical cancer screening services were available. Previous research indicated that occupation had a substantial impact on cervical screening knowledge(Konathala, Mandarapu, Sanapala, and Godi, 2017).

Early coital debut, early marriage before age 20, a large number of pregnancies, unprotected sex, multiple sex partners, partners with other concurrent partners, sexually transmitted infections, use of oral contraceptives, the successive incidence of cervical cancer within the family, smoking, and immunosuppressant including human immunodeficiency virus (HIV) infection were all identified as risk factors for cervical cancer. According to Odaibo, Nejo, and Olaleye (2018), most Nigerian women have high risk factors for cervical cancer, such as high rates of sexually transmitted infections like HPV, early initiation of sexual activities, high parity, and inconsistent condom use. As a result, increasing cervical cancer screening procedures among these high-risk women is critical.

According to Onyenwenyi and Mchunu (2018), healthy women in rural areas do not see the need for hospital check-ups. When there are obvious symptoms and herbal remedies have failed to provide the desired results, it is necessary to seek hospital care. As a result of this behaviour, late presentation occurs. Anxiety about the results being revealed, as well as a lack of awareness, are barriers to screening uptake, according to Modibbo *et al.* (2016). In her study, Ebu (2015) found that women who are uneducated are less likely to use health services because of misconceptions and personal opinions about them. Men's perceived unwillingness to assist in women's reproductive health issues is based on cultural and economic factors; otherwise, they are potentially willing collaborators if properly informed (Mutyaba *et al.*, 2007; Blackstone and Iwelunmor, 2017). Researchers have been unable to pinpoint why screening uptake is poor, despite the presence of other factors such as high awareness, a strong knowledge base, free screening services, and well-organized screening programmes. If CCS uptake will improve in the community and globally, the role of

social and cultural factors is critical. The goal of the study is to see how socio-cultural factors influence cervical cancer screening uptake.

Cervical cancer and screening primarily impact women, making it a gender problem. The involvement of husbands as significant decision makers in terms of household income, the role of other family members such as the mother-in-law, and the decision on which health facility the family will utilize cannot be disregarded. In an East African study, it was discovered that men's knowledge of cervical cancer influences women's uptake of screening, since the results show that men with greater levels of education had a higher degree of awareness (Rosser, Zakaras, Hamisi, and Huchko, 2014).

In a similar line, a study conducted in Makarfi, Borno State, found that men functioning as screeners has an effect on women's screening uptake because women are discouraged from attending clinics when men serve as screeners (Akintola, Odutola, Olayinka, Akinjiola, Nwokwu and Adebamowo, 2021). Male dominance was also found to have a negative impact on cervical cancer screening uptake in a study conducted by Ojiyi and Dike (2008) at Imo State University Teaching Hospital, Orlu, Nigeria. Among 450 women randomly selected from various clinics, the majority of the respondents stated that if they were to get a pap smear they would rather have it done by a female doctor. Anyebe, Opaluma, Maktarr, and Phillip (2014) found that the fear of exposing private parts to male doctors was a major cause for the lack of screenings among nurses at Ahmadu Bello University Hospital in Zaria, Kaduna State, Nigeria. This is in line with Mthepheya and Chepuka (2017), who assertedthat the gender of the screening personnel is also a factor that influences women's use of screening services. According to a study conducted by Mthepheya and Chepuka (2017), married males in Phalombe are unaware about cervical cancer and screening, even if they are aware of the condition. Their awareness, however, constitute a threat to women's access to cervical cancer screening. It has been proven that these findings may be obtainablein all parts of Africa.

2.2.5 Socio-economic factors and uptake of cervical cancer screening

Considering the fact that cervical cancer is commonly referred to asa disease of poverty, and poor women are more likely to have it as low socioeconomic

circumstances are a risk factor for getting it (Goodman, 2013). Similarly, a link between HPV infection, poverty, high parity, and poor sanitary conditions was identified as a co-factor for cervical cancer in a study in Mali (Palacio-Mejia, Range-Gomez, Hernandez-Avila and Lazcano-Ponce, 2003). Trebatická, J., Kopasová, S., Hradečná, Z., Činovský, K., Škodáček, I., Šuba, J. and Ďuračková, Z. (2006) found that wars, political instability, internal conflicts, natural catastrophes, starvation, and drought all contribute to unsatisfactory living conditions in Sub-Saharan Africa. For a long time, these frequently result in both internal and exterior displacement. The author cited the Vietnam War as an example, as well as the American Cervical Cancer Prevention Project. Rapes, prostitution, multiple marriages, and cohabitation are among social vices that enhance HPV spread.

According to Gakidon *et al.* (2008), CCS in 57 countries revealed that just 19 percent of women in developing countries have access to screening, compared to 73 percent in industrialized ones. Countries like Brazil had coverage of up to 80%, whereas Bangladesh, Ethiopia, and Myanmar only had coverage of 1% or less. Other academics have recognized some of the underlying socio-economic causes. In their research of socio-economic disparities among Korean women between 1998 and 2010, Lee, Park, Chang, Kwon, Yoo and Kim (2013) discovered that uptake increased from 40% to 52.5 percent, with significant increases in household income and educational level. In a similar vein, Rohani-Rasaf, Rohani-Rasaf, Asadi-Lari and Hashemi Nazari (2018) reported on a similar study in Iran. Iran Cancer Registry Data revealed the similar pattern of socioeconomic class for cervical cancer. This is also in line with the findings of Arrossi, Ramos, Paolino and Sankaranarayanan (2008), who found a link between women's income and access to screening services in Argentina, resulting in increased uptake.

Giswab, El-Khatib, Wolancho, Amdissa, Bamboro, Tadesse Boltena, Appiah, Asamoah, Wasihun & Tareke (2022) assessed the uptake of cervical cancer screening and its predictors among women of reproductive age in Gomma district, South West Ethiopia. The study found that Women's marital status, residence, occupation, distance to primary health care facility, health workers encouragement, frequency of health facility visits, birth experience, place of birth, awareness about cervical cancer and cervical cancer screening service were the predictive variables of reproductive age

women's uptake of the cervical cancer. This is in close corroboration with the study by Broberg, Wang, Östberg, Adolfsson, Nemes, Sparén, and Strander (2018), where it was identified that factors such as country of residence, income, being in the labour force, country of birth, education, living with a partner, and receiving welfare benefits were all independently related to non-attendance in cervical screening.

Previous studies have also found that attendance in screening is lower among older women, women with low socio-economic status, including a low education level,and women with low use of health care (Seidel, Becker, Rohrmann, Nimptsch, Linseisen, 2009). From the above studies, it can be concludedthat uptake of cervical cancer screening and practices is low. This calls for the need to conduct continuous intervention programmes by health care providers to develop health seeking behaviour towards the uptake of cervical cancer screening.

2.2.6 Strategies for promoting cervical cancer screening uptake among women

The government, non-governmental organizations(NGOs), communities, religious organizations, health personnel, family members, and corporate organizations must intensify efforts towardscreatingintervention programmes. Such intervention programmes should come with the understanding that cervical cancer is a threat that must be addressed head on.The developing world must, therefore, develop policies that will improve adequate awareness, perception, and uptake of cervical cancer screening by women.

According to Chirwa, Mwanahamuntu, Kapambwe, Mkumba, Stringer, Sahasrabuddhe, and Parham (2010), the community can accomplish cancer prevention goals by providing services for interventions, community-based education, and support programmesthat will help ensure that appropriate goals are set. In a broader sense, programmesthat emphasize women's reproductive health needs and concerns should be prioritized since they will provide societal inputs for planning and implementing programmeinterventions and informational messages. The community-based participatory approach to programmeimplementation will be aided by the establishment of eventual programmatic sustainability and greater programmeeffect.

According to Paul, Winkler, Bartolini, Penny, Huong, Nga, and Jeronimo(2013), a community mobilization plan that targets eligible (age appropriate) women, spouses,

and the broader community is needed. The plan should also include how messages about the lack of symptoms of precancerous lesions can raise awareness about cervical cancer screening; appropriate training for health promoters to deliver accurate information to their communities, including messages about the safety of screening and treatment; and coordination between outreach workers and service providers to ensure that women can travel to clinics at convenient times and be seen promptly. To be confident and skilled in their clinical abilities and programmes, health professionals require extensive training.

Cervical cancer prevention may be possible with early detection and treatment. A well-coordinated cervical cancer screening programmeshould be implemented, focusing on at risk groups, for example elderly women (Nwozor and Oragudosi, 2013). To lower the prevalence of cervical cancer in Nigeria, these issues must be addressed. According to Nakisige, Schwartz and Ndira (2017), if cervical cancer preventive efforts are targeted correctly, delayed presentation of women with advanced cervical cancer can be avoided. It is critical to have the right radiotherapy equipment for the treatment of cervical cancer. According to Visanuyothin, Chompikul and Mongkolchati (2015), increasing cervical cancer screening adherence will help to reduce cervical cancer morbidity and death, particularly in metropolitan settings. Cervical cancer will be reduced in Nigeria through the deployment of mobile screening units, educational programmesabout the disease, encouragement from healthcare providers, and female peer leaders.

When the population is educated about advanced cervical cancer screening proceduressuch pap smears, ocular inspection with acetic acid, and cervical tissue sampling, Konathala *et al.* (2017) believe that the spread of advanced cervical cancer will be dramatically reduced. Periodic educational interventions aimed at socially and economically disadvantaged women will increase short-term sexual risk behaviour reduction. According to Marlow, Chorley, Haddrell, Ferrer and Waller (2017), valuable information for screening providers regarding how to deal with low uptake can be classified based on the demographic disparities of non-participant types. When more exploration of attitudinal differences across different non-participant types is considered, useful guidance on the content of these targeted interventions may be provided. Regular health education of women, as well as clinicians' and other health

care professionals' recommendations of pap smear screening, will go a long way toward improving pap smear uptake, and ultimately reducing the incidence and burden of the disease, according to Okunowo, Daramola, Soibi-Harry, Ezenwankwo, Kuku, Okunade, and Anorlu, (2018). According to Ebu *et al.* (2018), CCS education should focus on HIV-positive women and those who are illiterate but are at high risk of getting cervical cancer. It is critical to promote education among both young and mature women, as it may play a key role in promoting healthy habits.

2.3   Gap in literature

Previous studies on cervical cancer screening have looked into awareness (for instance, Tatar et al 2018, Markovic et al 2005, and Mukama et al 2017), women's knowledge about CCS (for instance, Aweke et al, 2017, Sowemimo et al, Nwabichie 2018, and Geremew et al 2018),factors influencing CCS uptake (for instance, Rausl et al 2015, Ndejjo et al 2016, and Tiruneh et al 2017), socio-cultural factors influencing CCS uptake in both developed and developing countries (for instance, Ndikom et al 2012, Goodman 2013, Leinonen et al 2017, Nwobodo 2017, and Adegboyega et all 2019) and socio-economic factors influencing CCS uptake (Palacio-Mejia et al 2006, Gakidon et al 2008, Lee et al 2013, and Rohani-Rasaf et al 2018). However,previous studies on Cervical Cancer have largely focused on its biomedical contexts, with little attention paid to the social contexts affecting the knowledge and attitudes towards the uptake of Cervical Cancer Screening. Because there is a dearth of community-based studies on CCS uptake, especially in the study population, this study, therefore, investigated the awareness, knowledge, attitudes, perceptions of risks, and the socio-cultural factors influencing the uptake of the CCS among women in Oyo State, Nigeria.

2.4   Theoretical Framework

The study is anchored on the Health Belief Model (HBM) as a theoretical guide for explaining the complexity of the economic, social, and cultural factors influencing the uptake of CCS in Oyo State, Nigeria.

2.4.1. The Health Belief Model

Beliefs are the non-material socio-cultural fibre that shape behaviour in any society (Amzat and Razum, 2014). They are acquired alongside society's general culture, during socialisation. Beliefs demonstrate crucial link between socialisation, and behaviour (Abraham and Sheeran2015). The HBM dates to the 1950s when US public health researchers developed psychological models for enhancing the effectiveness of health education programmes (Hochbaum, 1958; Rosenstock, 1966). The model became a psychological model that explains and predicts health behaviour by focusing on attitudes of individuals, using the dimensions of belief, and subjective perception from the viewpoint of social actors. Today, the HBM is the most commonly used theory in health education, and promotion as well as health service utilisation research (National Cancer Institute, NCI, 2003).

Rosenstock (1974) recognised that Hochbaum in 1958 was the first to work on HBM research on uptake of tuberculosis X-ray screening. Hochbaum (1958) discovered that perceived vulnerability to tuberculosis, and the belief that people with the disease could be asymptomatic (making screening beneficial) distinguished between those who had, and had not attended for chest X-rays. In the same vein, a potential study by Kegeles (1963) identified perceived vulnerability to the worst imaginable dental problems, and awareness that visits to the dentist might prevent these problems, were variables that can predict the frequency of dental visits over a period of time. Kegeles (1963) studied the relationship of belief, and attitudinal variables to preventive visits. Haefner, and Kirscht (1970) further demonstrated that an HBM-based health education intervention designed to increase participants' perceived susceptibility, perceived severity, and anticipated benefits resulted in a more significant number of check-up visits to the doctor compared with no response over an eight-month follow-up. Thus, by the early (1970s), several studies suggested that the HBM specified a set of crucial health beliefs that provided a useful framework for understanding the individual difference in health behaviour patterns as well as designing behaviour change interventions.

The HBM had the advantage of specifying a discrete set of rational beliefs that appear to explain, and mediate the effects of demographic variables on health behaviour patterns. These variables are receptive to change through educational intervention. The

model could also be applied to a range of health behaviours, and will provide a template for shaping behaviour patterns relevant to public health as well as training health care professionals to work from their patients' subjective perceptions of illness, and treatment (Charles and Paschal, 2015). Personal beliefs or perception about a disease, and the available strategies to decrease its occurrence are determinant of health behaviour (Hochbaum, 1958). Individual judgement is influenced by a series of personal factors within the individual which ultimately affect health behaviour.

The HBM comprises six constructs (with a later addition, making seven): perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, modifying factors, cue to action, and self-efficacy (added later). The model has been frequently used vis-à-vis these constructs, as a theoretical guide for interventions in the area of the breast, cervical, and colorectal cancer. Interventions that adopted the HBM were able to assess, and aggregate subjective perception of susceptibility, and the severity of developing cancer, the likelihood of being screened as well as the benefits of, and barriers to screening participation. It implies that constructs of the HBM may be particularly useful when planning interventions that target underprivileged populations such as women in low-income countries, minority, and rural populations.

1. Perceived Susceptibility: This refers to an individual's perception of her personal risk or susceptibility of being affected by or contracting a particular health problem like cervical cancer. Perceived susceptibility represents one major perception that spurs people to adopt healthier behaviour, seek health information or engage in preventive practices against a disease. The greater the perceived risk, the greater the likelihood of decreasing the risk with good health habits. Women perceived susceptibility will prompt them to assess cervical cancer screening so as to avert the danger of developing cervical cancer. For example, death of close relation caused by cervical cancer has led women to go for CCS.

2. Perceived Seriousness: This is the individual subjective evaluation of a particular health condition like cervical cancer. This may be inferred from pain, disability, death, possibilities of a particular health problem due to a disease, as well as the economic burden or financial implications, and effect on job or

family life. Incidence of CC is common to women in their middle age, and that is when they were supposed to be contributing to the economy of the family; it therefore poses a serious economic burden to both the family and the nation. Several dollars are lost to the treatment of cancer worldwide.

3. Perceived Barrier: This is an individual's subjective definition and evaluation of the obstacles on his/her way to adopting a new behaviour. Perceived barriers are the major determinant of behavioural change, since the individual situates his response within the contexts of 'challenges' that might affect his/her pathway to the utilisation of care, despite available opportunities and resources (Janz and Becker, 1984). Barriers also stand in the way of some seeking treatment for their illness. Examples likethe fear that pap test is painful,distance, and not knowing where to go for the testing sometimes may outweigh the benefits of the test. Socio-cultural issues can also serve as a barrier because some women may not want to be screened by men as a result of their religious belief. Other barriers militating against women getting screened is the fact that Nigeria is a patriarchal society, and women are perceived to have low input in decision making.

4. Perceived Benefit: This refers to a person's perception of the potential value or advantages of adopting a particular health service, such as cervical cancer screening or utilisation of care services. Perceived benefits constitute important considerations that people make in commencing the pathway to the utilisation of care. For example, cervical cancer is one of the preventable cancers out of myriads of cancer; early detection of the precancerous cells certainly leads to a total cure of CC. Women's perception of this benefit goes a long way in helping them decideto go for screening.

5. Modifying Factors:These refer to the peculiar demographic, and social factors that may create, mediate or modify the other variables, thereby creating a context for the actor in question. These include culture, educational level, past experiences, skills, and motivation. They influence personal perception and determine the direction of response. For example, the experience of a patient with cancer who was successfully treated may have a sensitive perception of susceptibility or conversely, a diminished personal perception of seriousness because the cancer was treated, and cured easily. Women that are highly educated and economically buoyant may likely go for screening.

6. Cues to Action: Cues to action are events, people, or things that facilitate or enable people to change their behaviour despite perceived barriers. Examples include illness of a family member, media reports, socio-economic support (Graham, 2002). When a fellow knows someone with cancer illness, for instance, this could be a significant cue to action for such a fellow to attend a cancer education programme; similarly, the possibility of someone who lost an individual to cancer going for cervical screening is high.

7. Self-Efficacy: Self-efficacy has been proposed to be included as a separate construct in later iterations of the HBM as a result of the model being applied to maintain behavioural change such as chronic disease management (Rosenstock, I. M., Strecher, V. J., and Becker, M. H. 988). Women's level of awareness and knowledge coupled with other demographic variables will determine their uptake of cervical cancer screening.

SOCIO-CULTURAL FACTORS

Traditions,   Customs,   Norms,   Values,   Beliefs,   Religious creeds

KNOWLEDGE
- Awareness
- Perception of risk factors

HOUSEHOLD CHARACTERISTICS
- Type
- Size
- Composition
- Decision making
- Role responsibility

PERSONAL ACTIONS
- Perceived seriousness
- Perceived susceptibility
- Perceived barrier and benefit
- Cue to action (mass media, nurses, doctors)
- Modifying factors (age,

ATTITUDE
- Negative
- Positive

HEALTH BEHAVIOUR
Uptake   Non-uptake

Fig. 2.1: Conceptual Schema of Health Belief Model in Uptake of CCS

Source: Researcher (2020)

Figure 2.1 shows the interactions between various factors that influence health decision making in relations to uptake of cervical cancer screening.

The figure indicates some socio cultural factors which directly influenced some variables like the respondent's knowledge of cervical cancer, attitude to cervical cancer, household characteristics and personal actions. These variables also have a direct effect on the uptake of CCS. These socio-cultural factors include respondents' traditions, customs, norms, values, beliefs and religious creeds. The norms, values and belief of the people affect their knowledge of the causes, severity and control of cervical cancer. Religious leaders are key players in either positively or negatively influencing uptake of CCS.

The independent variables were grouped as 'knowledge' which include the awareness of the respondents and the perception of the associated risk factors. The awareness of the respondents and their perception of the risk factors associated with cervical cancer would most likely influence respondents' uptake of cervical cancer screening. Likewise, the attitude of the respondents have a larger influence on the health seeking behaviour of respondents. A positive attitude from the respondents would lead to uptake of cervical cancer screening thereby positively influencing the health seeking behaviour of the respondents.

The figure also shows the household characteristics (being intervening variables) e.g., family size, composition and household decision-making process, which may influence the available fund budgeted for healthcare including cervical cancer screening. The patriarchal nature of the society often influenced the health decisions making in the households. Most decisions are often taken by men, including those that affect women exclusively like cervical cancer.The health decisions on uptake of cervical cancer screening and utilisation of the available health facilities and institutions are largely the consequences of the interplay of the independent variables, and sometimes the intervening variables. The decisions may be for uptake or non-uptake, wherein other complimentary treatment options are considered. A decision may be taken not to adopt CCS based on perceptions.

The HBM can be used to explain the influence of the socio-demographic characteristics of respondents in relations to knowledge, awareness and practice of

CCS uptake. The model explains that a well-educated, economically empowered and well-informed individual about the consequences and severity of cancer is mostly going to be screened for cervical cancer. The model is also able to explain the impact of spousal support, culture and religion and the roles of significant others like peers and relatives, in shaping perceptions and utilisation of cervical cancer screening facilities. The HBM helps to explain the direction of decisions in the uptake of CCS. Where the religious leaders, community leaders and societal values can combine to create awareness about CCS, there may be positive decisions on uptake of cervical cancer screening. Affordability of the cost of uptake of CCS will determine whether uptake of CSS will be followed through or not, where complimentary methods are sought. Non-uptake of CCS often result from poor support from community and family, and poor channels of communication where the people are not adequately informed about severity of CC and the benefits of uptake of CCS.

CHAPTER THREE

METHODOLOGY

3.0 Chapter Overview

This section accounts for the systematic procedures adopted in the collection of data for this research. It is sequentially organised under the following subtopics: research design, description of the study area, study population, sample size, sampling procedure, research instruments, data analysis and management, and ethical considerations.

3.1 Research Design

The studydesign adopted cross-sectional survey and exploratory designs. The study was cross-sectional because it elicited information at a single point in time from respondents with various socio-demographic characteristics for representativeness. Due to the fact that some issues are deeply rooted in social and cultural practices of the people, the study engaged exploratory approach to dig deep towards understandingthe phenomena.

3.2 Study area

The study was conducted in Oyo State which is located in the southwest geopolitical zone of Nigeria. Oyo State was purposively selected because it houses the oldest cancer registry which isone of the six (6) population-based cancer registries in Nigeria namely: Ibadan Cancer Registry (IBCR). Ibadan Cancer Registry was established in 1962. It is located at the Department of Pathology, University College Hospital (UCH), Ibadan. UCH Ibadan was established by an act of parliament in November 1952 for the training of medical personnel and other health professionals in the country, and the West African sub-region. UCH is located within the Ibadan North Local Government Area of Oyo State.

The State is one of the three States carved out of the former Western State of Nigeria in 1976. Oyo State currently consists of 33 Local Government Areas and it is mostly

an agrarian community with major towns as administrative headquarters. The total female population in Oyo State from the data published on the website of the world population review is 3,842,041, which is about 49% of the total population of the state. There are 622 primary healthcare centres, and 57 general and specialist hospitals across the 33 Local Government Areas (Roth, G. A., Johnson, C., Abajobir, A., Abd-Allah, F., Abera, S. F., Abyu, G. and Ukwaja, K. N. 2017). Oyo State, like some other states in Nigeria, has a young population consisting of people that are under age 15 (NPC, 2016). There is also a declining population of the elderly in both male, and female within the population (NBS, 2018).

The State is homogenous, predominantly Yoruba speakers, with uniform pattern of settlements in villages and towns. The residential units of the state have been modernised in the cities and some towns while the rural areas still conform to the compound and houses which are occupied by extended family. The society is patriarchal as male dominance is practiced. Marriage is usually endogamous; whereby families solidify friendship by giving their children, especially daughters, to the families they feel would be secured. Intermarriage is not usually welcomed, but occasionally people marry outside their ethnicity (Jegede, 2010).

Oyo State Cervical Cancer Screening Centres

Oyo State operates a pluralistic healthcare system. This allows for lateral and horizontal referrals from private hospitals to tertiary or state-owned specialist hospitals. The state thus hasprivate health care institutions and public health care institutions. The public health care institutions consist of state-owned hospitals and tertiary hospital owned by the Federal Government. The University College Hospital, UCH, is a tertiary health care institution. It has a government cervical cancer screening centre. There are three other privately owned cervical screening and diagnostic centres (ABC Foundation, Fulbaum Center and Mecure) located in Ibadan The Ibadan Cancer Therapy Centre in UCH is located in Ibadan North Local Government Area (one of the randomly selected local government areas). A privately owned cancer centre, ABC Foundation, is located in Ibadan South West while Fullbaum and Mecure are within Ibadan North Local Government.

There awareness level about cervical cancer in the state is generally low while there is inequality in the geographical spread of screening centres across the state, leaving

those in the rural area without centres. The few private centres that are present are concentrated in the state capital, and are not enough to take care of those in the capital. In addition to launching the Cancer Control Plan on 23rd April, 2018, a first population based screening was conducted in all the 33 LGAs. A total of 9,518 women were screened using Visual Inspection with Acetic Acid for cervical cancer, and only 227 women were positive.
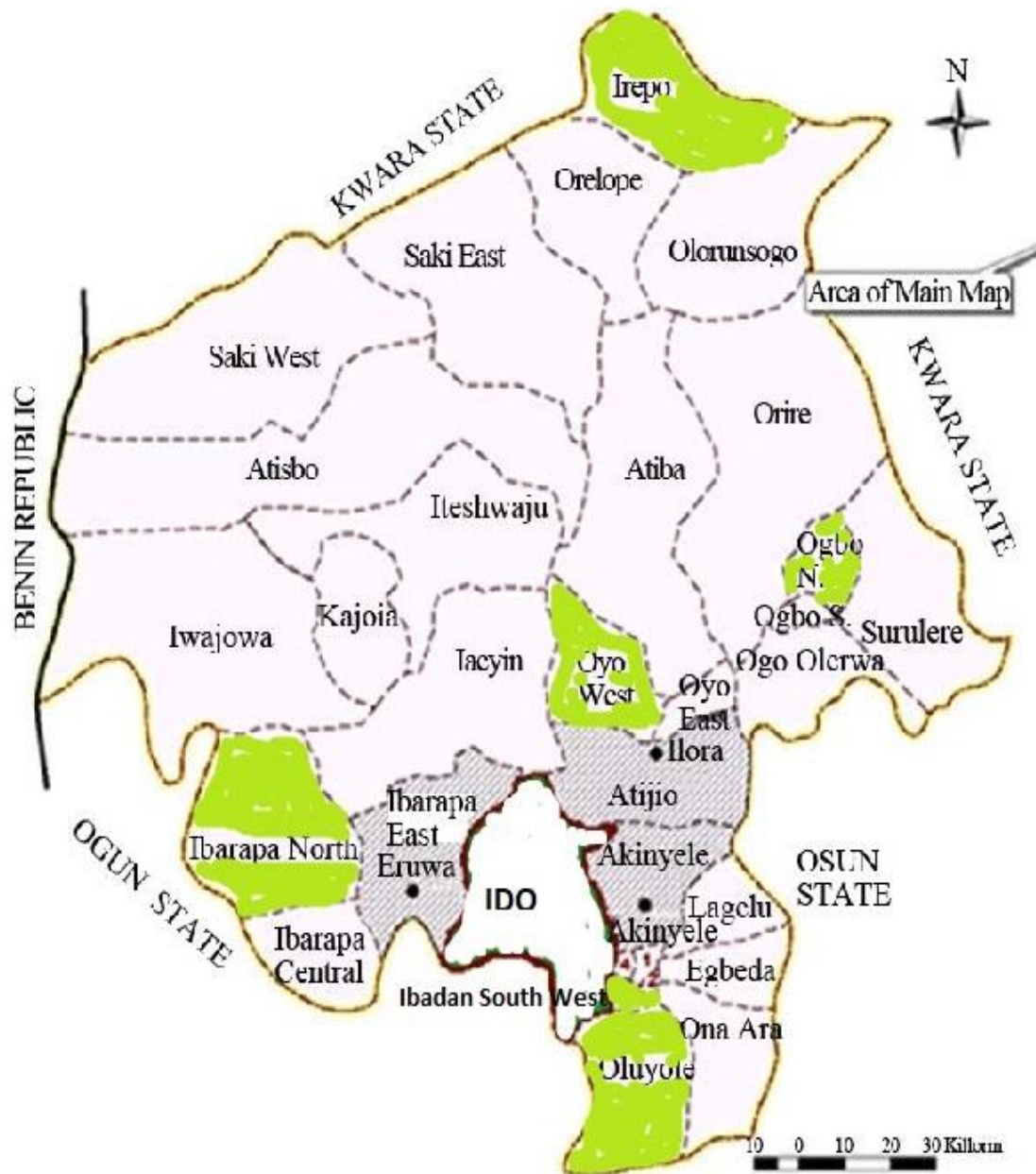
Fig. 3.1: **The Map of Oyo State Showing the Study Areas: Irepo, Ogbomoso North, Oyo West, Oluyole, Ibadan South West, Ibarapa North Local Government Areas.**

Source: Researcher (2020)

3.3 Population of the Study

The population for this study were women betweenages 20 and 60 because cervical cancer is prevalent among this age range. Married and single women within this age range were randomly selected. Also, nurses and doctors were selected to provide basic pieces of information on CCS. Community and religious leaders were interviewed, and married menwere also included in the Focus Group Discussions (FGDs) for the purpose of gathering information needed on the beliefs and traditions of the people that influenced their health decisions and health seeking behaviours.

3.4 Selection Criteria

3.4.1 Inclusion criteria

The determination of the inclusion and exclusion criteria was based on past works on CC and CCS. Since the required information concerned knowledge, attitudes and predictors of uptake of CCS among women, information was obtained from:

1. Women who have lived for at least 1 year in the community.
2. Women between the age range of 20-60 years and who are residents in the selected communities/LGA for at least 1 year.
3. Community religious leaders who had been residing in the selected Local Government Areas for at least two years.
4. Health workers –doctors and nurses – who have been in the selected facilities for at least a year.
5. Married men who have lived in the selected local government areas for at least one year.

3.4.2 Exclusion criteria

1. Women below age 20 or above 60 years.
2. Women that are residents of the selected communities less than one year.
3. Community religious leaders, health workers that have spent less than two years or one year in the selected LGAs.

3.5   Sampling

3.5.1 Determination of sample size

The sample size was determined using the idea of Leslie Kish (1965). Kish suggested the use of a formula where actual population is not known or where there is controversy surrounding the real figures. Thus, the sample sizes for the quantitative survey were calculated and determined using the Leslie Kish (1965) formation for single population:

$$N = \frac{(Z_{\alpha/2})^2 \, P(1 - P) * D}{(E)^2}$$
(3.1)

N – Sample size

$Z_{\alpha/2}$–Normal deviation for two-tailed alternative hypotheses at 5% level of significance is 1.96

$$Z_{\alpha/2} = 1.96$$

P – prevalence or proportion of interest of the study

For an impact study, P may be estimated at 50% of the population,
Hence $P = 0.5$

D – Design effect reflects the sampling design used in the survey

$D = 2$ (considering the choice of sampling for this study)

E (Margin of error) = 0.05

$$N = \frac{(1.96)^2 \, 0.5(1 - 0.5) * 2}{(0.05)^2}$$

$$N = \frac{1.9208}{(0.05)^2} = 768.32$$

$$N_n = \frac{N}{1 - q}$$

N_n–The adjusted sample size for a non-response rate (that is, proportion of attrition) q
Proportion of attrition for the study = 20% or 0.2

$$N_n = \frac{768.32}{1 - 0.2} = \frac{768.32}{0.8}$$

$N_n = 960.4$

$N_n = 960$

Table 3.1: Senatorial Districts and Selected Local Government Areas for the Study

S/N	Oyo North (SD)	Oyo Central (SD)	Oyo South (SD)
1	Atisbo	Afijio	Ibadan North East
2	**Irepo ***	Akinyele	Ibadan North
3	Iseyin	Atiba	Ibadan North West
4	Itesiwaju	Egbeda	Ibadan South East
5	Iwajowa	Lagelu	**Ibadan South West ***
6	Kajola	Ogo-Oluwa	Ibarapa central
7	**Ogbomoso North ***	**Oluyole ***	**Ibarapa North ***
8	Ogbomoso South	Ona ara	Ibarapa East
9	Olorunsogo	Oyo East	Ido
10	Orelope	**Oyo West ***	
11	Oriire	Surulere	
12	Saki West		
13	Saki East		

* Selected Local Government Areas

Table 3.1 shows the list of all the 33 Local Government Areas (LGAs) in Oyo state. The LGAs were clustered into senatorial districts from where two LGAs each were randomly selected. The selected LGAs are marked as shown. Furthermore, Table 3.1 shows the determination and distribution of the sample size for each of the six selected LGAs for the study.

Table 3.2: Quantitative Sample Size Distribution

S/N	LGAs	Total female population	Calculated sample size	Attrition -20%	Total sample sizes
1	Oluyole	101,090	151	38	189
2	Oyo West	67,560	101	25	126
3	Irepo	58,639	87	22	109
4	Ogbomoso North	95,441	142	36	178
5	Ibarapa North	49,021	73	18	91
6	Ibadan Southwest	143,476	214	53	267
	Total sample size		**768**	**192**	**960**
	Grand total sample size			**960**	

3.5.2 Sampling Procedure

3.5.2.1 Quantitative

The quantitative survey used a semi-structured questionnaire and multi-stage sampling technique in selecting the respondents. The women respondents were randomly selected amongst those qualified from households to elicit information about awareness, knowledge, and socio-cultural factors that influence uptake of CCS in the study population.

A multistage sampling procedure was adopted for sampling the respondents. The state was purposively selected because it has the oldest Cancer Screening Centre(CSC) at the UCH, and three other privately owned centres in Ibadan. The state was clustered into three senatorial districts of Oyo South (Ibadan South West and Ibarapa North), Oyo Central (Oluyole and Oyo West) and Oyo North (Irepo and Ogbomoso North).

Through simple random, two LGAs were selected from Oyo South senatorial district, namely:Ibadan South West and Ibarapa North, Oyo Central senatorial district, namely:Oluyole and Oyo West; Oyo North senatorial district, namely:Irepo and Ogbomoso North. The 960 respondents were proportionally allocated to the selected LGAs based on the women population in the LGAs. The 960 respondents were selected through simple random sampling.

The steps in the multistage sampling techniques are summarised thus:

Stage One: Purposive sampling of Oyo state

Stage Two: Clustering of LGAs to senatorial districts

Stage Three: Simple random sampling technique used to select two Local Government from each of the Senatorial District.

Stage Four: Random sampling of 2/5th of the wards in each of the selected Local Government Areas.

Stage Five: Systematic sampling of households in each of the ward.

Stage Six: Random selection of respondents in the household.

For the systematic sampling technique, a team of Enumerators (six) were recruited from National Population Centre, Federal Secretariat, Ibadan.The first house on the street was made starting point, followed by every two houses. This was done until the total sample was realised. For buildings with more than one household, all the households were sampled. In the house unit where the study criteria were not met, the next housing unit was used for units that could not meet up with the study criteria.

3.5.2.2 Qualitative

a. In-Depth Interview: Thein-depth interview (IDI) method was a major qualitative method used to elicit information from women in the study area within ages 20-60 years. Twentyparticipants were selected across the six (6) LGAs which constituted the study population. Women that were willing to participate within the selected political wards and household units were interviewed by the Research Assistants between August and November, 2020.

b. Key Informants: Three policy makers from the Ministry of Health, twelve nurses (two nurses were selected from each Local Government Area), and four doctors (one doctor was selected in each senatorial district and a doctor was interviewed from a private facility in Ibadan) were interviewed as key informants. Three focus group discussions were conducted for men in the study areas across the three senatorial districts. Married men between 8 and 10 were recruited in each session which lasted between 2 to 2hours 30 minutes , the researcher make use of the FGD guide until we reach saturation in each session. A note take took note of non verbal communications and other reaction useful for the study, Midget was used to record in each session. Twenty in-depth interviews were also conducted for opinion and religious leaders across the study areas equally utilising the guide for IDI until research was satisfied and the question exhausted. A minimum of 20 to 40 minutes was utilised by each interviewee.. The quantitative data was collected from May to June, 2020 using a Kobocollect instrument, due to COVID-19 pandemic which restricted movements across the nation during the peak of the pandemic.

c. Focus Group Discussion:Since Nigeria is a patriarchal society and male dominance in decision making cuts across every sphere of life, including health-seeking behaviour, therefore, the opinion of men is germane to this study. Hence, some men were selected for focus group discussions. Selection criteria for participants were age, marital status, and literacy level.Young and elderly men were involved: men between ages 20-49 were categorised as young while men from 50 and above were categorised as elderly. Three sessions were conducted based on age and literacy level.

Table 3.3: Multi-stage sampling procedure

Stage 1	Purposive sampling of Oyo State
Stage 2	Clustering of LGA in the senatorial districts to rural, and urban LGA
Stage 3	Simple random to select 2 LGAs from each of the senatorial districts
Stage 4	Random sampling of 2/5th of the wards in each of the selected local governments
Stage 5	Systematic sampling of households in each of the selected wards
Stage 6	Simple random selection of eligible respondents in the household

Table 3.4: Sampling Frame

Table 3.4: Sampling Frame

S/N	Senatorial Sample District	LGAs No. of	Total communities	Total No. of sampled wards	No. of wards	Total No. sample from households	Selected House holds	each of selected wards	
1	Oyo Central	Oluyole (rural)	10	142	4	45381	189	25	—
2	Oyo Central	OyoWest (Urban)	10	21	4	29510	126	16	—
3	Oyo North	Irepo (rural)	10	27	4	24709	109	14	—
4	Oyo North	Ogbomoso North (Urban)	10	18	4	38542	178	21	—
5	Oyo South	Ibarapa North (rural)	10	42	4	22513	91	13	—
6	Oyo South	West (Ibadan)	12	110	5	75652	267	33	
	Total		62	360	25	236307	960		

Table 3.5: Qualitative Sample Size Distribution

S/N	Senatorial LGAs District	Total no of wards	Total no of comm.	No of sampled wards	Total no of households	Sampled size for IDIs	No of participants	Sampled size for KII
1	Oluyole (rural)	10	142	4	45381	3	3	2
2	Oyo West (Urban)	10	21	4	29510	3	2	2
3	Irepo (rural)	10	27	4	24709	3	2	1
4	Ogbomoso North	10	18	4	38542	3	2	1
5	Ibarapa North	10	42	4	22513	3	3	2
6	Ibadan south west	12	110	5	75652	6	4	2
	Total	**62**	**360**		**236307**	**21**	**16**	**10**
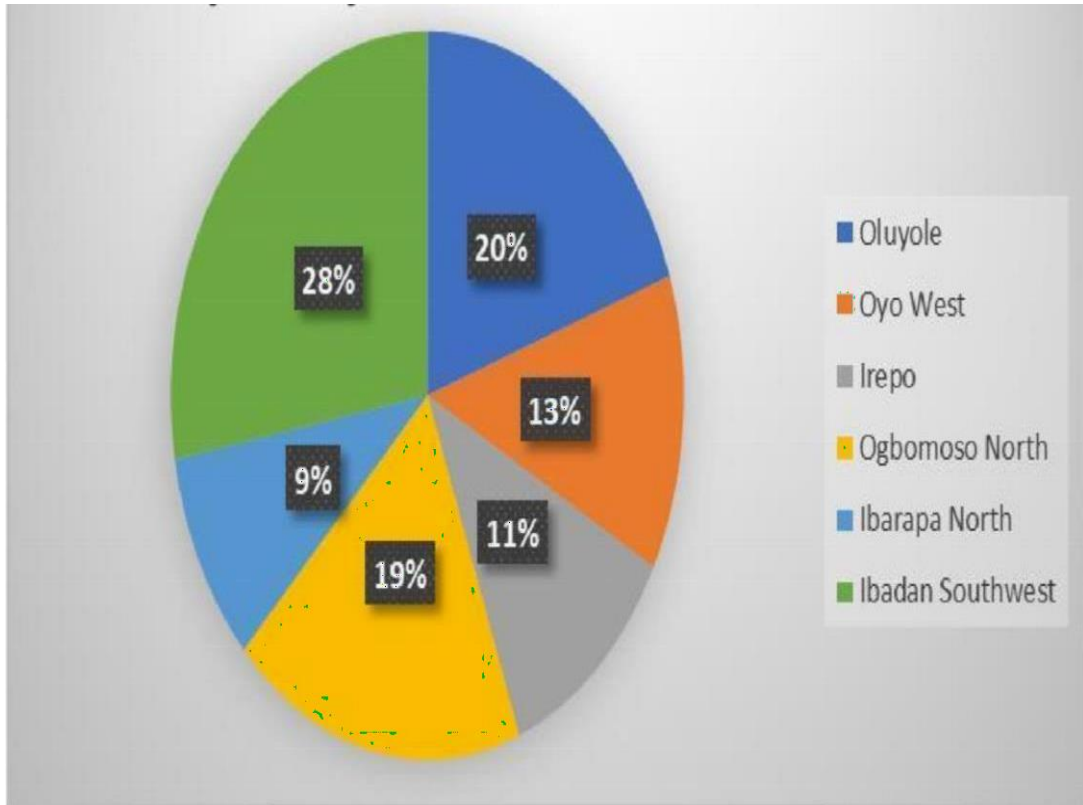
Fig. 3.2: Spatial pattern of administration of questionnaire

3.6   Research Instruments

There was a triangulation of research instruments in the collection of data which entailed both quantitative and qualitative methods. Quantitative data was collected using semi-structured questionnaire, while qualitative information was obtained through in-depth interview, key informant interview and focus group discussion (FGD) guides. The enumerators were trained to ensure a smooth data collection.

Questionnaire: The questionnaire used in this study comprised of six sections with both open- and closed-ended questions. Each of the sections consists of questions that attempted to obtain data on the key objectives of the study. Section A was designed to elicit information on the respondents' socio-demographic characteristics. Section B was on the respondent's awareness and knowledge about cervical cancer. Section C tried to elicit data about respondent's perception of risk. Section D was on influence of socio-cultural factors, norms and attitude of respondents on CCS. Section E was on the respondents' accessibility to health workers and facilities. Nine hundred, and Sixty (960) copies of the semi-structured questionnaire were administered to the women of reproductive age (20-60) that fell within the inclusion criteria for the survey.

In-depth Interviews (IDIs) Guide: Twenty in-depth interviews were conducted across the study population as follows:six community leaders, six women and eight religious leaders. The responses explained the sociological perspectives of the community leaders and women about predictors of uptake of cervical cancer screening.

Key Informant Interviews (KIIs): Key Informant Interviews (KIIs) were conducted with sixteen policy makers in the Oyo State Ministry of Health, including the Desk Officer for cervical cancer, and the Programme Officer of the recently launched Cancer Control Plan (Oyo State Cancer Control Plan, 2018-2022). Furthermore, managers of the existing private-owned cervical cancer screening facilities in the state were also enlisted for KII. All these were done to elicit macro perspectives from decision makers, and key stakeholders in relation to the political economy of cervical cancer screening as well as challenges in the provision and utilisation of screening services. The steps also helped to understand

the present state of affairs, while advancing strategies towards improved cervical cancer screening uptake among women in Oyo State. 16 Key Informant Interviews (KIIs) was conducted in all which included4 doctors and 12 nurses.

Focus Group Discussions (FGDs): Three Focus Group Discussion Sessions were conducted among married men in the selected study area. This was to provide deeper insights into individuals' perceptions about CCS as well as other dimensions to the cultural and socio-economic factors affecting uptake of CCS. These include economics, socio-cultural structure, belief systems, gender, and power relations as well as decision making. To this end, one FGD was conducted in each of the purposively selected LGAs.

Table 3.6: Matrix of Research Instruments for Data Collection Based on StudyObjectives

S/N	OBJECTIVES	Frequency Table	Chi-square	Factor Analysis	Logistic Binary regression
1	Socio-economic and demographic characteristics	✔	✔	✔	✔
2	Assess awareness and knowledge of women about cervical cancer screening in Oyo State.	✔	✔	✔	✔
3	Assess the risk perception, and attitude of woman about cervical cancer screening	✔	✔	✔	✔
4	Examine the uptake of cervical cancer screening	✔	✔	✔	✔
5	Explore the socio-cultural perception of women about cervical cancer	✔	✔	✔	✔
6	Determine the socio-cultural factors influencing uptake of cervical cancer screening	✔	✔	✔	✔

3.7   Study variables

The dependent variable in this study is the uptake of cervical cancer screening among women in the study population. It was affected by a lot of factors which this study attempted to identify.   Awareness of screening and knowledge of cervical cancer screening are the independent variables. The socio-economic factors included mental status, educational background, occupation status, monthly average income and cultural norms. Risk perceptions and knowledge about cervical cancer are the intervening variables that influenced uptake of cervical cancer screening.

Table 3.7: Problems Matrix - Measurement of Variables

Objectives	Study design	Study population	Data collection	Main outcome tools, variable technique	Data analysis
1. Socioeconomic, and demographic characteristics	Quantitative, qualitative data.	Women (20- 60, IDI years)	Questionnaire, and Multistage FGD	KII, Sampling technique	Frequency distribution and percentages
2. To Assess knowledge of women about cervical cancer screening in Oyo State	Quantitative, qualitative data.	Women (20- 60) Knowledge test Comparison	Questionnaire, IDI	Low Knowledge, Multistage FGD	Frequency distribution and percentages
3) Assess the risk, perception, and attitude of women	Quantitative, qualitative data.	Women (20- 60) Knowledge test Comparison	IDI, FGD, KII	RISK Perception is Low	Content and thematic analysis of qualitative analysis Descriptive statistics Frequency distribution, and percentages. Binary logistics regression
4) Examine uptake of cervical cancer screening	Quantitative, qualitative data.	Women (20- 60) Knowledge test Comparison	Questionnaire Multistage IDI, FGD	Screening is high	Content and thematic analysis of qualitative analysis Descriptive statistics Frequency distribution, and percentages. Binary logistics regression
5)To explore the socio-cultural perception of women about CCS	Quantitative, qualitative data.	Women (20- 60) Knowledge test Comparison	Questionnaire Multistage IDI, FGD	Screening is low	Multiple Regression analysis Thematic, and content analysis
6)To determine socio cultural factors influencing uptake of CCS	Quantitative, qualitative data.	Women (20- 60) Knowledge test Comparison	Questionnaire Multistage IDI, FGD	Screening is low	Multiple Regression analysis Thematic, and content analysis

Table 3.8: Summary of Variable, Definitions and Measurements

Variables	Variable definition	Measurement of variable
Dependent variable uptake of cervical cancer screening	No 0 Yes 1	0 –No 1–Yes
Independent variable awareness of cervical cancer	Unaware (No) = 0 Aware (Yes) = 1	No – 0 Yes – 1
Knowledge of symptoms of cervical cancer	Low = < 50 Average 50 – 69 High 70, and above	There were variables with a maximum score of 7, the highest score obtainable is 70%, therefore a score lower than 50 is regarded as low, average is a range of 50% - 69%, while a total score of 70 is high score
Perception of risk of cervical cancer	Low =< 50 Average 50 – 69 High 70, and above	There were variables with a maximum score of 7, the highest score obtainable is 70%, therefore a score lower than 50 is regarded as low, average is a range of 50% - 69%, while a total score of 70 is high score
Cultural norms	Low = < 50 Average 50 – 69 High 70, and above	
Reason for non-uptake		
Women at risk of contracting cervical cancer		

3.8   Validity of ResearchInstrument

The questionnaire was drafted after an extensive review of the subject matter, and the instrument was reviewed several times. Contributions from lecturers and supervisors in the Department of Sociology, University of Ibadan, Nigeria, were effected accordingly. The instrument was translated to Yoruba language, and back to the English language in order not to lose the meaning and the purpose of the instrument. A draft questionnaire was pre-tested in some communities in Oyo State. All research assistants (RAs) were well trained to handle the translated instruments alongside the English version without loss of value and message in order to maintain the face, content, and construct validities of the instruments. The internal structure of the questionnaire was modified to increase the internal consistency amongst the questions addressing the research topic and validate the research.

3.9   Reliability of ResearchInstrument

The research instrument was examined by the research supervisor and other experts to ensure that the instrument measured the objectives of the study. All research instruments were pre-tested in a pilot study among a few respondents in Oyo State. The pre-test was analysed using the Cronbach's Alpha Model to measure the consistency of the instrument. The overall coefficient reads 0.45 which means there is a relatively medium range consistency in the research questions. Meanwhile, the coefficient between the questions accessed for knowledge of cervical cancer is 0.80 which is consistent and the coefficient between the questions accessed for as well.

3.10   Selection and Training of Field Staff

Research assistants (RAs) were engaged and trained on techniques of handling instruments for social survey, especially in dealing with sensitive topic as cancer. The pre-test earlier carried out provided the opportunity of discovering questions that needed modifications.The RAs engaged in the research were members of the communities whose knowledge of the people and their culture assisted in seamless conduct of interviews. Some of them have had experience in data collection for academic works. The principal investigator was also always available for a regular review of their activities and for proper handling ofevolving critical issues.

3.11 Data Collection Procedure

Prior to the commencement of data collection, permission of the community leaders in each community was sought and the main objective of the study was disclosed. Primary data were collected through the aid of semi-structured questionnaire, key-informant interviews (KIIs) and in-depth interviews (IDI) guides. Kobocollect was used to collect quantitative data while KII and IDI guides were used to collect qualitative data, which complemented findings from the copies of the completed questionnaire.

Experienced Research Assistants (RAs) were employed and trained for two days on how to administer the questionnaire, with emphasis on each item in the questionnaire. The questionnaire was interviewer-administered. The study employed three research assistants (RAs) for Ogbomoso, two RAs for Oyo West, two RAs for Ibarapa, two RAs for Irepo and six RAs for Ibadan SouthWest and Oluyole to cover the six Local Government Areas, A total of fifteen RAs conducted the interviews and administered the questionnaire with the Principal Investigator (PI) as the coordinator of the quantitative session. In all, fifteen Research Assistants were employed to assist in data gathering.

For the qualitative instruments, the RAs were also trained on the different variables that the study investigated and how to probe them, using both English and Yoruba, the local language of the people. In all cases of qualitative data collection, the note-taker also documented non-verbal cues that participants expressed in the course of each session. Qualitative data were recorded with a voice recorder (midget), while photographic capture was made of relevant sights. The research instrument was administered on each respondent randomly selected in the wards from each local government. The mode of enumeration was face-to-face interviewer-administered interaction with the respondents by the trained research assistants, using Kobocollect Open Data Kit (ODK).

3.12 Administration of Instrument for Data Collection: Questionnaire

Quantitative data were collected from the respondents in their respective households with the aid of mobile phones, and were uploaded to the Open Data Kit also known as ODK server daily. The handheld electronic device incorporated the ODK. The

computer-assisted personal interviews (ODK) were used to minimize errors in data collection and entry. It was also used to collect Geographic Position System (GPS) information that served as part of the quality assurance and also provided spatial data for geo-referencing of findings.

The Geographic Information System (GIS) of the State was collected from the National Population Commission, NPC, and (2010) document, see Appendix A for case of reference. Appendix B shows the housing units across all the 33 LGAs while GIS shows the distribution of population by size, class of household, number of household and sex. Furthermore, the ward maps of the selected communities were accessed from Shell Petroleum Development Company documents from Department of Geography, Faculty of Social Science, and Humanities, University of Ibadan. The entire questionnaire were not filled. Twentysix copies of the questionnaire were found incomplete from the data pool theywere consequently removed prior to analysis.

Qualitative Data Collection Procedure:Prior to the commencement of data collection, the permission of the community leaders was sought; the main objective of the student was expressed. Key informant interview (KII) and In-depth interviews (IDI) as well as focus group discussion guides where the tools used in soliciting information from the study population. The researchers/ interviewers at some points acted as note takers and facilitators. The ethical principles of confidentiality and informed consent were strictly adhered to while participants' permission was also sought before recording the interviews on midgets.

3.13Data Management

The use of Open Data Kit (ODK) was intentional. It was utilised to minimise repeated errors in data collection and entry. Kobocollect has an immediate collation online but it was cleaned and looked into appropriately. Similarly, qualitative data were checked and cleaned. The themes and contents identified were analysed using the latest version of Nvivo and findings were reported appropriately. The researcher ensured no data was lost. Both the quantitative and the qualitative data were stored electronically as well as backed-up on flash drive and external harddiscs for easy retrieval.

3.14Methods of Data Analysis

3.14.1 Quantitative Data Analysis

The analysis of quantitative data was done at univariate, bivariate and multivariate levels. The already coded data were cleaned and imputed into the SPSS 22.0 Package of the Social Sciences. Descriptive and inferential statistics were used to analyse the univariate, bivariate, and multivariate data.This involved the description of the characteristics of backgrounds of respondents. The respondents' profiles were obtained through their socio-demographic and socioeconomic characteristics. The results of individual responses were analysed and presented using frequency distribution, percentages and charts.

The responses were analysed for each of the objectives/themes. These include participants' level of awareness and knowledge about cervical cancer and cervical cancer screening (CCS). It also analysed the risks associated with cervical cancer and uptake of cervical cancer screening. Responses on socio-cultural factors influencing uptake of CCS were also analysed. The analysis also considered the utilisation of available cancer screening facilities and factors influencing patronage. The results were presented in tables, charts and graphs as appropriate.

3.14.1.1 Univariate Analysis

Univariate analysis depicts the descriptive statistics (adopting frequency distribution, percentages and charts) about the distribution of respondent's socio-demographic characteristics, awareness and knowledge of CC and CCS, and attitude of the respondents towards CCS.

3.14.1.2Bivariate Analysis

Bivariate analysis was conducted to examine possible association between uptake of cervical cancer screening and the independent variables. The demographic characteristics were cross-examined with the various objectives of the study.Association was considered if significant at $p \leq 0.05$, and results were presented in tables,Bivariate analysis was performed using chi square.

3.14.1.3 Multivariate Analysis

The relationships between several of the variables (objectives) in the study were examined using multivariate analysis. The test was done using ANOVA. The test was able to show the interplay of many factors at the same time determined the strength and direction of relationships. Most respondents were influenced by one factor and a combination of many factors. Multivariate analysis was performed using linear regression for knowledge score and logistics regression for screening awareness, perception of risks and screening uptake.

3.14.2 Qualitative Data

The qualitative data were collected through IDIs and KIIs and involved categorisation of responses into the study's objectives which they matched. The recorded responses were transcribed, and the content was analysed along with the themes/objectives of the study. The transcription was read and re-read several timesto ensure that no crucial piece information was lost.Qualitative data were transcribed; both content and thematic analysis approach were the means of analysis.

Content analysis, in relation to devising precisely and clearly defined categories that applied to the materials, was utilisedin accordance with explicitly formulated rules and procedures. Verbatim quotations were used to support relevant themes vis-a-vis research objectives. Nvivo was used to analyse qualitative data for socio-cultural perception and factors influencing uptake.

These approaches allowed for free association of thematic issues and adoption of frequently reappearing ideas in sorting and synthesizing large amount of data. The midgets used for the recordings were saved in a lock. The transcriptions were reproduced several timesand saved in computers as files.

Table 3.9: Data Analysis

S/N	Variables	Variable types	Measurement
1	Demographic and socio-economic characteristics	Controls	Age, gender, educational level, religion and employment status, occupation and income
2	Awareness cervical Screening	Independent variable	Binary scale (Yes/No) question on awareness of
3	Level of knowledge	Independent variable	Likert scale items
4	Cultural norms	Independent variable	Likert scale items
5	Risk perception	Independent variable	Likert scale items
6	Attitude towards uptake	Dependent variable	Likert scale items
7	Uptake	Dependent variable	Binary measures (Yes/No)

3.15   Ethical Considerations

Ethical approval was obtained from the Social Sciences and Humanities Research Ethics Review Committee (SSHREC) University of Ibadan with reference number UI/SSHEC/2020/0026 (see appendix X), as well as the Oyo State Ministry of Health Ethical Review Board with reference number AD13/479/1303 (see appendix IX), since the study was carried out using public health facilitiesof the state. This was in line with the Oyo State Government policy on researches carried out in public facilities.The study also sought and obtained the consent of participants, before the commencement of the interviews. They were, however, allowed to opt out at any point they felt the need to. The study was also carried out cognizant of the following ethical issues that were observed:

Confidentiality: The confidentiality of the identities of the participants and respondents were maintained throughout the research. The instruments did not require the names, addresses and other pieces of personal information of participants. Identification numbers were derived from numbers already assigned to the instruments and study areas, and given to participants. Aggregate data, not personalised data, would be made use in the event of any publications from this work.

Beneficence to Participants: The ultimate goal of research is to bring a new idea into a particular issue and also make such a stepping stone for future research. This study, therefore, sheds more lights on the socio, cultural and economic factors influencing the uptake of CCS. Findings from this study will provide new strategies to policy formulation on CCS in Nigeria, especially in Oyo State. Benefits from this study are, therefore, directed at the nation as a whole, not just the respondents.

Voluntariness and Informed Consent: Participation in the study was completely voluntary; respondents were not forced to participate. They were informed that were free to discontinue at any point during the interview without penalty. The importance of the potential participant to the study was made clear to the potential participants, including the research methods and benefits of participating, but the ultimate decision to participate was left entirely to the potential participant, without pressure of any kind.Their consents were thus obtained even before the commencement of the interviews.

Non-malfeasance to participants: There were no physical risks that could be associated with the study, and no medical tests were taken. The study added value to the health of individuals and the welfare of the society. Interviews were discontinued or suspended in situations where some of the respondents became emotional, upset or felt insecure while responding to some of the questions.

3.16 Limitation of the Study

This study was conducted at the peak of COVID-19 pandemic, the researcher used Kobocollect ODK to minimize the level of physical contact, some IDIs were equally conducted through telephone interview. Some health practitioners working within the selected LGAs form the team of research assistance to enhance access to the participants and respondents of the study. These were some of the limitation of the study.

However, this study adopted a social model of health to examine the multiple factors that affected the uptake of cervical cancer screening. It adopted a sociological approach. It was not a biomedical research. It was a study that dealt with people's perceptions and culture as they affected their health seeking behaviour. Individuals are not only motivated by the personal profiles but by interplay of many factors some of which singly might not significantly influence individual's health decisions but when in contact with intervening variables became significant as seen in analysis of factors influencing uptake of CCS in this study areas.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0   Chapter Overview

In this chapter, findings from the study are presented to address the different thematic issues. This study used a triangulation of findings from qualitative and quantitative approaches, which made it easier for the researcher to combine findings from the two techniques in the interpretation and data presentation for the overall report. The major themes were determined by the specific objectives of the study. Regarding this, the qualitative component of the study's presentation was based on key informant interviews, in-depth interviews, and focus groups discussion held among the study participants. The presentation of results from the quantitative approach of the study is based on a total sample size of 960 respondents through which quantitative data were gathered. The presentation of results from the qualitative approach, on the other hand, is based on 16 KIIs, 20 IDIs, and three (3) FGD sessions through which qualitative data were gathered.

4.1 Background Characteristics of Respondents

4.1.1 Demographic characteristics of respondents

Table 4.1Demographic Characteristics of Respondents

Variables	Response categories	Frequency (n=934)	Percentage
Age Group	20 years, and below	86	9.2
	21 - 30 years	308	33.0
	31 - 40 years	299	32.0
	41- 50 years	145	15.5
	51 - 60 years	66	7.1
	Above 60 years	30	3.2
Marital Status	Single	324	34.7
	Married	610	65.3
Religion	Christianity	557	59.6
	Islamic	350	37.5
	ATR*	23	2.5
	Others	4	0.4
Highest level of education	No formal education	153	16.4
	Primary	187	20.0
	Secondary	331	35.4
	Tertiary	263	28.2
Occupation	Unemployed	148	15.8
	Civil servant	125	13.4
	Private sector workers	140	15.0
	Full-time/housewife	27	2.9
	Self employed	478	51.2
	Others	16	1.7
Estimated Income	Below ₦ 15000	196	21.0
	₦15,000 – ₦ 24,999	220	23.6
	#25,000- ₦ 34,999	189	20.2
	#35,000 - ₦ 44,999	196	21.0
	#45,000, and above	133	14.2
Ethnicity	Yoruba	818	87.6
	Igbo	92	9.9
	Hausa	21	2.2
	Others	3	0.3
Exposure to sex	Exposed	754	80.7
	Not exposed	180	19.3
Age at sexual debut	Below 15	133	17.6
	15 – 25	564	74.8
	Above 25	57	7.6

ATR* African Traditional Religion

Table 4.1 shows the demographic characteristics of the respondents from the quantitative study. The table reveals that the mean age of respondents was

34.67±11.91 years. A very few proportions of the sampled population were 20 years and below (9.2%), and 60 years and older (3.2%). The larger percentage falls within 21 to 30 years and 31to 40 yearswhich had 33%, and 32% respectively. A greater percentage were married (65.3%) while less than half (34.7%) were single. This suggests that a greater percentage of people who have heard about CC, and CC screening are married. Christians account for more. Concerning the respondent's status of education, less than twenty percent (16.4%) of the study population are illiterate. 20% had primary education, 35.4% of the respondents have secondary education, while28.2% had tertiary education. This study location appears to be a fairly educated community.

Table 4.2:   Attributes of ID & KI Interviewees

Variables	n-24	%
Age		
20-30	6	25.0
31-40	13	54.0
41-50	5	21.0
Gender		
Male	24	100.0
Female	0	0.0
Marital Status		
Married	19	78.1
Single	4	17.5
Widowed	1	4.4
Occupation		
Businessmen	9	37.5
Trader	7	29.2
Civil Servant	8	33.0
Place of Residence		
Oyo	5	20.8
Ibadan	10	41.7
Ogbomoso	9	37.5
Parity		
Nil	5	20.9
1 child	1	4.2
2 children	1	4.2
3 children	4	16.7
4 children	5	20.8
5 children	4	16.7
More than 5 children	4	16.7
Total	**24**	**100.0**

The reproductive history of respondents revealed that the majority of them (80.7%) are sexually active and just 19.3%, have no exposure to sex. In the same vein, a larger percentage (74.8%) had their age at sexual debut to be between 15 to 25 years, while a negligible percentage had sexual debut at over 25 years, and 17.5% had exposure to sex when they were below 15 years. This has a great implication for the risk of exposure to the human papilloma virus which is a precursor to cervical cancer, especially persistent exposure to sex in the presence of other risk factors. More than half (59.6%) of respondents were Christians while more than one-third (37.5%) were Muslims, and less than three percent (2.5%) were African traditional religionists.

The major ethnic group in the study location was Yoruba (87.6%), which was a true reflection of a heterogeneous society, and which reflected that they are mainly from South West states of Nigeria. The Igbo and Hausa are in the minority contributing less than ten percent each. The majority of the respondents (51.2%) are self-employed followed by private-sector workers (15%), and civil servants (13.4%). This shows Oyo State is economically buoyant. There are some unemployed women (15.8%), of course, who are dependent on others for survival. The monthly income of respondents revealed almost an even distribution of one-fifth of the respondents earning across N7,500-N14,999, N15,000-N24,999, N25,000-N34,999, andN35,000 with 21%, 23.6%, 20%, and 21%. The monthly income of 45,000, accounts for only 14.2%.

4.2 Profile of participants in qualitative interviews

On the background characteristics of the participants from the qualitative study, the key informants' interviews (KII)were carried out among policymakers, and health workers within the study population while the in-depth interviews (IDI) were carried out among the community women and religious leaders within the study population, in the same vein, a section each of focus group discussions FGDs was carried out within the study population among married men giving a total of three focus group discussions in all.

The total number of the respondents for KII interview was 16while the total for the IDI interview was 20. The age groups of the respondents ranged from 20 to 80 and most of them were between the ages of 51 to 60, which is understandable because most of them are community leaders. Most of the participants were female, which is due to the

nature of the study. The study was female-based. Almost all of the respondents were married and they were economically active. While some were health care practitioners, some were businessmen/women and farmers including herbalists and students. The participants of the study reside within the six selected local governments representing the 3 senatorial districts of the state. For the focus group discussions, most of the participants were within the age of 31 to 40, which was followed by those within the ages 20 to 30 and 41-50. Most of the participants were also married. A large number of the respondents were economically active in business engagement.

4.2.1 Awareness of cervical cancer

Figure 4.2 is the pie chart that shows the level of awareness of CC. Less than half (38.0%) of the respondents were aware of CC. This is considered a little low, but it is a reflection of why people were most unlikely to seek health care for an ailment they were not aware of.
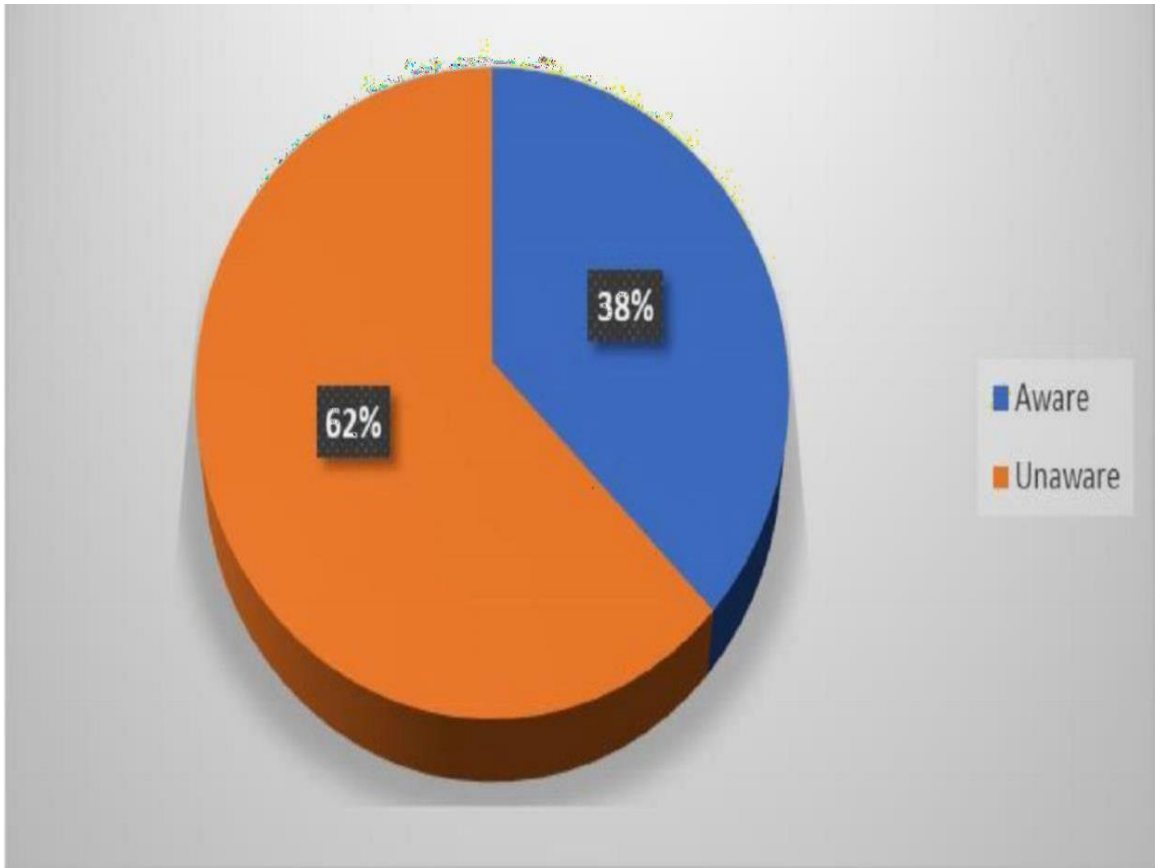
Fig. 4.1: Percentage distribution of awareness of Cervical Cancer

In a similar instance, the result of quantitative data revealed that of the total population of women that are sexually exposed, almost half (47%) of them were aware of cervical cancer, whereas 38% of the total population are aware of CC this is depicted by the pie chart below earlier

4.2.2 Sources of information about cervical cancer

It is equally important to ascertain the sources of information about CC based on the level of awareness in the study population. Sensitization about cervical cancer is one major aspect that should be intensified among the populace. All hands must be on deck to create awareness about this deadly disease.

Figure 4.3 is the bar chart that shows the distribution of the major sources of awarenessabout CC. On major sources of information about CC, nurses constitutes (29.5%) followed by media (radio) 17%. This percentage is closely followed by the doctors(16.7%)which seems to be a major source of awareness about CC. Religious institutions are almost the least (5.3%)source of awarenessabout cervical cancer. There was no evidence of information about CC from community leaders and families. The result of these findings shows that nurses majorly is the source of information for CC. From the study some were just hearing about this when they were interviewed, eighteen (18) respondents from the result of demographic characteristics were not aware of CC.
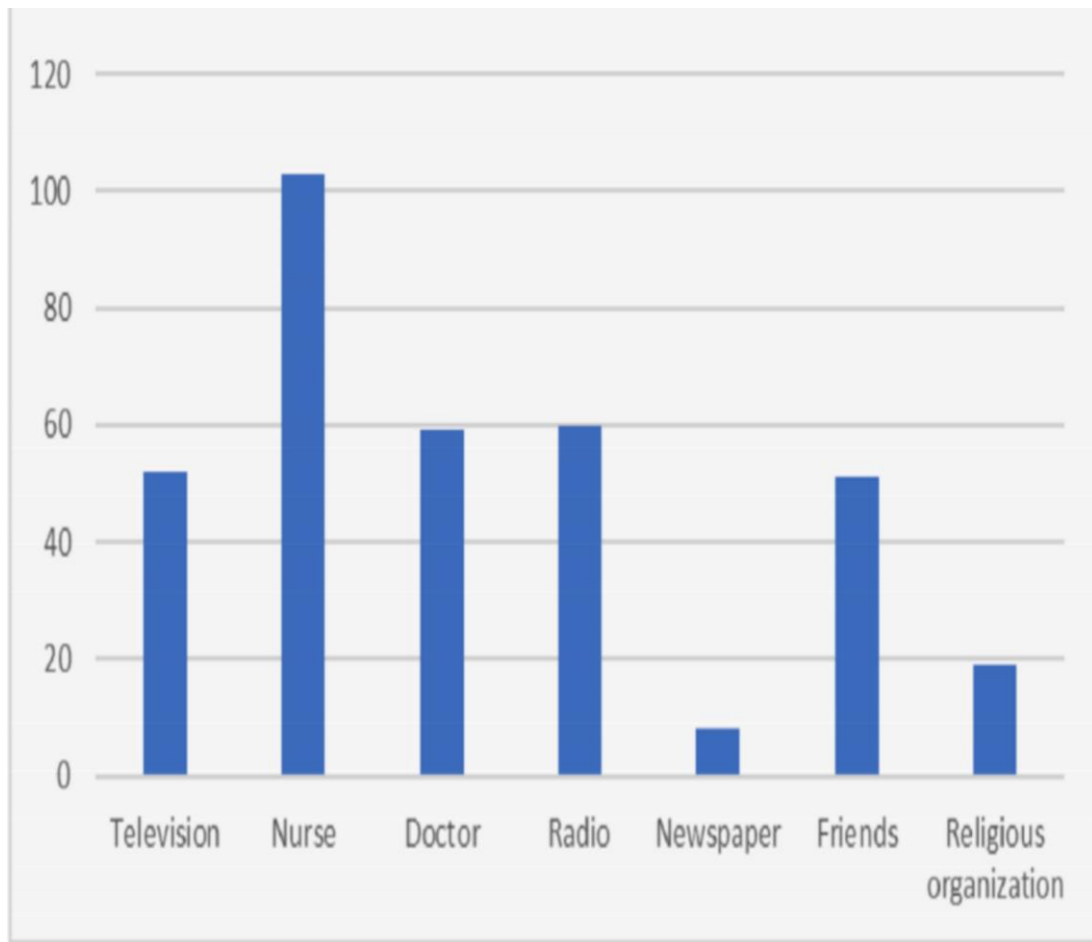
Fig. 4.2:Percentage distribution ofmajor sources of awareness of cervical cancer

The result of findings from a quantitative study revealed that Nurses had a greater influence on the awareness level of clients; they offer information to the client. This is understandable because they are the largest in health care that stay twenty four hours with clients, and are easily accessible.Media followed closely, and this is because the majority of respondents are self-employed, they most likely have access to the radio which may be the reasons for this in the study population. Furthermore, Doctors are the next category whose information is germane in the study population. It is however sad to note that the religious leaders contributed negligibly to information from the studied population. Results from qualitative data collaborated this as follows;

A male discussant from a focus group discussion in Oyo West Local Government reiterated the necessity of media campaign:

> *Some do not know about it. But, if they enlighten people about cervical cancer, by announcing it on radio, then people will have grasp knowledge of what it is about* (**FGD, Male**, **Adult**, **Oyo/2020**).

Creating awareness through media channel was buttressedfurther by both male and female participants as follows;

> My advice is that they should announce it (cervical cancer) either on radio, television or newspaper. They should create awareness about it, and then people will come out for the screening. Please, help us to inform the government. (**FGD, Male/20-60 years, Adult, Oyo/2020**).

In an interview conducted with one of the female participants, it was mentioned that even though she was not a medical doctor, the health talks on radio usually educate them, which they also pass to other. In her statement:

> Mummy you know that I am not a doctor, but what I know is that when we see someone that has cervical cancer or when they talk about it on radio frequently, Someone like me whatever I hear on radio especially if its health based, I inform them in our cooperative meeting that we should take care of ourselves that health is wealth ... (**IDI, Female, 52, Ibadan South West/Oyo/2020**).

There is the possibility of dissemination of information by women to the peers if well enlightened as corroborated further by this participant:

> Also, in church when we finish women convention meeting, I inform them as well. So, when we know what really cause it, and how women can prevent it,

I'd inform them at the meeting, and they allow me to talk about such issues**(IDI, Female, 52, Ibadan South West/Oyo/2020).**

According to the results obtained from the quantitative data as shown in Table 4.2, there is a significant association between the age of respondents and the awareness of cervical cancer. 16.4% of the respondents between the ages of 31-40 were the most aware of all the age groups. These are the more active age group who probably had more access to various sources of information like the electronics media and peer groups. Furthermore, as age increases, the frequency of awareness also decreases. Women between the ages of 31-40 form a chunk of respondents aware of cervical cancer.

There is a very significant association between the educational level of the respondents, and the awareness level of cervical cancer. As educational status increases, awareness level also increases giving us a perfect picture that women who have tertiary education, (18%) of the whole population form a proportion of those people that are aware of cervical cancer. Education exposes to the information that increases awareness level.

There is no significant association between the religion of respondents and awareness of cervical cancer. This is in line with the result of finding from socio-economic characteristics. Religion took the least percentage where respondents got information about cervical cancer awareness, 5.3 percent of respondents got information from religious leaders. There is also no significant association between ethnicity and the awareness of cervical cancer. Ethnicity, therefore, did not influence awareness levels of cervical cancer. The results above showed there was no significant association between marital status and awareness of cervical cancer with a p = 0.101 (this is 10% which is higher than 0.05 (5%). Some qualitative data supported the findings presented in table4.13. A health worker explains some reasons for the non-uptake of CCS, and the emphasis on awareness creation is very germane in improving uptake according to the participant.

Table 4.3: Association between Socio-economic characteristics of respondents and awareness of cervical cancer

Socio-economic variables		cervical cancer awareness			chi square test		
		Aware	Unaware	Total	X^2	Df	P value
Age group	20 years, and below	7(36.8)	12(63.2)	19 (2.5)	15.767[a]	5	0.008***
	21-30	100(41.8)	139(58.2)	239(31.7)			
	31-40	124(46.6)	142(53.4)	266(35.2)			
	41-50	85(61.5)	53(38.5)	138(18.3)			
	51-60	20(31.7)	43(68.3)	63(8.3)			
	61, and above	16(53)	13(47)	29(3.8)			
Education	No formal education	48(36.4)	84(63.6)	132(17.5)	36.768[a]	3	0.000***
	Primary Education	63(40.4)	93(59.6)	156(20.7)			
	Secondary education	105(40.4)	155(59.6)	260(34.5)			
	Tertiary education	136(66.1)	70(33.9)	206(27.3)			
Religion	Christianity	213(48.3)	228(51.7)	441(58.5)	5.620[a]	3	0.132
	Islamic	127(42.9)	169(57.1)	296(39.2)			
	ATRn	11(79)	3(21)	14(1.9)			
	Others	1(33.4)	2(66.6)	3(0.4)			
Ethnicity	Yoruba	324(49.2)	335(50.8)	659(87)	2.048[a]	3	0.563
	Igbo	22(28.2)	56(71.8)	78(10.3)			
	Hausa	5(36)	9(64)	14(1.8)			
	Others	1(33.4)	2(66.6)	3(0.39)			
Marital Status	Single	42(38)	69(62)	111(14.7)	6.219[a]	3	0.101*
	Married	285(50)	286(50)	571(75.7)			
	Divorced	16(47,1)	18(52.9)	34(4.5)			
	Widowed	9(23.7)	29(76.3)	38(5)			
Employment	Self employed	157(38)	256(61.9)	413(54.7)	54.869[a]	5	0.000***
	Public Sector Worker	82(73.8)	29(26)	111(14.7)			
	Private Sector Worker	64(57.6)	47(42)	111(14.7)			
	Not employed	36(41.4)	51(58.6)	87(11.5)			
	House Wife	9(34.6)	17(65)	26(3)			
	Others	4(66.6)	2(33)	6(0.7)			
Income	#7,500	37(28.7)	92(71.3)	129(17)	14.920[a]	4	0.005***
	#15,000	85(43.5)	110(56)	195(25.8)			
	#25,000	80(49)	83(50)	163(21.6)			
	#35,000	87(53.7)	75(46)	162(21)			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

Conversely, when participants were further asked whether women are available to go for CCS, one of the participants explained that people are available to do it, but the awareness for the CCS is not enough. As she stated:

> I think our people are available to do it. But the basic thing that I can cite as a reason is that, I think the awareness is not enough. There should be more awareness to go for the test to know whether you are prone to have this disease or not. I think that should be a sort of courage for people. I think it is the awareness, and not that we don't want to go because if you have witnessed those that have it, okay, I have the opportunity to witness a patient that has the something, the experience is not palatable. So, for them to know all that, I know that if the early stage, such could be known, and could be corrected, I am telling you a lot of people will come out **(IDI/Female/38 years/Oyo West Local Government/2020).**

The participants most likely when given adequate information will go for cervical cancer screening this was extensively discussed by a participants who happens to be a health worker while narrating her experience from the outreach conducted in the State sometimes in 2018;women, according to her shows willingness to go for cervical cancer screening with adequate sensitization. A similar report was also reported in Irepo Local Government still buttressing the need for sensitization by an FGD male elderly respondent as stated below:

> *This cervical cancer has claim lot of lives especially women according to the report we have heard. But since the past years, there has not been enough sensitization, and teachings or screening on these diseases (**FGD, Male Elderly, Irepo/2020**).*

Many people do not agree with the idea of male involvement on issues relating to cervical cancer screening, on the premise that is it is an issue that affects women, and for which male approval is not required. However, male involvement is crucial especially giving the male dominance in the Nigerian society.

> *Involving the men folk, we don't lose anything. Even they will see it as an advantage, it will prolong the life of our women, and it can improve their health condition (**KII, Male, Doctor, Ibadan/2020**).*

Awareness of the woman about CC indirectly leads to the awareness of the man because if the woman is aware, she informs her husband about the disease, and the husband can support her.

*Once the wife knows about the cervical cancer, it is very good for her to explain to her husband. Then, he is supposed to support her so she can go for the screening (**KII, Female, Nurse, Oyo West/2020**).*

The issue of sensitization and awareness of women are related to neither age group nor ethnicity or religion. The truth remains that creating awareness is very germane if the mortality, and morbidity of cervical cancer will be achieved in the study population. The elderly discussants in Irepo vividly supports the fact that sensitization of the populace, creation of awareness about cervical cancer screening will go a long way in reduction of the disease, and the resultant death from cervical cancer in the study population.

Although cervical cancer is the second commonest cancer affecting women worldwide,Nigeria inclusive, there are a lot of issues that surround women's awareness generally, and specifically from the study population. Awareness about breast cancer seems better in the study population. There are a lot of misconceptions, some people misconstrue CC with sexually transmitted diseases, some with '*eda*', some even associated strongly the risk factors of multiple sexual partners for automatic developing of cervical cancer. A lot still needs to be done, women cannot freely discuss issues with the female genitalia, the associated stigma of CC with promiscuity is another issue, the issue of polygamy, patriarchy, power relation, and who make a decision, poverty, and lack of access to information to the teeming population of vulnerable women who resides in the rural area is another serious issue militating against awareness.

The majority of single women seem not too bordered about the issues of cervical cancer while some menopausal women feel it is no longer necessary to go for a test. The level of insecurity in some parts of the world is also a threat to access to information, attention to the prevention of some communicable, and non-communicable diseases are diverted to some emerging emergencies. Therefore, a strong campaign to sensitize all categories of women: single, married, menopausal, and equally creating awareness among all women, single, married, and all sexually active, and all at-risk women, women in refugee camps, internally displaced camps (IDP) is of utmost importance.

There is a very strong relationship between employment status of the respondents, and their awareness of CC, and interestingly those that are self-employed are more aware because they make information to be more fluid, and available.

Lastly, there is a very strong association between the income of respondents and their awareness level. More income reflects more availability of securing means of getting information in some instance e.g., procurement of gadget, books, journals, and magazines; and attendance of seminars, and workshops which may create more opportunities of learning about the disease.

A chi-square test showed that the socio-cultural, and economic characteristics of the respondents with $p < 0.05$, except religion, and ethnicity, significantly influenced the uptake of cervical cancer screening. This only revealed awareness of cervical cancer had no association with respondents' ethnicity or their religion. Furthermore, the marital status of the respondents has nothing to do with awareness of cervical cancer in the study population. In the same vein, religion didnot have any significant relationship with the uptake of cervical cancer. In sum, less than half (38%) of the study population are aware of cervical cancer,

4.3   Knowledge of women about Cervical Cancer

The knowledge of the respondents about CC during the interview was assessed. Respondents knew the causes as well as the risk factors predisposing people to cervical cancer in the study population. It is difficult to ascertain, however, if the knowledge translates into practice.

4.3.1 Knowledge of symptoms of cervical cancer

Classification of knowledge: The study attempted to use the various responses of respondents on symptoms of cervical cancer to classify their knowledge. The responses of respondents on the symptoms were classified by adding the scores of the 7 items scale in the questionnaire. Average scores obtained were used to categorise respondents' knowledge of symptoms of CC. A percentage score <50.0% was categorised as low knowledge, (50–69%) as moderate knowledge, and a perceptions score >70% as high knowledge. This is presented in Table 4.3.

Table 4.4: Knowledge of symptoms of cervical cancer

S/N	Symptoms	Low	Average	High	Total
1.	Abdominal pain	97 (27.5)	103 (29.1)	152 (43.4)	352 (100.0)
2.	Vaginal bleeding	75 (21.2)	110 (31.1)	167 (47.7)	352 (100.0)
3.	Dyspareunia	76 (21.5)	114 (32.5)	162 (46.0)	352 (100.0)
4.	Abnormal vaginal discharge	55 (15.6)	98 (27.8)	199 (56.6)	352 (100.0)
5.	Vaginal bleeding after menopause	75 (21.2)	109 (31.1)	167 (47.7)	β52 (100.0)
6.	Heavy menstruation	57 (16.2)	106 (30.1)	189 (53.6)	352 (100.0)
7.	Unexplained weight loss	61 (17.2)	115 (32.8)	176 (50.0)	352 (100.0)

Figure 4.4 is the pie chart that iterates the level of knowledge about symptoms of CC.The figure revealed that all the respondents who were aware of cervical cancer also had some knowledge of the symptoms of CC. Almost half (49%) of respondents had high knowledge, about one-third (31%) had average knowledge while just one-fifth (20%) had low knowledge about cervical cancer in the study population.
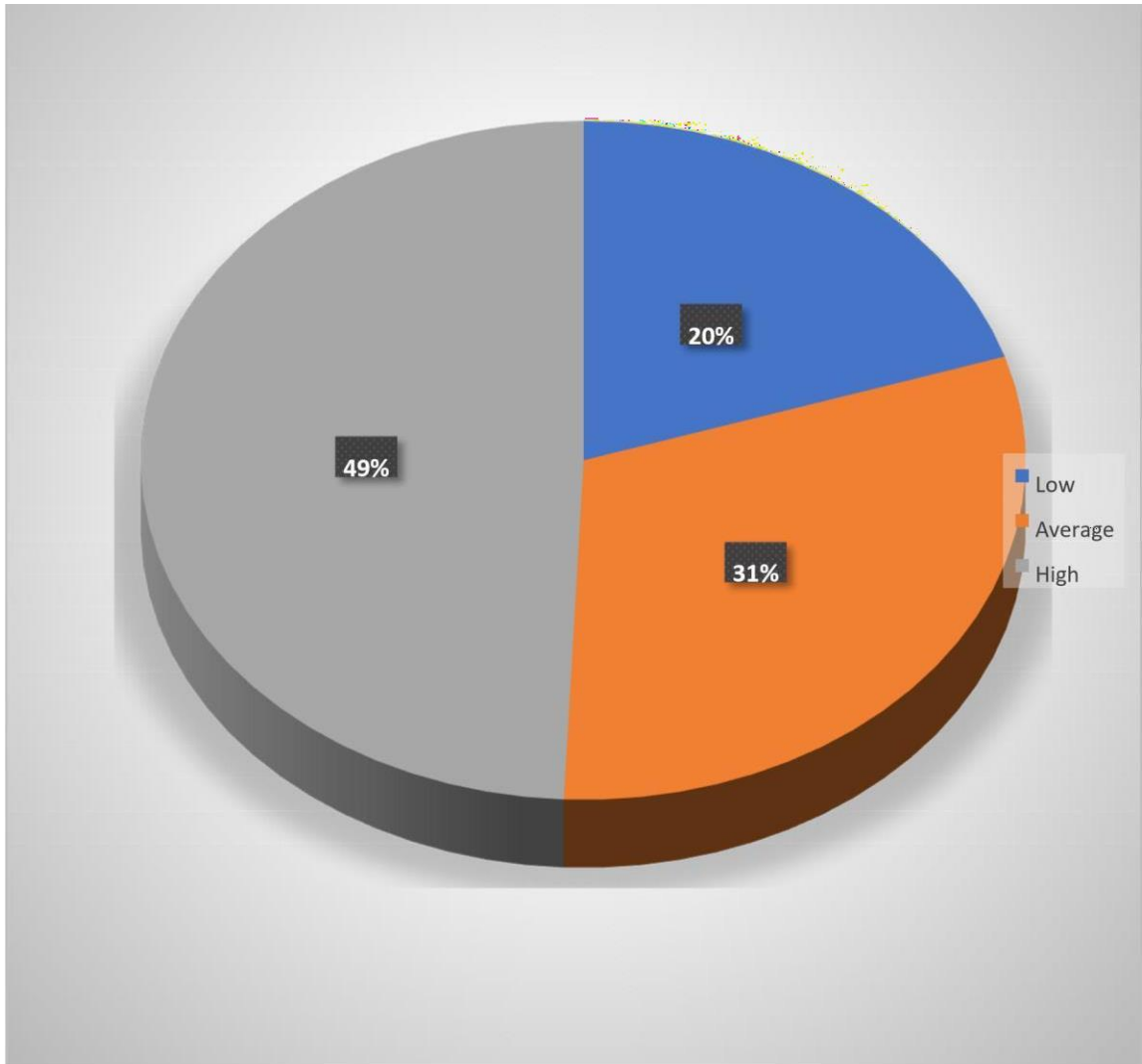
Fig. 4.3: Percentage distribution of knowledge of symptoms of cervical cancer

Furthermore, information was elicited from the respondents on their perception to further assess their knowledge level about CCS. Three variables were considered, and the responses were presented in Table 4.4 in order to show the relationship between awareness of CC and CC knowledge.

Table 4.5: Relationship between awareness of cervical cancer, and knowledge of cervical cancer

CC Awareness		CC Knowledge				Asymp (Sig.2)	
		Low	Average	High	Total	Value	df
Cervical cancer awareness	No	16.3	52.3	31.4	28.0	9.672a	2
	Yes	7.4	44.4	48.1	72.0		
	Total	**23.7**	**96.7**	**79.5**	**100.0**		

On awareness and knowledge level, 16.3% of those unaware had low knowledge level, 52.3% of those that were unaware had average knowledge level, whereas 31.4% of those that are unaware had high knowledge level, whereas, only (7.4%) of respondents that are aware of cervical cancer but with low knowledge level, 44.4% of those that were aware had an average knowledge level;less than half (48.1%) of those that were aware hadhigh knowledge level. So, awareness level significantly influences knowledge level among the study population.

Furthermore, information was elicited about respondents' knowledge of symptoms of CC.The major symptoms highlighted were pain during sexual intercourse, excessive loss of weight and postmenopausal bleeding. Participants have the following to report from the study population. Some however thought cervical cancer is an attack of the devil making it a spiritual issue

> Did they ever talk about the fact that sex might pain the woman if she hasit? I said that, if a woman has cervical cancer, and she involves herself in sexual intercourse, she will feel pain. Another one is that she will become lean because of the loss of blood **(FGD, Male, Adult, Oyo West/2020).**

The discussant above was able to identify two signs and symptoms namely pain during sexual intercourse and loss of weight.

> What I can say about cervical cancer is that firstly, we don't know if it is cancer or not because there are women who bleeds from their vaginal, and won't know where it comes from. Some thinks it is the work of the devil, and blood will be coming out from the vaginal, and it is different from the menstrual cycle. This is common among elderly women who are not giving birth again **(FGD, Female, Adult, Ibarapa North/2020).**

The female discussant was able to mention post-menopausal bleeding as another sign, and symptom of cervical cancer.

> Then, some women are so addicted to sex that they can't be with their husband alone. Also, some had the disease through their husband. Basically, it is adultery, and we don't know the type of the disease such man is having. Such women are taken to different hotels without knowing what type of diseases such man is having **(IDI, Female, 52, Ibadan South West/2020).**

Prostitution andadultery have been identified as risk factors for cervical cancer as reported by a participant. On the perception of men, one of the male participants during an interview stated that:

Interestingly, men perceived that promiscuity is associated with development of cervical cancer; it is strongly believed that women are exposed to the number of diseases in relationship to the number of men they are in sexual contact with. Multiple sex partners in essence, promiscuity, greediness all were perceived to expose them to cervical cancer **(IDI, Male, 40years, Ibarapa North/2020)**.

Lol, Cervical cancer is a part of cancer in the woman body. It is woman disease **(IDI, Male, 40years, OgbomosoNorth/2020)**.

Similarly, some risk factors were identified as a pre-course of developing CC. There was no controversy cervical cancer is associated with women as presented above. On the prevalence of cervical cancer, some community leaders bluntly denied its occurrence in their community. This necessarily may not be right but morbidity and mortality of cervical cancer is underreported generally, in African countries, of which Nigeria is included. As a participant from Ibadan South West shared his opinion on the prevalence of cervical cancer in his community as stated below:

I thank God that in our community at Ibadan South West Local Government Ward 1, Alekuso Zone, we have not had such case by the grace of God, Either among our wives, father's wives or our mothers. We thank God for that **(IDI, 54years, Male, Ibadan South West/2020).**
Well, you see the cervical cancer you talking about, we have done a programme on it for women under the regime of Ajimobi's wife; Florence, she was the one who brought about the programme., and people came to do the screening with drugs for people, also with counselling, and health education then... **(KII, 50years, Female, Kishi/2020).**

Zahedi *et al*. (2013) opined that knowledge is inadequate even among healthcare workers in simple, cost-effective "screen-and-treat" programmes that could have a greatly impact on the overall health of the population; therefore, there is a necessity for training and retraining of the health workers. Jassim *et al*., (2018) stated that the religious, and conservative aspect of culture is a barrier to approaching a male doctor; furthermore, society frowns at single ladies who access reproductive services including screening. Ahmed, Sabitu, Idris, and Ahmad (2013) in their study in Northern Nigeria affirmed that the general knowledge of cervical cancer screening was good, whereas attitude was fair; however, this did not translate to good practice.

4.3.2 Causes of Cervical Cancer

Some of the respondents demonstrated a high knowledge level about cervical cancer in the study population their responses are stated below:

> Some of the causes are, I think there is a virus called human papilloma virus (HPV). So, this virus is the cause of this cervical cancer. One can contact it through sex. Also, those who smoke cigarette or take weed ... **(FGD, Male, Adult, Oyo West/2020).**
> What we know is that, they said it is a disease that affects women at the vagina. It affects them to the extent that they may not give birth again. They said it is not something that shows quickly until they go for test. They also said that causes of this disease can be found in men's body system. So, men infect women with the disease ... **(IDI, Male, 53, Ibarapa North/2020).**

Few of the participants are knowledgeable about the fact that it is a terminal disease, they are aware also that cancer derives its name from the organ it attacks.

> What I know they call cervical cancer is the cancer of cervix, and what the literate call cancer is that it is a terminal disease that is, it does not have cure, and it kills people who are infected with it. We have different types of cancer such as cancer of the blood, cancer of the bone, and among others **(FGD Male, ADULT, Ibarapa North/2020).**

On the other hand, the knowledge of cause, diagnosis, prompt intervention of health care providers in the rural community is very commendable.

> Ihave heard of it. Cervical cancer is just, Cancer of the Cervix, and it is one of the latest that kills people now a days, especially women. We have been hearing of it several times but if it is detected early, it is curable, it is preventable. If there is prompt diagnosis, and prompt intervention. It may not kill the person **(KII, Female, 53yrs, Irepo/2020).**

One of the discussants knows that it is preventable which is very commendable.

> Is not that painful, but the thing is that, for the health workers, it might not be because we are the one that will carry out the procedure. But for someone that won't know what to do, they might not want to cooperate so we need to counsel them, and that is why most people run away because they did not know the implication or the outcome of what they will do. So, we need to counsel them, gain their consent so that they will cooperate with you because they must relax very well. So, you don't damp another place **(KII, Female, 53yrs, Irepo/2020).**

Knowledge is power; if knowledge level improves there is the likelihood of improved uptake as reported by the above discussant.

4.3.3 Perceived Risks associated with Cervical Cancer

Respondents were asked about possible risks associated with cervical cancer. Their responses were coded and classified into three: Low knowledge, average knowledge, and high knowledge. The responses are presented in the table below:

Table 4.6: Respondent's perceptions of Risks associated with Cervical Cancer

S/N	Risk factors	Knowledge			
		Low	Average	High	Total
1	Womanhood	53 (14.9)	79 (22.5)	220 (62.6)	352 (100.0)
2	Sexual activeness	69 (19.5)	85 (24.2)	198 (56.3)	352 (100.0)
3	Women of reproductive age	62 (17.5)	90 (25.5)	200 (57.0)	352 (100.0)
4	Family history of CC	73 (20.9)	113 (32.1)	166 (47.0)	352 (100.0)
5	Family history of mortality due to CC	63 (17.9)	97 (27.5)	192 (54.6)	352 (100.0)
6	Infection with Human Papillomavirus (HPV)	48 (13.7)	85 (24)	219 (62.3)	352 (100.0)
7	Smoking of cigarettes	70 (20)	93 (26.3)	189 (53.7)	352 (100.0)
8	Early sexual debut	77 (22.0)	85 (24.0)	190 (54.0)	352 (100.0)
9	Multiple sexual partners	50 (14.3)	66 (18.7)	236 (67.0)	352 (100.0)
10	Infections with STIs including HIV	55 (15.7)	85 (24.0)	212 (60.3)	352 (100.0)
11	Multiparity	124 (35.3)	119 (33.7)	109 (30.1)	352 (100.0)
12	Excessive use of contraceptives	102 (29.0)	87 (24.7)	163 (46.3)	352 (100.0)
13	Weakened Immunity	54 (15.3)	89 (25.3)	209 (59.3)	352 (100.0)
14	Irregular screening	18 (33.7)	88 (25)	146 (41.3)	352 (100.0)

There is a general belief from the study population that, greediness, uncleanness are risk factors to developing cervical cancer which are misconceptions. However, a few others highlighted; early sexual debut, fornication, multiple sexual partners, heredity as some of the risk factors.

Table 4.7: Association between social-economic characteristics of respondents, and perception of Risks of Cervical Cancer

Socio-Economic variable		Cervical Cancer Screening									Chi-Square Test		
		Anybody	Women of child bearing Age	Only poor people	Commercial sex workers	Only alcoholics	Older women	Only people living with HIV/AIDS	Don't know	Total	Value	df	P-value
Age	20 years, and below	11(40.7)	13(48.1)	0(0)	0(0)	0(0)	1(3.7)	0(0)	2(7.4)	27(7.7)	45.228[a]	35	0.115
	21-30	46(47.4)	35(36.1)	0(0)	7(7.2)	0(0)	2(2.1)	1(1)	6(6.2)	97(27.6)			
	31- 40	32(27.8)	68(59.1)	2(1.7)	6(5.2)	0(0)	0(0)	2(1.7)	5(4.3)	115(32.7)			
	41- 50	20(27.4)	37(50.7)	1(1.4)	6(8.2)	1(1.4)	1(1.4)	0(0)	7(9.6)	73(20.7)			
	51- 60	10(37)	14(51.9)	0(0)	2(7.4)	0(0)	1(3.7)	0(0)	0(0)	27(7.7)			
	60, and above	5(38.5)	4(30.8)	0(0)	0(0)	0(0)	0(0)	0(0)	4(30.8)	13(3.7)			
	No formal education	29(47.5)	21(34.4)	0(0)	5(8.2)	0(0)	1(1.6)	0(0)	5(8.2)	61(17.3)			
Education	Primary Education	21(44.7)	15(31.9)	1(2.1)	2(4.3)	0(0)	2(4.3)	0(0)	6(12.8)	47(13.4)	37.364[a]	21	0.02**
	Secondary education	34(33.3)	48(47.1)	1(1)	8(7.8)	1(1)	0(0)	3(2.9)	7(6.9)	102(29.0)			
	Tertiary education	40(28.2)	87(61.3)	1(0.7)	6(4.2)	0(0)	2(1.4)	0(0)	6(4.2)	142(40.3)			
	Christianity	70(32)	119(54.3)	1(0.5)	12(5.5)	0(0)	2(0.9)	2(0.9)	13(5.9)	219(62.2)			
Religion	Islamic	46(38.7)	50(42)	1(0.8)	9(7.6)	1(0.8)	3(2.5)	1(0.8)	8(6.7)	119(39.4)	37.012[a]	21	0.07*
	ATR	8(61.5)	2(15.4)	1(7.7)	0(0)	0(0)	0(0)	0(0)	2(15.4)	13(3.7)			
	Others	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	1(100)	1(0.3)			
	Yoruba	103(32.4)	162(50.9)	2(0.6)	20(6.3)	1(0.3)	5(1.6)	3(0.9)	22(6.9)	318(90.3)			
Ethnicity	Igbo	19(59.4)	9(28.1)	1(3.1)	1(3.1)	0(0)	0(0)	0(0)	2(6.3)	32(9.1)	16.368[a]	14	0.291
	Hausa	2(100)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	2(0.6)			
	Single	28(38.4)	35(47.9)	0(0)	1(1.4)	0(0)	3(4.1)	0(0)	6(8.2)	73(20.7)			
Marital Status	Married	84(33.5)	126(50.2)	3(1.2)	18(7.2)	1(0.4)	1(0.4)	3(1.2)	15(6)	251(71.3)	21.467[a]	21	0.431
	Divorced	7(50)	5(35.7)	0(0)	0(0)	0(0)	0(0)	0(0)	2(14.3)	14(4.0)			
	Widowed	5(35.7)	5(35.7)	0(0)	2(14.3)	0(0)	1(7.1)	0(0)	1(7.1)	14(4.0)			
	#7,500	27(50)	17(31.5)	0(0)	3(5.6)	0(0)	2(3.7)	0(0)	5(9.3)	54(15.3)			
Income	#15,000	32(42.7)	26(34.7)	1(1.3)	5(6.7)	0(0)	0(0)	1(1.3)	10(13.3)	75(21.3)	49.600[a]	28	0.007**
	#25,000	22(31.9)	37(53.6)	0(0)	6(8.7)	0(0)	0(0)	2(2.9)	2(2.9)	69(19.6)			
	#35,000	30(33)	48(52.7)	2(2.2)	4(4.4)	1(1.1)	3(3.3)	0(0)	3(3.3)	91(25.9)			
	#45,000	13(20.6)	43(68.3)	0(0)	3(4.8)	0(0)	0(0)	0(0)	4(6.3)	63(17.9)			

ATR=African Traditional Religion; *Significant at p<0.05*

Table 4.6 shows the association between respondents who are aware of risk associated with cervical cancer and theirsocio-demographic characteristics. From the above table, there is no significant association between the perception of risk, and women's age group however there is a strong association between the perception of risk and women's educational status.

It can be concluded from this study that as the educational status of women increases, their knowledge of the perceived risk of CC also increases. Moving ahead to religion, there is a strong significant association between religion, and knowledge of the perceived risk of cervical cancer amongst the women.

Equally, a larger amount of the respondents within 15–20 years (1 (33.3%) thought that married women, women who frequently have sex, and women in the reproductive age are meant to attend cervical cancer screening. Among the respondents that fall in the age bracket of 21–25, a bigger number of them 33 (50.7%) understood that women who are in no way wedded are meant to go for cervical cancer screening.

Furthermore, the self-employed women have more knowledge than other catgories of women in other sectors. Women with incomes of ₦25, 000, and ₦35, 000 also demonstrated a higher perception of the perceived risk of CC. So, there is a very high significant association between the marital status, employment, income, and the women's knowledge of the perceived risk of cervical cancer of women awareness on cervical cancer in the two countries.

Lastly, there is a significant association between the age group of the respondents and their perception of the risk associated with cervical cancer. Women between the ages of 31-40 are more knowledgeable than women of other age groups. Early marriage/ child marriage is considered a risk factor to CC as stated below:

> *Another reason, getting women married with force right from their young age.*
> *That's she has been having sex since her young age, and it is common in our*
> *culture (FGD Male, Oyo/2020).*

The place of the right diet as a preventive measure was mentioned as well. The highlight of the excerpt from the interviews below attest to this fact:

It can be prevented. What we need is that, there is some behaviour, and foods that can be predispose us to have cancer, and, if one can move from away from it, one has a better chance of not having the cancer (**IDI, Male, 40years, Ogbomoso North/2020).**

Well, I can't say this is a particular cause. But, sometimes, it could be through fornication or adultery. Something like "agbere", if someone continues in that path, she can be infected with different kinds of diseases. If you can't hold or keep yourself, it is a problem. That's the cause I can say. There are different unknown diseases in men, and once they have sexual intercourse, she'd be infected with it (**IDI, Male, 83, Oyo West/2020).**

Keep yourself from fornication or sexual intercourse with different men. The disease doesn't just affect someone, you must have trail towards the way. So, if you can keep yourself, you can prevent it. That is what I will say. It is very bad to have multiple sexual partners. It won't affect such a person immediately; it will be little by little. When it turns to cancer that means there is a problem. Cancer doesn't show immediately, and the same goes with the treatment; it doesn't heal immediately (**FGD, Male, 83, Oyo West/2020).**

Participants still reiterated that fact that multiple sexual partners, promiscuity are risk factors to developing CC as documented below:

If someone inherits it, it doesn't have age limit because such child would contact it from her mother. But if it gotten from another person, then, when a woman is mature enough to have sex can be infected with it. Also, if she doesn't have sex with just anybody, she might not be infected with it (**FGD, Male, 83, Oyo West/2020).**

The place of genetic being a predisposing factor is emphasised by the discussant above. The lamentation of the traditional religious leader from Ibadan South West Local Government summarizes the perception of risk of developing CC, the emphasis on a strong association between adultery, and cervical cancer cannot be overemphasized or dimisified as was reported in the study population.

Well, the elders do say a proverb, "wherever we fetch, the water doesn't get dry". If a woman is greedy, and doesn't keep herself, if 10 men sleep with her, she has 10 diseases already. Then, plus her own disease, that is 11 already which is why it is very bad for a woman to fornicate. When she is married, she should be contented with her husband. (**IDI Male, Elderly, Ibadan South West/2020**).

Interestingly, men perceived that promiscuity is associated with development of cervical cancer; it is strongly believed that women are exposed to the number of diseases in relationship to the number of men they are in sexual contact with. Multiple sex partners in essence, promiscuity, greediness all were perceived to expose them to CC.

*Lol, CC is a part of cancer in the woman body. It is woman disease. Men are aware too that CC is a disease of women **(IDI, Male, 40years, OgbomosoNorth/2020)**.*

4.3.4   Perception about cervical cancer

Interesting, some community leaders bluntly denied the occurrence of cases of cervical cancer in their community while others who have experience of cervical cancer with their spouse shared the experience, and even mentioned other important personality that has suffered from the disease to buttress the point. To some others, they mentioned referral systems available for women who are positive to the test. Below are some of the responses from participants.

> I thank God that in our community at Ibadan South West Local Government Ward 1, Alekuso Zone, we have not had such case by the grace of God, Either among our wives, father's wives or our mothers. We thank God for that **(IDI, 54years, Male, Ibadan South West/2020).**

The last administration in Oyo state embarked on community outreach with a few to ascertain the prevalence of CC in Oyo state this was reported below;

> Well, you see cervical cancer you talking about, we have done a programme on it for women under the regime of Ajimobi's wife; Florence, ... We have seventeen centres in this local government so we did it across the local government. With that, I don't think people do not have the knowledge or have the disease, and up able to talk because it is not long, they did it **(IDI, 50years, Female, Kishi/2020).**

Table 4.8: Perceptions of Cervical Cancer Screening

Perception	Responses			
	Disagree	**Indifference**	**Agree**	**Total**
Detection of early changes in cervix	38(12.6)	68(22.5)	196(64.9)	302(100.0)
Frequency of screening every three years	48(15.9)	92(30.5)	162(53.6)	302(100.0)
Detection of sexually transmitted infections	42(13.7)	92(30.5)	168(55.6)	302(100.0)

The respondents in the study population demonstrated more than average in their level of agreement in all the variables under investigation: detection of early changes in cervix, frequency of screening in every three years, detection of sexually transmitted infections.

4.3.5 Management, and Prevention of Cervical Cancer

The majority of respondents have a lot of misconceptions about management. They still believe in the traditional way of management of cancer that is hinged on the use of herbs, and concussion that is not measurable, and its efficacy in the management of cervical cancer is not yet proven. Some believe the work of the devil while others think orthodox medicine is better to manage it. Some people also know there is a process of management that may not be available in Primary or even secondary health care centres but management is better off in tertiary hospitals therefore referral of clients may be the best option as was reported.

> With my own idea, if some cases are worst, they are being referred to Ogbomosho so that they can help them **(IDI, Male, 54, Oyo West/2020).**
> Yes, it works for it. Also, using medicine for it is better because they go into details when it comes to such disease by doing screening, and all. Then, our herbs do not have prescription but medicines have **(IDI, Male, 52, Ibarapa, North/2020).**
> Some people resolve to orthodox medicine for management of cervical cancer. Then, they were very close, and they have different friends they tell the problem. If they don't know, they will tell them what to do, and it will disappear. But now, everywhere is an information age, and they don't know what to do about the sickness again, they just resort to the hospital **(IDI, Male, 54, Oyo West/2020).**
> In the past, our forefathers utilize herbs, they consult spiritual powers in the management of diseases inclusive of cancer, the efficacy of which we cannot ascertain. The culture is gone. We lived in the farm, we know about it very well, we know where to go, and what to do. We have met different people. But our fathers then, they believe when they control them with hands, they know what to do. How many children can say they know witches, and wizards, just few except it is told in the history. **(IDI, Male, 54, Oyo West/2020).**

Prevention is known to be better, cheaper, and safer than cure; respondents have these to say on some preventive measures. Emphasis was placedon avoidance of multiple sexual partners, avoidance of greediness, healthy eating habits, and cleanliness among other things. These were presented in the excerpts below:

> I know few of them. But, the first things are that the person as a woman must stop immoral sexual act **(IDI, Male, 39, Irepo/2020).**
> Then, some women are so addicted to sex that they can't be with their husband alone. Also, some had the disease through their husband. Basically, it is adultery, and we don't know the type of the disease such man is having. Such women are taken to different hotels without knowing what type of diseases such man is having. Also, lovers of money can have such diseases. Also, women giving birth are to be clean always with whatever they are using on their body so they won't waste money. So, the odour will return into the body instead of going out **(IDI, Female, 52, Ibadan South West/2020).**

Awareness, informing women if there are preventive measures; such as injections so they can go for it. Then we can tell the surrounding people about this, and the precautions on the food they eat. Also, if you can advise me so I can disseminate the information to others **(IDI, Female, 52, Ibadan South West/2020).**

4.4   Perception of Women about Cervical Cancer Screening

The awareness of cervical cancer screening is high, 86.0% of those aware of cervical cancer (352) are aware of cervical cancer screening. Cervical cancer screening is mostly opportunistic in developing nations as compared to organized ones in developed nations leading to a drastic reduction in both morbidity, and mortality. The perceived susceptibility and severity are relatively unknown compared to other forms of cancer like breast cancer. Awareness of women about CCS is high in the study population. Information about this was majorly from the religious organization as reflected in the result of the chi-square below. It shows the association between the socioeconomic characteristics and awareness of cervical cancer screening.

4.4.1 Awareness of Cervical Screening

Figure 4.5 is the pie chart that shows the level of awareness of respondents about CCS. The awareness of CCS is high becausethere are just 14% of those unaware of cervical cancer screening of the (352) who were aware of cervical cancer. Cervical cancer screening is mostly opportunistic in developing nations as compared to organized ones in developed nations leading to a drastic reduction in both morbidity, and mortality.
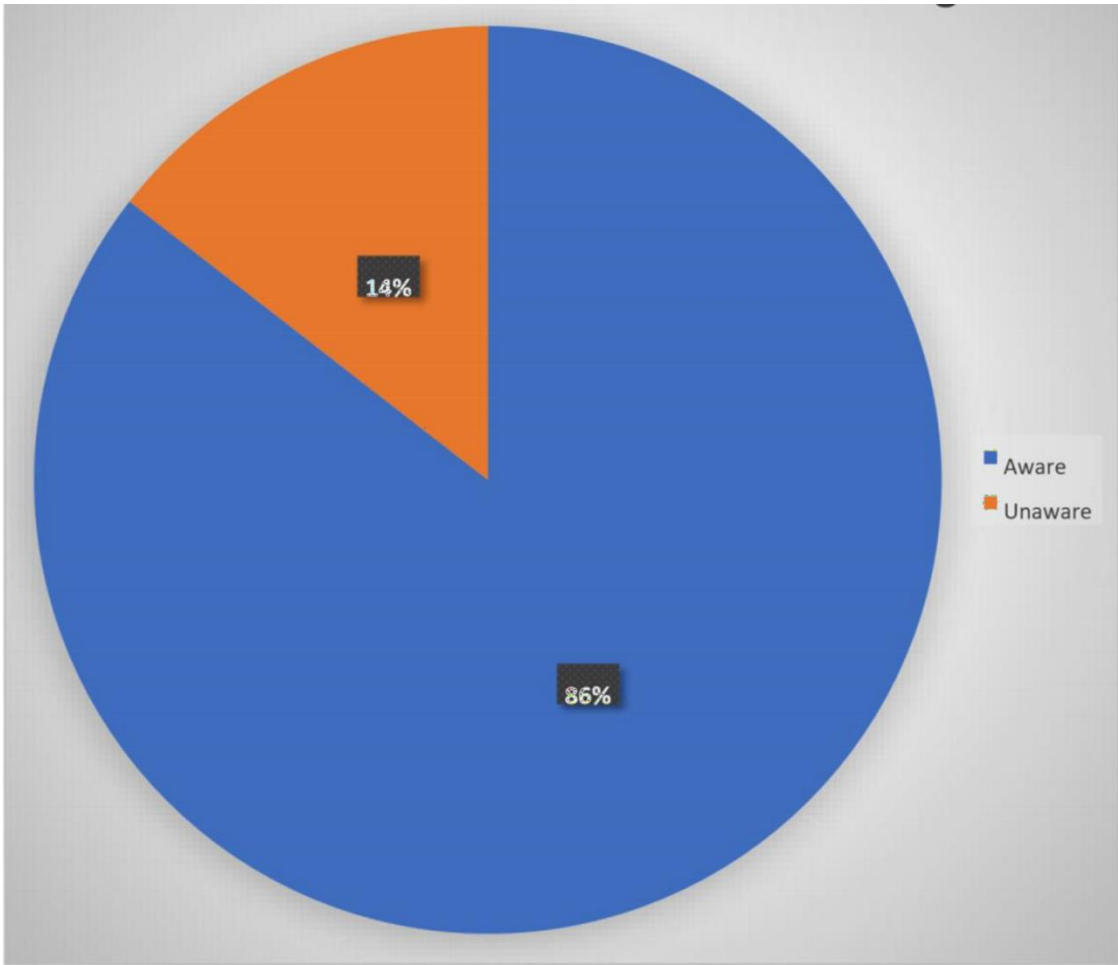
Fig. 4.4: Percentage distribution of awareness of cervical cancer screening

Table 4.9: Association between Socio-economic characteristics of respondents, and awareness of cervical cancer screening

Summary of Chi square: Socio economic variable

Socio-Economic variable		Cervical Cancer-Screening			Chi-Square		
		Not aware	Aware	Total	X²	df	P value
age group	20 years, and below	5(18.5)	22(81.5)	27(7.7)	3.967ª	5	.554
	21-30	17(17.5)	80(82.5)	97(27.6)			
	31-40	16(13.9)	99(86.1)	115(32.7)			
	41-50	9(12.3)	64(87.7)	73(20.7)			
	51-60	1(3.7)	26(96.3)	27(7.7)			
	61, and above	2(15.4)	11(84.6)	13(3.7)			
Education	No formal education	9(14.8)	52(85.2)	61(17.3)	1.747ª	3	.626
	Primary Education	4(8.5)	43(91.5)	47(13.4)			
	Secondary education	14(13.7)	88(86.3)	102(30)			
	Tertiary education	23(16.2)	119(83.8)	142(40.3)			
Religion	Christianity	35(16)	184(84)	219(62.2)	9.341ª	3	0.03**
	Islamic	14(11.8)	105(88.2)	119(33.8)			
	African Traditional Religion	0(0)	13(100)	13(3.7)			
	Others	1(100)	0(0)	1(0.3)			
Ethnicity	Yoruba	48(15.1)	270(84.9)	318(90.3)	2.199ª	2	.333
	Igbo	2(6.3)	30(93.8)	32(9.1)			
	Hausa	0(0)	2(100)	2(0.6)			
Marital Status	Single	13(17.8)	60(82.2)	73(20.7)	3.110ª	3	.375
	Married	35(13.9)	216(86.1)	251(71.3)			
	Divorced	0(0)	14(100)	14(4)			
	Widowed	2(14.3)	12(85.7)	14(4)			
Employment	Self employed	30(20)	120(80)	150(42.6)	9.640ª	5	0.08**
	Public Sector Worker	6(7.8)	71(92.2)	77(21.9)			
	Private Sector Worker	6(10.7)	50(89.3)	56(16)			
	Not employed	6(11.1)	48(88.9)	54(15.3)			
	House Wife	0(0)	7(100)	7(2)			
	Others	2(25)	6(75)	8(2.3)			
Income	#7,500	9(16.7)	45(83.3)	54(15.3)	4.185ª	4	0.382
	#15,000	14(18.7)	61(81.3)	75(21.3)			
	#25,000	15(21.7)	54(78.3)	69(19.6)			
	#35,000	9(9.9)	82(90.1)	91(25.9)			
	#45,000	3(4.8)	60(95.2)	63(17.9)			
Total		**50(14.0)**	**302(86.0)**	**352**			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

Source: Fieldwork (2020)

According to the result obtained, there is no significant association between the age of respondents and the awareness of cervical cancer screening. There is also no significant association between the educational level of the respondents, and the awareness level of cervical cancer screening. There is a strong association between the religion of the respondents, and the awareness level of cervical cancer screening. Most likely religious leaders do give information about screening as reflected in the interview.

Considering the total population, (84%) of the population of Christians is aware of cervical cancer screening, (88.2%) of the population of Muslims is aware of cervical cancer screening, while (100%) of the population of traditionalist is aware of cervical cancer screening. There is no significant association between ethnicity, marital status of respondents, and awareness of cervical cancer screening however there is a very strong association between respondent's employment status, and their awareness of cervical cancer screening, and interestingly there is a higher level of awareness than unawareness across all range. Lastly, there is no significant association between the income of respondents, and their awareness level of cervical cancer screening.

However the report of participants is at variance with this fact, the participant are of the opinion that religious leader can be catalyst who can encourage their congregations to go for CCS as stated below:

> For example, those who contacted me now, they can create awareness among the Imams, and pastors by explaining the importance of this screening to women. Then, they can inform the congregation about. Then, anyone who is interested, and understands how important it is, they would go for the screening (**IDI, female, 25 years, Oyo West/2020).**

Awareness about cervical cancer is not enough, and there is urgent need to improve the awareness level of the people so that by default, most women will be aware about CCS. There is also inadequate human resource for health.

> We need to create that awareness more especially in the rural setting even in the city centres as well. The awareness question on it is not as it ought to do, it is like a daily thing everybody need to talk about. That every woman on the street should be able to know that it is a thing for them to understand(create awareness make it loud, and clear). Part of the challenge again is the human resource for health, those that render the service to us, are they actually adequate? The answer is no. So we need to do more in the area of human resource **(KII, Male, Doctor, Ibadan/2020).**

Furthermore, participant reinstated the fact that religious leaders' forums can be used to increase awareness of women about cervical cancer screening. Some qualitative data supported the findings presented above as seen in the Excerpt.

> For example, those who contacted me now, they can create awareness among the Imams, and pastors by explaining the importance of this screening to women. Then, they can inform the congregation about. Then, anyone who is interested, and understands how important it is, they would go for the screening **(IDI, female, 25 years, Oyo West/2020).**
> We thank God. At CAN in Irepo, if we didn't hear a broadcast, we won't work on it. Right now, there is an on-going work. We went to all churches to pray, and we deliberately informed them to tell their members to go out for injection that is being announced by health experts. So, no one is to run away from anyone. I told my members myself, and, we'd call all elders from churches in different areas so they can talk to their members to come out for screening because health is wealth, and without good health, we can't do anything. You know, the first thing is for health practitioners to create awareness about the issue. Have seminars where men won't be there just to enlighten women on the issue. But as for us, once we hear about the issue, we will take the necessary steps to help women **(IDI, male, 39 years, Irepo/2020).**

Religion looks like a good instrument here to increase awareness level of women. Women are most likely going to belief, obey, and trust the judgment of their imams, pastor, prophet or their babalawo. If the message is clear enough, and these categories of religious leaders are adequately engaged from results of this present study a lacuna is filled, and most likely awareness level, and subsequent uptake may be achievable.Past studies have shown that some hidden factors are militating against uptake of screening. Community involvement, community ownership vis a vis routine screening, and national policy on this subject of discourse is germane here. There is a strong indication that the religious leaders' influence on their congregation is effective and significant. They are equally enlightened about and were transferring the awareness, and knowledge to both Muslims and Christians the aftermath effect is the strong association ofthe awareness about cervical cancer screening. The response of the CAN secretary in Irepo Local Government Area attests to this fact. The female respondent at Oyo West Local Government equally presented a similar scenario as stated above.

4.4.2 Category of Women Who Go For Cervical Cancer Screening

The respondents have this to say about the category of women that should be screened.

> We are all tagged woman. If we say it is for the young, in fact what the old are doing are more delicate compared to what the young are doing? So, it is everyone ma. We are all tagged woman. If we say it is for the young, in fact what the old are doing are more delicate compared to what the young are doing? So, it is everyone ma **(KII, Female, 62 years, Ogbomoso North/2020).**
>
> It is women. (IDI, male, 53 years, Ogbomoso North)

Uptake of HPV Vaccine: a larger percentage hasnot heard about HPV vaccine as stated below, this is crucial as early detection enhances the prognosis of CC:

> No (not immunized). No, I have not heard about the vaccine. **(IDI, Female, 27 years, OgbomosoNorth/2020).**
>
> I am actually hearing that (vaccine) for the first-time ma. **(KII, Female, 28 years, Ibarapa/2020).**
>
> I have not. I am hearing this for the first time **(KII, Female, 25 years, Ogbomoso/2020).**

Exposure to sexual intercourse is a major predisposing factor to cervical cancer as reported by this participant.

Time to go for screening: A respondent had something to say concerning the time to go for screening, and that is iterated below. Past literature revealed that screening is opportunistic, more of an outreach than routine. This is confirmed as the only response in the studied population.

> *That time, the privilege we had was that the federal government-sponsored it.***(IDI, Female, 59 years, Ogbomoso North/2020).**

4.4.3 Uptakeof Cervical Cancer Screening

Figure 4.6 is the pie chart that shows the distribution of the uptake of CCS among the respondents. The result showed that only about 42.0% of those who were aware of cervical cancer screening went for screening despite being aware of the existence of facilities for screening, and they represented only 36.4% of those who were aware of cervical cancer. This showed that there were factors that inhibited uptake of CCS even by those who were aware of the existence of cervical screening centres. Uptake of cervical cancer screening was just fair as less than half of participants had been screened before in the study population. Several factors accrue to this uptake while an avalanche of factors was responsible for non-uptake as itemisedby the participants in the study population. The cost of screening, the distance of screening centres, waiting time at screening centres, disclosure of test results are some other reasons that were mentioned.
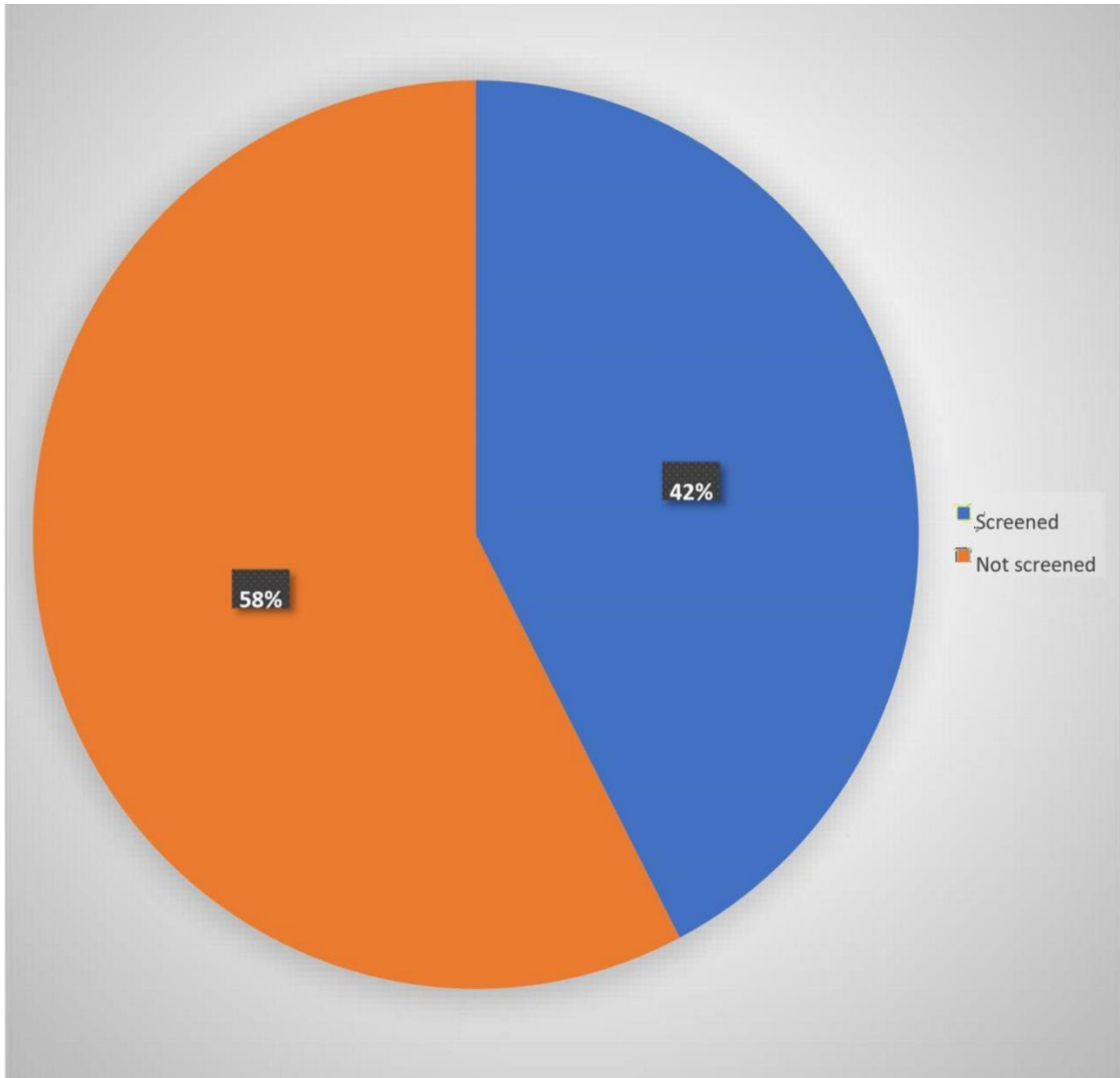
Fig. 4.5Percentage distribution of uptake of cervical cancer screening

Shortage of health care personnel, lack of facilities, low budget for health care, uneven distribution of screening facilities were equally identified in the study population. The participants who have been screened described the process. A key informant,a nurse, said she did hers when she attended a workshop at University College Hospital. Some others said theirs were done in an outreach programme with the opportunity of screening and they described the process:

> When we got there, they collected our blood they did the test, they did lot of things, they checked our height, they ask for our age, before they gave an appointment to come the next time. They opened like one wants to give birth to a child, so they on a light, or a touch to the vaginal, then they asked us to go so whoever it is concerned will be called to come back for the result **(IDI, Female, 59 years, Ogbomosho North/2020).**
> The first one is pap smear where you take the smear of the cervix, put it on the slide, and send it to the laboratory for those who will analyse it to see if the person is prone to cancer of the cervix (...) **(KII, Female, 53yrs, Irepo/2020).**
> Then there is another one Visual Inspection of cervix with the use of acetic acid, whereby you view the cervix of the respondents is placed lititomy position, then draw the buttock to the edge of the examination couch, view the cervix with good source of light, then damp it with acetic acid, then wait for like 5 to 10 minutes, if it changes, there is going to be white patches there which shows the person is having or prone to cervical cancer but if nothing happens, then the person is not having it **(KII, Female, 53yrs, Irepo/2020).**

The views in the qualitative interviews showed why a few women had been screened. In an attempt to ascertain an association between the socio-economic characteristics of respondents and uptake of cervical cancer screening the findings show the statistical significance of the variables. Table 4.9 shows that there is no significant association between the age group of women and the uptake of cervical cancer screening but there is a significant association between educational status, and the uptake of cervical cancer. 22 Women with no formal education whatsoever have been actively involved in the uptake of cervical cancer followed by 20 women with tertiary education. Women with primary and secondary educational status have very low uptake.

Table 4.10: Association between social economic characteristics of respondents and uptake of cervical cancer screening

Socio-Economic variable		Cervical Cancer-Screening Not Screened	Chi-Square Screened	Total	X^2	Df	P value
Agegroup	≤20 years	12(54.5)	10(45.5)	22(7.3)	4.405[a]	5	.493
	21-30	50(61.0)	32(39.0)	82(27.2)			
	31-40	59(62.1)	36(37.9)	95(31.5)			
	41-50	35(53.0)	31(47.0)	66(21.9)			
	51-60	11(42.3)	15(57.7)	26(8.6)			
	≥61 years	7(63.6)	4(36.4)	11(3.6)			
Education	No formal education	26(49.1)	27(50.9)	53(17.5)	2.876[a]	3	.411
	Primary Education	27(61.4)	17(38.6)	44(14.6)			
	Secondary education	46(54.8)	38(45.2)	84(27.8)			
	Tertiary education	75(62.0)	46(38.0)	121(40.1)			
Religion	Christianity	107(58.8)	75(41.2)	182(60.3)	2.186[a]	3	.535
	Islamic	61(57.5)	45(42.5)	106(35.1)			
	ATR	6(46.2)	7(53.8)	13(4.3)			
	Others	0(0.0)	1(100.0)	1(0.3)			
Ethnicity	Yoruba	156(58.2)	112(41.8)	268(88.7)	2.325[a]	2	.313
	Igbo	16(50.0)	16(50.0)	32(10.6)			
	Hausa	2(100.0)	0(0.0)	2(0.7)			
Marital Status	Single	42(66.7)	21(33.3)	63(20.9)	6.019[a]	3	0.111*
	Married	118(55.4)	95(44.6)	213(70.5)			
	Divorced	9(69.2)	4(30.8)	13(4.3)			
	Widowed	5(38.5)	8(61.5)	13(4.3)			
Employment	Self employed	75(67.0)	37(33.0)	112(37.1)	12.468[a]	5	0.029**
	Public Sector Worker	36(49.3)	37(50.7)	73(24.2)			
	Private Sector Worker	34(65.4)	18(34.6)	52(17.2)			
	Not employed	26(50.0)	26(50.0)	52(17.2)			
	House Wife	2(28.6)	5(71.4)	7(2.3)			
	Others	1(16.7)	5(83.3)	6(2.0)			
Income	#7,500	23(53.5)	20(46.5)	43(14.2)	12.826[a]	4	0.012**
	#15,000	30(50.0)	30(50.0)	60(20.0)			
	#25,000	28(50.0)	28(50)	56(18.5)			
	#35,000	61(74.4)	21(25.6)	82(27.2)			
	#45,000	32(52.5)	29(47.5)	61(20.2)			
Total		174	128	302(100)			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

It is also imperative to note from Table 4.9 that there is no association between religion, marital status, and the uptake of cervical cancer screening from the respondent's population but there is a significant association between the ethnicity of the respondents and the uptake of cervical cancer screening. Yoruba women have been actively involved in the uptake of cervical cancer screening above the women from all the remaining three ethnic groups (Igbo, Hausa, and others). There is a significant association between the employment of respondents and uptake of cervical cancer screening. Women from the public sector have the highest uptake of cervical cancer screening followed by self-employed women. The table shows that women from the public sector have very good knowledge of cervical cancer screening. The self-employed have more time to go for screening and can be screened than the government workers who have no ample time of their own, and fail to take the screening test due to negligence.

Respondentswhose average income isN15,000 have the highest uptake of cervical cancer screening, 22 in number, and the result from the table shows that as income increases, the uptake of cervical cancer screening decreases. The respondents' views in the qualitative interview showed that a smaller percentage has been screened. A key informant,a nurse,reported how she had the opportunity to do the screening when she attended a workshop at University College Hospital. She has thisto say:

> I am a health worker, and I had the opportunity to have my own then when I went for a programme at University College Hospital. Then, we were given some test to do, and provide the result. That was when I had the opportunity of doing it **(KII, Female, 38 years, Oyo West/2020).**

Reasons for non-uptake of cervical cancer screening

Quantitative results from 173 respondents that were aware of cervical cancer screening but who didnot go for screening gave their reasons for non-uptake of cervical cancer screening as follows: faith in God's protection, lack of access to screening centres was another major reason, while pain experienced during screening, to some the high cost of screening, and was the reason for non-uptake. Table 4:10 gave the full details of the respondent's reasons for non-uptake. Respondents (173) who did not take up screening were asked for the reasons for their non-uptake of CCS. Multiple reasons were given, and the result presented in the table below

Table 4.11: Reasons for non-uptake of cervical cancer screening

Reasons	Frequency	Percentage (%)
Painful exercise	74	42.7
Embarrassment	62	35.8
Unnecessary for asymptomatic person	62	35.4
Expensive	74	42.4
Unavailability of Screening centre	81	46.4
Fear of stigmatization	75	43
Spouse's decision	49	25.1
Faith in divine protection	101	57.9
Not being promiscuous	83	47.7

Some factors have been identified as responsible for non-uptake. One respondent revealed this in Ibarapa North Local Government.

> Lack of facilities, and equipment, number two, we do not have enough medical practitioners. Third, there are no seminar, and awareness on how people would go about it. Then our government does not bother about our environment **(FGD/Male Adult/ Ibarapa North/2020).**

Some excerpts from the opinions of those interviewed further gave more insights to some of the hindrances to the uptake of CCS: Some of the key informants identified challenges affecting uptake of CCS. Prominent among them is an acute shortage of staff, a nurse from Irepo local government stated this below.

> *Is this man power issue because people are retiring, and they didn't replace them so it has to be tackled from the federal to the state before the local government (**KII, Female, Nurse, Irepo/2020**).*

The few available Health practitioners must be well motivated and rewarded to give the best to their clients this is captured below by an informant from Irepo.

> *There are some thing they can to boost their morale, they can give them incentives, and those are the things that can make a health worker work effectively. (**KII, Female, Nurse, Irepo/2020**).*

In the same vein, the available practitioner should be trained and retrained. This is also germane for effectiveness, and efficiency this is reported by an informant below.

> Through seminars, organising seminars for them, workshops, and because the orientation of people working in local government has been bastardised. Having recruit enough people, they should create awareness that people are now there so that they will motivate people back to that clinic, and are professional **(KII, Female, Nurse, Kishi/2020).**

Some factors have been identified as responsible for non-uptake. One participant revealed this in Ibarapa North Local Government. The discussant further identified lack of equipment, infrastructural facilities, manpower shortage, and poor budgeting for health care by government resulting in neglect of the populace in terms of health care facilities.

> Lack of facilities, and equipment. Number two, we do not have enough medical practitioners. Third, there are no seminar, and awareness on how

people would go about it. Then our government does not bother about our environment **(FGD/Male Adult/ Ibarapa North/2020).**

Some men do not allow their women to go for CCS probably because of illiteracy or poverty.

> *Some people's husband won't allow their wife to do the screening but my own husband oo, once they hear it in school, and he comes, he says oyaaaa, let's go we have a place to go* **(IDI, Female, Adult, Ogbomoso, North/2020).**

The women must be accountable to their husbands, and the husbands in turn should acknowledge the submission of their wives by permitting them to and supporting them for the uptake of CCS.

> Any wife who accepts that the husband is the head; she must inform her husband no matter the response of the husband. Then, the husband too must allow her wife to go for the screening as well. So, we need your help here ma to make this known so our women can come out **(FGD, Male, Adult, Oyo West/2020).**

A discussant reported that his wife must inform him about his movement, and take permission from him before going for CCS uptake which is a reflection of male dominance which is inimical to women's health generally and to the outcome of CC among women.

> *Our wives must take permission, and inform us about their movement* **(FGD, Male, Adult, Oyo West/2020).**

A discussant said that the women know how to go about it if they want to go for the uptake of CCS even without obtaining permission from their husbands.

> I am just citing an example like someone calls you to a revival that we are mainly praying for our children, and the husband say, I don't want my wife to go about o. As a woman, you know how to go about that to achieve that just to pray for your children, So, there are (70%) of women that can do that. Men are father of the world; I am the one that gave birth to my children. I think (70%) of women will know how to go about it without the consent of their husband **(IDI, Female, Adult, Ibadan South West/2020).**

Disclosure of screening results to women is germane to improved uptake of cervical cancer screening as reported by the participant.

Past outreaches on cervical cancer have failed to present the result of cervical cancer screening to women who participated in the screening exercise hence there is fear that such women may be reluctant to come for screening when invited again. This was reported by a participant in Oyo West.

> So, we the health workers we thought if you can't give us the result, so be it. So, nobody went for the result. Those women that partook in the something could not have their result. I think if you still create such awareness again, they may be reluctant to come out again they will tell you that those ones they have done, they are yet to see it (**IDI/ Female 38, Oyo West LocalGovernment/2020**).

There were other challenges related to service delivery of cervical cancer screening mentioned by those interviewed, some of which are presented here: Acute shortage of manpower is reported by the informant is one of the major challenges affecting uptake of cervical cancer.

> Even the ones that are very close to them, there are some challenges they are having as well but the essential thing is this man power issue because people are retiring, and they didn't replace them so it has to be tackled from the federal to the state before the local government (**KII, Female, Adult, Kishi/2020**).

A referral is the best option for the health practitioner at the local government because of the lack of equipment for proper treatment, and management of cervical cancer.

> You know we are primary health centre, like I said earlier, there are more or less challenges we face. Anyone we cannot handle; we refer them to the secondary level or the tertiary level. Even the so-called tertiary hospital, they do not have equipment. How many of those hospitals have the equipment but we do not have enough equipment, and we don't start what we cannot handle (**KII, Female, 50 years, Kishi/2020**).

Another informant from Ibadan posited that there have been issues with the human resource for health in recent times. He also acclaimed that there is a need for more hands and that it would be a good fit if the government can recruit more staffs.

> Although we have issues with human resource for health. Recently in the last administration, I told you we are seriously challenged as far as human resources for health is concerned. When I have a facility that I need to have a minimum staff complement of about 30 or 20 something now, and I don't have more than 3,4,5, and there are other things they need to do, so they will be thinking screening for cervical cancer is a least of their problem so they need to do others like antennal clinic, vaccination, family planning. So that is the only challenge we have. But if we can increase capacity for nurses as well. We want to see how the government can help us to recruit more hand so that

we care for our people that will stretch out, and offer this services. What first, and foremost, is the knowledge?**(KII, Male, Doctor, Ibadan/2020).**

The necessary equipment is needed to make CCS run smoothly as posited by a key informant. Gloves among other equipment are important but not as much as the technical know-how involved in operating the equipment.

> I won't say we have but we can always improve. What I am saying is that what we have now, we can make do with it if we have the required capacity, and I mean knowledge based to render it. So there are gaps as in what we need things like gloves among others, which are not available but something we can procure. It is not so costly to get but the most important thing is the knowledge of how to do it, few of them have that other requirement are necessary as well but we can always source for them, but there are still gaps to make them available, and we have them in abundant but can be easily reached. **(KII, Male, Doctor, Ibadan/2020).**

The simplicity of CCS was expatiated since doctors are not needed for screening; nurses are capable and could be trained also. Sophisticated equipment are not needed as well.

> *You don't need the doctor to screen, you can easily train nurses even CHO can be trained in detection then they can refer to the level of care if need be for further management* **(KII, Male, PHC, Ibadan/2020).**

There is a need for information to be on air so that the government could be aware of the challenges health facilities are facing in terms of inadequate staff, deteriorated health facilities, etc. so that the government can work on them.

> First things we want to do is to seek audience with the government, write proposal for them, let them see the reasons why we need more hands in the system, that is ongoing. Two, we want to see if we can start upgrading our facilities so that basic requirement, equipment will be there, so we want to leverage on the benefit of the entre-position funds now, with due focus on primary care now. We will be able to strengthen the system now. **(KII, Male, PHC, Ibadan/2020).**

Routine programs are been set up in some health facilities to make women aware of cervical cancer but they are not permanent.

> No, but we are trying to, the programme we are trying to put up was to ensure this vaccination, and I don't think it is a larger scale now only as a programmatic approach to it. It is like a programme that comes, and go but what we should is a systematic vaccination that will be built into the system,

like a routine. As at today it is not available **(KII, Male, Doctor, Ibadan/2020).**

He further stated below that there is a set advocacy unit that advocates for women to go for CCS seldom.

> *We advocate for women to do their screening at least twice in a year (**KII, Male, Doctor, Ibadan/ 2020).***

On cost, some participants stated that lack of funds was the major issue in the uptake of cervical cancer screening. The fact that payment is made out of pocket wherein insurance is not effective yet, is another major challenge to uptake as reported by the discussant.

> If we have such initiative (cervical cancer screening) for free, people will go. But, if they request for money, people might find it difficult to go for the screening. The insurance system in Nigeria is poor. If it is for free, we will go for it. **(FGD, Male, Adult, Oyo West/2020).**

A free or subsidized screening will encourage women to go for cervical cancer screening as reported by a male adult

> If they bring such programme, we will allow our wives to go for the screening. But it must be free for them or if the money is just #2,000, that is not much then that is better. It is for our benefit. Also, if they go for screening, they might detect another illness, may God protect us. If it between 15,000 or 5,000, we can persuade our wives to go for it. But, if it is more than that, they might not come out **(FGD, Male, Adult, Oyo West/2020).**

Other discussants further reinstated that free screening and treatment will be advantageous, and welcomed by all, and sundry.

> If they come with a treatment, and money is not required, people will definitely go for it. If I see such, I can allow my wife to go for it **(FGD, Male, Adult, Oyo West/2020).**Some adduced non-uptake of CCS to distance: Then, if it is close to us, then people can go out for the screening. But, if it is around Ibadan, people will be reluctant to go for it **(FGD, Male, Adult, Oyo West/2020).**

Furthermore, the distance of screening centres is a major issue influencing uptake of cervical cancer screening.

> *There is the money factor. Second, the area which it is located matters if it is not far to the screening centre (**FGD, Male, Adult, Oyo West/2020).***

However, a participant talked about the level of bonding in a relationship for spousal support to enable a woman to partake in CCS

> It is due to lack of love. Because wherever love radiates, the husband will never ask you not to go for screening. But where there is love, he will be ready to support you. Also, if you are capable enough to fund yourself then you are good to go **(FGD, Male, Adult, Oyo West/2020).**

Corruption in the health system leading to extortion of patients was adduced by another participant during an FGD session:

> Then, the country we have our self. Let me say the economic situation of country. Someone who is yet to eat morning food or afternoon food, and they are told to go for a test, and all these, some of our nurses are being extortive, they are supposed to collect small amount of money or it is free of charge **(FGD, Male, Adult, Ibarapa North/2020).**

Poor distribution resources to the rural areas were described as a factor by a participant as excerpted here:

> *Ahh, there are lot of reasons. You know we are far away from the government*
> *(FGD, Male, Adult, Ibarapa North/2020).*

Challenges in service delivery for cervical cancer screening: There are some challenges related to service delivery of CCS mentioned by the respondents, and below are some of the challenges:

> Even the ones that are very close to them, there are something, some challenges they are having as well but the essential thing is this man power issue because people are retiring, and they didn't replace them so it has to be tackled from the federal to the state before the local government **(KII, Female, Adult, Kishi/2020).**
> You know we are primary health centre, like I said earlier, there are more or less challenges we face. Anyone we cannot handle; we refer them to the secondary level or the tertiary level. Even the so-called tertiary hospital, they do not have equipment. How many of those hospitals have the equipment but we do not have enough equipment, and we don't start what we cannot handle **(KII, Female, 50 years, Kishi/2020).**

Some of the key informants provided solutions to some of the challenges. A doctor said it is pertinent to have a laboratory in urban areas, and work is ongoing on this

> Most of our high volume primary centre, we want to ensure we have laboratory in those high volume centres so those simple test that can be done by them even during normal routine clinic. It is gradual process, we are working towards it **(KII, Male, Doctor, Ibadan/2020).**

Policy guidelines on cervical cancer screening are needed to be developed.

> *There is a process to develop a policy guideline on cervical screening. (**KII, Male, Doctor, Ibadan/2020**).*

Capacity buildings for health facilities are needed to be developed. Volunteers can help with the buildings, and erect the structure for the facilities.

> Not totally there because they took it away from them. That is why I said we are going to leverage on that, and create ownership, and own it on our own. So if we can see people to help us with capacity building, it will be like a routine everyone needs to know at least in high volume centre even if it is one per LGA, it will go a long way **(KII, Male, Doctor, Ibadan/2020).**

Health education is important as posited here so that people can know that cervical cancer is not a death sentence. Also, awareness creation about CC is pertinent in other to increase the awareness level of women in society.

> *We need to hype up on health education, and awareness creation so that people will know that it is not as terrible (**KII, Male, Doctor, Ibadan/2020**).*

Factors influencing uptake:There are so many reasons given that influences uptake of cervical cancer screening ranging from a free or low cost of screening, awareness or sensitization, short distance, positive test result, good attitude of health caregivers, well-equipped facilities, the expertise of the health caregivers short duration for the procedure the detailed is presented in table 4.12 of the quantitative data. The responses from qualitative data show a mixed feeling, some of the reasons highlighted were closeness of screening centre, free screening, lack of awareness or sensitization, shortage of manpower, sex of health care involved in the screening process. These are reported as follows;

> Then, if it is close to us, then people can go out for the screening. But, if it is around Ibadan, people will be reluctant to go for it **(FGD, Female, Adult, Oyo/2020).**
> I will allow her if we get the opportunity, and it is free. Some don't even have money to eat, and feed themselves. So, I will allow my wife, and inform others as well. **(FGD, Male, Adult, Oyo West/2020).**
> Just to add to what my colleague has said, the reason is that, there is no money. If they declare it free tomorrow, so many people will come out for the screening. But, if they know about it, they will mobilize people themselves to come out for the screen **(FGD, Male, Adult, Oyo/2020).**
> That is why people don't do screening. There is also no much awareness of detailed information. Then the child is delivered, the nurse who are close to

us, don't tell us. Then they just test us, and do not tell this is what is wrong **(FGD, Female, Adult, Ibarapa North/2020).**
There is not sensitization. Do you know some women won't know something that is wrong until they are unable to eat or give birth to children? So that is how it is. **(FGD, Male, Adult, Kishi/2020).**
Women who are involved in conducting this screening are not enough, so they think opening their vaginal for male doctor is a problem **(FGD, Male, Adult, Irepo/2020).**

4.4.4 Factors affecting utilization of cervical cancer screening

Respondents who had experienced Cervical Cancer Screening were asked for the factors that affected uptake of CCS based on their experiences. Table 4.11 revealed an association between socio-economic characteristics of respondents, utilization of CCS facilities.

Table 4:12: Association between social economic characteristics of respondents, and utilization of cervical cancer screening facilities

Summary of Chi square: Socio economic variable

Socio-Economic variable		Cervical Cancer-Screening				Chi-Square		
		Not affordable	Affordable	Very affordable	Total	X^2	df	P value
Age group	20 years, and below	1(25.0)	3(75.0)	0(0.0)	4(3.1)	10.402^a	10	.406
	21-30	8(19.5)	27(65.9)	6(14.6)	41(32)			
	31-40	10(27.0)	15(40.5)	12(32.4)	37(28.9)			
	41-50	10(32.3)	15(48.4)	6(19.4)	31(24.3)			
	51-60	2(15.4)	8(61.5)	3(23.1)	13(10.2)			
	61, and above	1(50.0)	0(0.0)	1(50.0)	2(1.6)			
Education	No formal education	9(39.1)	13(56.5)	1(4.3)	23(18)	10.852^a	6	0.093*
	Primary Education	6(33.3)	8(44.4)	4(22.2)	18(14.1)			
	Secondary education	10(27.0)	20(54.1)	7(18.9)	37(29)			
	Tertiary education	7(14.0)	27(54.0)	16(32.0)	50(39.1)			
Religion	Christianity	13(16.5)	44(55.7)	22(27.8)	79(61.7)	11.204^a	4	0.024**
	Islamic	17(40.5)	19(45.2)	6(14.3)	42(32.8)			
	African Traditional Religion	2(28.6)	5(71.4)	0(0.0)	7(5.5)			
Ethnicity	Yoruba	31(29.5)	50(47.6)	24(22.9)	105(82)	8.830^a	4	0.066*
	Igbo	1(4.5)	17(77.3)	4(18.2)	22(17.2)			
	Hausa	0(0.0)	1(100.0)	0(0.0)	1(0.8)			
Marital Status	Single	3(18.8)	12(75)	1(6.3)	16(12.5)	6.701^a	6	.349
	Married	25(25.8)	49(50.5)	23(23.7)	97(75.8)			
	Divorced	1(14.3)	5(71.4)	1(14.3)	7(5.5)			
	Widowed	3(37.5)	2(25)	3(37.5)	8(6.3)			
Employment	Self employed	12(27.9)	21(48.8)	10(23.3)	43(33.6)	10.274^a	8	.246
	Public Sector Worker	6(13.3)	27(60)	12(26.7)	45(35.2)			
	Private Sector Worker	4(22.2)	10(55.6)	4(22.2)	18(14.1)			
	Not employed	8(42.1)	9(47.4)	2(10.5)	19(14.8)			
	House Wife	2(66.7)	1(33.3)	0(0.0)	3(2.3)			
Income	#7,500	11(55)	8(40)	1(5)	20(15.6)	29.632^a	8	0.000***
	#15,000	10(32.3)	20(64.5)	1(3.2)	31(24.2)			
	#25,000	4(19)	8(38.1)	9(42.9)	21(16.4)			
	#35,000	5(14.7)	21(61.8)	8(23.5)	34(26.6)			
	#45,000	2(9.1)	11(50)	9(40.9)	22(17.2)			
Total		32	67	28	128(100)			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

The income of the respondents has shown to be highly significant with the utilization of cervical cancer screening facilities. 65% of the women who earn #7500, 16 of them precisely utilize the facilities more. With an increase in income of respondents, there is a decrease in the utilization of the facilities.

Peer group:The influence of peer, and friends was documented here:

> the impact they can take is that if some ones come to help, we should also go out to do it. Then no friend can tell me not to go. For example, when they brought HIV test, and I told my friend to let's go for the screening **(FGD, Female, Adult, Kishi/2020).**
> What I see is that, our community for anyone to have such a disease, some of her friends can make jest of her, and stigmatize her. So that is why people don't speak up on what is wrong with them **(FGD, Male, Adult, Ogbomoso North/2020).**

Perceived pain:A respondent has this to say about the perception of pain during cervical cancer screening.

> Okay, like my elder sister, there was one time that she, and her friend went for the test. According to her, she told me, it is kind of painful **(KII, Female, 28 years, Ibarapa North/2020).**
> Some people will say they don't like what they will insert in their private part because it is always painful **(IDI, Female, 45 years, Ibarapa North/2020).**

Perceived susceptibility:This is another variable from the health belief model, the perceived susceptibility to developing cervical cancer which equally influences uptake.

> Okay, I have not been screened because, probably I was just thinking there was no need for it since I do not have such disease or probably some symptoms of such diseases that is why I have not been screened. That is why I have not gone to the hospital for screening is because I don't have symptoms **(IDI, Female, 27 years, Ogbomoso North/2020).**
> Being a very young lady so I believe ladies in my age range, there should not be anything of such. I really want to believe that it is actually meant for older women, women in their late 40's about to reach menopause, and all that, so that is my own belief **(KII, Female, 28 years, Ibarapa North/2020).**

There are variables that influence women's uptake of CCS which was the focus of this section.

4.5 Women's Attitude towards Cervical Cancer Screening

4.5.1 Women's attitude towards cervical cancer screening

The study attempted to use the various responses of respondents on attitude towards CCS to classify. The responses of respondents on their attitudes were classified by adding the scores of the 7 items scale in the questionnaire. Average scores obtained were used to categorise respondents' attitudes towards cervical cancer screening. A percentage score <50.0% was categorised as negative attitude, >50.0% as positive attitude.

Figure 4.7 is the pie chart that shows the respondent's attitude to CCS. From the figure, 60.0% of the respondents have a negative attitude towards CCS while 40.0% of the respondents have a positive attitude towards cervical cancer screening.
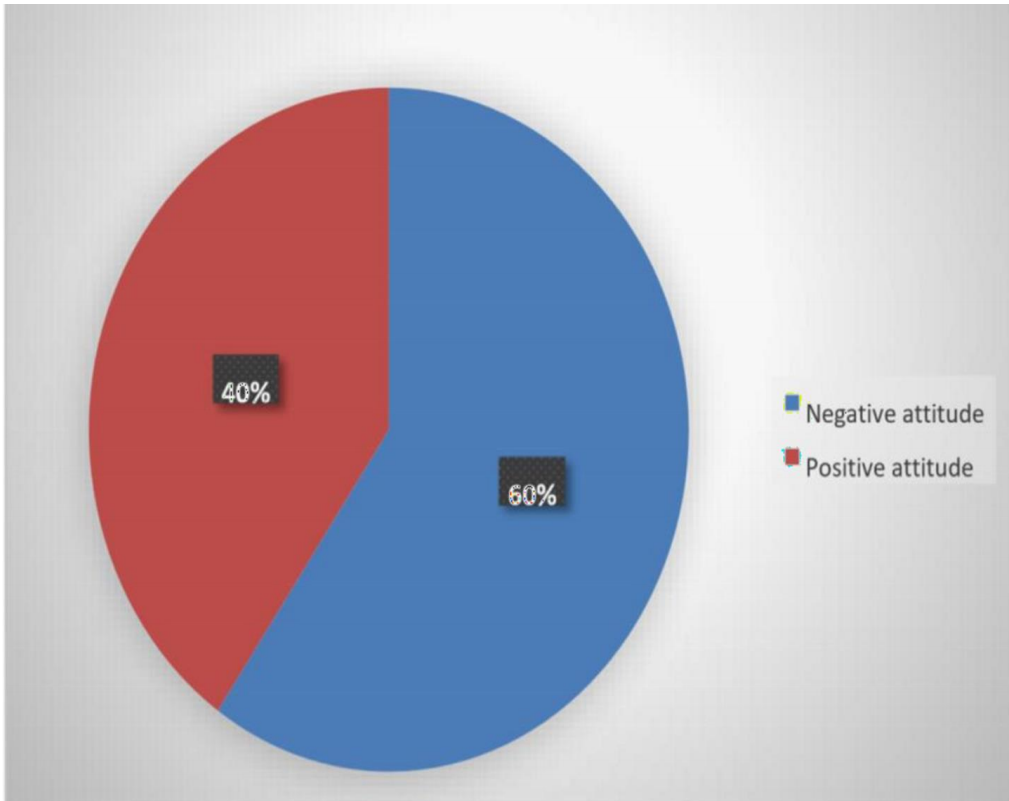
Fig. 4.6: Percentage distribution of respondent's attitude to cervical cancer screening

The attitude of respondents to the uptake of screening determines the outcome of uptake hence it is important to consider this relation to uptake.

4.5.2 Women's attitude in relation to their uptake of cervical cancer screening

From the table, majority (64.1%) of the respondents had negative attitude towards cervical cancer screening but were not yet screened. It is also imperative to note that respondents with a positive attitude towards cervical cancer screening but not yet screened constitutes more than two-thirds (62.2%) of the sampled population while respondents with a positive attitude towards CCS, and already screened were nearly one third (32.0%) of the respondents. Attitude did not significantly impact the uptake of CCS.

Table 4.13. Relationship between attitude of respondents to cervical cancer screening, and uptake of Cervical cancer screening

		Have you ever been screened for cervical cancer?			Asymp.Sig. (2 sided)		
		Unscreened	Screened	Total	Value	df	
Attitude towards CC screening	Negative attitude	154(64.1)	86(35.9)	240(68.0)	.164[a]	1	.685
	Positive attitude	70(62.2)	42(37.8)	112(32.0)			
Total		224	128	352(100.0)			

4.5.3 Women's attitude to CCS in relation to their knowledge about cervical cancer

There is a highly significant association between the attitude of respondents to cervical cancer screening and their knowledge about cervical cancer. From the table, the majority of the respondents who have a negative attitude to cervical cancer screening have average knowledge about cervical cancer. They constitute (53.6%) of the sample population. It is imperative to note also that (59.5%) of the respondents who have a positive attitude towards cervical cancer screening have high knowledge about cervical cancer.

Table 4.14. Relationship between attitude of respondents to cervical cancer screening, and knowledge about cervical cancer

| | | CCKNOWLEDGE | | | | | | |
		Low	Average	High	Total	Value	Df	Asymp. Sig. (2-sided)
CCSATTITUDE	Negative attitude	29(14.0)	112(53.6)	69(32.4)	210(59.7)	23.833[a]	2	.000
	Positive attitude	6(4.1)	52(36.4)	84(59.5)	142(40.3)			
Total		35	164	152	352(100.0)			

The attitude of participants was negative in the study population, some of the participants explained some altitudinal issues identified among the study population and this was reported as follows.

> *Some people don't know where to go, what they are in contact with, since it doesn't stop them from eating, and having sex, they do not believe they are sick till it is much* (**FGD, male, Kishi/2020**).

Women don't know where screening centres are located within the areas, coupled with the fact that the disease takes years before its start exhibiting the signs, and the symptoms lead to delaying in seeking care. This was revealed in the statement below from a discussant

> The next thing for one that is vulnerable to it, they should start the management they should not wait for anything. With the outcome of the result, the intervention should commence, and let the client know the reason why she should go for intervention immediately, there are ways you can tell the person, if you don't want to lose your life or you don't want another person to take care of the children... (**KII, Female, Irepo Local Government/2020**).

In some instances, women who are suffering from cervical cancer don't present themselves early for treatment until they are at the advanced stage of the disease this was an example from a female participants.

> So, ignorance is killing most of them. Especially this Kishi town, they don't believe in this orthodox, they prefer traditional, and that is why when they are pregnant, the issue of family planning should be put aside. When that is pregnant, the diplomatic appearance in the clinic, Mummy we have given birth. You will be the one taking care of them during pregnancy but when they want to give birth they don't come to the clinic. So if 89 registered, we might have 14 delivery (**KII, female, Kishi/2020**).

The general attitude of preference for traditional medicine is not limited to sufferers of cervical cancer but it extends even to other services like family planning, antenatal, intranatal, and post-natal services as reported by a female discussant

> When we were told to do the screening, you will be reluctant due to lack of funds. They did ask you to go for different test, and drug, what you are not capable of is what they will ask you to do. So just stay at your comfort zone for personal medications. Generally, it is nonchalant attitude (Ailakasi) (**KII, female, Kishi/2020**).

Specifically, the geographical distribution of medical resources, exposure to health information through media, employment opportunities, health insurance coverage, and women's sexual autonomy, as well as women's sexual autonomy, and education at the community level, all contribute to their screening behaviour.

4.6   Socio-cultural Determinants of Uptake of Cervical Cancer Screening

Some socio-cultural factors influenced the health-seeking behaviour of women. Some of these factors affected the household decision-making process. They reflected the power structure in the household. There are also cultural factors embedded in the community which determines people's health belief. Illnesses are culturally constructed. Women are restricted by societal perspectives of an ailment, and means of seeking cure or management. Women experiences challenges of stigmatisation and disclosure. There are religious prescriptions and proscriptions as regards the health-seeking behaviour of women. The study identified some perceptions about cervical cancer that was socio-culturally constructed which affected the knowledge of respondents, and participants. These were grouped, tabulated, and classified as presented in Table 4.14.

Table 4.15: Respondent's perceptions of Socio-cultural factors affecting uptake ofCervical Cancer Screening

Perceptions	Knowledge			
	Low	Average	High	Total
1. Belief on supernatural cause of CC	152(50.7)	68(22.3)	82(22.0)	301(100.0)
2. Spouse's Support to access CCS	103(34.3)	92(30.3)	107(35.3)	301(100.0)
3. Religious creeds	150(49.7)	93(30.7)	59(19.7)	301(100.0)
4. Screening is a sign of sexual promiscuity	114(38.0)	77(25.3)	111(36.7)	301(100.0)
5. 'Jejereenuonaileomo' is associated with prostitution	91(30.0)	79(26.0)	132(44.0)	301(100.0)

Table 4.15 shows that there is no significant association between socio-cultural norms of respondent to cervical cancer screening and their uptake of cervical cancer screening. A large number of respondents that have been screened for cervical cancer feel indifferent about the socio-cultural norms affecting uptake of CC. The same can be said for respondents that have not been screened for CC.

Table 4.16. Relationship between socio-cultural norms of respondents affecting

cervical cancer screening, and uptake of Cervical cancer screening

		Socio-cultural factors						Asymp. Sig. (2-sided)
		No	Indifferent	Yes	Total	Value	Df	
Have you ever been screened for cervical cancer?	No	54(27.2)	107(53.8)	38(18.9)	198(56.3)	4.102[a]	2	0.129
	Yes	27(17.6)	90(58.8)	36(23.7)	154(43.8)			
Total		81	197	74	352(100)			

4.7 Accessibility to Facility for Cervical Cancer Screening

Generally speaking, access to cervical cancer screening among other tests, and medical care is very poor, past studies revealed that screening centres are majorly in private centres, the situation in the rural settings is even worst. Respondents who had experienced Cervical Cancer Screening were asked for the factors that affected uptake of CCS based on their experiences. Table 4.16shows factors affecting utilization of CCS.

Table 4.17: Factors affecting utilization of cervical cancer screening

Factors	Frequency (n=128)	Percentage
Distance to residence		
(a) Below 1Km	19	14.8
(b) 1 - 5km	38	29.9
(c) 6 – 10 km	30	23.3
© Over 10 km	41	32
Cost of transportation		
Nil	12	8.9
N50-N100	36	28.2
N101 – N200	33	26.1
Above N200	47	36.8
Availability of screening equipment's in public hospitals		
(a) Available	65	51
(b) Unavailable	63	49
Availability of screening equipment's in private hospitals		
(a) Available	71	55.3
(b) Unavailable	57	44.7
Satisfaction with services at CCS centre		
(a) Satisfied	102	79.5
(b) Not-satisfied	26	20.5
Functionality of equipment's		
(a) Functional	111	86.5
(b) Not functional	17	13.5
Duration of Screening		
(a) Less than 30 minutes	64	50.3
(b) 30 minutes	46	36.1
(c) Above 30 minutes	18	13.6
Outreach for CCS by health workers		
(a) Organised	56	44.1
(b) Not organised	72	55.9
Regularity ofoutreachprogramme		
(a) Never	2	2
(b) Rarely	70	55
(c) Often	49	38
(d) Very often	7	5
Overall rating of expertise of Health workers		
(a) Poor	18	14.1
(b) Fair	8	6.2
(c)Moderate	10	7.8
(d) Good	74	57.8
(e)Excellent	18	14.1

Table 4:18: Association between social economic characteristics of respondents, and utilisation of cervical cancer screening facilities

Summary of Chi square: Socio economic variable (n=32)

Socio-Economic variable		Cervical Cancer-Screening				Chi-Square		
		Not affordable	Affordable	Very affordable	Total	X^2	Df	P value
Age group	20 years, and below	1(25.0)	3(75.0)	0(0.0)	4(3.1)	10.402^a	10	.406
	21-30	8(19.5)	27(65.9)	6(14.6)	41(32)			
	31-40	10(27.0)	15(40.5)	12(32.4)	37(28.9)			
	41-50	10(32.3)	15(48.4)	6(19.4)	31(24.3)			
	51-60	2(15.4)	8(61.5)	3(23.1)	13(10.2)			
	61, and above	1(50.0)	0(0.0)	1(50.0)	2(1.6)			
Education	No formal education	9(39.1)	13(56.5)	1(4.3)	23(18)	10.852^a	6	0.093*
	Primary Education	6(33.3)	8(44.4)	4(22.2)	18(14.1)			
	Secondary education	10(27.0)	20(54.1)	7(18.9)	37(29)			
	Tertiary education	7(14.0)	27(54.0)	16(32.0)	50(39.1)			
Religion	Christianity	13(16.5)	44(55.7)	22(27.8)	79(61.7)	11.204^a	4	0.024**
	Islamic	17(40.5)	19(45.2)	6(14.3)	42(32.8)			
	African Traditional Religion	2(28.6)	5(71.4)	0(0.0)	7(5.5)			
Ethnicity	Yoruba	31(29.5)	50(47.6)	24(22.9)	105(82)	8.830^a	4	0.066*
	Igbo	1(4.5)	17(77.3)	4(18.2)	22(17.2)			
	Hausa	0(0.0)	1(100.0)	0(0.0)	1(0.8)			
Marital Status	Single	3(18.8)	12(75)	1(6.3)	16(12.5)	6.701^a	6	.349
	Married	25(25.8)	49(50.5)	23(23.7)	97(75.8)			
	Divorced	1(14.3)	5(71.4)	1(14.3)	7(5.5)			
	Widowed	3(37.5)	2(25)	3(37.5)	8(6.3)			
Employment	Self employed	12(27.9)	21(48.8)	10(23.3)	43(33.6)	10.274^a	8	.246
	Public Sector Worker	6(13.3)	27(60)	12(26.7)	45(35.2)			
	Private Sector Worker	4(22.2)	10(55.6)	4(22.2)	18(14.1)			
	Not employed	8(42.1)	9(47.4)	2(10.5)	19(14.8)			
	House Wife	2(66.7)	1(33.3)	0(0.0)	3(2.3)			
Income	#7,500	11(55)	8(40)	1(5)	20(15.6)	29.632^a	8	0.000***
	#15,000	10(32.3)	20(64.5)	1(3.2)	31(24.2)			
	#25,000	4(19)	8(38.1)	9(42.9)	21(16.4)			
	#35,000	5(14.7)	21(61.8)	8(23.5)	34(26.6)			
	#45,000	2(9.1)	11(50)	9(40.9)	22(17.2)			

Notes: ***=p<0.01; **=p<0.05; *=p<0.1

From Table 4.17, the result shows there is no significant association between respondents' age group, education status, and the utilization of cervical cancer screening centres. There is a significant association between the religion of respondents and the utilization of CCS facilities. The table shows that (42%) of the women who practice Islam utilize CC facilities more followed by Christians. Other religions have very low turned up in the utilization of cervical cancer screening facilities. The ethnicity of the respondents has shown to be insignificant with the utilization of cervical cancer screening facilities. There is absolutely no significant association between marital status, employment, age group, and the utilization of cervical cancer screening facilities. The income of the respondents has shown to be highly significant with the utilization of cervical cancer screening facilities. (65%) of the women who earn #7500, 16 of them precisely utilize the facilities more. With an increase in income of the respondents there is a decrease in the utilization of the facilities. Religious institutions have supported women to access uptake of screening as was reported below

> For example, those who contacted me now, they can create awareness among the Imams, and pastors by explaining the importance of this screening to women. Then, they can inform the congregation about. Then, anyone who is interested, and understands how important it is, they would go for the screening **(IDI/ Female, 25yrs, Oyo West Local/2020).**
> We thank God. At CAN in Irepo, if we didn't hear a broadcast, we won't work on it. Right now, there is an on-going work. We went to all churches to pray, and we deliberately informed them to tell their members to go out for injection that is being announced by health experts. So, no one is to run away from anyone. I told my members myself, and, we'd call all elders from churches in different areas so they can talk to their members to come out for screening. Because health is wealth, and without good health, we can't do anything **(IDI/ Male, 39Years, Religious Leaders, Irepo Local Government/2020).**

Some factors have been identified to be responsible for non-uptake. One respondent revealed this in Ibarapa North Local Government.

> Firstly, lack of facilities, and equipment. Number two, we do not have enough medical practitioners. Third, there are no seminar, and awareness on how people would go about it. Then our government does not bother about our environment **(FGD/Male Adult/ Ibarapa North/2020).**

Other issues surrounding uptake are about the politics, and corruption, disclosure of results of the screening to women after the screening.

At the end of the day, because of politics behind it, they were asking us to pay something. From my own purse it is not possible, and initially, the local government paid them some money. So, we the health workers we thought if you can't give us the result, so be it **(IDI/ Female 38, Oyo West LocalGovernment/2020).**

So, nobody went for the result. Those women that partook in the something could not have their result. I think if you still create such awareness again, they may be reluctant to come out again they will tell you that those ones they have done, they are yet to see it **(IDI/ Female 38, Oyo West LocalGovernment/2020).**

Some participants cannot identify the correct timing nor does the actual cost of screening as reiterated by a participant below this have implications for uptake;

They told us that if one are chanced one can come for the test or screening within five (5) years. But some, who are chanced, can come yearly because some do it yearly but that time, the privilege we had was that the federal government sponsored it. Because some who it earlier, said they did it for 35,000 naira, some said 40,000 naira, for those who heard it before us too **(IDI, Female, 59 years, Ogbomoso/2020).**

Evidence from respondents below also asserted many of the respondent's belief that if waiting for time for screening is shorter, and cost is free, many women will go for it. If the distance to screening centres is short this will also be motivating factors as well.

You see, choosing just a day for the screening delays people, and it wastes time a lot. Because when they say they are coming to Oyo west local government, definitely, they will use just a day to attend to people. Some will just sit, while some would have taken a number to be attended to. But, if they can cite a place that you can do it at any time of the day, they will attend to you, then people will come out, but they have known that they will come, and if I don't go early, there won't be time to do it. So, there is opportunity for people even if it just few days in a week, then it is better. **(KII, Female, 38 years, Oyo West/2020).**

Another challenge that relates to access is the inequitable distribution of health facilities across the state.

So, tell him that in my own area at Ward 1, Alekuso, we do not have any maternity here. Yes ma, we don't have anyone. Imagine, a woman was in labour in the midnight, we had to take her to Alenle, they said the doctor wasn't around, we carried her to another maternity, they have locked the gate. So, we had to take her to Adeoyo maternity, thank for favour which has caused the woman to survive **(IDI, Male, 54 years, Ibadan Southwest/2020).** Assuming we had maternity at Alekuso, they'd have given her treatment, and, if they can't handle her, they'd refer us to Adeoyo maternity. But they'd have given her first aid. In the past 4 or 5 days, an accident occurred at Alekuso close to our area which caused a big injury, so we had to get a cab to take him to Adeoyo, we don't even know him. So, from Adeoyo, we were referred to UCH. You know, assuming we had a maternity at Alekuso here; the nurse

would have given him first treatment **(IDI, Male, 54 years, Ibadan Southwest/2020).**
We are far from where the hospitals here. If you carry out your research well, you will notice that they are many in the village than those in the cities. There is nothing stopping them to take care of themselves in the cities because so many families have family doctors that the doctor would come home to treat them **(FGD, Male, Adult, Ibarapa North/2020).**

The focus of all stakeholders is to provide quality healthcare to women in all settings particularly the rural communities where quality health care is scarce.

4.7.1 Multivariate analysis of the relationship between socio-economic factors, modified by the health seeking behaviour, and ascertain interactions with specific variables to explain the moderating influence of cultural norms on uptake of cervical screening among women

Multivariate analysis was used to determine the nature, and the strength of some of the socio-economic factors, such as education, age, average monthly income, and marital status as a control to the health-seeking behaviour generated from the health belief model (HBM), such as cervical cancer knowledge, cervical cancer risk perception, cervical cancer perception of benefit, cervical cancer perception of relevance.Furthermore, some interaction terms were considered to ascertain some moderation or some negative impact cultural norms had on knowledge, risk perception, and perception of benefit respectively.

There is a significant relationship between uptake of cervical cancer screening and socioeconomic variables. Specifically, the P-value of education with the uptake of screening reflects a (99%) confidence interval, while the P-value to age is a (95%) confidence interval where P value < 0.05. The P-value of average monthly income and marital status is (99%) confidence interval respectively. Educational average monthly income had a negative inputwhile marital status positively influence the uptake of cervical cancer screening at (99%) confidence interval, whereas age equally had a positive influence at (95%) confidence interval.

Table 4.19:Multi linear regression showing the sociocultural factors predicting the uptake of CCS

Variables	Unstandardized coefficients		Standardised coefficients		
	B	**Std. error**	**Beta**	**T**	**Sig.**
Constant	0.309	0.043		7.159	0
Education	-0.03	0.01	-0.096	-2.906	0.004
Age	0.022	0.009	0.08	2.285	0.023
Average monthly income	-2.97E-06	0	-0.119	-3.562	0
Marital status binary a. Dependent variable: have you ever been screened for cervical cancer?	0.093	0.023	0.138	4.081	0
R R square Adj. R square F Df	.212[a] .045 .041 10.898 4, 929				

Significant at $P < 0.05$

The table shows the multi linear regression of the sociocultural factors predicting the uptake of CCS. The table shows that sociocultural factors; education, age, average monthly income jointly predicted the uptake of cervical cancer screening. The R value is 0.21, the R squared value is 0.05, and the adjusted R squared value is 0.04. Also, F is 10.898 and total of df is 4, 929.

In the analysis model, the age of respondents, and marital status had positive significant associations with the uptake of cervical cancer screening.Women have the likelihood of the uptake of cervical cancer screening than their single counterparts. Respondent age equally influences their uptake, the majority of older respondents that are married go for screening, educational status, and average monthly income although had strong association but a negative value with the predictive value of the ANOVA taken to be just (4.1%). Educational status and average monthly income may not necessarily influence uptake in the presence of some serious reasons for non-uptake like belief in divine protection, pain during the procedure, embracement, lack of access, fear of positive result may hinder uptake of cervical cancer screening in the presence of either secondary or tertiary education as well as high monthly income, other socio cultural factors can contribute to non-uptake.

Table 4.20: Multi linear regression showing the knowledge of CC predicting the uptake of CCS

Variables	Unstandardized coefficients		Standardised coefficients		
	B	Std. error	Beta	T	Sig.
Constant	0.459	0.067		6.81	0
Education	-0.032	0.012	-0.103	-2.747	0.006
Age	0.019	0.009	0.071	2.095	0.036
Average monthly income	-1.25E-06	0	-0.05	-1.461	0.144
Marital status binary	0.09	0.023	0.134	4	0
CCKNOWLEDGE	0.001	0.002	0.021	0.409	0.683
CC_risk_perception	0.01	0.004	0.206	2.742	0.006
CC_per_benefit	0.031	0.005	0.539	6.587	0
CC_per_relevance	-0.01	0.005	-0.12	-2.015	0.044
CC_per_severity	-0.073	0.009	-0.017	-7.894	0
Culture	-0.004	0.002	-0.063	-1.731	0.084
a. Dependent variable: have you ever been screened for cervical cancer?					
R R square Adj. R square F Df	.381[a] .145 .136 15.678 933				

Significant at P < 0.05

The table shows the multi linear regression of the knowledge of CC predicting the uptake of CCS. The table shows that the knowledge of CC has no significant relationship with the uptake of CCS. However, other factors like the perceived benefitof CC and CC risk perceptionindependently contributed to CCS uptake with a β value of 0.54 and 0.21 while perceived severity, and CC perceived relevance has a negative significant relationship with the uptake of CCS with a β value of -0.02, 0.21, -0.12. The R value is 0.38, the R squared value is 0.15, and the adjusted R squared value is 0.14. Also, F is 15.678 and total of df is 933.

On Cervical Cancer perception with a coefficient of 0.206, and a P-value of 0.006 reflecting a highly significant value for risk perception. Furthermore, the coefficient of Cervical Cancer perception of benefits is 0539 with a P-value of 0.000 showing a higher significant value at the level. On the other hand, a coefficient of -0.120 of Cervical Cancer Knowledge perception at a P-value of 0.044 shows a negative impact but a significant P value level; the coefficient of cervical cancer perceived severity is -0.548, and P-value of 0.000 which cultural norms have a coefficient of -0.063 but a P value of 0.084 P-value for cervical cancer perception of severity is highly significant respectively.

Furthermore, with the inclusion of six(6) variables: Knowledge of cervical cancer, perceived susceptibility, cervical cancer perceived relevance, cervical cancer risk perception, cervical cancer benefit perception, and cultural norms. There was a slight improvement though still negative from the educational status, and income at model 2, the predictive powers significantly increase from (4.1% to 13.6%) as well. The detailed regression analysis revealed that education significantly influences uptake though at a negative value. Whereas age and marital status significantly influence the uptake of cervical cancer screening. Income at model 2 did not have a significant association with the uptake of cervical cancer screening. Summarily, at model 2. Income did not have a significant association with the uptake of cervical cancer screening, also knowledge of cervical cancer screening is not significant association to the uptake of cervical cancer screening, while the perception of severity and cultural norms harmed the uptake of cervical cancer screening but with a strong association to the uptake of cervical cancer screening though negative impact at model 2. Cervical cancer risk perception, CCS perception of benefit, and perception of relevance all strongly influence the uptake of cervical cancer screening.

Table 4.21:Multi linear regression showingculture predicting the uptake of CCS

Variables	Unstandardized coefficients		Standardised coefficients		
	B	Std. error	Beta	T	Sig.
(Constant)	0.661	0.184		3.585	0
Education	-0.031	0.012	-0.102	-2.716	0.007
Age	0.019	0.009	0.071	2.099	0.036
Average Monthly Income	-1.18E-06	0	-0.047	-1.384	0.167
MARSTATBINARY	0.092	0.023	0.136	4.038	0
CCKNOWLEDGE	0.016	0.005	0.364	2.895	0.004
CCKRISKSPERC	-0.003	0.007	-0.055	-0.367	0.714
CCSPERCBEN	0.015	0.012	0.265	1.238	0.216
CCKPERC	-0.011	0.005	-0.128	-2.142	0.032
CCPERCS	-0.072	0.009	-0.545	-7.852	0
CULTURE	-0.013	0.008	-0.232	-1.544	0.123
Knowledge	-0.001	0	-0.666	-3.028	0.00
Risk_culture	0.001	0	0.53	1.95	0.052
Benefit *and* Culture	0.001	0.001	0.418	1.306	0.192
R R square Adj. R square F Df	.381[a] .145 .136 15.678 933				

Significant at P < 0.05

From the model above, three (3) variables were added on interaction terms to make up thirteen (13) variables. Knowledge in association with culture; risk by culture, and benefit by culture. Knowledge is a significant negative moderator of cultural norms,

but risk perception is a positive moderator of cultural norms. Knowledge is a moderator of cultural norms; knowledge worsens the impact of cultural norms on uptake of cervical cancer screening from -0.232 to -0.666. In the same vein, risk perception is a positive moderator of cultural norms from-0.232 to 0.530 while the perception of benefit has an effective moderator of cultural norms with a coefficient of 0.418 which is not significant. On the whole, there is a further improvement from 13.6% in model 2 to 14.3% in model 3 show a higher power of predictive power at the third model.

Table 4.22: Factors influencing uptake of cervical cancer screening

Variables Model 1		Model 2	Model 3
Education -0.096***		-0.103***	-0.102***
Age 0.080**		0.071**	0.071**
Average Monthly Income	-0.119***	-0.050	-0.047
Marital status	0.138***	0.134***	0.136***
CCKnowledge		0.021	0.364***
CCKrisksperc		0.206***	-0.055
CCSpercben		0.539***	0.265
CCKperc		-0.120**	-0.128**
CCpercs		-0.548***	-0.545***
Cultural-norms		-0.063*	-0.232
Knowl_By_Cultural-norms			-0.666***
Risk_By_Cultural-norms			0.530*
Benefit_By_Cultural-norms			0.418
Model Summary			
Number of observations	934	934	934
R-Square	0.045	0.145	0.155
Adjusted R-Square	0.041	0.136	0.143

The table above is a summary of the multi linear regression of the factors influencing the uptake of CCS. There are 13 variables of interest here with other 10 variables to measure the impact of the concerned variable with the control which is (socio-economic) when the other 7 variables of interest are modifying at model 2, and 3 other variables are modifying at model 3. The coefficient of education is -0.102 with P-value of 0.007, Age is 0.071 with P-value of 0.036, average monthly income is -0.047 with P-value 0.167 while marital status coefficients are 0.136 with P-value 0.000, cervical cancer knowledge is 0.364 with P-value 0.004, cervical cancer risk perception is -0.055 with a P-value of 0.714, cervical cancer screening perceived benefits are 0.265 with P-value 0.216, whereas cervical cancer perceived susceptibility is 0.128 with a P-value of 0.032, cervical cancer perceived severity is 0.545 with a P-value of 0.000. Summarily, the three models are further explained in the table below

4.8. Misconception surrounding awareness of cervical cancer, and screening

Generally, awareness about the disease from the qualitative findings seemed to be that, cervical cancer affects women, although there were some misconceptions about the disease among the participants. Yoruba's belief, and refers to cervical cancer, as jejereenuileomo" a good number of respondents are aware or familiar with the cancer of the breast which is the commonest cancer affecting women but they seem not too familiar with cervical cancer.

> They call it "aisanjejere" here (IDI, Female, 45, Ibarapa North/2020).
> People are not well oriented about it... That is just the mentality people are having about it. Reasons more women are not coming out for it, I think. (IDI, Female, Adult, Ibadan South West/2020).
> The very first thing I think is more awareness because I don't really think people are more aware about it. So, awareness on social media, going to market, churches, mosque, and things like that **(IDI, Female, 27, Ogbomoso/2020).**

The level of awareness is low among the study population, and that is a major reason why women are not eager to go for screening. A woman has this to say from one of the local governments. Interestingly some religious leaders are not aware of cervical cancer, no wonder from the quantitative data, a fewer percentage got information from religious institutions. A clergyman from a location has this response.

Yeah, the only thing I heard about cancer is that it is of different kind but the common one is breast cancer. But, that of cervical cancer is not as common as the other ones (IDI, Male, 54, Ibarapa North/2020).

A couple of other respondents however have misconceptions about cervical cancer, some emerging names in the study area revealing the women's misconception are "*loyiloyi, kokoroinueje, jedijedi,* and *eda*", some others equally categorise uncleanness as a cause of cervical cancer. Some of their responses are stated below:

> They call it "loyiloyi", you know they will remove it. They call it "loyiloyi". When they want to poo, the thing will come out **(IDI, Female, 27years, Ibarapa North/2020).**
> Here, they call it "kokoroinueje" some people call it "eda" **(IDI, Female, 53, Ibarapa North/2020).**
> Yes ma, it will remove. It will be like "jedijedi" coming out of the buttocks. It will remove from the private part, they call "loyiloyi" ma**. (IDI, Female, 27, Ibarapa North/2020).**
> Some of them are not clean enough. Some people might not have their bathe in two or three days, and, I do tell them that women have lot of odours in their body system. So, it is necessary to take care of ourselves. May God help us because cleanliness is next to godliness. When they are clean, they'd avoid this disease**. (IDI, Female, 62, Ibadan South West/2020).**

A community leader from Ogbomosho posited that cervical cancer can be contracted from sleeping with different men.

> There are other causes. Infidelity is one, if one woman sleeps with many men. Also, contact diseases from men. Late child birth cannot cause cervical cancer. Of course, there are different men out there, and, people have diseases in their body. No one will voice out to you that this is my condition. When they have sexual intercourse, it can lead to other diseases in the body. **(IDI, Female, Community leader, Ogbomosho/2020).**

Early diagnosis is also very important in detecting cervical cancer as reiterated by the community leader from Ogbomosho

> The best thing is to go to the hospital. Left to me, it should be specialist hospital where they'd have experienced doctors pertaining to such sickness. Also, such individual should not wait till it is become a big issue. Once the symptoms are detected, she should go to the hospital because prevention is better that cure. **(IDI, Female, Community leader, Ogbomosho/2020).**

Another community leader from Ibadan Southwest reiterated that cervical cancer is known to be the devil's handwork and that women are usually being possessed with it.

Before the modern days, it is most likely possessed by people. They may say, it is a woman that possessed her with it. Recently, they have been explaining to us that it is a disease which can be cured. If we follow our mothers, they may say it is Lekan mothers that possessed her with the disease. So, we have been told that it is not like that, that there are test they can do to detect, and cure it.These are the reasons God told them to come to us so we can lead them to the hospital where they can be cures. Those who can stand up foo, and, after using the drug for 4 to 6 months, they can stand to go take the drug themselves. You know all these types they can say someone is behind the problem. **(IDI, Male, Community leader, Ibadan Southwest/2020).**

It is also known that widowhood inheritance is still in practice in some parts of Oyo state but youths nowadays won't even consider it. It is fading away gradually.

Well, it is not common again. Even the small wife, and the main wife would have disagree to such behaviour. They will have taught them outside. In fact, I have been lured with such behaviour but I said no, let me just take care of her own together. Truly, when the husband was alive, he wasn't ready to take of her, we do it together. Now that he is dead, let it be general that we will take care of them together. Children of nowadays won't agree to that again. **(IDI, Male, Community leader, Ibadan Southwest/2020).**

Furthermore, a community leader gave insights that a woman is vulnerable to having multiple diseases depending on the number of men she has been intimate with.

Well, the elders do say a proverb, "wherever we fetch, the water doesn't get dry". If a woman is greedy, and doesn't keep herself, if 10 men sleep with her, she has 10 diseases already. Then, plus her own disease, that is 11 already which is why it is very bad for a woman to fornicate. When she is married, she should be contented with her husband **(IDI, Male, Community leader, Ibadan Southwest/2020).**

He further stated that the forefathers have a special way of managing diseases in the olden days. The use of herbs is effective in curing diseases, he stipulated.

Ma, we have o. we have the herbs we do, and there are some soaps they use so it will healed. Our fore fathers then, they use leaves, and herbs to cure all diseases. But now a days, they sue tablet, and all sort of things. That is why we think that, because we don't use the previous herbs, it is affecting so many people. Then, when pregnant wakes up in the mornings, there is a special herb for her. If she doesn't do anything, there is special herb for her too. But, we don't follow all those things anymore which has opened the door for so many diseases. **(IDI, Male, Community leader, Ibadan Southwest/2020).**

The usage of herbs serves as one of how a woman can prevent herself from contracting cervical cancer or other diseases as the case may be.

You see all those, we are to screening for all diseases. First, when a woman wakes up, she will check every part of her body, and use the necessary herb

that is how to avoid any type of diseases. Either "*agboiletutu* or *agboiba* or *agbokokoro*," she should every herbs dealing with diseases. When we were young, our fathers will wake us up very early to use some herbs dealing with the health **(IDI, Male, Community leader, Ibadan Southwest/2020).**

Traditional birth attendance has this to say about cervical cancer, the misconception of cervical cancer with sexually transmitted diseases among the respondents is another serious issue of concern especially among community leaders who should champion the course of reducing the prevalence, and prevention in our community.

Apparently, from the above narration the level of awareness is low with some misconceptions, this is maybe a strong reason why uptake of cervical cancer screening is low in the study population based on previous studies, and literature, improving the level of awareness is central to improved uptake with its resultant reduction in morbidity, and mortality of cervical cancer among women.

4.8.1 Cultural factors impinging on uptake of CCS

Socio-cultural factors have influenced the uptake of cervical cancer screening. Although society is changing, some negative cultural factors like widowhood inheritance, polygamy tend to encourage the spread of the Human Papilloma Virus (HPV) among wives in a family. Patriarch is another major issue, the power relation in the home, the decision-making power in the household, the health-seeking behaviour, the available budget for health, and nutrition, and the choices of health care facilities are some of the issues that have been identified to influence uptake in the study population. Although culture is changing, some negative cultural values, superstition, myths seem to be facing out gradually as the populace are hang influenced by a result of education, engagement with occupation, socialization, and because the world is global in terms of technology as reported by the participants.

Some qualitative responses expatiated on these perceptions: The World is changing, some beliefs and cultural heritage both good, and evil are fast disappearing, and they are being replaced by modern ones, hence nowadays, widows' inheritance is fast disappearing this was reported by a male participant below;

> You see, we thank God for civilization. People no longer practice the act of "*oposusu*" in the present world. No one wants to take the elder brother's wife anymore. Is it the younger brother who had done his court wedding or

> traditional wedding or Muslim wedding or church wedding with another woman before the elder brother died, is he the one that will now take the elder brother's wife? (**IDI/Male Traditional Religious Leaders, 54Years, Ibadan South West/2020**).
>
> They will explain to her that they will just take the responsibility of the children, and tell the wife that it is her responsibility too. So, there is civilization now. However, in the olden days, they do such (**IDI/Male Traditional Religious Leaders, 54Years, Ibadan South West/2020**).

Educational empowerment of the womenfolk has successfully dispelled shyness in the discussion of issues that borders on the reproductive system, private parts, and other related issues.

> Hmm, the culture is influencing a bit. Not really because nowadays especially the century we are, most women are more educated. Not like in those days that you hardly talk to a woman about her private part. But nowadays, women are more educated about themselves so the culture or what so ever is not really affecting that much. Inability to speak about private part is considered in previous literature (**IDI, Female, Adult Ibadan South West/2020**).

There is a common misconception about the cause of cervical cancer, which is common and presented by a male respondent from Oyo west local Government. Some consider cervical cancer as an attack from the enemy. This misconception can negatively affect the uptake of screening among women.

> *Yoruba people believe that it is an attack. That is what I know ma*(**FGD, Male, Oyo West Local Government/2020**).

On spousal support, women shared different experiences. Some claimed they lacked support from their husbands while a few stated they could stand on their own to finance their healthcare because to them it was a survival strategy. Some of these views are presented thus:

> Some people's husband won't allow their wife to do the screening but my own husband oo, once they hear it in school, and he comes, he says oyaaaa, let's go we have a place to go (**IDI, Female, Adult, Ogbomoso, North/2020**).
>
> Like we know, we are all Yoruba, and we were made to understand that we must bow, and respect our elderly ones. Also, the husband is the head of the home, and the wife. So, any wife who accepts that the husband is the head; he must inform her husband no matter the response of the husband. Then, the husband too must allow her wife to go for the screening as well. So, we need your help here ma to make this known so our women can come out (**FGD, Male, Adult, Oyo West/2020**).

Decision-making power in the household was majorly influenced by the patriarchal nature of our society hence responsible women still take permission on things that border on their health generally inclusive of this of course was cervical cancer screening from their spouses. A participant reported as follows;

> *Our wives must take permission, and inform us about their movement (**FGD, Male, Adult, Oyo West/2020**).*

Illiteracy and poverty have been strongly associated with uptake of cervical cancer screening.

> *Some people, and illiterate, and some lack of money did not allow them to know what to do, so when it has gone wrong that is when they will be like they didn't know it will turn out like this (**IDI, Female, Adult, Ogbomoso, North/2020**).*

The participant reiterated the fact that Cervical Cancer affects the rich, and poor, so, information about it is important.

> So that is what we hear in the past years, so when such a thing as this could killed those powerful ones, you know what we are about to talk about is very serious. So, people should be chanced to know more about it **(FGD, Male Elderly, Irepo/2020).**

Male involvement has been identified as crucial in the management of cervical cancer as reported by this participant.

> Yes o, to give them the consent to do it. It will surely, because you can never rule out that one, but I think everything is changing. So many women are taking responsibility of their own health. We can't rule that out but I am telling you if the awareness is there, no man would want to hear such **(FGD, Male Elderly, Irepo/2020).**

It was further reported that male involvement, sensitization on awareness, and uptake of screening will be a breakthrough in cervical cancer prevention strategies stated below by an informant from Oyo West.

> In fact, if we look at the issue of family planning, some would have done it, and the husband would request that they remove it. The health worker will request for reasons for removal now, I though you just did it. She would respond that my husband asked me to remove it. So, we can't rule such out,

But I believe if that awareness is enough even if it at the male side, some of them can tell their wife at home **(KII, Female, 28yrs, Oyo west/2020).**

Women should also educate their spouses about cervical cancer as reported by a participant below;

*There are many impacts ma. Once the wife knows about the cervical cancer, it is very good for her to explain to her husband. Then, he is supposed to support her so she can go for the screening **(IDI, Female, 25years, Oyo West/2020).***

However, a woman opined on the ability of women to take some health decisions if they perceived the severity and possible loss:

It can, and it may not because we women know how to go about our things, I believe. It is what you want your husband to know that he will know. We women if we want really want to do something, and out husband is not interested, and we know it is for our own good, (70%) of women know how to go about it **(IDI, Female, Adult, Ibadan South West/2020).**

Women gradually are developing in their decision making power, they are becoming strategic in this respect as stated below;

I am just citing an example like someone calls you to a revival that we are mainly praying for our children, and the husband say, I don't want my wife to go about o. As a woman, you know how to go about that to achieve that just to pray for your children, So, there are (70%) of women that can do that. Men are father of the world; I am the one that gave birth to my children. I think (70%) of women will know how to go about it without the consent of their husband **(IDI, Female, Adult, Ibadan South West/2020).**

Healthy eating habit goes a long way in the prevention of many non-communicable diseases, so it is important in the case of CC hence this is the contribution of an informant as stated here.

*Then there are some foods you can be taking. Local fruit you can take to prevent it but the essential thing **(KII, Female, Nurse, Irepo/2020).***

Proper, and prompt management of STD is of utmost importance if morbidity and mortality of CC will be reduced because ninety-nine percent of cervical cancer is caused by the human papillomavirus which is also a sexually transmitted infection.

If you feel like you are having those STD, there should be prompt intervention,
you should not manage it yourself, seek the appropriate intervention, and let it
be treated once, and that will be the end **(KII, Female, Nurse, Irepo/2020).**

It is very necessary to have appropriate data to form the baseline for the prevalence rate of CC in Oyo State as reported by one of the stakeholders at the state PHC board, and the exert is reported below.

> We have divergent base line studies or information as far as the prevalence cervical cancer in our community, and that is what we have been trying to do to have much more computerized information on it., and the only way we can do that is awareness creation among the women, and researcher like you to come to the field, and be able to do a kind of cross-sectional study to ascertain on what is the likely prevalence **(KII, Male, Doctor, Ibadan/2020).**

Early detection is pertinent in the prevention of Cervical Cancer so the struggle continues. Inspection of the body is also very crucial as reported below by a key informant.

> Because cervical cancer is highly preventable if you can have early detection. Early detection in the sense that, if you can have some changes which you can notice in the cervix of the woman, and that can be done with simple methodology by doing a kind of steaming method, and visualisation. Visual assessment after steaming can actually give away an abnormal cell grown on the cervix of a woman. Those are the way we try to asses any one that is at risk of developing it, and take some preventive measures. Like management for it, and it is very simple as well. As simple as the assessment, and investigation of screening is, so is the management at early stage as well. So you can docrariotherapy, post-steaming, and that can get the thing off the way. So by, and large, it is continuous work on eradicating cervical cancer among our women of child bearing age **(KII, Male, Doctor, Ibadan/2020).**

One of the discussants from Ogbomosho reiterated that one of the challenges women are facing which leads to them not presenting themselves for cervical cancer screening is ignorance.

> What causes it is that, some women do not know what is wrong with them. Once you don't know what is wrong, you won't know where to go. When we talk about health programme, it is not about looking at the doctor alone, but a person who will educate them on their health issues, and direct them on where to go when sick. Most of them go to traditional methods here since we don't have such screening or hospital or ways to sensitise them here **(FGD, Male, Religious leader, Ogbomosho/2020).**

Another discussant said that many of the women in the village do not have access to health facilities, the reason being that the health facilities are not within reach, and also

the majority of the women in the village are poor. They are not buoyant enough to afford the bills for the screening.

We are far from where the hospitals here. If you carry out your research well, you will notice that they are many in the village than those in the cities. There is nothing stopping them to take care of themselves in the cities because so many families has family doctors that the doctor would come home to treat them. Even some of our children has never seen a doctor, when does she wants to see it so we are far from hospital. There is no money if they tell us what is wrong, and asked to go to Ibadan for treatment, is it the person that is yet to eat would go to Ibadan to treat herself.

> So there is no enough money to take care of one's self. So if there is a hospital close them, so many know what is wrong with them that if there is health issue, they would come out to the extent that you will be tired. So no money **(FGD, Male, Religious leader, Ogbomosho/2020).**

One of the discussants also reiterated that even though some of them are aware, their level of understanding is low, and so it affects their attitude towards the uptake of CCS.

> There is this nonchalant attitude exhibited. Even if someone knows what is wrong, and the person is reluctant to go so their level of orientation, and understanding is low. So you will have to force them even if it is free they will find it very difficult to go there. So that is what is called nonchalant attitude. **(FGD, Male, Religious leader, Ogbomosho/2020).**

A male discussant also said that inferiority complex and stigmatization are some of the reasons women do not go out for the uptake of cervical cancer screening.

> There is nothing more than some who is shy. Because when they go people tend to make jest of them, and they become ashamed. There are some who has money to take themselves out for the screening but for the shyness, she will not go, and at the end of the day, the person dies of such disease. **(FGD, Male, Religious leader, Ogbomosho/2020).**

Ogbomosho is blessed with so many state health facilities alongside private facilities.

Despite that, women still don't come in to check their health status because they complain of lack of money, and they are unable to foot their financial bills. They prefer to go for cheaper means; local herbs.

Basically, Ogbomosho north local government area is actually one of the local governments in Oyo state I think is actually blessed, filled with health facilities. There are renowned health institution in Ogbomosho that are sighted, notably is Bowen teaching hospital Ogbomosho, presently LAUTECH teaching hospital, those are the prominent health institutions. Asides that, we have quite a number of growing private institutions that also provide health care facilities to the people of Ogbomosho, and its environment. People from other state actually come to Ogbomosho to this institution to receive care so basically we are blessed but in as much as we know that this institutions are available we still find out that people still won't come for various reasons notably finances, unable to pay for their medical bills, they prefer to go to alternate medicine, and that has been a challenge they are actually facing **(KII, Male, Doctor, Ogbomosho/2020).**

A male doctor reiterated below that cervical cancer screening is expensive.

The issue has to do with money because here, screening as we all know is most patients still believe they are not sick so they don't know the reason they should be screened. If you ask them you are going to screen them, they ask first how much it is going to cost. Okay, here for you to be screened for cervical cancer, it is going to cost about seven thousand five hundred to thirty-three thousand naira. **(KII, Male, Doctor, Ogbomosho/2020).**

A female health practitioner from Ayete stipulated below that there is no nurse, no power, and also that three shifts of the nurses on the ground cannot cover the workload they have at the primary health care centre.

We have many challenges. For example, here in Ayete PHC as the headquarters of the local government, we do not have any nurse. We have no nurse here. So I, the community health extension worker, I am the M*and*E officer, then another community health extension worker that is working with me is theDSSN of the local government, so at times we have only one on ground that is not a programme officer so at times, if our programme call for, maybe we have any travelling or so, the only person that is here cannot do 24/7. So at times, the person do morning duty, afternoon, and night duty will be on ground for health assistant, and attendant. So we have many challenges concerning man power. At least I know that in this primary health care as the local government is supposed to have the nurses, CHO, and all but now **(KII, Female, Health practitioner, Ibarapa North/2020).**

An informant, who is a doctor from Bowen stated that in Ogbomosho North local government, there is no routine screening as seen below:

No, routinely no. In Bowen, if I can remember vividly, we do have a well patient clinic where they expect people to come for routine check-up not only for cervical cancer. General screening which is on ground. But you know the mentality of our people is once you are not sick you don't have to go to the hospital, so they won't come **(KII, Male, Doctor, Ogbomosho/2020).**

The necessity for health education on lifestyle changes is crucial, and there is also a need for health insurances to assist patients with their health challenges, he stated as shown below:

> Basically, what is still to be done is health information, and it is very important, and education, people need to be educated on their health, lifestyles, modification, and things like that. Once education gets in, and they are well informed, they become empowered, and also just as said, we need to put in place insurance scheme (NHIS), and I think it is very relevant for our own system because, the reason most people don't come to the hospital is that they can't fund their bills. If we have a system that can help them pay for some of those bills, I think people will come, and there will be improvement in people's health in the populace, and I think it is very important if we can put up a scheme like that. **(KII, Male, Doctor, Ogbomosho/2020).**

Also, the informant said that the government needs to come into play to subsidize the health bills in other to allow the masses to go for the screening and to provide health equipment for health institutions so that they can function.

> And asides education, the government need to invest in some of those health institutions, and make some of those things available for the screening, and make the materials available if they are provided for free then it will become difficult for any health institution to bill, and the cost will be brought down, you understand. So if they can make it available, the screening programmes will be for free, and it will be helpful so those who are picked early will be treated appropriately because by the time they come with advanced cases, it is usually not amendable to treatment or the treatment becomes much more costly **(KII, Male, Doctor, Ogbomosho/2020).**

Summarily, the informant reported that the health of the people is the wealth of the nation, and so health education on lifestyle changes and aid from the government is important.

> So those are some of the things they may need to look into. Then, I think those are some of the insights, people's education on health education, insurance scheme for the general population, and the government should subsidised, and make some of those things available, investment in the health sectors, that is very important. That is the key; the health of the people is the wealth of the nation **(KII, Male, Doctor, Ogbomosho/2020).**

Another informant, a health worker from Ibarapa north also advised that cervical cancer screening equipment be provided by the government to make screening easier for the people.

> Maybe, the government should make sure that all the equipment needed for that cervical cancer screening is brought to the local government or each

health facilities, and the health workers that is in that section should place in each local government PHC, so that any time the people in our areas come to the clinic, they will do it for them. So it won't be once in intervals or years. It should be regular **(KII, Female, Health worker, Ibarapa north/2020).**

Some socio-cultural factors, starting from poverty level but not limited to that, decision making in the home, governance, power relations, lack of or inability tofreely discuss issues to pertain to reproductive health, issues that surround religion, preference for a particular gender in attendance during screening, the society norms, and belief generally, and specifically all surround what respondents revealed as their responses in the study population.

4.8.2   Spousal support, and Male Involvement

The level of support an individual receives differ; some women can vouch for their husbands they are very supportive. Some men said if it is free or cheap, they will allow the wife to access the screening. Some women said that they know how to go about caring for themselves, tactfully, and by wisdom taking care of their health. Others presume that things are changing so women are now empowered to make informed decisions. There are a lot of issues here on decision making, power relations in the family, husbands remain the head, wives must take permission, coupled with the who has the financial power in the home, and these are issues of concerns as women presented their opinion below:

> If the governments are willing to do this, our wives can go for it. But it must not stress us **(FGD, Male, Adult, Oyo West/2020).**
> Our wives must take permission, and inform us about their movement **(FGD, Male, Adult, Oyo West/2020).**
> I will allow her if we get the opportunity, and it is free. Some don't even have money to eat, and feed themselves. So, I will allow my wife, and inform others as well **(FGD, Male, Adult, Oyo west/2020).**
> When a woman says she is going for screening, we should permit her to else the husband too will be infected. Then, if they don't know about it, it will be a problem **(FGD, Male, Adult, Oyo West/2020).**
> If they come with a treatment, and money is not required, people will definitely go for it. If I see such, I can allow my wife to go for it **(FGD, Male, Adult, Oyo West/2020).**
> Some people, and illiterate, and some lack of money did not allow them to know what to do, so when it has gone wrong that is when they will be like they didn't know it will turn out like this **(IDI, Female, Adult, Ogbomoso, North/2020).**
> There are many impacts ma. Once the wife knows about the cervical cancer, it is very good for her to explain to her husband. Then, he is supposed to support her so she can go for the screening (IDI, Female, 25yrs, Oyo West/2020).

4.9   Discussion of Findings

This section synergized the results of the study in line with preceding findings in the literature. On age, the study revealed that about one-third (33%) of the respondents fall between the range of 21 to 30 years that is understandable because the population in Oyo State is youthful. Furthermore, a smaller percentage(3.5% are within the age of 60 years). Several authors reported across several population, the results of their findings forthe socio demographics characteristics are as follows; in a study conducted in Ethiopia byWoldetsadik, A. B., Amhare, A. F., Bitew, S. T., Pei, L., Lei, J. and Han, J. (2020) they reported that age was significantly associated with the uptake of cervical cancer screening.Similarly, another study exposed that women in the younger age group (18–29 years) were less likely to be screened compared to women in the grown-up age (40–49 years); the result was in variance with the study conducted in Nigeria by Dozie, Elebari, Nwaokoro et al. (2021) which reported that age and level of education are significant factors of screening for cervical cancer. It shows (17.3%) of women with no formal education are aware of the risk associated with cervical cancer, 13.4% of women with primary education are aware of risks associated with cervical cancer, (29%) of women with secondary education are aware of risks associated with cervical cancer while (40.3%) of the women with tertiary level of education are aware of risks associated with cervical cancer.This is almost similar to the study Ifemelumma, Anikwe, Okorochukwu, Onu, *et al*., (2019) which reported that most of the respondents, 179 (46.1%), were between 21, and 30 years of age, and the least number, 8 (2.1%), falls within the ages of 51 to 60 years.

On religion, (Dutta, Haderxhanaj, Agley, Jayawardene and Meyerson, 2018), in their study in Kenya stated that Christians, and women exposed to anticipated messaging on television had advanced odds of testing than Muslims and women with no exposure.Religion is the only variable that is significantly associated with uptake of cervical cancer screening. Lofters, Vahabi, Kim, Ellison, Graves, Glazier (2017), had a study that is at variance with this present study. Their study of Ontario, Canada revealed that being born in a Muslim- Majority country is associated with less- the likelihood of uptake of cervical cancer screening. Similarly, Onyenwenyi and Mchunu (2018) reported that religious beliefs can constitute a barrier to cervical cancer screening.

Equally, education plays a role in the study conducted in Jordan by Al-amro, Gharaibeh, and Oweis (2020) where they stated in their earlier studies in Jordan, the authors suggested that the low screening rate could be due to majority of the women have low levels of education and women on a low income. The study conducted in Benin, and Zimbabwe by Barrow, A., Onikan, A., Nzoputam, C. I. and Ekholuenetale, M.(2020) showed that socio-demographical factors together with environmental location, and chosen economic factors significantly explain the unequal exposure. This is at variance with a study conducted in Nigeria by Okunowo, Daramola, Soibi-Harry, Ezenwankwo, Kuku, Okunade, and Anorlu (2018), which said that higher education and understanding of risk factors have been revealed to boost the enthusiasm, and use of Pap smear test.

Woldetsadik, (2020) reported that occupational status significantly influences the uptake of cervical cancer screening. A large number of the respondents were economically active,32.8% of them were businessmen while others were engaged in one trade or the other which is similar to the findings of Olubodun, Odukoya, and Balogun (2019) which showed that most of the respondents were semi-skilled (70.8%).

There is no significant association between ethnicity, marital status, and knowledge of the perceived risk of cervical cancer amongst the women. In this present study, a greater percentage 65.3% were married. The study corroborated Dozie, Elebari, Nwaokoro, *et al*. (2021) who reported that marital status did not prove a noteworthy association with respondents' insight of cervical cancer screening**.**On marital status 209 (53.9%) were married.This is in tandem with the study conducted by Heena *et al*., (2019) which says that adequate knowledge is an important determinant of attitude, and because the study population did not have the knowledge, their attitude was also negative**.**

Some women generally exhibit a nonchalant attitude and resolve to self-medication as reported by the female discussant. Awareness, and attitude towards HPV, and its vaccines among market women in Bodija market, Ibadan. That says that nearly half of the respondents, (49.8%), were sexually active by age 18years. This has a great implication on the risk of exposure to the Human Papilloma Virus which is a precursor to cervical cancer especially persistent exposure in the presence of others risk factors.

Equally, supported the study conducted in Kenya by Gatumo, Gacheri, Sayed, *et al.*, (2018), which says that there are high levels of negative attitudes among the sampled population. Oluwole, E. O., Mohammed, A. S., Akinyinka, M. R. and Salako, O. (2017) reported that the majority are willing to be screened if they are avail of the opportunity which is similar to what Idowu *et al* (2016) who stated that 97% had a positive attitude to screening, equally Anyebe *et al.* (2014) reported in the study among Nurses in Ahmed Bello University Teaching hospital Zaria, where 70.1% of those who were never screened reported the willingness to uptake screening: this is in variance with this present study what respondent in a qualitative study said they will uptake screening if the opportunity presents itself. Gebreegziabher, Gebremeghil, and Berhe (2016) reported a positive attitude (63.1%) toward cervical cancer screening. Mengesha, A., Messele, A. and Beletew, B. (2020) equally have a positive attitude (58.2%).

Poor knowledge is directly associated with attitude in the study population. The symptoms commonly identified in the study population are intra or post-coital bleeding, bleeding after menopause, persistent blood-stained vaginal discharge, and lower abdominal pain. Ahmed, Sabitu, Idris, and Ahmad (2013) reported a fair attitude in their study; Frank and Ehiemere (2018) reported a positive attitude (97%); Ndikom, C. M, Ajibade, A. B. and Oluwasola, T. A. (2020) reported a positive attitude in the study population.

Practical barriers can still impede attendance among those who hold positive attitudes to screening. Mutambara *et al.* (2017) noted that traditional churches in Zimbabwe discourage women from seeking medical attention as they urge them to have faith, and receive their healing from God. The traditional churches (Apostolic Churches) have an indigenous origin, with their founders being local Zimbabwean people; hence they have practices that are quite similar to traditional cultural practices. Most of these churches do not allow members to seek medical care. These Apostolic churches emphasize faith healing, and strict adherence to church beliefs, and practices, which undermine the benefits of modern health care.

Furthermore, on socio demographic characteristics the quite a number of authors reported as follows; Woldetsadik*et al*(2020) had in their Ethiopian study respondents within the age range 30 to 39 (47.5%), (78.4%) were marriedOkunowo(2018) had

(78.5%) of respondents in the Lagos study married. On the ethnic group, the majority (87.6%) of the respondents were Yoruba. This affirmed the study of Toye, Okunade, Roberts, Salako, Oridota, and Onajole, (2017) that showed that more than half (56.8%) of the respondents were from the Yoruba ethnic group, which is because the study was conducted in the South-Western region of the country which encompasses mainly the Yoruba ethnic group.

Most of the respondents (51.2%) are self-employed. This shows the average status of the respondents as fairly capable to adopt an uptake of CCS in Oyo State. The monthly income of respondents revealed almost an even distribution of one-fifth of the respondents earning across ₦7,500, ₦15,000, ₦25,000, and ₦35,000 respectively. Which also agreed with Idowu, Olowookere, Aderonke Fagbemi, and Ogunlaja, (2016) that says that most of the respondents of their study were in the lower, and middle socioeconomic classes. On educational status, most of the respondents had secondary education which makes us to understand that the sampled population is fairly educated which is supported byOlubodun, Odukoya, and Balogun (2019) which shows that a greater proportion of respondents in their study also had secondary education as their maximum level of education. The reproductive history of respondents revealed that the majority, (80.7%), of them, are sexually active in the same vein, a larger percentage (74.8%)had their ages at sexual debut to be between 15 to 25 years, this is similar to the findings of Bello, Oluwasola, and Odukogbe (2016) in their study on Awareness, and attitude towards HPV, and its vaccines among market women in Bodija market, Ibadan. That says that nearly half of the respondents, (49.8%), were sexual–active by age 18years. This has a great implication on the risk of exposure to the Human Papilloma Virus which is a precursor to cervical cancer especially persistent exposure in the presence of other risk factors.

The study revealed that of the total population of women that were sexually exposed, almost half (47%) of them were aware of cervical cancer, which is in line with the study of Amu, Ndugba, and Olatona (2019) with results stating that (44.2%) respondents were aware of cervical cancer. Furthermore, Ndikom*et al*(2014), Idowu*et al*(2019) reported low awareness in their study population which is similar to this present study whereas, Akpo *et al* 2016, and Olajide et al(2020), reported high awareness among their study population which is at variance with this present study.

However, awareness about cervical cancer screening is high, which is in consonance with Olajide *et al* (2020)which gave a better report in their study of women from selected government-owned hospitals in Abuja where 93.8% of women were aware of cervical cancer screening. Der *et al* (2018) equally reported 82.2% of respondents were aware of screening programmers in Ghana, also in Nigeria. Idowu *et al* (2016) equally reported that (67%) of the respondents were aware of cervical cancer screening. Abysmally low awareness of cervical cancer screening level was reported by Olubodun *et al*. (2019) in Idi- Araba, Lagos. Awareness of cervical cancer screening is found to be low as reported similarly by Okunowo *et al*., 2018, Okunowo, and Smith –Okono (2020), and Idowu *et al*. (2016).   Cervical cancer screening is mostly an opportunity, and not an obligatory service offered in developing nations as compared to organized ones in developed nations which led to a drastic reduction in both morbidity and mortality among those nations.

The study results stated that there is a significant association between the age of respondents, and the awareness of cervical cancer which is at variance with the findings of Ijezie, and Johnson (2019) which concluded that there is no association between the socio-demographic characteristics, and awareness among the participants was not statistically significant. Olajide, Ogunmodede, Oyewumi, and Ajibade (2020) gave almost similar assertion where respondents between ages 20-30, and those between 31-40 accounted for (45.5%) respectively, while the similar percentage falls within 41-50. This study revealed that there was no significant association between the age of respondents and awareness of socioeconomic characteristics of respondents. Religion and employment are the only demographic variables with significant association with awareness and socio-demographic characteristics.

The respondents' awareness level notwithstanding, there are several perceived risks associated with cervical cancer which this present study identified with supporting empirical studies by other authors as presented here. In this study, respondents' perception is quite high (62.6%) as regards the belief that womanhood is a predisposing factor to developing cervical cancer. Sexually active women also have likelihood (56.3%) responses according to the result of developing cervical cancer. More than half of respondents, (57.0%) considered women of reproductive age as highly susceptible to developing cervical cancer. Weakened immunity (59.3%), family

history of mortality due to cancer (54.0%) as a result of cervical cancer, smoking of cigarette (53.7%), early sexual debut (54.0%), all had more than half respondents respectively accounting for the high perception of being at risk of developing cervical cancer.

A greater percentage of respondents said infection with Human Papilloma Virus (62.3%), multiple sexual partners (67.0%), and infection with STI including HIV (60.3%) has led to a high risk of falling out with CC. Multiparty is the only risk factor contributing just about one-third (30.1%) to perceived risk while family history of cancer contributed just a little below half (47.0%) as well as irregular cervical cancer screening (41.3%) of respondent's perception of risk in the study population. Literature abounds as well of the risk of women associated with developing CC in their respective study area, the knowledge of women to perceive risk associated is crucial in the uptake of CCS.

Surprising, Olubodun, Odukoya, and Balogun (2019) reported that most likely women in the disadvantaged area most likely have a seriously low knowledge as (90.0%) of the respondents didn't know about the factors that can influence CC, few mentioned early age at first sex (3.6%), multiple sexual partners (2.0%), infection with HPV (2.0%), and use of tobacco (0.7%). This is at variance with this demonstrated high knowledge, more than (50%) in all of these risk factors in this present study. In a similar report by Mengesha *et al* (2019) in Ethiopia, more than half (59.7%) of participants who were aware of cervical cancer didn't know the risk factors like STDs, smoking, sex with multiple partners, family history of cervical cancer, and multiparty could lead to cervical cancer. Furthermore, the majority (81.4%) of the participants in the study population did not know that HPV causes cervical cancer. It is important to note that the result of the present study is in tandem with Amu *et al* (2019) who reported that participants in their Lagos study identified the most common risks factors as HPV infection (49%), multiple sexual partners (47.8%), and early sexual debut (30%).

In a similar vein, Okunowo *et al* (2018) reported the most frequently identified risk factors as multiple sexual partners (37.6%), sexually transmitted infection (34.6%), having partners who have multiple sexual partners (34.2%). Interestingly, Asiedu, Breitkopf andBreitkopf (2014) in their study of women attending women's health

clinics on addressing cervical cancer prevention reported that women recognized eight out of twelve risks factors acknowledged by the American cancer society. This is at variance with the present study where all the fourteen risk factors were identified and perceived as risk factors in the study population.

Aside from perception of risks associated with cervical cancer, the respondents in the study population have asked pertinent questions to explore their knowledge level. A score of below (50) is termed low, (50 to 69) moderates while above 70 is high knowledge, this present study revealed the report of knowledge level as follow: The section was answered by (352) respondents who were aware of CC; these are the responses of the signs, and symptoms of CC.

Abdominal pain – (43.4%)

Vaginal bleeding – (47.7%)

Dyspareunia – (46.0%)

Abdominal vaginal discharge – (56.6%)

Vaginal bleeding after menopause – (47.7%)

Heavy menstruation – (53.6%)

Unexplained weight loss – (50%)

The overall knowledge score of respondents were (49.3%). High knowledge is (30.7%), and poor knowledge is (20.0%). In the past literature, several authors gave a similar report as in this present study, however, some were at variance with Amu *et al* (2019) in the Lagos study reported the following as recorded knowledge of symptoms of cervical cancer; foul-smelling vaginal discharge (52.2%), post-coital bleeding (42.6%), lower abdominal pain (41.0%). In their overall knowledge score, only (18.1%) had good knowledge of cervical cancer while (81.9%) had poor knowledge. This is at variance with the present study with an overall knowledge score of (49.3%), an average of (30.7%), and poor knowledge of only (20%). Mengesha *et al* (2020), reported equally that (80.0%) of the study population had poor knowledge. There is however a similar finding in Aweke, Ayanto, and Ersado (2017) which found (46.3%) of respondents in their study population to have poor comprehensive knowledge about CC. Poor knowledge is directly associated with attitude in the study population. The symptoms commonly identified in the study population are intra or post-coital

bleeding, bleeding after menopause, persistent blood-stained vaginal discharge, and lower abdominal pain.

A similar assertion was also presented by Olubodun *et al* (2019), where a larger percentage (90.8%) had poor knowledge of cervical cancer while only less than (10.0%) knew the following symptoms; foul-smelling vaginal discharge (5.6%), heavy vaginal bleeding (1.7%), and vaginal bleeding after intercourse (0.7%). Okunowo, Daramola, Soibi-Harry, Ezenwankwo, Kuku, Okunade and Anorlu (2018) identified the most frequently identified symptoms in their Lagos study to be abnormal vaginal bleeding (43.4%), post-coital bleeding (39.5%), and lower abdominal pain (39.0%), which is almost similar to the present study.

In a study among attendees of family planning unit in Ibadan, Ndikom *et al*. (2014) identified that most respondents (62.9%) receiving family planning services had poor knowledge of cervical cancer. This is at variance with the present study where only (20.0%) had poor knowledge about cervical cancer in the study population. It is striking to note that Jassim, Obeid, and Nasheet (2018) found that there was no relationship between knowledge about Pap smear, and level of education or employment, although this was based on just one item of the knowledge score. When respondents were asked about their perceptions about cervical cancer screening, major reasons for screening revealed in this present study were: detection of early changes in cervix (64.9%) detection of HPV which is one of the sexually transmitted infections causing cervical cancer (55.6%), and three years timing of cervical cancer screening (53.6%).

Tapera, R., Manyala, E., Erick, P., Maswabi, T. M., Tumoyagae, T., Letsholo, B. andMbongwe, B. (2017)gave an opinion that is at variance with the findings of this study where there was a gross misconception about reasons for cervical cancer screening among respondents in the university of Botswana female students. Findings from this study are at variance with the result of the finding of Modibbo, Dareng, Bamisaye *et al* (2016) who reported that several participants in Ondo, and Abuja recognized the role of a sexually transmitted infection in cervical cancer although not necessarily HPV, however in the study only one participant mentioned association with HPV. A negligible percentage (8.0%) was recorded however by Vhuromu, Goon, Mapatle, Lebese, Okafor, in a study in South Africa where they said that cervical

cancer is a test for sexually transmitted infections. Furthermore, there is the necessity to increase awareness of women generally but the strong association between HPV as a precursor of cervical cancer, and the great effect of vaccination as a primary preventive strategy to halting both Morbidities and mortality of CC especially at the study population.

Conclusively the result of this present study differs from what Mbaka, Wainhenya, Oisebe (2018) in a study in Kenyan identified. A negligible percentage (6.1%). suggested threeyearly screening while two (2.0%) thought screening should be done every 5 years. More than half (53.6%) suggested that screening should be done every three years. When respondents were explored on what are the management, and prevention strategies the following were the results of findings. The result of findings in this present study revealed the majority of respondents have a lot of misconceptions about management, and prevention. Results of findings from qualitative data revealed that management of cervical cancer like any other cancer basically hinges on the use of herbs, and concussion that is not measurable, and whose efficacy in the management of cervical cancer is not yet proven as reported in this present study. This is at tandem with Mengesha *et al* (2020) who reported that concerning prevention, and treatment, only (65.3%), and (42.7%), and curable respectively. In a similar report, Arora, Wani, Kasbe, and Jain (2017) opined that lack of awareness about the disease concerning risk factors, screening methods, and vaccination is a major hindrance for early detection and prevention of the disease. The authors further stressed that there has been a regular campaign against cervical cancer in the study population for about three decades.

Furthermore, according to Frank, and Ehiemere (2017), inadequate facilities, materials, and personnel constitute major challenges to cervical oncological services Awareness of cervical cancer screening is a very important factor to cervical cancer uptake therefore responses along this are reported as presented. About (85.5%) respondents are aware of CCS while (14.5%) are unaware of CCS. Furthermore, the association between awareness of cervical cancer screening, and socio-economic characteristics of respondents in the study population revealed there is no significant association between the age of respondents and the awareness of cervical cancer screening. There is also no significant association between the educational level of the respondent, and the awareness level of cervical cancer screening. Whereas there's a

strong association between religion, and awareness level, interestingly, a report at variance with this present study was reported among medical students of the university (Amin, S. M., Abdullahi, K., Muhammad, M., Mohammed, L. I., Mahmoud, R. A. and Muhammad, R. B., 2020). Amin *et al* (2020) reported that 46.3% of the respondents are uninformed about the frequency of screening although (26.8%) indicated it should be done at least once every three years.

Having an understanding of cervical cancer there is the necessity to find out the category of whose should be screened. There is a lot of misconception about the category of women who should be screened, some single respondents felt they should not be screened; some felt because there are no symptoms of cervical cancer so why screening while others felt menopausal women doesn't need screening. The result of this present study assign to Tapera *et al* (2017) where (33%) of the participants expressed a lack of personal susceptibility to cervical cancer therefore no necessity for a pap smear test as reported by the authors. (72.5%) equally reported there is no need for screening in the study population it was further stated some of the reasons for this is the fact they are not ill nor present any signs, and symptoms to warrant being screened.

In a related development, Okonowo (2020) reported that (20.0%) of respondents in the study population didn't recognize the need to go for screening because they are not susceptible to developing cervical cancer. Furthermore, Amin *et al* (2020) reported that the majority (72%) acknowledge that cervical cancer screening is an important investigation for all women above 40 years of age whereas Mostrom *et al* (2019) in Carolina reported that most of the unmarried women seem not to bordered about the issues of cervical cancer while some menopausal women felt it is no longer necessary to go for the cervical cancer screening test. Malhotra (2020) reported while reporting in the studies David Moher, A.L (2009), Rajiv, Guta, Parveen, Singh, Bhavna, Lange, Rashmi, Kumari, Pawan, Shama, and Riya, Guta (2019), Pattupara *et al* (2016), Varughese, Samueland Dabas (2016), Kassa *et al.* (2019), Julius *et al* (2018). (46.88%) of respondents who should be screened, and above 30 years of age (9.58%), and women of reproductive age (39.75%), and married women, (35.4%), and any female should be screened.

Interestingly, the primary prevention strategy of prevention is vaccination of girls, and women of HPV, vaccine, the respondents understanding, and uptake of this was explored, and this was compared to existing literature. An abysmally low percentage of respondents in the study population are firstly knowledgeable and have ever been screened for Human Papilloma Virus. A similar assertion was reported in a preliminary study of Ifediora and Azuike(2018) in the study of young Nigerian women said only (22.0%) of their respondents knew about, and have ever been screened of HPV as it was reported.

In the same vein, Papri, Khanam, Islam, and Hakim (2015) reported in their study that a greater percentage (85.88%) are not aware of the Human Papilloma Virus vaccine while only (14.12%) are aware of the Human Papilloma Virus vaccine among Bangladesh women even though it is the commonest genital tract cancer in female in that country. According to Jassim *et al*. (2018) only (3.7%) heard about the human papillomavirus vaccine, while the majority (96.3%) either had not heard or did not know about the human papilloma vaccine this is similar to the presents study where almost all the respondents claimed that they are not aware of human papilloma vaccine.

Similarly, Mburu, Itsura, Mabeya, Kaaria and Brown (2019) reported that exposure to the human papillomavirus vaccine was associated with higher knowledge of CC. The result of Mburu (2019) is in contrast with this study where (93.3%) a percentage of respondents have heard about the human papillomavirus among the in-depth interview in the study population. The awareness of CCS is abysmally low, just (14%) of those are aware of cervical cancer screening. Abysmally low awareness of cervical cancer screening level was reported byOlubodun *et al.* (2019) in Idi- Araba, Lagos. Awareness of cervical cancer screening is found to be low as reported similarly by Okunowo *et al*. (2018), Okunowo, and Smith –Okono(2020), and Idowu *et al*. (2016). Cervical cancer screening is mostly opportunistic in developing nations as compared to organized ones in developed nations leading to a drastic reduction in both morbidity, and mortality.

The timing of screening is an important determinant of successfully overcoming the burden of cervical cancer Screening naturally should be routine, not just an opportunity nor an outreach. In developed nations of the world, where they have been

able to curb the morbidity, and mortality of cervical cancer, the norm is that cervical cancer is routinely conducted to women who are at risk of cervical cancer which is a secondary prevention strategy.There is the necessity to access the facilities for cervical cancer screening. In this present study, a greater percentage, 32% of women will cover a distance of 10km before they can access the centre of cervical cancer screening while 23.3% will cover a minimum of 610km whereas 29.9% will cover 1-5km. In the same vein, more than half of the respondents who patronized the screening centre confirmed that screening equipment was available. A larger percentage (79.5%) of women were satisfied with screening centres while a greater percentage confirms the functionality of the screening equipment. On the duration of screening, the majority of respondents say screening is within 30 minutes.

Vhuromu, et al. (2018) reported that there is a negative impact on transportation, and geographical location. This study is at variance with this current work on the utilization of cervical cancer screening services. Vhuromu (2018) further explained that 58.2% of women travel over 5km to access screening centres.Olajide, Adedoyin, Bennett, Ogunmodede, Oyewumi and Ajibade (2020) also reported that 45.1 % of women utilize cervical cancer screening facilities. They also concluded that 94.2% of women did not engage in cervical cancer screening, and this is in random Ndikom *et al* (2020), and this current research work.

Modibbo *et al* (2016) concluded that there are several barriers to successful cervical cancer screening among Nigerian women, some of which vary by religion. In a similar instance, Jassim *etal.* (2018) stated that the religious and conservative aspect of culture is a barrier to approaching a male doctor, furthermore, society frowns at single ladies who access reproductive services including screening. Lofters et al.,(2017), in a study that is at variance with this present study. Their study of Onatario, Canada revealed

that being born in a Muslim- majority country is associated with less – the likelihood of uptake of cervical cancer screening. Similarly, Onyenwenyi and Mchunu (2018) reported that religious beliefs can constitute a barrier to CCS.

Uptake of CCS is a major, and dependent variable of this study, a lot of issue surround uptake as it is presented further. The results of this present study showed that 42.4% of those who are aware of CCS were screened, the figure represents 36.4% of those who

are aware of cervical cancer. There are various issues surrounding uptake of cervical cancer screening in the study population, and most especially generally as well, respondents knowledge about CCS, and the relationship of the variables of health belief model also determine whether women will go for screening, therefore, women's perception of susceptibility, perceived risks associated, perceived relevance of the screening, the perceived benefit derived when the screening is done, perceived severity of the course of cervical cancer are all interwoven in uptake world over, and specifically as well in this study population.

Furthermore, some factors influence women to the uptake of screening, and as well there is a mirage of factors that contribute to the non-uptake of cervical cancer screening among respondents. These above-mentioned issues will be discussed in the section especially bearing in mind the fact that uptake of CCS is the dependent variable of the present study. It is pertinent to note that knowledge of CCS has been considered by many authors; some of which are in tandem with the present study. It is pertinent to note that 86% (296) of the respondents who knew about CC were aware of cervical cancer screening while only 14% of the study population were not aware of the screening. This is similar to what Rajiv, Guta, Parveen, Singh, Bhavna, Lange, Rashmi, Kumari, Pawan, Shama, and Riya, Guta (2019) reported that 89.47% of the respondents attending India females' age 20-50 years visiting the Out-Patient Department of gynaecology, and obstetrics department of Government medical college reported.

Varadheswari, Rahul, Dandekar, and Sharanya, reported that 85.13 % of women in the study are aware of CCS. in a related development in a community based study in India, Elamurugan, Sujindra., Rajendran, Praveena, and Thangamani., Sivashankari, reported that (84%)of women are aware of cervical cancer screening, even in a rural community-based study 96.6% of women are aware as reported by Krishnaveni. K, Pinki, Roy, and Sambathkumar. Ethiopia study that is also commonly based reported a similar report where (65.3%) of the women were aware of cervical cancer screening similarly, Liu, Tongtong., Li, Shunping., Ratcliffe, and Chen (2017), reported that women in China had 75.3% knowledge level about cercal cancer screening, and also in Dominical Akpol *et al* (2016) reported that 72.73% of women were knowledgeable level in Nepal, Sudan was just below average, and an average of reported by Shrestha,

Sapkota, and Sapkota and Almobarak, Ahmed, Elbadawi, Ayman, Elmadhoun, Wadie, Elhoweris, Mohammed, and Ahmed, Mohammed reported must lower as reported by Javaneed, Shoukat, Shina, Hammed, Ghauri, Ahmed where (35.40%) were knowledgeable about cervical cancer screening.

In a related development, as reported by Malhotra, N., Taneja, N., Shankar, R., Pal, A., Chawla, B., Awasthi, A. A., and Janardhanan, R.(2020), in the systematic review of 17 articles, that the overall knowledge of women about cervical cancer screening globally is (42.22%). Some African countries reported an abysmally low level of knowledge as reported by Geoges, Amed in the Cameroonian study where only 14.65% are knowledgeable about cervical cancer screening. Der *et al* (2018) equally reported 82.2% of respondents were aware of screening programmers in Ghana, while in Nigeria, Idowu, A., Olowookere, S. A., Olumide, A., Popoola, G. O., Abiodun, A., Oluwagbemi, A. and Omidoyin, I. (2019) reported an awareness level of (15.0%) among rural women of Lagos, Olajide *et al* (2020) gave a strongly better report in their study of women from selected governmentowned hospitals in Abuja where (93.8%) of women were aware of cervical cancer preventive strategic although only (45.1%) utilized the services meaning there is a remarkable low correlation in effect knowledge necessarily may not translate into practice which is also incongruent with the present study where 86% of respondents were aware of cervical cancer screening but only (42.4%) of them were ever screened.

This is a similar picture. Ndikom *et al* (2020) reported that most (62.9%) of respondents in the Ibadan study reported a poor level of knowledge about screening uptake although they expressed their willingness to utilize screening services which were at tandem to what Woldestsadiq (2020) reported that women were willing to access screening services in their Ethiopia study. This is also at tandem with this present study because women gave a similar report in the qualitative study; it is not surprising as reported by Ndikom *et al* (2020) that Fasanu *et al* (2014) in a study among health workers in South-Western Nigeria. They posited that four out of every five health workers were aware of cervical cancer, but about two-thirds had poor knowledge while only 10% did pap smears in the study population. Idowu *et al* (2016) equally reported that (67%) of the respondents were aware of cervical cancer screening, the majority (97%) had a positive attitude to cervical cancer screening.

Furthermore, (92%) of the two-third (67%) demonstrated poor knowledge level as reported further by the authors. Even though knowledge about cervical cancer screening is average to non-uptake of cervical cancer screening in the study population there are barriers to non-uptake to cervical cancer screening in the study population.Several things acted as an interplay between uptakes of screening as some perception hinged on health-seeking behaviour of women in the study population as well as a related association with the independent variable relating to the socio-economic characteristic of the respondents. According to this present study report, there is no significant association between age, and education of respondents, and awareness of cervical cancer screening. However, there is a strong association between religion, and employment of the respondents, and the awareness level of respondents.

Malhotra (2020) reported in the systematic review that many studies Kassa, Gurmessa,Lemma, Abebe (2019). Georges, Armel, Herve, Simo, Richard, Jeremie, Charlette (2017). Shrestha *et al* (2013). Javaeed *et al* (2019) showed a significant association between the knowledge of cervical cancer screening, and the educational level of study participants, while studies Pattupara, Dhiman, Singh, Chaturvedi (2016). Kassaaetal (2019). Liu, Li, Ratcliffe and Chen (2017). Juliu *et al* (2018) reported a significant association between cervical cancer screening and marital status. Age is significantly associated too as reported by Kassa *et al*, (2019) Georges *et al* (2017), Juliu *et al* (2018). Olubodun *et al* (2019) reported a significant association between cervical cancer screening, and occupational status while George *et al* (2017) equally reported a significant association between cervical cancer screening and family income. All the authors didn't reveal whether there is an association with cervical cancer screening, and religion in the several reviewed articles which is at variance with this present study, also the fact that several authors reported an association with age and educational status of the respondents.

Furthermore, the study of Woldetsodiq *et al* (2020) revealed that the population of women screened at the age of 18-29 was 8 % which was lower than women aged 30-39 which is 11.9%, and 40-49 which is (36.1%). A related development logistic regression analysis identified that geographically women who were in rural areas were less likely to be screened (OR = 0.30, at 95 confidence intervals about 0.11-0.85) than women who live in the urban areas. The authors further reported that respondents'

screening showed a difference by occupation, where self-employed women were more likely to be screened than government-employed which is at random to this present report.

Shresthra, *Sapkota and Sapkato* (2019) in Nepal had a report that is at women with the present study when the authors reported a significant association between knowledge of cervical cancer screening with educational, and religious status. However, there was no association between knowledge of cervical cancer screening, and age, marital status, and occupational status. Woldetsadik (2020), Elit, Saskin, Raut, Elliott, Murphy, Marrett (2019) reported a significant association between low income, and low uptake of cervical cancer screening which is at random with the current student as income increases uptake also increases. Ndikom *et al.* (2020) this is equally the position where a significant association between income, and cervical cancer screening. it showed further that the respondent of income above 40,000 was five times more likely to be screened for cercal cancer compared with those who earned less than 20,000 than similarly, respondents with good knowledge were three times to be screened.

Religion is the only variable that is significantly associated with uptake of cervical cancer screening. Lofters *et al*. (2017), had a study that is at variance with this present study. Their study of Onatario, Canada revealed that being born in a Muslim- Majority country is associated with less- the likelihood of uptake of cervical cancer screening. Similarly, Onyenwenyi *et al*. (2018) reported that religious beliefs can constitute a barrier to CCS. The attitude of respondents to the uptake of screening determines the outcome of uptake hence it is important to consider this relation to uptake. Oluwole *et al* (2017) reported that the majority are willing to be screened if they are avail of the opportunity which is similar to what Idowu *et al* (2016) stated where (97%) had a positive attitude to screening, equallyAnyebe, Opaluma, Maktarr, and Phillip (2014) reported in the study among Nurses in Ahmed Bello University Teaching hospital Zaria, where (70.1%) of those who were never screened reported the willingness to uptake screening: this is in (congruency) with this present study what respondent in a qualitative study said they uptake screening if the opportunity presents itself. Gebreegziabher (2016), Gebremeghil, and Berhe (2016) reported a positive attitude

(63.1%) toward cervical cancer screening. Mengesha *et al* (2020) equally have a positive attitude (58.2%).

Following the reviewed literature, participants were able to identify some reasons for non-uptake, therefore, several authors; David *et al* (2009), Pattupara *et al* (2016), Varughese *et al* (2016), Krishnavein K, Roy P, Sambathkumar R. (2016), Kassa *et al* (2019), Kas *et al* (2018), Akpo *et al* (2016), Julius *et al* (2018), Shrestha *et al* (2013). This was reported as revealed by Malhotra (2020). Opined that the common reasons for non-uptake in the systematic review of (17) articles 10 countries Punjab, Dominica, India, Nepal, Sudan, China, Palastain, Nigeria, Ethiopia, Cameroon were no signs, and symptoms (32.78%) followed by no knowledge (28.21%), and the majority of women who felt they are healthy hence it is not necessary to undergo screening. it was further reported by the authors that women had a positive attitude towards the screening process in the studied population.

Furthermore, other authors identified barriers to screening from other African countries Mbaka *et al* (2020) in the Kenyan studies attributed to lack of comprehensive knowledge on cervical cancer being attributed to non-uptake of cervical cancer screening. A similar report given by Der *et al* (2018) reported in the study population that respondents identified lack of screening centres inaccessibility of existing screening centres to the large at-risk population of women (especially women living in rural communities which is in line with Woldesadiq *et al* (2014) reported Nepal as well as what Ndejjo *et al* (2016) reported in Uganda). Similarly, the high cost of screening is reported by Der *et al* (2018) which are at random with Frank, and Ehiemere (2017) similar reasons as reported by Der *et al* (2018).

Studied around the region of Nigeria revealed the following reasons for non-uptake; various researchers identified reasons for non-uptake which is at tandem with this present study presented as follows; faith in divine protection (57.9%), not put being promising (47.7%), unavailability of screening centre (46.4%), Painful Exercise (42.7%), Expensive (42.4%), fear of stigmatization (43%) embracement (35.8%), the unnecessary asymptomatic person (35.4%) Okonowo *et al* (2018) however, identified the following reasons for non-uptake in their study population which is at variance with the present study, lack of awareness, and adequate information on cervical cancer, and screening methods. However, the authors present some motivating factors

for non-uptake in the study population which are stated below; 30.4% non-recommendation by doctors, 14.5% believe that they are not susceptible to developing cervical cancer screening, 2.9% pain, and embracement, 1.50 fear of positive test result. In a similar development Iluvbare *et al* (2020) gave the following as reasons for non-uptake as presented further.

Financial constraints, Fear of positive results, religious, and cultural beliefs. Doctor's recommendation, affordability, fear of death through cancer (perceived severity). SimilarlyNdikom *et al* (2020) itemized the following barrier for non-uptake. Lack of understanding of disease condition 51.1%, 39.5%, lack of information, 37.1% lack of access to cervical cancer screening, 35.1% long distance, equally, Tapera, Manyala, Erick, Maswabi, Tumoyagae, Letsholo andMbongwe (2017) stated that 33% of participants expressed lack of personal susceptibility to non-uptake in Botswana. In the same vein, Olajide *et al* (2020) reported these are the reasons for non-uptake. Lack of money (affordability) funds, lack of awareness (referred to Ndejo *et al* 2016), and Mugassa, and Frumence 2020, fear of positive results, awareness, and where to go for the screening, religious factors (beliefs) in line with Mudibbo *et al* (2016). Other reasons include the attitude of health workers (Dike and Ijeoma, 2017) caring attitude of female health workers, non-recommendation of health workers Okunowo *et al*, and Ndejjo, Alamid *et al* talk about encouragement from health workers helping in uptake. Fear of dining protection.

Conclusively, some variables of interest were mentioned which include susceptibility revealed the severity of fear of death is influencing uptake negatively, and positively in the study population, and as supported by Tapera *et al* (2017), Ndikom *et al* (2020) , Olajide *et al* (2020). Ndikom (2020) further relates the strong association between income, and knowledge about CCS influencing uptake which is at variance with this present study where marital status and employment positively influence uptake. Onyenwenyi and Mchunu, (2018) gave a comprehensive report on the barriers to cervical cancer screening uptake. Hospital-related barriers, presenting issues of the long clinic waiting hours, painful screening procedure inconvenient timing, and lack of trust of health workers which Olajide *et al* (2020) equally reported in the study stated. The authors spoke about Geographical barriers about distance to screening centres, and travel costs to healthcare services. Expert below substantiate this '

*Because I want to do cervical test I have to go to Lagos University Teaching Hospital or Lagos State University Teaching Hospital. No money even for transport, and it is not near us (**IDIP 5 female**).*

Furthermore, economic-financial barriers were discussed in terms of the cost of travel, and charges for screening, and treatment. One of the respondents said;

> Some women are just ordinary house wives. Yes, they are unemployed. So, if the husband doesn't give her any money, she cannot go to the hospital and some of them, their husband will be jobless, the wife jobless, will not be able to be affording the test **(IDI 10 female)**.   Educational barriers were noted, illiteracy majority among spouses mentioned which in turn is related to the lack of appropriate health information concerning cervical cancer in the community. Lack of appropriate information brings about poor health maintenance behaviour as reflected in the following response.
> Illiteracy is a major problem that may affect them if the husbands are illiterate because they will ask why? When someone is an illiterate, they may not see the need to go for screening (**IDI 3, male**).

Lastly, psychosocial barriers were addressed about religious, cultural or partner-related as cited by a few of the respondents. Female respondents spoke about spousal approval. Some believed in traditional medicine.

> Cultural reasons too can affect because there are some people who have never left their village. They believe that they don't have business with the orthodox medicine so they don't want to even hear anything about the white man. Their own is all about root, and herbs, and would not agree to go for screening (**IDI 7, female**).

On the aspect of Cervical Cancer Screening update, the result of this present study revealed that (43%) of respondents were screened while (58%) were not screened.Various interactions reported levels of uptake across their student population. Malhotra (2020) in the systematic review of 10 countries; India, Punjab, Nigeria, Ethiopia, Dominica, Cameroon, China, Nepal, Pakistan, and Sudan revealed that a range of 0.9063.7% followed closely by Patturpara, Dhiman, Singh andChaurturrred, a study in India where only1% access cervical cancer screening. Generally speaking, in developed nations of the world, preventive strategies have been key to reducing morbidity, and mortality as a result of cervical cancer. The developing nations are still in the fight against reducing the disease, and its attendance mortality. Therefore, Ncube, Bey, Knight, Bessler and Jolly (2015) reported that about two-third (66%) of respondents in Portland, Jamaica have been screened. Kileo reported that 21% of respondents who are primary school teachers in Tanzania have been screened. Uptake

of screening was abysmally low in china compared to developed nations according to Malhotra (2020). Sudan equally had reported byAlmobarak et 2016 an uptake level of 15.80%. Javaed *et al* 2019 gave an uptake level of 5.9% in Pakistan. Nepal had 10.50% as the uptake level according to Shrestha *et al.* (2013).

Phylis Mbaka *et al.*, 2018 reported that 23.1% had ever undertaken a cervical screening examination. Gebreegziabher *et al* 2016 wrote in his study carried out in Mekelle town Northern Ethiopia among nurses in 2014 that 10.7% of nurses reported that they have ever been tested for cervical cancer in five years (2009-2014). Der *et al*, 2018 reported that only 8.9% of the respondents have ever been screened for cervical cancer. Woldetsadik*et al*, 2020 also has in their report that only 12.2% of the respondents had been screened. Tapera *et al*, 2017 has it that 26.9% of the respondents had been screened. Interestingly, Olajide *et al.*, 2020 have in the report of his study carried out in Abuja that 45.1% of the respondents have utilized the screening services. Chinemerem, Nwabichie, Ismail (2017) reported that 27.5% of their women population have been screened. The author summarized that there is generally low uptake of CCS among African women even in their home countries because screening is not seen as a routine check-up. In a related development, immigrant women have been reported to have low uptake of cervical cancer screening especially in West African countries such as Nigeria, and Ghana. In Nigeria, Ahmed *et al*l 2013 reported that 32.7% in the study population have ever been screened for cervical cancer. Ekne et al2015 reported that 19.7% of women in Cameroon have been screened, similarly, Isa *et al* 2016 reported that 19.7% of Nigerian women have been screened in their study population. Ndikom *et al* 2020 gave a similar assertion where only 16.1% had previously utilized cervical cancer screening in their study population in Oyo state. Okunowo 2020 reported among the urban women in Lagos that just 18.4% of women have been screened. 32.8% of young Nigerian women have been screened for CC as reported by Ifedora, and Azuike (2018) while studying knowledge, and attitudes about cervical cancer among female secondary school students in Nigeria. Adeyemi (2013) reported uptake of cervical cancer screening among African women living in the USA to be 28%. This is at variance with what Benedicta 2015 found among Hispanic women in the USA where about two third, 64.3% of them have been screened. In a related development, Lofters *et al* 2010 reported that a little over half (53.1%) of immigrant women in Ontario Canada have been screened for cervical cancer.

In more than 10 countries, Mengesha (2020) reported that they have a general belief that people with multiple sexual partners always opine that CC is punishment for their sins from God. The community mere belief that any cancer is a wild health challenge including cervical cancer that is preventable if detected, and treated early, there is a similar report from an unpublished thesis of Oyebola (2020) where respondents consider cancer as a death sentence in her Ibadan study of breast cancer, and spousal relationship in the Ibadan. Furthermore, (78%) of the respondents believe that cervical cancer is preventable as reported by Mengesha (2020) in their Ethiopia study. Shaw *et al* (2015) reported cervical screening rates among women in Mayama to be 19.1%.

Further findings, according to the results obtained in this study showed that 46.7% of the study population are aware of cervical cancer. This means that majority of the study population, 53.3% to be precise are not aware of CC, and it is in tandem with Ndikom *et al*. (2012) where a study was carried out on women of childbearing age in selected health facilities in Ibadan. The study reported that the majority of the women of childbearing age are not aware of cervical cancer. Oluwole *et al* (2017) carried out a similar study in Lagos, Nigeria, and reported that only 15% of the respondents were aware of cervical cancer. Low awareness about cervical cancer has been identified as a major barrier to cervical cancer screening.

Conversely, Oche *et al* (2013) reported that over 50% of the respondents were knowledgeable about cervical cancer, and 50% had no knowledge of cervical cancer. In the same vein, Akpo, *et al*, (2016), a study carried out in Dominica on Cervical Cancer knowledge, screening practices, and vaccines among female medical reported that 70% of the students are aware of cervical cancer. This development could be because the students in Dominica are more increased in public advocacy networks and because they are in their prime. Yahya and Mande (2019) also reported that 66.7% of the participants were aware of cervical cancer.

Furthermore, at model 1 of the analysis, the age of respondents, and marital status had positive strongly significant associations with the uptake of cervical cancer screening; married women have the likelihood to the uptake of cervical cancer screening than their single counterparts. Respondent age equally influences their uptake, the majority of older respondents that are married go for screening, educational status, and average monthly income although had strong association but a negative value with the

predictive. The value of the ANOVA was taken to be just 4.1%. Educational status and average monthly income may not necessarily influence uptake in the presence of some serious reasons for non-uptake like belief in divine protection, pain during the procedure, embracement, lack of access, fear of positive result may hinder uptake of cervical cancer screening in the presence of either secondary or tertiary education as well as high monthly income, other socio-cultural factors can contribute to non-uptake.

Yahya and Mande (2019) also reported that 66.7% of the participants were aware of cervical cancer. The association between socioeconomic characteristics and uptake of cervical cancer screening as presented above is supported by some authors notable among them by Woldetsadik *et al*.,(2020)where it was reported that there is a significant association between the age of respondents and uptake of cervical cancer screening in the study population. Furthermore, the proportion of women who are screened at the age of 18-29 was 8%, ages 30-39, 11.9%and 40-49(3.1%) meaning that as ages increase, the frequency of uptake of CC increases. The beta regression value of 0.080 with a p-value of less than 0.01 is a strongly significant, and positive regression value at model 1 meaning that as age increase is the independent variable, the dependent variable of uptake and knowledge of cervical cancer increases. The result of Woldetsadik(2020) is at tandem with what Mbaka *et al*., (2018) reported in the Kenyan study where participants who had been screened before were significantly old(30.7+_ 6.4 years; p-value 0.001Ncube et, al (2021) revealed that women in the ages 30-39 years were almost three times more likely to have been screened than to women in the youngest age group whereas, women who were 4049nare 6.2 times more likely to have been screened compared to youngest age group, and 4.5 times more for women 50 years, and older.

In the same vein, marital status had a positive beta regression value of 0.138*** meaning a p-value of <0.001 a strong significance, meaning that married respondents most likely go for cervical cancer screening more than their single respondents. This is at tandem with what Ncube *et al* (2021) in the Jamaican study where married women were two times more likely to have been screened compared to single women. In addition, the authors equally reported those respondents 85% who reported they did know where to go for screening were less likely to have ever been screened if they know the screening centres. Education negatively influences the uptake of screening

at -0.096***. Frank and Ehiemere (2017) identified that cultural influences, unavailability of screening services, lack of advocacy, lack of national policy on CCS, education of respondents, and monthly average income may not increase uptake of cervical cancer screening as reported by the author. Tapera *et al* (2017) reported that the majority 35% of female university students did not go for screening because they are under age, 16.5% perceived they did not see the need for CCS. it means as education increases uptake decreases meaning education did not influence uptake similarly average monthly income influences uptake negatively at -0.119***.

Some major factors are interplaying here, female health workers, university students, and others that have good educational backgrounds still have low uptake, the reasons sometimes is hinged on various factors which this present study decide to address. On income not predicting uptake Nwabiche *et al* (2018) reported that Africa women are not doing cervical cancer screening in their own country because cervical cancer screening is not a routine check-up for them even if they have enough monthly income, they are not likely to go for it. George (2021), in his study, shows that there is a high intake of cervical cancer screening among educated women. Onyenwenji and Mchunu (2018) reported in their study in Nigeria stated that illiteracy especially of the husbands can militate against the uptake of cervical cancer screening.

Ndikom *et al*.(2020) revealed further that uptake of cervical cancer remained influenced by income which is at variance with the current study. This present study showed a significant association with employment status, and uptake of cervical cancer screening which is similar to what Woldetsadik *et al*.(2020) where it was reported that respondents screening differed by occupation, the self-employed woman was more likely to be screened (OR=2.5, 95% C;1.066.27) than government-employed women. In a related development, respondents who are in rural areas were less likely to be screened than women who live in urban areas.

Model 2 is an addition of 6 variables; cervical cancer Knowledge, CC of risks perception, Cervical cancer perception of benefit, Cervical Cancer perception of relevance, Cervical cancer perception of susceptibility, and cultural norms. A striking report by several authors; Idowu *et al* (2016), Assoumon, Mabika, Mbiguino, Moualllif, and Ennaji. (2015), Ferdous and Marzen, (2014) showed that knowledge does not translate into practice or uptake of CCS. Malhotra *et al* (2020) equally

reported in their review across ten countries that knowledge does not translate into uptake of cervical cancer, this is contrary to what Nwabichie *et al* (2018) in their Malaysia study reported that respondents' knowledge influences uptake.

The report of all these authors is at tandem with the result of this current study where cervical cancer knowledge value of 0.021 is not significant at all meaning that at this level knowledge of cervical cancer does not translate to practice of cervical cancer screening. Furthermore, the result of this present study showed that cervical cancer risk perception is strongly and significantly associated with the perception of risk with P-value of 0.206*** this positive influence revealed that as the respondent perception of risk increase their uptake of cervical cancer screening increases this is in line with Tapera *et al* (2017), and Agboola, and Bello (2021 report.) similarly as respondents perception of benefit of CCS increases, so also the tendencies to go for screening increases as reported in this present study where the p-value is P-value 0.539***This is in line with what Frank and Ehiemelle(2017) reported.

Surprisingly enough CC knowledge perception of relevance, CC perception of severity with the value of -0.120**, on cervical cancer perception of severity the value was -0.548***, and cultural norms carried the value of -0.063* all these variables have a strong significant but negative value meaning that cervical cancer perception of relevance, perception of severity, and cultural norms does not increase uptake of cervical cancer screening. Tapera *et al* (2017) reported that perception of once susceptibility to cervical cancer can affect screening behaviour in their study population 33% of participants expressed a lack of personal susceptibility to cervical cancer and therefore believed they didn't need to go for the screening. They also revealed that perceived susceptibility is strongly associated with uptake of screening in their study population those that perceived themselves as at risk of contracting cervical cancer were 1.8 times more likely to go for cervical cancer screening.

Furthermore, Mburut *et al*(2019) reported a significant association between uptake of cervical cancer screening and human papillomavirus vaccination. Chidyaonga-Maseko, Chirwa, and Muula (2015) reported in their study stated that parents were worried about the fertility of their vaccinated daughters. Frank and Ehiemere (2017) supported that identifying the benefit of cervical cancer screening is the reason for

wanting to go for cervical cancer screening. Ilevbre *et al* (2019) reported that perception of cervical cancer severity is a key factor in the uptake of cervical cancer screenings, the author reported that 34% in their study population were able to go for cervical cancer screening because they perceive cervical cancer as highly serious, whereas 66% perceived cervical cancer screening less serious, the author further identified religious, and cultural belief as prominent reasons for non-uptake for cervical cancer screening uptake.

Loftal *et al.* (2016) corroborated that women in Muslim dominated communities may not go for cervical cancer screening as reported in their Ontario Canada study. Chidyaonga-Maseko et al. (2015) reiterate that culturally, women do not want to show their genitals to anyone else except their husbands as showed in the Ugandan study which is a major reason for non-uptake of cervical screening. Devarapalli, Labani, Nagarjuna, Panchal, and Asthana (2018) reported in their study when it was stated that lack of family support i.e., husband not supporting the screening or they condemn the person who went for screening is a strong cultural factor militating against the uptake of cervical cancer screening in their Indian study. Tadesse (2015) in Ethiopia study stated that women might usually resort to faith based institutions/ traditional healing before seeking medical treatment.

Furthermore, routine check-ups is not a norm in developing countries, especially in Africa. Ilevbare, Adegoke, and Adelowo (2019) in their study posited those cultural differences such as culture; values, and ways of life will strongly influence a woman's decision on having cervical cancer screening despite knowing the risk of not undergoing the screening. There are lots of reasons that can be deduced from this. Decision making power in the household, sexual autonomy as well as attitude towards domestic violence as reported in Tiruneh, Chuang, Ntenda and Chuang (2017) A woman that is knowledgeable about cervical cancer but whose decision making power is low will not likely go for cervical cancer screening, on the other hand, sexual autonomy among women can be profitable in increasing uptake of cervical cancer screening as documented by the same author in their Kenyan study. The role, the community play in increasing uptake cannot be overemphasized as further stated. Poor health-seeking behaviours are a predictor to delay care, and a major reason women present with cervical cancer at an advanced stage in Nigeria, this is similar to what

Hadiya reported among women in Uganda. Habtret *et al* (2018) reported that women's health-seeking behaviour for CC is low, their poor knowledge is not actively searching information about cervical cancer is significantly associated with not seeking health for cervical cancer precaution, and control.

A study conducted by Major KoyabeNtsayagae, Molwame, and Gabaitiri (2019) in Botswana reiterates that women said that their culture believed that vaginal examination is embarrassing, and that makes them run away from screening despite knowing the risk of cervical cancer. Fentie, Tadesse, and Gebretekle (2020) in their study opined those women are unwilling to go for screening due to cultural, and religious norms. They expressed it in many ways such as getting holy water, and prayer, not wanting to disrobe for pelvic examination in front of female health care providers. Ngari, Nyamiaka, and Kukami (2021) in their study inferred that some cultural beliefs that screening is evil and unclean; therefore, women from these communities will hardly go for tests. Agboola, and Bello (2021) in their study asserted that women said they were not at risk of CC because they feel they have spiritual protection this is at tandem with this present study.

4.9.1 Theoretical Application

The HBM comprises six constructs: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers, modifying factors, and cue to action. The model has been frequently used vis-à-vis these constructs, as a theoretical guide for interventions in the area of breast, cervical, and colorectal cancer. Interventions that adopted the HBM were able to assess, and aggregate subjective perception of susceptibility, and the severity of developing cancer, the likelihood of being screened as well as the benefits, and barriers to screening participation. It implies that constructs of the HBM may be particularly useful when planning interventions that target underprivileged populations such as women in low-income countries, minority, and rural populations (Hochbaum, 1958).

On perceived risk, the study stated that there is a general belief that fornication, greediness, uncleanness are risk factors to developing cervical cancer which is a misconception. A few others highlighted multiple sexual partners, early sexual debut, and heredity as some of the risk factors.

On perceived seriousness, some of the community leaders in the study bluntly denied the occurrence of cases of cervical cancer in their community while some other community leaders are aware of the seriousness of CC in the community. Also, some respondents who have experience of cervical cancer with their spouse shared the experience, and even mentioned other important personalities that have suffered from the disease to buttress the point.

On perceived barriers, the majority of the respondents claimed that access to CCS among other tests, and medical care is very poor. A slight majority of the respondents said that the distance to the place of screening affects the utilization of Cervical cancer screening while some say the cost of screening affects the utilization of cervical cancer screening. The majority also claimed that the availability of screening equipment also affects the utilization of cervical cancer screening. The majority asserted that satisfaction with services at the screening centre affects utilization. A majority also reiterates that the functionality of equipment affects the uptake of CCS.

On perceived susceptibility, the results of the table show that the respondents whose age falls below the age of 40 do not believe that they are susceptible to cervical cancer, and thereby feel that they do not need to do the screening.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1   Summary

The study adopted a mixed triangulation of both the qualitative and quantitative data. The quantitative analysis involved women between the ages of 20 to 60 years who were drawn from three senatorial districts, one rural, and one urban local government giving a total number of six (6) local government, with a total number of 960 respondents forming the population for the study, sixteen (16) respondents formed the population for the KII while twenty (20) respondents formed population for the IDI there were nine focus group discussions across the Local Government Areas.

The study examined the factor influencing socio-economic factors affecting uptake of cervical cancer screening, the study elicited the awareness of women about cervical cancer, sources of awareness were equally elicited, the study further documented on knowledge of signs, and symptoms of cervical cancer, the study focused on the awareness of cervical cancer screening, sources of awareness of cervical cancer screening, the socio-cultural factors influencing screening among women in the study population. The study also examines the uptake of cervical cancer screening factors for non-uptake, and also the study equally examined the motivating factor influencing uptake of CCS.

The study adopted the health belief model as an analytical framework, this theory postulated that they are six variables and the study further adopted cross-sectional survey wherein semi-structured questionnaires were administered to 960 women to determine awareness of cervical cancer screening, to determine the perception of women towards uptake cervical cancer screening, similarly seven (3) focus group discussions with a minimum of six (6), and a maximum of seven giving a total population of fifty-five (55) were interviewed. It was established that respondents were aware of the deadly nature of cervical cancer, however, their sources of information majorly were from nurses, and media radio followed by doctors. Religious

organizationform a negligible source of information of cervical cancer. Respondents' knowledge level about signs and symptoms of cervical cancer is high from the study population. However, knowledge about cervical cancer didn't translate to uptake or practice of screening. The awareness level of respondents about cervical cancer screening is about average, however, uptake of screening is low as less than half of respondents who are aware of screening eventually go for screening.

The emerging themes from key informant interview (KII), in-depth interview (IDI), and focus group discussion (FGD) was elicited, and discussed, about cervical cancer, cervical cancer screening, and uptake of screening. The variables of (HBM) were discussed concerning the dependent variable which is the uptake of cervical cancer screening. A greater percentage of respondents believe divine protection is the reason why they didn't go for screening.

On the symptoms of cervical cancer, abnormal discharge ranked high followed by heavy menstruation, vaginal bleeding, and painful sexual intercourse. In a similar vein, response were elicited on what respondents identified of major reasons about the perception of cervical cancer screening showing that detection of early changes, frequently is every three years and detections of sexually transmitted infection as was revealed by respondents.

Furthermore, there are a lot of misconceptions about the category of women to be screened, some responded that all women while other felt women that are of childbearing age should be screened if there are no symptoms some felt it is not necessary to be screened. Duration of screening, the timing of screening, and adequacy of screening equipment as well as satisfaction with screening was discussed, and information was chatted from respondents.

Factors that influenced non-uptake of screening were elicited from respondents while other motivating factors influencing uptake were elicited from the study population. The Bivariateanalysis including chi-square with the variable shows some significant between the socio-economic variable, and awareness of cervical cancer, knowledge of cervical cancer, as well as uptake of cervical cancer. The involvement and contribution of religious leaders is negligible in the study population. Male involvement will go a long way in preventive strategy targeted at reducing both morbidity, and mortality of

cervical cancer screening. Some community leaders have a series of misconceptions about the symptoms and signs of CC which can be a serious barrier to health-seeking behaviours among the population. There are some stigmas associated with some signs, and symptoms identified with cervical cancer, and cervical cancer screening will be a barrier to women to seek help early when the cervical cancer is at the stage when it can be appropriately treated.

The majority of participants that were interviewed across the community; community leaders, religious leaders both Christian and Muslim had a grievous misconception about the possibility of women with multiple sexual partners automatically being carriers of the numbers of their multiple sexual partners, the position which was taken by a majority of the leaders. This position will influence their support of women to go for cervical cancer screening and subsequent reduction of morbidity, and mortality as a result of the disease. Furthermore, on spousal support as recorded from the study population, men still state that women must submit to them, and inform them about what they want to do, hence women's autonomy on this issue is threatened. However, some men said they will support their wives.

Some single women who are sexually active, and some menopausal women are not aware of their susceptibility to CC hence their unwillingness to go for cervical cancer screening. Community involvement, spousal support, women's health seeking behaviour, and susceptibility to cervical cancer screening have been thoroughly examined in the present study, and the outcome of this will be good for policy formulation, and design of intervention study targeted at encouraging women to uptake of CCS.

5.2 Conclusion

The awareness level of women about cervical cancer screening is on average, some identifiable factors are responsible for non-uptake even though some women are knowledgeable about signs, and symptoms of cervical cancer screening. In a similar relationship, some motivating factors assisted a little below half of the study population who had been screened. The place of health workers in sensitization about cervical cancer cannot be overemphasized whereas, there is still a serious gap in

information about cervical cancer from the religious organisation in the study population which is an important issue that needed further investigation.

Also, the support from husband or male involvement in reproductive health issues is an evolving concept, and the awareness knowledge and some serious misconception from the married men of well tackled will go a long way in improving the present level of uptake of screening in Oyo State.The community leaders and religious leaders' position is central in strategic interventions that will be targeted towards reducing the prevalence, morbidity, and mortality of CC among the population remain a key component in reducing the rate of preventable cervical cancer diseases in developing nations so the result of this finding has contributed immensely to the body of knowledge.

5.3Recommendations

5.3.1   Government

Recommendation

Government should:

i.   Formulate a national policy on cervical cancer

ii.   Formulate plans for implementation of the policy

iii. Make screening organized and routinely as obtainable in the developed nations rather than opportunistic

iv.   Make CCS relatively free, cost-effective, accessible and evenly spread (Cancer control plan 2018)

v.   Create awareness campaign that should be community-based.

vi.   Encourage community ownership and participation, and spousal involvement

vii. Identify designated ambassadors in the communities

viii. Enforce HPV vaccination of every child and married women with motivation for participants who are fully immunized

ix.   Direct officials to make CCS accessible at staff clinic as it is applicable in Oyo staff secretariat

x.   Make State insurance schemes cover CCS as it is applicable in Oyo State health insurance scheme.

xi.   Give proper monitoring and evaluation

5.3.2 Women

Women should:

• Utilise uptake of routine screening with proper documentation for a reminder

• Participate in inclusive community intervention programmes

5.3.3 Religious Leaders

Religious leaders should:
- Implement CC awareness campaign
- Integrate CCS in doctrinal practices
- Promote uptake of CCS service through constant reminder and doctrinal practices

5.4 Contributions to Knowledge

i. Organize girls club; this will encourage catching them young as a proactive measure for halting morbidity and mortality of CC.

ii. Designing pamphlet that will enlighten women about CC and CCS which will be distributed to women across the study population.

iii. Advocacy visits to religious leaders with a bid to sensitizing them about CC and CCS with emphasis on where to locate CCS centres, its cost, treatment options and other related issues germane to prevention of CC.

iv. Organizing enlightenment campaign (in form of jingles, pamphlets) about the signs and symptoms of CC and misconceptions about CC across the study population.

v. The researcher will write a position paper on the key findings of the study to be presented to plenary sessions of the State house of Assembly to assist in the enactment of policy//law about CC and CCS.

5.5 Suggestions for Further Research

• Applying a gender lens on cervical cancer screening: a case study of Oyo state, Nigeria

• Domestic violence and cervical cancer screening among urban minority

• `the association between intimate partner violence and cervical cancer screening among women of childbearing age: A Southwest Nigeria case study

• Male involvement in female partners screening for cervical cancer in Southwest Nigeria.

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CERVICAL SCREENING SURVEY

REF No [   ]

Dear Respondent,

I am a postgraduate student of the Department of Sociology, Faculty of Social Sciences, University of Ibadan. The questionnaire is designed to obtain information on the 'SOCIO-ECONOMIC AND CULTURAL FACTORS INFLUENCING UPTAKE OF CERVICAL CANCER SCREENING IN OYO STATE'. Kindly indicate your consent by ticking the appropriate box below before proceeding to supply the needed information in the questionnaire. Kindly fill in the questionnaire below. The information given will be treated with utmost confidentiality and is strictly for academic purpose.

SECTION A: PERSONAL PROFILE

1. Please indicate your level of education, religion, age, ethnic group, marital status, employment status and income

Level of Education		Religion		Age(years)		Ethnicity		Marital status		Employment Status	
No formal education	☐	Christianity	☐	20- 30	☐	Yoruba	☐	Single	☐	Self Employed	☐
Primary education	☐	Islamic	☐	31- 40	☐	Igbo	☐	Married	☐	Public Sector Worker	☐
Secondary education Post Secondary	☐	African Religion	☐	41- 50	☐	Hausa	☐	Separated	☐	Private Sector Worker	☐
Degree/HND	☐	Others	☐	51- 60	☐	Others	☐	Widowed	☐	House wife	☐
Postgraduate	☐									Others	☐

2. What is your income per month?	₦5000:00	☐		
	₦10,000- ₦20,000	☐		
	₦20,001 - ₦30,000	☐		
	₦30,001- ₦40,000	☐		
	Others	☐		

3. Have you ever had sexual intercourse?	Yes	☐	No	☐	If No skip to section B

4. Age of first sexual contact	

5. Have you ever been pregnant?	Yes	☐	No	☐	If No skip to section B

6. How many pregnancy have you had?	

7. Parity (Number of previous deliveries)	

8. Age at first birth?	Below 18 years	☐
	19 – 24 years	☐
	25 – 34 years	☐
	Above 35 years	☐

9. Have you ever heard of cervical cancer?	Yes		☐	No	☐	If no skip to question 19

10. If yes, what was the source of your information(Multiple response is allowed)	Television	☐
	Nurse	☐
	Doctor	☐
	Radio	☐
	Friends/relatives	☐
	Newspaper	☐
	Religious	☐
	Others	☐

11. To what extent do you know about the following symptoms of cervical cancer? Use a scale of 1 to 7, where 1= not at all and 7= very high

	1	2	3	4	5	6	7
Stomach pain	☐	☐	☐	☐	☐	☐	☐
Blood from the private part	☐	☐	☐	☐	☐	☐	☐
Pain during sex	☐	☐	☐	☐	☐	☐	☐
Serious Headache	☐	☐	☐	☐	☐	☐	☐
Loss of weight	☐	☐	☐	☐	☐	☐	☐
Abnormal discharge from the private part	☐	☐	☐	☐	☐	☐	☐
Always having feeling of vomiting	☐	☐	☐	☐	☐	☐	☐
Blood from the private part after monthly cycle of blood discharge have stopped	☐	☐	☐	☐	☐	☐	☐
Excess blood during monthly cycle of blood discharge (menstruation)	☐	☐	☐	☐	☐	☐	☐
Weight loss without reason	☐	☐	☐	☐	☐	☐	☐

12. In your opinion, who can be infected with cervical cancer?	Everywoman	☐
	Women of child bearing Age	☐
	Only poor people	☐
	Commercial sex workers	☐
	Only alcoholics	☐
	Older women	☐
	Only people living with HIV/AIDs	☐
	I don't know	☐

13. Why is cervical cancer screening done on women?	Check for cancer or early changes of cancer in the cervix	☐
	Check for infections passed on through sex	☐
		☐
	I don't know	

14. How often does a Doctor/ Nurse recommend for a woman to come for cervical cancer screening test?	At least every 3 years from age of 20	☐
	At least every 5 years from age of 20	☐
	At least every 10 years from age of 20	
	I don't know	☐
		☐

15. Are your health workers skilled to perform cervical cancer screening?	Yes	☐	No	☐	I don't know ☐

16. When you need clarification on cervical cancer screening, are health workers able to answer your entire question?	Yes	☐	No	☐	☐ No Idea

<table>
<tr><td colspan="6" align="center">Susceptibility</td></tr>
</table>

17. How would you judge your risk of developing cervical cancer?	High risk of developing cervical cancer	☐
	Low risk of developing cancer	☐

<table>
<tr><td colspan="3" align="center">Severity</td></tr>
</table>

18. How serious is cervical cancer compared to other forms of cancer?	More severe	☐
	Similar to others	☐
	Less severe	☐
	I don't know	☐

<table>
<tr><td colspan="3" align="center">To what extent do you agree with the following?</td></tr>
</table>

19. Cervical cancer screening gives you a sense of control	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐
20. It is worth to do cervical cancer screening	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐
21. Cervical cancer screening detects pre-cancerous cells before symptoms.	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐
22. Cervical cancer screening is very painful	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐
23. It is embarrassing to have cervical screening	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐
24. The screening is not necessary if there are no signs and symptoms	Strongly Disagree	☐
	Disagree	☐
	Not Sure	☐
	Agree	☐
	Strongly Agree	☐

25. To what extent do you agree that the following may increase women's chances of developing cervical cancer?

	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
Infection with Human Papillomavirus	☐	☐	☐	☐	☐
Smoking Cigarettes	☐	☐	☐	☐	☐
Starting to have sex at young age before 17 years	☐	☐	☐	☐	☐
Having multiple sexual partners	☐	☐	☐	☐	☐
Having sex with multiple partner	☐	☐	☐	☐	☐
Infections with sexually transmitted disease	☐	☐	☐	☐	☐
Having many children > 5	☐	☐	☐	☐	☐
Long term use of contraceptives	☐	☐	☐	☐	☐
Not going for regular screening	☐	☐	☐	☐	☐
Have weaken immunity	☐	☐	☐	☐	☐

What are your attitudes towards Cervical Cancer Screening?		
26. I'm afraid to take Cervical Cancer Screening Test	Strongly Disagree	☐
	Disagree	☐
	Agree	☐
	Strongly agree	☐
27. I'm not free to talk about cervical cancer screening	Strongly Disagree	☐
	Disagree	☐
	Agree	☐
	Strongly agree	☐
28. I'll be worried if I have early signs and symptoms of cervical cancer.	Strongly Disagree	☐
	Disagree	☐
	Agree	☐
	Strongly agree	☐
29. It is difficult to go to cervical screening cancer clinic	Strongly Disagree	☐
	Agree	☐
	Disagree	☐
	Strongly agree	☐

30. To what extent do your cultural norms affect Cervical Cancer Screening? Use a scale of 1 to 7, where 1= not at all and 7= very high

	1	2	3	4	5	6	7
Cultural Belief							
Husband's Permission to access cervical cancer screening							
Husbands support on regular attendance for cervical screening							
Religion Affiliation							

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Cervical Cancer Screening is a sign of promiscuity						
"Jejereenuonaileomo" is associated with prostitution						
31. Are women seeking for cervical screening charged?	Yes	☐	No	☐	I don't know	☐
32. If yes, is the charge affordable?	Yes	☐	No	☐	I don't know	☐
33. Do you have health insurance schemes including cancer screening and treatment	Yes	☐	No	☐	I don't know	☐
34. Do health facilities provide free cancer screening?	Yes	☐	No	☐	I don't know	☐
35. If yes, how often?						

36. How far is the nearest health facility from your house?	Below 1km	☐
	1 – 5kms	☐
	5 – 10kms	☐
	Over 10kms	☐
37. How much does it cost you to reach the nearest health facility?	Nil	☐
	₦50 - ₦100	☐
	₦101 - ₦200	☐
	Above ₦200	☐
38. Do health facilities have cancer screening equipment?	Yes	☐
	No	☐
	I don't know	☐
39. If yes, are their equipment functioning?	Yes	☐
	No	☐
40. Do health workers organise for outreach programmes on cervical cancer?	Yes	☐
	No	☐
	I don't know	☐
41. If yes, how often?	Very often	☐
	Often	☐
	Rarely	☐
	Never	☐
42. How best can you rate the expertise of the health workers in cervical screening?	Excellent	☐
	Good	☐
	Moderate	☐
	Fair	☐
	Poor	☐
	I don't know	☐

Olufe onidahun,

Mo je akeko ni eka ti ati nko nipa ibakegbepo, imo ijinle elegbejegbe, ile eko giga ni Ibadan (Department of Sociology, Faculty of Social Sciences, University of Ibadan). A se agbekale onibeere na lati se awari '' IPA TI ETO ORO AJE ATI ASA NKO LORI AYEWO JEJERE ILE OMO NI IPINLE OYO''. E jowo e fi erongba yin han nipa fifi ami si inu apoti ti oye ki e to tesiwaju lati fi idahun fun onibeere na. E jowo e fi idahun si awon ibeere ti o wa ni isale wonyi. A o pa awon idahun yin mo fun erongba eko nikan.

Mo gba

Mo ko jale

EKA A: AWON AMUYE IBI TI OLUDAHUN NGBE

ONKA	AWON IBEERE	AWON IDAHUN	ENA
101	Kin ni ojo oro yin ni ojo ibi ti o koja lo?		Nitooto
102	Eya wo ni yin?		Nitooto
103	Ipo wo ni igbeyawo yin wa?	Apon Adelebo Iya tabi baba nda gbe Opo Dalemosu Omiran (E so fun wa)	1 2 3 4 5 99
104	Kin ni esin yin?	Kristiani Musulumi Elesin ibile tabi abalaye Omiran (E so fun wa)	1 2 3 99
105	Ti o ba je kristiani, eya wo ni e fi ara mo?	Ye ni eko Ti oni Emi mimo Awon ajihin rere Omiran (E so fun wa)	1 2 3 99
106	Ti o ba je Musulumi, eya wo ni e fi ara mo?		Nitooto
107	Ipele wo ni ekeko de?	Ko lo si ile eko Eko esin musulumi Alakobere Ile eko giga Eko ti awon alase fi owo si Keko gboye ipele akoko Keko gba oye imo ijinle ati bebe lo	1 2 3 4 5 6 7
108	Ise wo ni e yan ni aayo?	Omo ile iwe	1

199

		Osise ijoba	2
		Iyawo ile	3
		Akosemose	4
		Onisowo	5
		Aladani	6
		Alabaru	7
		Omiran (E so fun wa)	99
109	Elo ni owo ti onwole si apo asunwon yin ni osoosu?	₦5000:00	1
		₦10,000:00 - ₦20,000:00	2
		₦20,000:00 - ₦30,000:00	3
		₦30,000:00 - ₦40,000:00	4
		Omiran (E so fun wa)	99
110	Ifigagbaga (Ikunle melo ni e ti ni ri)		Nitooto
111	a. Nje eti ni oyun ri?		Nitooto
	b. Oyun melo ni eti ni ri?		Nitooto
112	Kin ni ojo ori yin nigba ti eni ajosepo pelu okunrin/obirin fun igba akoko		Nitooto
113	Kin ni ojo ori yin nigba ti e bi akobi omo yin?	Kere si odun 18	1
		Laaarin odun19-24	2
		Laarin 25-34	3
		Ju odun 35	4

EKA B: IMO ATI AYEWO NIPA JEJERE ILE OMO

ONKA	AWON IBEERE	AWON IDAHUNS	ENA
204	Nje eti gbo nipa jejere ile omo i?	Beni	1
		Beko	2
205	Ti o ba je beni, nibo ni eti gbo nipa re?	Ero mohun maworan	1
		Awon agbebi	2
		Onimo isegun	3
		Ero asoromagbesi	4
		Ore tabi ojulumo	5
		Iwe iroyin	6
		Awon adari esin	7
		Omiran (E so fun wa)	99
206	Awon ami ti o toka si arun jejere ile omo?	Inun kikan	1
		Ki oju ara ma seje	2
		Yiya igbe eje ati ikun	3
		Ako efori	4
		Riru ninu ago ara	5
		Ki oju ara ma soje	6
		Ki o ma seni bi eni fi bi	7
		Ki oju ara ma seje leyin igba	8
		ti nkan osu ti duro fun igba	9
		die	10
		Ki eje ma y ani asiko nkan osu	

		Riru ninu ago ara ni ani idi	

Awon nkan wonyi ni o ma se atilehin fun imudagba arun jejere ile omo. Ba wo ni e se fara mo si?

207	Ni kokoro aifojuri ti o ma nfa jejere ile omo (HPV)	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
208	Mimu siga	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
209	Ni ajosepo pelu okunrin tabi obinrin ni omo ti ojo ori re ko ti to odun mejidinlogun	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
210	Ni ajosepo pelu okunrin tabi obinirn ti o koja eyokan	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
211	Ni ajosepo pelu okunrin tabi obinirn ti o ni orekunrin tabi orebinrin ti o koja eyokan	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
212	Ki ko arun gbajumo	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
213	Ni omo ti o po ju marun lo	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
214	Lilo oogun idabobo fun igba pipe	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5
215	Ko jale lati se ayewo ara eni	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5

216	Adikun ninu agabra lati doju ko aisan, HIV	Nko fara mo rara	1
		Nko fara mo	2
		Ko si idaniloju	3
		Mo fara mo	4
		Mo fara mo gidigidi	5

EKA D: IMO ATI IWOYE NIPA JEJERE ILE OMO

ONKA	AWON IBEERES	AWON IDAHUNS	ENA
217	Ni erongba ti yin, ti ni o le ni arun jejere ile omo?	Enikeni	1
		Awon obinrin ti o bi omo lowo	2
		Awon otosi tabi akuse eniyan nikan	3
		Awon olowo nabi tabi agbelepawo	4
		Awon omuti nikan	5
		Awon arugbo lobinrin	6
		Awon ti onia run kogboogun nikan	7
		Emi ko mo	8
218	Nigba ti e ba nilo imo nigba arun jejere ile omo nje awon osise ile iwosan ni idahun fun gbogbo awon ibeere yin?	Beni	1
		Beeko	2
219	Ki ni idi re ti a fi nse ayewo arun jejere ile omo fun awon obinrin nikan?	Si se ayewo jejere tabi ibere jejere ni ile omo	1
		Si se ayewo awon arun ibalopo	2
220	Kin ni erongba yin nipa nini arun jejere ile omo?	Ewu ni ni arun jejere ga	1
		Ewu ni ni arun jejere kere ni iye	2
		Emi ko mo	3
221	Bawo ni arun jejere se le to nigba ti a ba fi we awon arun jejere miron?	O buru ju awon yoku lo	1
		Bakanna ni ori pelu awon miran	2
		Okere niye si awon miran	3
		Emi ko mo	4
222	Igba melo ni awon onimo isegun tabi awon osise ile isegun so oye lati ma se ayewo fun arun jejere ile omo?	O kere ju odun meta meta lati omo ogun odun	1
		O kere ju odun marun marun lati omo ogun odun	2
		O kere ju odun mewa mewa lati omo ogun odun	3
223	Nje awon osise ile iwosan ni imo lati se ayewo arun jejere ile omo?	Beni	1
		Beeko	2

EKA E: IPA TI ASA ATI IBAKEGBEPO NKO

| 305 | Nje igbagbo re nipa asa ka o ni owo ko lati ma se ayewo arun jejere ile omo? | Beni | 1 |
| | | Beeko | 2 |

306	Ti o ba je beni, ki ni awon ohun ti o gba gbo?		Nitooto
307	Nje o gba ase lati odo oko re lati se ayewo arun jejere ile omo?	Beni Beeko	1 2
308	Ba wo ni oko re se nse atilehin to fun o ni orekoore ti o b ani lati lo se ayewo arun jejere ile omo ?	Atilehin to gbongbon Atilehin ti o mo niwonba Ko si atilehin kankan	1 2 3
309	Igbawo ni o lero pe ayewo jejere ile omo ni lati bere	Below18 years 19 -24 years 25 – 34 years 35 – 44 years 45 – 54 years 55 – 64 years Above 65 years	1 2 3 4 5 6 7
310	Nje ile isin ti o faramo gba awon obinrin ni iyanju lati se ayewo arun jejere?	Beni Beeko	1 2
311	Ti o ba je beni, ba wo ni won se gbayi ni iyanju?		Nitooto

EKA E: NINI ANFAANI SI AWON OSISE ILE IWOSAN ATI IRIN ISE IGBALODE

ONKA	AWON IBEERES	AWON IDAHUNS	ENA
401	Ba wo niile iwosan ti o ni irin ise igbalode se jina si ile re?	Din ni1km 1 – 5kms 5 – 10kms Ju 10kms	1 2 3 4
402	Elo ni o na o lati de ile iwosan ti o ni rin ise igbalode?	Mo wa laarin meji ₦50 - ₦100 ₦100 - ₦200 Ju ₦200	1 2 3 4
403	Nje ile iwosan ni rin ise igbalode ti a fi nse ayewo arun jejere?	Beni Beeko Emi ko mo	1 2 3
404	Ti o ba je beni, nje awon irin se yi je ojulowo?	Beni Beeko Emi ko mo	1 2 3
405	Nje awon osise ile iwosan a ma se ipolongo nipa arun jejere ile omo?	Beni Beeko	1 2
406	Ti o ba je beni, fun igba melo?	Ni igba gbogbo Igba die Rara Won ko se ri	1 2 3 4
407	Osunwo wo ni e le gbe imo awon akosemose osise ile iwosan le?	O tayo O dara O se atewo gba O dara die Ko dara rara	1 2 3 4 5

EKA F: IPA TI ETO ORO AJE NKO

ONKA	AWON IBEERE	AWON IDAHUNS	ENA
408	Nje awon obinrin ti o se ayewo arun jejere nsan owo?	Beni	1
		Beeko	2
		Emi ko mo	3
409	Ti o ba je beeni, nje won ni agbara lati san owo yi?	Beni	1
		Beeko	2
410	Nje eto adojutofo wa fun ayewo ati itoju arun jejere?	Beni	1
		Beeko	2
		Emi ko mo	3
411	Nje ile iwosan nse ayewo ofe fun arun jejere?	Beni	1
		Beeko	2
		Emi ko mo	3
412	Ti o ba je beeni, fun igba melo?		Nitooto

Ba wo ni ose fara mo awon gbolhun ti o w ani isale wonyi to?

413	Ayewo arun jejere ile omo fun ni ikawo?	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
414	O to lati se ayewo arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
415	Ayewo arun jejere nse afihan ibere pepe ki ami re to jeyo	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
416	Ayewo arun jejere fun ni inira	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
417	Ayewo arun jejere mu idojuti ba ni	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
418	Ayewo yi ko nilo ti ko ba si ami tabi itokasi arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
419	Mo ni iberu lati se ayewo arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3

		Mo fara mo gidigidi	4
420	Nko ni ominira lati soro nipa arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4
421	Mo ma ni iporuuru okan ti mob a ni ami tabi itokasi arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidì	4
422	Onira lati lo si ile iwosan ti ati se ayewo arun jejere	Nko fara mo rara	1
		Mo fara mo	2
		Nko fara mo	3
		Mo fara mo gidigidi	4

KII guide for health workers

1.   Can you please explain what cervical cancer is? Probe for symptoms of cervical cancer

Probe for risk factors or causes of cervical cancer

Probe for prevention of cervical cancer

Probe for management, and treatment of cervical cancer

2.   Who do you think is at risk of cervical cancer?

3.   Can you please shed light on cervical cancer screening?

Probe for various forms of screening

Probe for number of times that a woman should go for the screening

Probe for the category of women that should go for the screening

4.   What are the people's socio-cultural perceptions about cervical cancer?

5.   Does your health facilities offer cervical cancer prevention, and control services Probe if they conduct health talk on cervical cancer (Probe for frequency of the health talk)

Probe if they conduct medical outreaches on cervical cancer (Probe for frequency of the outreaches)

Probe if they have cervical screening equipments? (Probe for adequacy of the equipment; cost, and the frequency at which people access it)

Probe if they offer vaccination services for cervical cancer (Probe for cost, and the frequency at which people access it)

6.   Are you aware of any policy or programme of the government on cervical cancer prevention, and control

If yes, probe for details of the policy or programme

7.   What do you think are the socio-cultural, and economic factors influencing uptake of cervical cancer screening?

Probe for husband's permission, educational status, income, perception of the disease, financial constraints, pain in doing the test, embarrassment, vaccination status, perceived susceptibility, perceived severity etc

KII guide for policy makers

1.   Can you please give an explanation about your understanding of what cervical cancer is?

2.   How equipped are our health facilities to offer cervical cancer prevention, and control services?

Probe which level of the health care facilities is equipped to offer cervical cancer prevention, and control services

Probe for adequacy of cervical screening equipment

Probe if they offer vaccination services for cervical cancer

3.   What are the challenges that have been identified in cancer prevention, and control? Probe for what is or are being put in place to address such challenges

4.   Are there policies or programme of the government on cervical cancer prevention, and control

If yes, probe for details of the policy or programme

If no, probe for what is been done to ensure there is policy or programme on it

5.   One of the challenges of utilizing health facilities, and services is financial constraints, please, what are the efforts of the government towards reducing out of pocket spending on cervical cancer prevention, and treatment?

6.   What do you think are the socio-cultural, and economic factors influencing uptake of cervical cancer screening?

Probe for husband's permission, educational status, perception of the disease, fear of pain in doing the test, fear of being embarrassment, vaccination status, perceived susceptibility, perceived severity etc

IDI GUIDES

INTERVIEWEES THAT HAVE BEEN SCREENED

1.   Could please tell me your understanding of cervical cancer?

Probe for socio-cultural perception about cervical cancer

Probe for sources of information about cancer

Probe for symptoms of cervical cancer

Probe for causes of cervical cancer

Probe for prevention of cervical cancer

Probe for management, and treatment of cervical cancer

2.   Who do you think is at risk of cervical cancer?

Probe for socio-cultural reasons for susceptibility

3.   When do you think one should go for cervical cancer screening?

Probe for number of times that a woman should go for the screening Probe for the type of woman that they think should go for the screening

4.   You have said that you have gone for cervical cancer screening.

Probe for how she got to know about the screening

Probe for why she went for the screening

Probe for when she went for the screening

Probe for where she went for the screening

5.   Did you go through pre-, and post-counseling sessions when you went for the screening? If yes, could you please tell me what you were told during the counseling sessions?

Probe if she was told the benefits of the test; category of women that can do the test; number of times to do the test; prevention, transmission, and control of cervical cancer etc.

6.   Please, what was the cost implication for the test?

Probe if it was out of pocket or sponsored

If out-of –pocket, probe for the amount, and who paid for the test If sponsored, probe for the person or organisation that sponsored it

7.   Did you seek for your husband's permission to do the test?   If yes/ no, probe for the reasons

Probe for other responsibilities of the man

8.   When you came back from the screening, did you show your husband the result of the test?

Probe for husband's contribution to staying healthy after the screening If test is positive, what were the steps taken? Probe for husband's responsibilities in the steps taken.

Have you gone for another test after the initial test?(For those who have done screening for more than 3 years)

If no, probe for reasons for not going (finance, pain in doing the test, embarrassment, lack of husband's support, vaccination status, perceived susceptibility, perceived severityetc)

If yes, probe for reasons for going (financial capacity, husband's support, vaccination status, perceived susceptibility, perceived severity, and perceived benefitsetc)

Probe if they will still go for another test when it is due

10.   Will you go for another test when it is due? (**For those whose screening is not up to 3 years**)

If no, probe for reasons (finance, pain in doing the test, embarrassment, lack of husband's support, vaccination status, perceived susceptibility, perceived severity etc

If yes, probe for reasons for going (financial capacity, husband's support, vaccination status, perceived susceptibility, perceived severity, perceived benefits etc)

11.   Have you been vaccinated against HPV **[For both parties (screening less than 3 years, and more than 3 years)]** If yes, probe for why, when, and where.   If yes, probe for cost implication

If yes, probe for husband's responsibilities (including support) in the vaccination. If no, probe for why (financial constraints, ignorance of the vaccine, lack of husband's support, perceived susceptibility etc)

INTERVIEWEES THAT ARE AWARE BUT HAVE NOT GONE FOR SCREENING

1.   Could please tell me your understanding of cervical cancer?

Probe for socio-cultural perception about cervical cancer

Probe for sources of information about cancer

Probe for symptoms of cervical cancer

Probe for causes of cervical cancer

Probe for prevention of cervical cancer

Probe for management, and treatment of cervical cancer

2.   Who do you think is at risk of cervical cancer?

Probe for socio-cultural reasons for susceptibility

3.   When do you think one should go for cervical cancer screening? Probe for number of times that a woman should go for the screening

Probe for the type of woman that they think should go for the screening

4.   Can you please give reasons that made you not to go for cervical cancer screening? Probe for ignorance of the screening; financial constraints; fear of pain; lack of husband's support etc,

5.   If you decide to go for test, what are factors that will influence your uptake of the screening?

Probe if she needs to seek for husband's permission?,If yes/ no, probe for the reasons Probe for other responsibilities of the man

Probe forother factors such as financial constraints, pain in doing the test, embarrassment, lack of husband's support, vaccination status, perceived susceptibility, perceived severity

FGD GUIDES

(Discussants who are aware of cancer but wife have not done screening)

1.   In your word, can you please explain what cervical cancer means?

Probe for sources of awareness

Probe for their knowledge about the causes, symptoms, prevention, and treatment of cervical cancer

2.   What are the socio-cultural perceptions about cervical cancer

3.   Have you ever been informed about cervical cancer screening?

Probe for sources of information about cervical cancer screening?

4.   You said that your wife has not gone for cervical cancer screening. Can you please tell us the reasons behind this?

Probe for economic/financial constraints, and other socio-economic reasons

(Susceptibility, severity of the disease etc) Probe for socio-cultural reasons

5.   If your wife wants to go for screening, will she have to ask for your permission to go?   If yes/no, probe for reasons

APPENDIX VII

(Discussants whose wives have gone for the screening)

1.   Can you please explain what cervical cancer means?

Probe for sources of awareness

Probe for their knowledge about the causes, symptoms, prevention, and treatment of cervical cancer

2.   What are socio-cultural perception about cervical cancer

3.   Can you please tell us your understandingofcervical cancer screening?

Probe for sources of information about it

Could you please tell us why your wife went for the test?

Probe for perceived susceptibility, severity, benefits, cues to actions) Probe for socio-cultural reasons

4.   When your wife wanted to go for the test, did she seek for your permission to go?

If yes/no, probe for reasons why she must seek for consent

If husband permitted her to go, probe for reasons

 If husband did not permit, probe for reasons

5.   Please, what were the cost implications of the screening done by your wife?

Probe if it was out-of pocket or sponsored

If sponsored, probe for who sponsored the screening fee If out-of-pocket, probe for who paid for the screening fee

6.   Are you aware of the results of the screening?

Probe if he was interested; reasons for interest or dis-interest

Probe for steps taken after seeing or knowing the results   Probe
for the responsibilities of the man in the steps taken

7.   If your wife wants to go for subsequent screenings, does she still needs to seek
for your permission to go? If yes/no, probe for reasons

Probe for the man's responsibilities in subsequent screenings

8.   What are the other socio-cultural, and economic factors that will influence your
wife's uptake of subsequent screenings?

APPENDIX VIII

MINISTRY OF HEALTH
DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION
PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. ....
All communications should be addressed to
the Honorable Commissioner quoting
Our Ref. No.AD 13/479/ 1303   30th May, 2019

The Principal Investigator,
Department of Sociology,
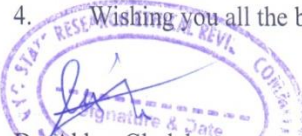Faculty of Social Sciences,
University of Ibadan,
Ibadan.

Attention: Owolabi Gbonjubola

ETHICS APPROVAL FOR THE IMPLEMENTATION
OF YOUR RESEARCH PROPOSAL IN OYO STATE

This is to acknowledge that your Research Proposal titled: "Socio-Economic and Cultural Factors Influencing Uptake of Cervical Cancer Screening in Oyo State." has been reviewed by the Oyo State Ethics Review Committee.

2.   The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3.   Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.

4.   Wishing you all the best.

Dr. Abbas Gbolahan
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethics Review Committee

OYO STATE PRIMARY HEALTH CARE BOARD
OFFICE OF THE EXECUTIVE SECRETARY

OYSPHCB OFFICE:
Quarters 691, Oba Biladu Street,
Off Secretariat-Government House Road,
Agodi G.R.A., Ibadan, Nigeria.
TEL: 0814-449-5488, 0808-517-5481
E-MAIL: oyosphcb2015@gmail.com

Your Ref. No..........
All Correspondence should be addressed
to the Executive Secretary quoting
Our Ref...

7th May, 2020

Permission to Conduct Research Work

Re;Gbonjubola Owolabi; Matric No:92750 ;

This is to acknowledge your request on a research project, titled; "Socio-Economic and Cultural Factors Influencing Uptake of Cervical Cancer Screening in Oyo State" to be conducted in the pre-selected local government areas of the State among the women of child bearing age.

The approved Local Government Areas are; Ibadan North; Ibadan South West; Ibarapa North; Irepo; Ogbomosho North and Oyo West.

The permission is hereby granted and you are to note that a copy of the final report of the study should be made available to the Oyo State Primary Health Care Board as well as the Local Government Health Authorities where the research is conducted as a form of feedback.

You shall be accorded all necessary assistance. Best of luck!

Dr. M.B. Olatunji

Executive Secretary

Effective coordination of Resources and Stakeholders to achieve optimum Primary Health Care Service System for the People of Oyo State

APPENDIX X

SOCIAL SCIENCES AND HUMANITIES RESEARCH ETHICS COMMITTEE (SSHEC)

University of Ibadan

Chair: Prof. Jegede A. S.
Tel:+234-8055282418
Email: sayjegede@gmail.com
sayjegede@yahoo.com
as.jegede@mail.ui.edu.ng

27 October, 2020.

Re – Socio- economic and cultural factors influencing uptake of cervical cancer screening in Oyo State, Nigeria

UI/Social Sciences Ethics Committee assigned number: UI/SSHEC/2020/0026

Name of Principal Investigator: Mrs Olanike Gbonjubola Owolabi
Address of Principal Investigator: Department of Sociology,
University of Ibadan,
Ibadan, Oyo State.

Date of receipt of valid application: **24 June, 2020.**
Date of meeting when final determination on ethical approval was made:

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and given full approval by the SSHE Committee.

This approval dates from **27/19/2020 to 26/10/2021**. If there is delay in starting the research, please inform the SSHE Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. All informed consent forms used in this study must carry the SSHE Committee assigned number and duration of SSHE Committee approval of the study. It is expected that you submit your annual report as well as an annual request for the project renewal to the SSHE Committee early in order to obtain renewal of your approval to avoid disruption of your research.

Note: the National code for health research ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the SSHEC. No changes are permitted in the research without prior approval by the SSHEC except in circumstances outlined in the Code. The SSHEC reserves the right to conduct compliance visit to your research site without previous notification.

Prof. A. S. Jegede

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