KNOWLEDGE, ATTITUDE AND FACTORS AFFECTING UTILIZATION OF CERVICAL SCREENING SERVICES AMONG FEMALE NON- ACADEMIC STAFF IN A TERTIARY INSTITUTION IN BENIN CITY.

BY

IDEMUDIA PROSPERITY OSAOSE

BMS2005067

FACULTY OF NURSING SCIENCE
COLLEGE OF MEDICAL SCIENCE
UNIVERSITY OF BENIN
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IN PARTIAL FULFILLMENT OF THE AWARD OF BACHELOR OF NURSING SCIENCE (BSC), COLLEGE OF MEDICAL SCIENCE, UNIVERSITY OF BENIN, BENIN CITY

OCTOBER, 2025

DECLARATION

This is to declare that this research project " KNOWLEDGE, ATTITUDE AND FACTORS AFFECTING UTILIZATION OF CERVICAL SCREENING SERVICES AMONG FEMALE NON- ACADEMIC STAFF IN A TERTIARY INSTITUTION IN BENIN CITY " was carried out by IDEMUDIA PROSPERITY OSAOSE .it is solely the result of my work except where acknowledged as being derived from friends ,non academic female staff, other persons or resources.

MATRICULATION NUMBER——————————————

FACULTY, COLLEGE NURSING SCIENCE, COLLEGE OF MEDICAL SCIENCE

UNIVERSITY OF BENIN, BENIN CITY

Signature——————————

Date——————

CERTIFICATION/APPROVAL

This is to certify that this research project by IDEMUDIA PROSPERITY OSAOSE With MATRICULATION NUMBER———————— has been examined and approved for the award of "BACHELOR OF SCIENCE IN NURSING SCIENCE CERTIFICATE "

IDEMUDIA PROSPERITY OSAOSE _____

(Project Student) **Sign and date**

Sr JOAN N.CHUKWURAH

_____

(Project supervisor). **Sign and date.**

PROF. (MRS) C. E OMOROGBE _____

Hod of Department (MED SURG) **Sign and date**

_____ _____

External examiner **Sign and date**

ABSTRACT

Cervical cancer remains a major public health challenge, particularly in developing countries where awareness, screening, and prevention are inadequate. This study assessed the knowledge, attitude, and factors influencing the utilization of cervical cancer screening services among female non-academic staff at the University of Benin, Benin City. A descriptive cross-sectional research design was adopted, and data were collected using a structured self-administered questionnaire from 90 respondents selected through total enumeration. Data were analyzed using descriptive and inferential statistics, including chi-square tests at a 0.05 significance level. Findings revealed that while most respondents (86.7%) had heard of cervical cancer, knowledge about specific risk factors such as human papillomavirus (HPV) and recommended screening intervals was limited. Although the majority demonstrated positive attitudes toward screening (mean = 3.52), actual utilization was low, with only 31.1% having ever undergone screening. Major barriers identified included lack of awareness, financial constraints, fear of the screening procedure, and distance to healthcare centers. A significant relationship was found between awareness and screening utilization (p = 0.001) as well as between attitude and utilization (p = 0.003). The study concludes that despite relatively high awareness, inadequate knowledge and prevailing barriers hinder effective screening uptake. It recommends intensified health education, workplace-based screening programs, policy support, and subsidized services to enhance cervical cancer prevention among women in tertiary institutions.

Keywords: Cervical Cancer, Knowledge, Attitude, Screening Utilization, Non-Academic Staff, Benin City

DEDICATION

This work is wholeheartedly dedicated to God Almighty, my ever-present help and unfailing source of strength. Thank You for the grace, wisdom, and perseverance that brought me this far. All glory and honor belong to You.

To my dear family, your love, sacrifices, and endless support have been the pillars that held me through every challenge. Thank you for believing in me and standing by me. This milestone is dedicated to you all, with love and gratitude

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CHAPTER ONE

INTRODUCTION

1.0 BACKGROUND TO THE STUDY

Cancer of the cervix is an abnormal growth in the lining of the cervix that begins as a slight abnormal squamous cellular change or dysplasia. Poor knowledge of cervical cancer screening remains a major barrier to its utilization, particularly in developing countries, where many women lack adequate awareness of its importance, benefits, and availability (Petersen et al., 2022). Cervical cancer is the fourth most common cancer among women worldwide, with an estimated 604,000 new cases and 342,000 deaths annually (World Health Organization [WHO], 2020). The WHO (2021) recorded about 270,000 cervical cancer deaths annually, with 90% occurring in middle- and low-income countries. Cervical cancer is responsible for almost 8,000 deaths from advanced disease and late presentation. Every two minutes, a woman dies from cervical cancer worldwide (Huang et al., 2021). Eighty-eight percent (88%) of the cervical cancer burden is on developing countries, contributing significantly to gynecological oncology deaths (Akhter et al., 2024). Cervical cancer accounts for approximately 20–25% of female deaths in sub-Saharan Africa, which is nearly twice the global percentage (Yang et al., 2023). According to WHO (2020), the number of women diagnosed with cervical cancer annually in Nigeria is approximately 14,089, making it the second leading cause of cancer-related deaths after breast cancer. Cervical cancer is slow-growing, meaning it can progress over time without being detected in the early stages. Most women diagnosed with precancerous changes in the cervix are in their early 20s or 30s, whereas the average woman diagnosed with cervical cancer is in her mid-40s. Cervical cancer occurs when cervical cells grow abnormally and invade other tissues. When invasive, the cancer affects deeper

cervical tissues and may spread (metastasize) to other parts of the body, including the vagina, bladder, rectum, liver, and lungs (Bhatla et al., 2021). The primary cause of cervical cancer is persistent infection with high-risk human papillomavirus (HPV) strains, particularly HPV 16 and 18, which account for over 70% of cases worldwide (Toye, 2017). HPV is the most common sexually transmitted viral infection and has a high mortality rate (Xie et al., 2021). Cervical cancer is strongly linked to HPV infection, with 99% of cases attributed to the virus (Stelzle et al., 2020). Global estimates suggest that HPV 16 and 18 are responsible for approximately 71% of cervical cancer cases, with HPV 16 contributing 60.6% and HPV 18 contributing 10.2% (WHO, 2020). Women of reproductive age have a 50–90% lifetime risk of acquiring HPV, which varies depending on the oncogenic potential of the strain (Kombe et al., 2021). Risk factors for cervical cancer include early sexual debut, multiple sexual partners, sexual activity with a partner who has multiple partners, and first sexual intercourse before age 18, which increases the likelihood of acquiring HPV (Lee et al., 2024). Additional risk factors include smoking, a history of sexually transmitted diseases (STDs), HIV infection, a family history of cervical cancer, and prolonged use of oral contraceptives. The introduction of the HPV vaccine has been a landmark achievement in primary cervical cancer prevention. It has significantly reduced cervical cancer morbidity and mortality among vaccinated women in developed countries. However, in developing countries, socio-cultural, political, and economic factors hinder its uptake (Msoka et al., 2021). The provision of the HPV vaccine in low- and middle-income countries has been essential in achieving the global action plan for cancer prevention (Kumar et al., 2020). WHO (2020) recommends HPV vaccination for girls aged 9–13 years before sexual exposure, as it is most effective before HPV infection occurs.

The Nigerian Federal Ministry of Health [FMOH] (2019) recommends HPV immunization for girls and women aged 9–26 years before sexual activity. However, unlike childhood vaccines, the HPV vaccine is not included in free mass immunization programs and must be purchased out-of-pocket (Massa et al., 2022). In 2013, vaccine manufacturers partnered with the Global Alliance on Vaccine Immunization (GAVI) to reduce vaccine costs for developing countries like Nigeria (Ahonkhai et al., 2021). Despite these efforts, access to HPV vaccines in Nigeria remains limited due to high costs, poor vaccine distribution, low screening rates, an ineffective healthcare system, poor healthcare accessibility, low awareness, and the failure to recognize cervical cancer as a major public health concern ((Talabi et al., 2023; John-Akinola et al., 2022). Studies have reported that cervical cancer awareness and screening uptake remain low due to a lack of knowledge about its importance (Ducray et al., 2021). A study conducted in Benin City to assess knowledge and screening practices among women of reproductive age (15–49 years) attending immunization clinics showed poor knowledge and low screening rates (Adjobimey et al., 2022). Despite the high incidence of cervical cancer, poor knowledge of the screening process and low uptake of screening services persist, largely due to a lack of awareness (Delie et al., 2024).

1.1 STATEMENT OF PROBLEM

Cervical cancer remains a significant public health concern worldwide, particularly in developing countries where screening and prevention measures are inadequate (WHO, 2021). Despite being largely preventable through regular screening and HPV vaccination, cervical cancer continues to claim the lives of thousands of women annually (Derbie et al., 2022). The high mortality rate is attributed to late presentation, poor screening uptake, and limited awareness among women (Srinath et al., 2022).

The WHO (2021) reported that approximately 270,000 women die from cervical cancer annually, with 90% of these deaths occurring in low- and middle-income countries. In Nigeria, cervical cancer is the second most common cancer among women, with an estimated 14,089 new cases recorded annually (WHO, 2021). Despite this high incidence, studies indicate that the utilization of cervical cancer screening remains low due to multiple barriers, including poor awareness, cultural beliefs, financial constraints, and inadequate access to healthcare facilities (Petersen et al., 2022). Research conducted by Chukwuka et al. (2021) in Benin City revealed that a significant proportion of women of reproductive age have poor knowledge and low uptake of cervical cancer screening. Similarly, Idewele et al. (2024) found that although medical students in Benin had good knowledge of cervical cancer screening, the actual utilization of screening services was still low. Among non-academic staff women in tertiary institutions, the situation is even more concerning due to additional socio-economic and educational constraints (Nyambiya et al., 2024). Many of these women do not consider cervical cancer screening a priority due to competing responsibilities and a lack of awareness regarding its importance (Petersen et al., 2022). Furthermore, cultural misconceptions and fear of diagnosis contribute to poor screening behavior among women in this category (Saeed et al., 2021). Despite various global and national efforts to promote cervical cancer screening, including the introduction of subsidized HPV vaccination programs and awareness campaigns, the uptake of screening services remains unacceptably low in Nigeria (FMOH, 2019). The existing disparities in cervical cancer screening among different ocioeconomic groups highlight the urgent need for targeted interventions to address the factors affecting its utilization (Shin et al., 2021). This study, therefore, seeks to examine the factors influencing the utilization of cervical cancer screening services among non-

academic staff women in a tertiary institution in Benin. Understanding these factors will provide insights into the barriers and facilitators of cervical cancer screening and contribute to developing effective strategies for improving screening uptake among this vulnerable population.

1.2 AIM OF THE STUDY

The aim of this study is to examine the knowledge, attitude, and factors affecting the utilization of cervical screening services among female non-academic staff in a tertiary institution in Benin City. The study will assess the level of awareness and understanding of cervical cancer screening, evaluate attitudes toward screening, and identify key factors influencing its utilization.

1.4 RESEARCH OBJECTIVES

The specific objectives are to:

1. Assess the level of knowledge of cervical cancer and its screening among non-academic staff women in a tertiary institution in Benin.

2. Assess the attitude of female non-academic staff toward cervical cancer screening and how it affects utilization.

3. Determine the level of utilization of cervical cancer screening services among female non-academic staff.

4. Identify the factors affecting the utilization of cervical cancer screening services among female non-academic staff.

1.5 RESEARCH QUESTIONS

1. What is the level of knowledge of cervical cancer and its screening among female non-academic staff in a tertiary institution in Benin?

2. What are the attitudes of female non-academic staff toward cervical cancer screening, and how do these attitudes influence utilization?

3. What is the level of utilization of cervical cancer screening services among female non-academic staff?

4. What are the key factors affecting the utilization of cervical cancer screening services among female non-academic staff?

1.6 HYPOTHESES

1. (H_0): There is no significant relationship between awareness and the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin.

2. (H_0): There is no significant relationship between attitude and the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin City.

1.7 SIGNIFICANCE OF THE STUDY

This study is significant as it will provide insight into the knowledge, attitude, and factors affecting the utilization of cervical screening services among female non-academic staff in a tertiary institution in Benin City. By identifying the level of awareness, attitude, and barriers to screening, this research will contribute to public health strategies aimed at increasing cervical cancer screening uptake. The findings will benefit policymakers by informing the development of targeted interventions to improve screening rates. Healthcare providers will also gain a better understanding of the challenges faced by women in accessing screening services, leading to improved patient education and service delivery. Additionally, this study will serve as a reference for future research on cervical cancer prevention and screening, contributing to the growing body of knowledge in this field. Ultimately, improving knowledge, shaping positive

attitudes, and addressing barriers to cervical cancer screening will enhance early detection and treatment, thereby reducing mortality rates associated with the disease.

1.8 SCOPE OF THE STUDY

This study focuses on the knowledge, attitude, and factors affecting the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin City. It examines their awareness, perceptions, and attitudes toward cervical cancer screening, as well as the socio-cultural and economic factors that influence their participation in screening programs. The study is restricted to female non-academic staff within a selected tertiary institution in Benin City. It does not include students, male staff, or academic staff, as their perspectives and challenges regarding cervical cancer screening may differ.

1.9 OPERATIONAL DEFINITION OF TERMS

- **Cervical Cancer:** A malignant tumor that develops in the cells of the cervix, usually as a result of persistent infection with high-risk strains of the human papillomavirus (HPV). It is a major public health concern, particularly in low- and middle-income countries, where screening and vaccination rates are low.
- **Cervical Cancer Screening:** A preventive measure that involves medical tests used to detect precancerous or cancerous changes in the cervix early. This is typically done through Pap smear (a test that collects cervical cells for microscopic examination) and HPV DNA testing (a test that identifies high-risk HPV strains responsible for cervical cancer).
- **Female Non-Academic Staff:** Women employed in the University of Benin who are not engaged in teaching or research but perform administrative, technical, or support roles. This study will focus on female non-academic staff aged 25–60 years, as they are within the reproductive and post-reproductive age range where cervical cancer risk increases, and screening is recommended.

- **Human Papillomavirus (HPV):** A highly prevalent sexually transmitted infection (STI) with over 100 strains, some of which are classified as high-risk due to their association with cervical cancer. Persistent infection with HPV types 16 and 18 is responsible for more than 70% of cervical cancer cases worldwide.
- **Attitude toward Cervical Cancer Screening:** The beliefs, perceptions, and disposition of individuals toward undergoing cervical cancer screening. This includes their willingness, fear, misconceptions, and cultural influences that affect their decision to get screened.
- **Utilization of Cervical Cancer Screening Services:** The extent to which eligible women access and participate in cervical cancer screening programs. Utilization is influenced by factors such as awareness, accessibility, affordability, and socio-cultural beliefs.
- **Barriers to Cervical Cancer Screening:** Factors that prevent or discourage women from undergoing cervical cancer screening, including lack of awareness, financial constraints, fear of diagnosis, cultural beliefs, stigma, inadequate healthcare facilities, and limited access to screening centers.
- **Pap Smear Test:** A screening procedure used to detect abnormal or precancerous cells in the cervix. It involves collecting a sample of cervical cells for laboratory examination to identify early signs of cervical cancer.
- **HPV Vaccination:** A preventive measure that protects against infection with high- risk strains of the human papillomavirus, significantly reducing the risk of cervical cancer. The vaccine is most effective when administered to girls and young women before the onset of sexual activity.
- **Socio-Cultural Factors:** The cultural norms, beliefs, traditions, and social influences that affect women's perception and willingness to participate in cervical cancer screening. These may include religious beliefs, myths about cervical cancer, societal stigma, and gender dynamics in healthcare decision-making.

CHAPTER TWO

2.0 Literature Review

This chapter reviews existing literature on knowledge, attitudes, and factors influencing the utilization of cervical cancer screening services, particularly among women in workplace settings. The review aims to provide a detailed understanding of cervical cancer, screening methods (especially Pap smear and HPV testing), awareness levels, behavioral and socio-demographic factors, and barriers to utilization.

2.1 CONCEPTUAL Review

2.1.1 Overview of Cervical Cancer

Cervical cancer is a malignant tumor that arises from the cervix, which is the lower part of the uterus connecting to the vagina. It is primarily caused by persistent infection with high-risk types of the human papillomavirus (HPV), particularly types 16 and 18, which are responsible for over 70% of cervical cancer cases globally (World Health Organization [WHO], 2023). According to the Global Cancer Observatory (GLOBOCAN), cervical cancer is the fourth most common cancer in women worldwide, with an estimated 604,000 new cases and 342,000 deaths in 2020. More than 85% of these cases occur in low- and middle-income countries, where screening and preventive services are limited (Sung et al., 2021). In Nigeria, cervical cancer is the second leading cause of cancer-related death among women, accounting for over 14,000 new cases and 8,000 deaths annually (International Agency for Research on Cancer [IARC], 2021).

Cervical cancer usually develops slowly over time. It begins with precancerous changes in the cervical cells known as cervical intraepithelial neoplasia (CIN), which may progress to invasive cancer if not detected and treated early. These changes are

often asymptomatic, making regular screening critical for early diagnosis and treatment. Common symptoms in the advanced stages include abnormal vaginal bleeding, pelvic pain, and vaginal discharge with a foul odor.

In 2020, the WHO launched a global strategy to eliminate cervical cancer as a public health problem, setting targets that include 90% HPV vaccination coverage, 70% screening coverage, and 90% treatment of precancerous lesions by 2030 (WHO, 2021). Achieving these targets requires coordinated efforts in public health education, resource mobilization, and strengthening of healthcare systems.

Given the high burden of cervical cancer and the availability of preventive measures, assessing the knowledge, attitudes, and utilization of screening services—especially among potentially underserved populations such as female non-academic staff in tertiary institutions—is critical for informing policy and intervention strategies.

2.1.2 Knowledge of Cervical Cancer Screening

Knowledge of cervical cancer screening refers to the awareness and understanding that individuals have regarding the existence, purpose, procedures, and benefits of screening services for the early detection of cervical cancer. Studies have consistently shown that poor knowledge about cervical cancer and its screening contributes to the low uptake of screening services, particularly in developing countries (WHO, 2021). Awareness of cervical cancer risk factors, symptoms, and available screening methods is critical in ensuring early detection and prevention (Kakotkin et al., 2023). Cervical cancer screening includes procedures such as Pap smears and HPV testing, which help detect precancerous and cancerous changes in the cervix.

A study by Mafiana et al. (2022) found that many women in sub-Saharan Africa, including Nigeria, have limited knowledge of these screening tests due to inadequate health education, cultural beliefs, and misconceptions. Furthermore, low literacy levels and a lack of exposure to mass media campaigns have been identified as barriers to knowledge acquisition (Bawuah et al., 2025).

According to the World Health Organization (2021), an increase in cervical cancer screening awareness has been associated with higher screening uptake. However, several studies indicate that while some women have heard of cervical cancer screening, their knowledge about its frequency, purpose, and importance remains inadequate (Shin et al., 2021).

Additionally, research by Mbachu et al. (2021) in Nigeria revealed that misconceptions, such as the belief that screening is only for sexually active women or that it is unnecessary in the absence of symptoms, contribute to poor utilization. Health education and sensitization programs have been identified as key interventions to improve knowledge of cervical cancer screening.

2.1.3 Knowledge and awareness of cervical cancer screening

Attitude plays a crucial role in determining whether individuals utilize cervical cancer screening services. Attitude encompasses a person's beliefs, perceptions, and feelings about a subject, which in turn influence their behavior (Kobylińska, 2022). In the context of cervical cancer screening, women's attitudes are shaped by factors such as perceived susceptibility to cervical cancer, perceived benefits of screening, and fear of the screening process itself (Remmel et al., 2024).

Studies have shown that a positive attitude toward screening is often associated with higher participation rates, while negative perceptions lead to lower uptake(Petersen et

al., 2022). Fear and anxiety about pain, discomfort, or embarrassment during the screening procedure are common barriers to participation (Bonniec et al., 2022).

Many women also hold the belief that they do not need screening unless they exhibit symptoms, despite medical evidence showing that early detection through screening significantly reduces cervical cancer mortality rates (Groves & Brooks, 2021). Moreover, cultural and religious beliefs can shape attitudes, with some women viewing cervical screening as unnecessary or conflicting with their personal or religious values (Moey et al., 2022). Educational interventions and awareness campaigns have been shown to positively influence attitudes toward cervical cancer screening(Ampofo et al., 2022). When women receive adequate information about the benefits of screening and dispel misconceptions, they are more likely to participate in screening programs (Chabalala et al., 2025).

2.1.4 Utilization of Cervical Cancer Screening Services

Utilization of cervical cancer screening services refers to the extent to which women undergo recommended screening procedures such as Pap smears, HPV testing, and visual inspection with acetic acid (VIA) at appropriate intervals (Tesfaye et al., 2022). Despite the critical role of early detection in reducing cervical cancer mortality, utilization rates remain suboptimal in many low- and middle-income countries, including Nigeria. Factors influencing utilization include individual awareness levels, perceived susceptibility to cervical cancer, perceived benefits of screening, and accessibility of screening services (Al-Ani et al., 2023).

Globally, the WHO recommends that women aged 30 to 49 years undergo cervical cancer screening at least once every five years (WHO, 2021). However, studies have consistently shown that actual participation falls below recommended targets, especially among women in non-medical professions (Horlait et al., 2022). Barriers to

utilization include fear of pain, stigma, cultural beliefs, lack of time, financial constraints, and limited availability of female health providers. Furthermore, utilization is often linked to socio-demographic factors such as age, education level, marital status, and employment status (Sheba et al., 2022).

In tertiary institutions, female non-academic staff may face unique challenges that influence their use of cervical cancer screening services. Institutional support, workplace health programs, and the availability of on-site screening significantly impact utilization rates. Understanding the level of utilization among this population is crucial for designing targeted interventions that can promote regular screening and reduce cervical cancer burden (Shin et al., 2021). Thus, assessing utilization patterns will help identify existing gaps and inform strategies aimed at increasing participation in screening programs.

2.1.5 Factors Affecting Utilization of Cervical Cancer Screening Services

The utilization of cervical cancer screening services is influenced by multiple factors, including socio-demographic, economic, cultural, and healthcare-related determinants. Understanding these factors is essential for improving screening uptake and reducing cervical cancer mortality rates (Petersen et al., 2022).

SOCIO-DEMOGRAPHIC FACTORS

Age, education level, and marital status significantly impact the utilization of cervical cancer screening services. Studies indicate that older women are more likely to undergo screening compared to younger women, who may perceive themselves as less susceptible to cervical cancer (O'Donovan et al., 2021. Additionally, higher levels of education correlate with increased screening rates, as educated women tend to have better awareness and knowledge of cervical cancer and its prevention (Kim et

al., 2022). A study in the United States found that women with a college degree were twice as likely to undergo screening compared to those with only a high school diploma (Islami et al., 2021).

ECONOMIC BARRIERS

Financial constraints are a major obstacle to cervical cancer screening, particularly in low- and middle-income countries where screening services may not be free or subsidized (Srinath et al., 2022). Many women cannot afford the cost of Pap smears, HPV testing, or transportation to healthcare facilities (Biddell et al., 2021). In India, a study found that women in lower socioeconomic groups were significantly less likely to participate in screening programs due to financial barriers (Negi & Nambiar, 2021). In contrast, countries with universal healthcare, such as Canada, report higher screening rates due to free or subsidized services (Preker et al., 2021)

CULTURAL AND RELIGIOUS BELIEFS

Cultural norms and religious beliefs also influence screening behavior. Some women view cervical cancer screening as unnecessary unless they experience symptoms, while others perceive it as an invasion of privacy (Ozturk et al., 2024). Religious misconceptions, such as the belief that screening promotes promiscuity, further discourage participation in screening programs (Kisa & Kisa, 2024). In Saudi Arabia, cultural stigma associated with gynecological examinations has been identified as a key barrier to screening (Alomair et al., 2023). Additionally, societal stigma associated with gynecological examinations may prevent women from seeking screening services (Peterson et al., 2021).

HEALTHCARE SYSTEM BARRIERS

The availability and accessibility of healthcare services significantly impact screening utilization. A lack of well-equipped screening centers, long waiting times, and inadequate trained personnel contribute to low screening rates (Kassa et al., 2025). Furthermore, negative experiences with healthcare providers, such as poor communication and lack of encouragement, discourage women from returning for screening (Owokuhaisa et al., 2024). Public health campaigns and healthcare provider recommendations have been identified as effective strategies to increase screening participation (Liu et al., 2020). Addressing these barriers through targeted interventions, financial subsidies, and community-based health education programs is essential to improving cervical cancer screening uptake and reducing the burden of cervical cancer.

2.2 THEORETICAL REVIEW

2.2.1 HEALTH BELIEF MODEL (HBM)

The Health Belief Model (HBM) is a psychological model that helps explain and predict health behaviors by focusing on the attitudes and beliefs of individuals. It was developed in the 1950s by social psychologists Godfrey Hochbaum, Irwin Rosenstock, and others to understand why people did or did not use health services (Rosenstock et al., 1974). The model posits that an individual's health-related actions are influenced by their perceptions of the threat posed by a health problem and the benefits of avoiding the threat. It consists of several key constructs that contribute to health behavior, which include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy (Janz & Becker, 1984).

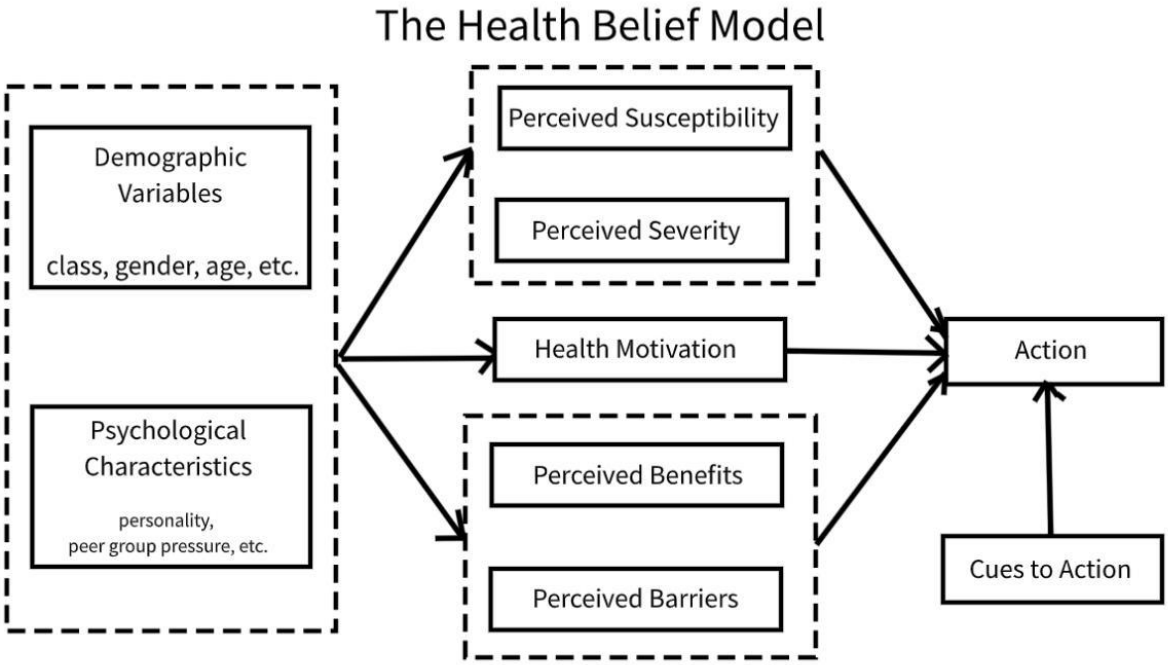

Fig2.1 Health Belief Model (Rosenstock et al., 1974)

1. **Perceived Susceptibility**: This refers to an individual's belief about the likelihood of experiencing a health problem. In the context of cervical cancer, women who believe they are at risk of developing cervical cancer are more likely to undergo screening (Dsouza et al., 2022).

2. **Perceived Severity**: This construct involves an individual's belief about the seriousness of the health problem. If women perceive cervical cancer as a severe and life-threatening disease, they may be more motivated to engage in screening (Appiah, 2022).

3. **Perceived Benefits**: This reflects the belief that taking a specific action will reduce the risk or severity of the health problem. For example, women who believe that cervical cancer screening will reduce their risk of developing cancer are more likely to get screened(Perkins et al., 2023).

4. **Perceived Barriers**: These are an individual's perceptions of the obstacles to taking action. Financial cost, lack of awareness, and fear of discomfort during screening are common barriers to cervical cancer screening (Shariati-Sarcheshme et al., 2024).

5. **Cues to Action**: These are external factors or reminders that prompt individuals to take health actions. A health promotion campaign or doctor's recommendation could serve as a cue to action for women to undergo cervical cancer screening (Acharya et al., 2021).

6. **Self-Efficacy**: This refers to an individual's confidence in their ability to perform the behavior (e.g., to undergo screening). Higher self-efficacy is associated with increased screening uptake (Dsouza et al., 2021).

The Health Belief Model is widely applied to understanding the factors influencing the utilization of health services, including cancer screening. In the case of cervical cancer screening, the model can help identify key perceptions that may promote or hinder women from seeking screening services. Studies have shown that addressing these perceptions through health education and interventions can lead to improved screening rates (Sosa et al., 2021). By applying the Health Belief Model, this study aims to explore the psychological and behavioral factors that affect cervical cancer screening utilization among female non-academic staff in a tertiary institution in Benin.

2.3 EMPERICAL Review

2.3.1 Knowledge and Awareness of Cervical Cancer Screening

Abugu and Nwagu (2021) conducted a cross-sectional study among women belonging to a faith-based organization in southeastern Nigeria to assess their awareness and knowledge of cervical cancer and screening practices. The findings revealed that while 78% of the respondents had heard about cervical cancer, only 32% were aware of available screening services, and a mere 12% had ever undergone screening. The study exposed critical gaps in comprehensive understanding, with many women holding misconceptions about the causes of cervical cancer, believing it was linked to spiritual attacks or promiscuity rather than infection with the human papillomavirus (HPV). These beliefs, coupled with stigma, religious influences, and fear of diagnosis, were significant barriers to health-seeking behavior. The authors emphasized the urgent need for culturally tailored education and outreach programs, particularly within religious settings, to improve uptake. Despite the small sample size, the study offers valuable insights into how cultural and social dynamics in Nigeria may contribute to low screening rates.

Similarly, Ondari et al. (2023) carried out a large-scale, community-based survey involving 2,000 adults in both urban (Kampala) and semi-urban (Mbarara) regions of Uganda. The study found an impressively high level of general awareness about cervical cancer, with 95% of respondents indicating familiarity with the disease. However, only 37.8% correctly identified HPV as the primary risk factor, and just 35% of women reported ever having been screened. A notable 74.1% of participants cited lack of accurate information as the principal barrier to screening, compared to only 14.5% who identified lack of access to services as a constraint. Interestingly, willingness to screen was very high, with 93.7% of women stating they would participate in cervical cancer screening if the services were provided free of charge. These results suggest that the primary challenge in this population is not availability of services but rather a knowledge gap, indicating that investment in public health education could significantly improve uptake. The study's broad sample strengthens its generalizability.

Jomusu et al. (2024) investigated the knowledge, perception, and screening practices related to cervical cancer among women attending antenatal clinics at a tertiary hospital in northeastern Nigeria. The study involved 400 pregnant women and found that only 25.5% demonstrated good knowledge of cervical cancer, with most respondents unaware that HPV is the main causative agent. Additionally, only 9% had positive perceptions about cervical cancer screening, and a mere 9.9% had ever been screened. Cultural and religious beliefs, limited access to information, and lack of recommendation by health professionals were identified as key contributors to the low levels of awareness and utilization. A critical finding was that women with good knowledge were nearly six times more likely to have undergone screening (AOR = 5.97; $p = 0.009$), establishing knowledge as a strong independent predictor of

uptake. The study underscores the need to integrate cervical cancer education into antenatal care services to reach women during their routine contact with the healthcare system.

2.3.2 Utilization of Cervical Cancer Screening Services Among Women

A cross-sectional study by Dozie et al. (2021) assessed the utilization of cervical cancer screening services among 400 women working in tertiary institutions across Southwestern Nigeria. The study aimed to determine the level of uptake of Pap smear tests and the factors influencing utilization. Using a structured self-administered questionnaire, data were collected on sociodemographic characteristics, knowledge of cervical cancer, attitudes towards screening, and actual screening behaviors. Findings revealed that only 27.5% of the respondents had ever undergone a cervical cancer screening test. Among these, 68% had only been screened once, highlighting the low adherence to routine screening schedules. Factors significantly associated with utilization included higher educational attainment, previous counseling by health professionals, and participation in workplace health promotion programs. Women who reported positive attitudes towards screening and perceived cervical cancer as a serious health threat were more likely to utilize screening services. However, barriers such as fear of pain, embarrassment, and cost remained significant deterrents. The authors emphasized the need for institutional policies to promote regular screening through awareness campaigns and subsidized services. A limitation of the study was its reliance on self-reported data, which might have introduced recall bias. Similarly, an Ethiopian study by Jemal et al. (2023) investigated cervical cancer screening utilization among female healthcare workers. The study found a utilization rate of 38%, with knowledge, attitude, and perceived susceptibility being strong predictors of screening behavior. These findings further underscore that even among medically

knowledgeable populations, utilization remains below optimal levels, suggesting the need for multifaceted intervention strategies.

2.3.3 Factors Affecting Utilization of Cervical Cancer Screening Services

Several studies have examined the multifaceted barriers and enablers that influence the utilization of cervical cancer screening services. One notable study by Abebaw et al. (2022) investigated the socio-demographic and institutional factors associated with cervical cancer screening uptake among 500 female non-academic staff in a federal university in southwest Nigeria. The study employed a cross-sectional design using structured questionnaires. Findings revealed that only 28% of respondents had ever undergone a cervical screening test. Key factors associated with low utilization included lack of awareness (52%), fear of diagnosis (43%), high cost of screening (36%), and poor access to facilities (29%). Logistic regression analysis demonstrated that women with tertiary education were significantly more likely to utilize screening services (OR = 3.6; 95% CI = 2.1–6.0). The study concluded that awareness, education level, and financial accessibility were major determinants of screening behavior. Similarly, a recent study by Abubakari et al. (2025) examined factors influencing cervical cancer screening uptake in a public tertiary hospital in Ghana, providing a regional perspective within West Africa. The cross-sectional study surveyed 420 women and identified religious beliefs, cultural misconceptions, and fear of pain or embarrassment as major barriers. Notably, women who had received information about cervical cancer from healthcare providers were 4.2 times more likely to get screened than those who had not ($p < 0.05$). This underscores the pivotal role of healthcare communication in shaping health-seeking behaviors. Both studies converge on key determinants such as education, awareness, healthcare accessibility, and socio-cultural beliefs. Despite their valuable contributions, both are limited by

their cross-sectional design, which restricts causal inferences. Furthermore, the use of self-reported data may introduce response bias. Nevertheless, these studies reinforce the importance of targeted educational interventions and system-level improvements to enhance screening uptake among women, particularly in institutional and low-resource settings.

2.4 Summary of the Literature Review

This review has examined both theoretical and empirical literature relevant to knowledge, attitudes, and factors affecting the utilization of cervical cancer screening services. The Health Belief Model (HBM) provides the conceptual foundation for understanding how women's perceptions of susceptibility, severity, benefits, and barriers shape their screening behavior.

Empirical studies across Nigeria and other countries highlight a recurring pattern of inadequate knowledge and awareness about cervical cancer and its screening methods. While general awareness is moderately high in some populations, accurate knowledge regarding risk factors like HPV and recommended screening intervals remains low. Cultural misconceptions, stigma, and limited health education from professionals continue to hinder uptake. Demographic variables such as education, age, and marital status also play a role in shaping screening behavior.

However, several research gaps remain. Firstly, there is limited focus on female non-academic staff in tertiary institutions, a unique group often overlooked in health research. Secondly, most studies employ cross-sectional designs, which restrict the ability to assess causality or the impact of interventions. Thirdly, many studies lack a robust theoretical framework, reducing their explanatory power. Lastly, there is

insufficient exploration of workplace-related barriers, such as time constraints, institutional support, or access to on-site screening.

These gaps underscore the relevance of the present study, which targets an understudied population and applies a theoretical lens to investigate how knowledge and attitudes influence the utilization of cervical cancer screening in a tertiary institution setting.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter outlined the methodology that was employed to investigate the knowledge, attitude, and factors affecting the utilization of cervical screening services among female non-academic staff in a tertiary institution in Benin City. It provided a detailed description of the research design, population of the study, sampling techniques, data collection instrument, methods of data analysis, and ethical considerations. The choice of methodology was guided by the nature of the research objectives and the need to obtain valid, reliable, and generalizable results. By adopting an appropriate research strategy, the study aimed to generate meaningful insights into the barriers and facilitators influencing cervical cancer screening among the target population.

3.1 Research Design

This study adopted a descriptive cross-sectional research design. The descriptive design is chosen because it allowed for the collection of data at a single point in time, enabling the study to provide a snapshot of the knowledge, attitude, and factors affecting the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin City. The cross-sectional design is particularly suitable for understanding the current state of knowledge and attitudes regarding cervical cancer screening, as well as the socio-cultural and economic factors that may influence its uptake (Mabotja et al., 2021). The study was conducted using a quantitative approach to collect numerical data that can be analyzed statistically. This involved the use of structured questionnaires to gather information from the respondents. A descriptive approach helped identify patterns and relationships within the data, while statistical analysis provided insights into the factors associated with

cervical cancer screening utilization. This approach is ideal for addressing the study's objectives, as it enables the researcher to capture a broad range of responses from the target population. Additionally, a cross-sectional design is cost-effective and time-efficient, allowing the researcher to gather large amounts of data in a relatively short period, which is crucial given the scope of the study.

3.2 Research Setting

The study was conducted at the University of Benin (UNIBEN), Benin City, Edo State, Nigeria. UNIBEN is one of Nigeria's foremost federal universities, located in a semi-urban environment and known for its extensive academic and administrative workforce. The university comprises multiple faculties and administrative divisions that rely heavily on non-academic staff for daily operational efficiency.

Data collection was carried out among female non-academic staff across selected academic and administrative units within the institution. These included the Faculty of Basic Medical Sciences, which is a key component of the College of Medical Sciences and comprised seven departments: Anatomy, Physiology, Medical Biochemistry, Nursing Science, Physiotherapy, Medical Laboratory Science, and Radiography.

In addition to the Faculty of Basic Medical Sciences, the study extended to other major units where a significant number of female non-academic staff were actively engaged. These included the School of Postgraduate Studies, Faculty of Agriculture, Faculty of Law, and the Admissions Office. Although the Admissions Office is not a faculty, it functioned as a major administrative hub where non-academic personnel were responsible for student processing, documentation, and institutional coordination.

The included units collectively housed administrative, clerical, technical, and support staff who formed an essential but often understudied segment of the university workforce. These female non-academic staff interacted daily with students and academic personnel, yet they were frequently excluded from institutional health promotion programs and research. This made them a key population for assessing knowledge, attitude, and factors influencing the utilization of cervical cancer screening services.

3.3 Target Population

The target population for this study comprised female non-academic staff members of the University of Benin (UNIBEN), Benin City, Edo State, Nigeria. The study focused on women aged 25 to 60 years, which aligns with the nationally recommended screening age bracket for cervical cancer and the World Health Organization (WHO) guidelines for cervical cancer prevention.

The population included female non-academic personnel working across selected academic and administrative units within the institution, namely the Faculty of Basic Medical Sciences, School of Postgraduate Studies, Faculty of Agriculture, Faculty of Law, and the Admissions Office. These units host a considerable number of female staff occupying various non-academic roles such as administrative officers, clerical staff, records and data processing personnel, secretaries, technical support staff, and other support service workers.

Although the exact number of female non-academic staff across these units was not officially documented at the time of data collection, these selected units were acknowledged by the university administrative registry as having a significant

representation of female non-academic personnel, justifying their inclusion as the target population for the study.

3.4 Sample Size Determination

A complete enumeration approach was adopted for this study due to the accessible size of the female non-academic staff across the selected units. All eligible and consenting female non-academic staff from the Faculty of Basic Medical Sciences, School of Postgraduate Studies, Faculty of Agriculture, Faculty of Law, and the Admissions Office were approached for participation. A total of 90 respondents were successfully enrolled and included in the final analysis.

3.5 Sample and Sampling Technique

A total enumeration (census) sampling technique was employed for this study. All eligible and consenting female non-academic staff across the Faculty of Basic Medical Sciences, School of Postgraduate Studies, Faculty of Agriculture, Faculty of Law, and the Admissions Office were approached for participation. A total of 90 respondents met the inclusion criteria and completed the questionnaire, and their responses were used for the final data analysis. This method ensured that the views of the accessible population within the selected units were adequately represented.

3.5.1 Inclusion Criteria

The inclusion criteria for this study were:

- Female non-academic staff members of the Faculty of Basic Medical Sciences, University of Benin
- Aged 25 to 60 years
- Staff members who consented to participate in the study

3.5.2 Exclusion Criteria

The exclusion criteria for this study were:

- Male staff members
- Female academic staff members
- Non-academic female staff who were under 25 or over 60 years of age
- Non-academic female staff members who did not consent to participate in the study

3.6 Instrument for Data Collection

The primary instrument for data collection in this study was a structured questionnaire (Appendix I). The questionnaire was designed to capture comprehensive data on the knowledge, attitudes, and factors affecting the utilization of cervical cancer screening services among female non-academic staff at the tertiary institution in Benin City. The questionnaire was developed based on the research objectives and consisted of multiple sections aimed at addressing different aspects of the study. The sections of the questionnaire included:

1. Demographic Information:

This section collected data on the respondents' age, marital status, educational level, work experience, and departmental affiliation. This information helped to contextualize the respondents' answers and identify any trends based on demographic factors. This section consisted of 6 items in a multiple-choice and fill-in-the-blank format.

2. Knowledge of Cervical Cancer and Screening:

This section assessed the level of knowledge regarding cervical cancer and its prevention through screening methods such as the Pap smear and HPV testing. The

questions focused on awareness of cervical cancer, its causes, risk factors, and the availability of screening services. This section consisted of 5 items in a Yes/No format.

3. Attitude Toward Cervical Cancer Screening:

This section explored the respondents' perceptions and attitudes toward cervical cancer screening. It included a modified 4-POINT Likert-scale questions (ranging from "Strongly Agree" to "Strongly Disagree") to measure their opinions on the importance of screening, perceived barriers, and their willingness to participate in screening programs. This section consisted of 5 items.

4. Level of Utilization of Cervical Cancer Screening Services:

This section assessed the extent to which respondents utilized cervical cancer screening services. It focused on the frequency, type, and recency of screening, as well as individual decision-making behaviors. The section consisted of 5 items framed in dichotomous (Yes/No) formats, capturing details such as prior screening history, frequency of screening, type of screening test undergone, and reasons for non-utilization.

5. Factors Affecting Utilization of Cervical Cancer Screening Services:

This section assessed the key factors influencing whether or not female non-academic staff accessed cervical cancer screening services. It included items exploring socio-cultural, religious, financial, geographic, and psychological barriers to utilization. These factors were drawn from literature and tailored to reflect common constraints within the local context. The section consisted of 7 standardized items, measured using a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. Respondents indicated their level of agreement with statements addressing barriers

such as lack of awareness, fear of stigma, high cost of services, distance to healthcare facilities, and the influence of cultural or religious beliefs.

3.6.2 Validity of the Instrument

Validity refers to the degree to which an instrument accurately measures what it is intended to measure (Creswell & Creswell, 2018). For this study, content validity was ensured by carefully aligning the questionnaire items with the research objectives and the key variables identified in the literature review. Each section of the instrument was systematically structured to capture the constructs of interest — including knowledge, attitude, utilization, and influencing factors — drawing on insights from previously validated survey tools and related studies. To further strengthen validity, the questionnaire was subjected to expert review. Specifically, the project supervisor from the Department of Nursing Sciences examined the instrument to ascertain its relevance, clarity, and consistency with the study objectives. Feedback and recommendations from this expert review were incorporated to enhance the accuracy and appropriateness of the questionnaire items.

3.6.3 Reliability of the Instrument

Reliability refers to the degree to which a research instrument produces stable and consistent results when used repeatedly under similar conditions (Bolarinwa, 2015). In this study, the internal consistency of the questionnaire was assessed using Cronbach's alpha coefficient, focusing on the major sections of the instrument, namely knowledge, attitude, utilization, and influencing factors. A pilot study was conducted among 20 female non-academic staff selected from administrative and academic units within the University of Benin that were not included in the main study sample, to avoid contamination of responses.

The participants were asked to complete the draft questionnaire to evaluate the clarity, relevance, and consistency of the items. The pilot responses were entered and analyzed using SPSS version 25, and Cronbach's alpha values of 0.70 and above were considered acceptable, indicating satisfactory internal consistency and confirming that the instrument was reliable for use in the main study.

3.7 Method of Data Collection

Data for this study were collected using a structured, self-administered questionnaire. The researcher personally distributed printed copies of the questionnaire to eligible female non-academic staff across the Faculty of Basic Medical Sciences, School of Postgraduate Studies, Faculty of Agriculture, Faculty of Law, and the Admissions Office, University of Benin.

A direct face-to-face distribution approach was adopted to enhance response rate and allow for immediate clarification of any ambiguities raised by respondents. Data collection was conducted over a period of two weeks, during official working hours and in coordination with unit heads and administrative supervisors to minimize disruption of routine duties. Each respondent was approached in her office and provided with a questionnaire and an attached informed consent form, which clearly stated the purpose of the study, the voluntary nature of participation, and guarantees of confidentiality and anonymity.

Respondents were given 15–20 minutes to complete the questionnaire immediately, or were permitted to return it within 24 hours if additional time was required. Completed questionnaires were retrieved directly by the researcher to ensure data accuracy and maintain response integrity. Only respondents who provided informed consent were

included, and no personal identifiers were recorded. All collected data were securely handled and used strictly for research purposes.

3.8 Data Analysis

The collected data were coded and entered into the Statistical Package for the Social Sciences (SPSS) version 25.0 for analysis. Descriptive statistics, including frequencies, percentages, tables, and charts, were used to summarize respondents' sociodemographic characteristics and responses to the research questions.

Where appropriate, inferential statistics such as the chi-square test were employed to examine associations between selected demographic variables and the utilization of cervical cancer screening services. A p-value of less than 0.05 ($p < 0.05$) was considered statistically significant for all analyses.

1. **Section A (Demographic Information):** Data on age, marital status, department, years of service, job role, religion, educational qualification, and number of children were analyzed using descriptive statistics such as frequency counts, percentages, means, and standard deviations.

2. **Section B (Knowledge of Cervical Cancer and Screening):** Each item was coded on a dichotomous scale (Yes = 1, No = 0). Total knowledge scores were computed for each respondent, and the mean knowledge score was calculated. A cut-off point of 50% was applied to categorize respondents as having *good knowledge* (≥ 50%) or *poor knowledge* (< 50%).

3. **Section C (Attitude Toward Screening):** This section consisted of five Likert-scale items rated on a 5-point scale (Strongly Disagree = 1 to Strongly Agree = 5). Total and average attitude scores were computed for each respondent. A mean score

of 3.0 or higher was interpreted as a *positive attitude*, while a score below 3.0 indicated a *negative attitude*.

4. **Section D (Utilization of Cervical Cancer Screening):** Items in this section were assessed using Yes/No responses. Frequencies and percentages were used to determine how many respondents had ever undergone screening and whether they intended to screen in the future. Results were presented in tables and simple charts.

5. **Section E (Factors Affecting Utilization):** Items were measured on a 5-point Likert scale. Mean scores were computed for each factor, with a mean score of 3.0 or higher considered as indicating a significant barrier or influence on screening uptake.

For inferential statistics, Chi-square tests were employed to assess associations between categorical variables (e.g., knowledge level and screening utilization, or educational qualification and attitude). In addition, binary logistic regression was applied to identify predictors of screening uptake (dependent variable: Yes/No). All inferential statistics were tested at a 95% confidence level, with p-values less than 0.05 ($p < 0.05$) considered statistically significant.

3.9 Ethical Considerations

The study adhered to ethical principles, including informed consent, confidentiality, and voluntary participation. Ethical approval was sought from the Ethics Committee of the School of Basic Medical Sciences, University of Benin, to ensure that the study complied with institutional regulations and ethical standards. In addition, consent and permission were obtained from all respondents before data collection commenced. The following ethical considerations were maintained during the research exercise:

i. **Confidentiality:** Information provided by respondents was treated with the utmost confidentiality. No names or addresses were requested in the questionnaire, ensuring

anonymity. Respondents were informed that their responses would remain confidential and used solely for scientific research purposes.

ii. **Self-Determination/Voluntary Participation:** Respondents had the right to voluntarily decide whether to participate in the study without any risk of penalty or prejudicial judgment. They were informed of their right to withdraw from the study at any point without consequences and could refuse to answer any questions they found unclear or uncomfortable. Participation was entirely voluntary, and respondents were assured that their decision to participate or not would not affect their relationship with the institution.

iii. **Avoidance of Plagiarism:** All authors and sources cited in the study were properly acknowledged in the body of the work and listed in the reference section, ensuring that academic integrity standards were upheld. Any external data, research, or ideas were appropriately referenced, and the study strictly followed ethical guidelines for citation and acknowledgment to avoid plagiarism.

CHAPTER FOUR

PRESENTATION OF RESULTS

Table 4.1a: Demographic Characteristics of Respondents (n = 90)

Variable	Category	Frequency (n=90)	Percentage (%)
Age (Years)	25–35	28	31.1
	36–45	32	35.6
	46–55	20	22.2
	56–60	10	11.1
Marital Status	Single	18	20.0
	Married	56	62.2
	Divorced	8	8.9
	Widowed	8	8.9
Unit/Faculty of Employment	Anatomy	8	8.9
	Physiology	7	7.8
	Medical Biochemistry	7	7.8
	Nursing Science	10	11.1
	Medical Laboratory Science	8	8.9
	Radiography	6	6.7
	Physiotherapy	6	6.7
	School of Postgraduate Studies	10	11.1
	Faculty of Agriculture	9	10.0
	Faculty of Law	5	5.6
	Admissions Office	4	4.4

Table 4.1b: Demographic Characteristics of Respondents (n = 90)

Educational Qualification	Primary School	4	4.4
	Secondary School	12	13.3
	National Diploma	20	22.2
	Bachelor's Degree	36	40.0
	Master's Degree	12	13.3
	Doctorate Degree	2	2.2
Number of Children	None	20	22.2
	1–2	30	33.3
	3–4	28	31.1
	5 or more	12	13.3
Years of Employment	Less than 1 year	10	11.1
	1–3 years	22	24.4
	4–6 years	30	33.3
	7 years or more	28	31.1

The results in Table 4.1 show that the majority of respondents (35.6%) were between the ages of 36 and 45 years, followed by 31.1% who were within the 25–35 years age group.

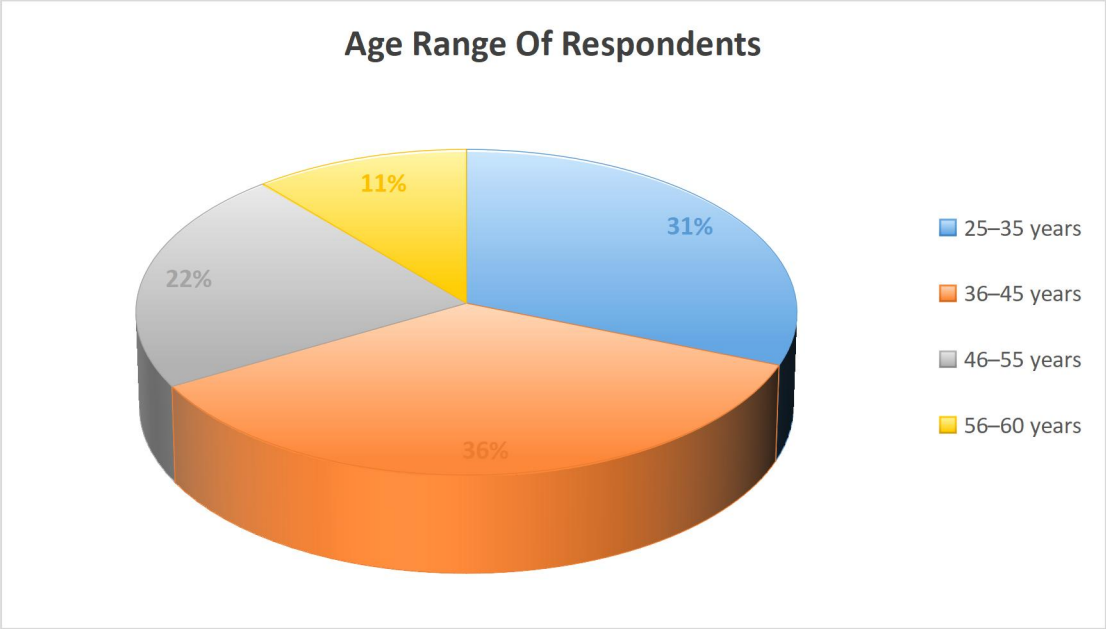

Figure 4.1 Pie Chart Showing the Age Range Distribution of the Respondents

Table 4.2: Knowledge of Cervical Cancer and Screening Among Respondents (n = 90)

Knowledge Item	Response	Frequency (n)	Percentage (%)
Heard of cervical cancer	Yes	78	86.7
	No	12	13.3
Know that HPV is the main cause of cervical cancer	Yes	58	64.4
	No	32	35.6
Know that screening should begin from age 25	Yes	50	55.6
	No	40	44.4
Know that Pap smear and HPV testing detect cervical cancer early	Yes	66	73.3
	No	24	26.7
Know that screening should be done every 3–5 years	Yes	52	57.8
	No	38	42.2

The results in Table 4.2 reveal that a majority of respondents (86.7%) had heard of cervical cancer, indicating a relatively high general awareness of the condition among female non-academic staff in the institution. However, only 64.4% correctly identified HPV as the major cause of cervical cancer, showing a moderate level of understanding of the etiological factor.

Table 4.3: Attitude Towards Cervical Cancer Screening Among Respondents (n = 90)

Statement	SD(n%)	D(n%)	N(n%)	A(n%)	SA(n%)	Mean	Remark
Cervical cancer screening is important for my health.	4 (4.4%)	6 (6.7%)	10 (11.1%)	40 (44.4%)	30 (33.3%)	**3.95**	**Positive Attitude**
I believe that early detection through screening can save lives.	3 (3.3%)	5 (5.6%)	8 (8.9%)	42 (46.7%)	32 (35.6%)	**4.05**	**Positive Attitude**
I am willing to undergo screening if made available at work.	6 (6.7%)	10 (11.1%)	15 (16.7%)	35 (38.9%)	24 (26.7%)	**3.68**	**Positive Attitude**
Cervical cancer screening is too expensive for most people.	10 (11.1%)	20 (22.2%)	18 (20.0%)	28 (31.1%)	14 (15.6%)	**3.17**	**Negative attitude**
Screening is only necessary for sexually active women.	18 (20.0%)	25 (27.8%)	20 (22.2%)	17 (18.9%)	10 (11.1%)	**2.73**	**Negative attitude**

Grand mean=3.52

The findings in Table 4.3 reveal that most respondents demonstrated a positive attitude towards cervical cancer screening. A high mean score (M = 4.05) was recorded for the belief that early detection can save lives, indicating strong agreement among participants. Similarly, the statement that cervical cancer screening is important for health recorded a high mean score (M = 3.95), further confirming favorable perception.

Table 4.4: Level of Utilization of Cervical Cancer Screening Services Among Respondents (n = 90)

Utilization Item	Response	Frequency (n)	Percentage (%)
Have you ever undergone cervical cancer screening?	Yes	28	31.1
	No	62	68.9
If yes, have you been screened more than once? *(n = 28)*	Yes	10	35.7
	No	18	64.3
Do you undergo screening on a regular basis?	Yes	12	13.3
	No	78	86.7
Have you ever had a Pap smear or HPV test?	Yes	24	26.7
	No	66	73.3
If you have never undergone screening, was it due to lack of awareness, fear, cost, or other barriers? *(n = 62)*	Yes	50	80.6
	No	12	19.4

The results in Table 4.4 indicate a low level of cervical cancer screening utilization among respondents. Only 31.1% reported ever undergoing screening, and among those, less than half (35.7%) had been screened more than once. Regular screening uptake was also poor, with only 13.3% reporting consistent adherence to screening schedules.

Table 4.5 Mean Distribution of Factors Affecting Utilization of Cervical Cancer Screening (n = 90)

S/N	Statement	SD n(%)	D n(%)	A n(%)	SA n(%)	Mean	Remark
22	Lack of awareness affects my decision to go for cervical cancer screening	4 (4.4%)	8 (8.9%)	38 (42.2%)	40 (44.4%)	**3.27**	**Agree**
23	Financial cost is a barrier to undergoing cervical cancer screening	6 (6.7%)	10 (11.1%)	36 (40.0%)	38 (42.2%)	**3.18**	**Agree**
24	Distance to healthcare centers affects my decision to undergo screening	10 (11.1%)	22 (24.4%)	34 (37.8%)	24 (26.7%)	**2.91**	**Agree**
25	Fear of the screening procedure discourages me from getting screened	8 (8.9%)	16 (17.8%)	40 (44.4%)	26 (28.9%)	**2.93**	**Agree**
26	My cultural beliefs discourage me from going for cervical cancer screening	22 (24.4%)	30 (33.3%)	24 (26.7%)	14 (15.6%)	**2.31**	**Disagree**
27	My religious beliefs influence my willingness to undergo screening	18 (20.0%)	28 (31.1%)	26 (28.9%)	18 (20.0%)	**2.44**	**Disagree**
28	Fear of being stigmatized prevents me from accessing screening services	14 (15.6%)	20 (22.2%)	36 (40.0%)	20 (22.2%)	**2.69**	**Agree**

Grand Mean = 2.81

The findings in Table 4.5 reveal that several factors were perceived by respondents as influencing the utilization of cervical cancer screening services. Lack of awareness ranked highest with a mean score of 3.27, indicating that many respondents agreed that insufficient knowledge significantly affects their decision to undergo cervical screening.

4.6 Test of Hypotheses

Hypothesis 1

Null Hypothesis (H_{01}): **There is no significant relationship between awareness and the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin.**

Table 4.6.1: Chi-square Test of Relationship Between Awareness and Utilization of Cervical Cancer Screening Services

Variables	χ^2 (Chi-square)	df	p-value	Decision
Awareness vs. Utilization	10.842	1	0.001	Reject H_0

The Chi-square test result ($\chi^2 = 10.842$, df = 1, p = 0.001) shows a statistically significant relationship between awareness and utilization of cervical cancer screening services among female non-academic staff. Since the p-value is less than 0.05, the null hypothesis is rejected. This implies that respondents who are more aware of cervical cancer and its screening methods are more likely to utilize the services.

Hypothesis 2

Null Hypothesis (H_{02}): There is no significant relationship between attitude and the utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin City.

Table 4.6.2: Chi-square Test of Relationship Between Attitude and Utilization of Cervical Cancer Screening Services

Variables	χ^2 (Chi-square)	df	p-value	Decision
Attitude vs. Utilization	8.926	1	0.003	Reject H_0

The Chi-square test result ($\chi^2 = 8.926$, df = 1, p = 0.003) reveals a statistically significant relationship between attitude and utilization of cervical cancer screening services among female non-academic staff. Since the p-value is less than 0.05, the null hypothesis is rejected. This indicates that respondents with a positive attitude

towards cervical cancer screening are more likely to utilize the services compared to those with a negative attitude.

CHAPTER FIVE

DISCUSSION OF FINDINGS, SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter provides the discussion of findings, implications for nursing, summary, conclusion, recommendation, and suggestion for further studies.

5.1 Discussion of Findings

This study investigated the knowledge, attitude, and utilization of cervical cancer screening services among female non-academic staff in a tertiary institution in Benin City, with a focus on the factors influencing utilization. The discussion of findings is presented in line with the study objectives.

Objective 1: To assess the level of knowledge of cervical cancer and its screening among non-academic staff women

The findings revealed that a considerable proportion of the respondents had low to moderate knowledge of cervical cancer and its screening. Although many were aware that cervical cancer is preventable and that screening can aid early detection, specific knowledge regarding recommended screening intervals, methods available (Pap smear, VIA, HPV DNA testing), and eligibility was limited. This is consistent with the study by Ifemelumma et al. (2022), who reported poor awareness of cervical cancer screening among women in Nigeria, despite increasing sensitization campaigns. Similarly, Eze et al. (2023) found that while awareness of the disease was fairly high, detailed knowledge about screening guidelines and preventive measures remained inadequate among working-class women. The implication is that knowledge gaps persist among non-academic staff women, which may hinder timely and consistent utilization of screening services.

Objective 2: To assess the attitude of female non-academic staff toward cervical cancer screening and how it affects utilization

The results showed that respondents' attitudes toward cervical cancer screening were mixed. While some expressed positive attitudes—believing screening is important and lifesaving—others demonstrated negative perceptions, influenced by fear of pain, embarrassment, stigma, or fatalistic beliefs that cancer is a "death sentence." These findings mirror those of Adesuyi et al. (2021), who found that fear and misconceptions were key barriers to cervical cancer screening uptake among Nigerian women. A study in Kenya by Korir et al. (2022) similarly showed that women's negative attitudes, shaped by myths and misconceptions, significantly discouraged utilization despite availability of services. Therefore, attitude plays a central role: even when knowledge exists, negative perceptions can act as barriers to service uptake.

Objective 3: To determine the level of utilization of cervical cancer screening services among female non-academic staff

The study revealed very low utilization of cervical cancer screening services among respondents. Only a small proportion had ever undergone screening, and fewer had done so within the recommended timeframe. This gap between awareness and actual practice highlights a common challenge in cervical cancer prevention. This aligns with the work of Ndikom and Ofi (2022), who reported that utilization of cervical screening services among Nigerian women remains below 20%. International studies, such as that of Getachew et al. (2023) in Ethiopia, also observed that while awareness is relatively high, actual screening uptake is disappointingly low, often due to structural and psychosocial barriers. The low utilization rate in this study suggests that

availability of knowledge or services alone is insufficient—active interventions are needed to improve uptake.

Objective 4: To identify the factors affecting the utilization of cervical cancer screening services among female non-academic staff

Several factors were identified as barriers to utilization. These include inadequate knowledge, negative attitudes, fear of results, cost implications, lack of time, absence of spousal support, and preference for alternative health practices. Sociodemographic variables such as education level and income were also significantly associated with utilization, with higher education and income linked to greater likelihood of screening. These findings are in line with Yakubu and Salisu (2022), who reported that sociodemographic status strongly influences preventive health behavior. Similarly, Okeke et al. (2021) highlighted financial barriers, cultural stigma, and lack of institutional policies as major deterrents to cervical screening uptake among working-class women in Nigeria. This underscores the need for targeted health education, workplace-based screening programs, and policy-level support to overcome these barriers.

5.2 Implications of Findings

The findings of this study have several implications for nursing practice, health education, and policy formulation regarding cervical cancer prevention among women, particularly non-academic staff in tertiary institutions.

1. Implications for Nursing Practice

The study highlights the central role nurses play in promoting cervical cancer awareness, screening, and preventive care. Since nurses are often the first point of

contact in healthcare facilities, they are in a strategic position to provide education, counseling, and screening services. The observed knowledge gaps suggest that nurses must intensify efforts in health education campaigns, especially within workplaces where women may have limited time to access routine hospital-based health talks. Furthermore, nurses should adopt culturally sensitive communication approaches that dispel myths, address fears, and encourage positive health-seeking behavior.

2. Implications for Health Education and Awareness Campaigns

The poor utilization of cervical cancer screening services despite awareness indicates that general knowledge is not enough—tailored, sustained, and practical education programs are necessary. Health educators should design workplace-based interventions that specifically target non-academic female staff, using clear, relatable messages that highlight the benefits of screening. Awareness campaigns should also involve family members, including male partners, to encourage spousal support, as lack of it was identified as a barrier.

3. Implications for Policy and Institutional Support

Low screening uptake suggests the need for institutional policies that integrate cervical cancer screening into workplace health programs. The tertiary institution in Benin could collaborate with healthcare providers to offer periodic, subsidized, or free screening for female staff within the workplace. Such policies would reduce barriers related to cost, time, and distance. At a broader level, government health policies should strengthen cancer prevention programs by making screening services more affordable, accessible, and mandatory during routine health checks for women.

4. Implications for Future Research

The study underscores the need for more research into behavioral and sociocultural determinants of cervical cancer screening uptake among working women in Nigeria. Future research should consider qualitative approaches to better understand deep-seated fears, beliefs, and attitudes. Comparative studies across different professional groups (academic vs. non-academic staff) may also provide insights into how educational exposure shapes screening behavior.

5.3 Limitations of the Study

Like every research, this study is not without limitations, which should be considered when interpreting the findings:

1. **Restricted Study Population:** The study was conducted among female non-academic staff in a single tertiary institution in Benin. Therefore, the findings may not be generalizable to all women, other categories of staff, or different institutions across Nigeria.
2. **Self-Reported Responses:** Data were obtained through self-administered questionnaires, which may be subject to recall bias or social desirability bias. Some respondents might have provided answers they believed were expected rather than their true knowledge, attitude, or practices.
3. **Cross-Sectional Design:** The use of a descriptive cross-sectional design limits the ability to establish causality. While associations were identified between knowledge, attitude, and utilization, causal relationships could not be firmly established.
4. **Limited Exploration of Sociocultural Factors:** Although the study assessed some cultural and religious factors influencing screening utilization, it did not explore them

in-depth. Qualitative methods such as interviews or focus group discussions could have provided richer insights.

5. **Potential Non-Response Bias:** Despite efforts to encourage full participation, some respondents may have withheld information or skipped certain questions, which could affect the completeness and accuracy of the results.

5.4 Conclusion

This study assessed the knowledge, attitude, utilization, and factors influencing cervical cancer screening services among female non-academic staff in a tertiary institution in Benin. The findings revealed that although awareness of cervical cancer and its screening methods was relatively high, actual utilization of screening services remained low. Many respondents demonstrated positive attitudes toward the importance of cervical cancer screening and acknowledged its role in early detection and saving lives. However, despite this favorable disposition, barriers such as financial cost, fear of the procedure, cultural and religious beliefs, stigma, and limited access to health facilities significantly hindered regular utilization of screening services. The results suggest a gap between awareness and practice, emphasizing the need for targeted interventions to bridge this disparity. In conclusion, improving knowledge alone may not be sufficient to enhance screening uptake. A comprehensive approach that combines education, affordable access, workplace-based screening programs, and the removal of sociocultural and economic barriers is essential to improve the utilization of cervical cancer screening services among female non-academic staff and, by extension, women in similar populations.

5.5 Recommendations

Based on the findings of this study, the following recommendations are made:

1. Health Education Campaigns:

The institution, in collaboration with health professionals, should intensify cervical cancer education programs targeted at non-academic staff to improve awareness and correct misconceptions.

2. Subsidized or Free Screening Services:

Government and institutional health units should provide free or subsidized cervical cancer screening services to remove the financial barrier that hinders utilization.

3. Workplace-Based Screening Programs:

Periodic screening outreaches should be organized within the institution to make access easier and encourage participation among staff who may have tight work schedules.

4. Counseling and Psychological Support:

Fear and stigma associated with cervical cancer screening can be reduced through counseling and support groups. Trained nurses and health educators should reassure women about the safety and benefits of the procedure.

5. Policy Implementation:

Institutional policies should mandate regular health checks, including cervical cancer screening, as part of occupational health programs for female staff.

6. Cultural and Religious Engagement:

Community leaders, religious groups, and cultural stakeholders should be engaged to address cultural and religious barriers that discourage women from utilizing cervical cancer screening services.

7. Further Research:

More extensive studies should be conducted across different tertiary institutions in Nigeria to provide comparative data and inform broader intervention strategies.

5.7 Suggestions for Further Study

1. Future research could be conducted using a larger sample size across multiple tertiary institutions in Edo State and other parts of Nigeria to allow for better generalization of findings.

2. A comparative study between academic and non-academic staff could provide insights into whether educational background significantly influences knowledge, attitude, and utilization of cervical cancer screening.

3. Longitudinal studies should be carried out to evaluate the impact of workplace-based awareness and screening interventions on sustained utilization of cervical cancer screening services.

4. Further studies could explore the role of male partners and family support in influencing women's decisions to utilize cervical cancer screening services.

5. Qualitative research, such as focus group discussions or in-depth interviews, may provide deeper insights into cultural, religious, and psychosocial factors that hinder or promote screening utilization.

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APPENDIX I

QUESTIONNAIRE

Department of Nursing Science,
School of Basic Medical sciences,
University of Benin,
Benin City,
Edo State.

Dear Respondent,

I am a 500 Level student of the department of Nursing, of the above mentioned institution conducting a research study on ‘‘**Knowledge, Attitude, and Factors Affecting Utilization of Cervical Cancer Screening Services Among Female Non-Academic Staff**’’ as part of the requirement for the completion of a Bachelor’s Degree in Nursing Science. Kindly and sincerely provide answers to the questions in the spaces provided. Every information provided is highly confidential and strictly for academic purpose. No names are required. Your participation is voluntary and you can withdraw from the study at any time without any negative conseqences. Please be independent and truthful in your reponses.Thank.

Yours faithfully,

Idemudia Prosperity Osaose .

KNOWLEDGE, ATTITUDE, AND FACTORS AFFECTING UTILIZATION OF CERVICAL CANCER SCREENING SERVICES AMONG FEMALE NON-ACADEMIC STAFF

SECTION A: (DEMOGRAPHIC INFORMATION)

Please answer all questions by ticking (√) the option

1. **Age on your last birthday:** 25-35 ☐ 36-45 ☐ 46-55 ☐ 56-60 ☐
2. **Marital status:**Single ☐ Married ☐ Divorced ☐ Widowed ☐

3. **Unit/Faculty of Employment:**

a). Faculty of Basic Medical Sciences: Anatomy ☐ Physiology ☐ Medical Biochemistry ☐ Nursing Science ☐ Medical Laboratory Science ☐ Radiography ☐ Physiotherapy ☐

b). School of Postgraduate Studies

c).☐ Faculty of Agriculture

d). ☐ Faculty of Law

e). ☐ Admissions Office

f).☐ Other (Please specify) _____

4. **HIGHEST Educational Qualification:** Primary School ☐ Secondary School ☐ National Diploma☐ Bachelor's Degree☐ Master's Degree☐ Doctorate Degree☐ Others (Please specify) _____

5. **Number of children:**

None ☐ 1-2 ☐ 3-4 ☐ 5 or more ☐

6. **Years of Employment at the Institution:**

Less than 1 year ☐ 1-3 years ☐ 4-6 years ☐ 7 years or more ☐

SECTION B: KNOWLEDGE OF CERVICAL CANCER AND SCREENING

Please tick the correct option (√) .

7. **Have you ever heard of cervical cancer?**
☐ Yes ☐ No

8. **Do you know that Human Papillomavirus (HPV) is the main cause of cervical cancer?**
☐ Yes ☐ No

9. **Do you know that women should begin cervical cancer screening from age 25?**
☐ Yes ☐ No

10. **Do you know that Pap smear and HPV testing are used to detect cervical cancer early?**
☐ Yes ☐ No

11. **Do you know that cervical cancer screening should be done regularly (every 3–5 years depending on age and test used)?**
☐ Yes ☐ No

SECTION C: ATTITUDE TOWARDS CERVICAL CANCER SCREENING

Please rate your level of agreement with the following statements. (SD-Strongly Disagree, DA-Disagree, N-neutral, A-Agree & SA-Strongly Disagree)

S/No		SD	DA	N	A	SA
12.	Cervical cancer screening is important for my health.					
13.	I believe that early detection of cervical cancer through screening can save lives.					
14.	I am willing to undergo cervical cancer screening if it is made available to me at work.					
15.	I believe cervical cancer screening is too expensive for most people to afford.					
16.	Cervical cancer screening is only necessary for women who are sexually active.					

SECTION D: LEVEL OF UTILIZATION OF CERVICAL CANCER SCREENING SERVICES

Please answer the following questions.

17. Have you ever undergone cervical cancer screening?
☐ Yes ☐ No
18. If yes, have you been screened more than once?
☐ Yes ☐ No
19. Do you undergo cervical cancer screening on a regular basis?
☐ Yes ☐ No
20. Have you ever had a Pap smear or HPV test as part of screening?
☐ Yes ☐ No
21. If you have never undergone cervical cancer screening, was it due to lack of awareness, fear, cost, or other barriers?
☐ Yes ☐ No

SECTION E: FACTORS AFFECTING UTILIZATION OF CERVICAL CANCER SCREENING SERVICES

Please rate your level of agreement with the following statements. (SD-Strongly Disagree, DA-Disagree, A-Agree & SA-Strongly Disagree)

S/N	Statement	SD	DA	A	SA
22	Lack of awareness affects my decision to go for cervical cancer screening				
23	Financial cost is a barrier to undergoing cervical cancer screening				
24	Distance to healthcare centers affects my decision to undergo screening				
25	Fear of the screening procedure discourages me from getting screened				
26	My cultural beliefs discourage me from going for cervical cancer screening				
27	My religious beliefs influence my willingness to undergo screening				
28	Fear of being stigmatized prevents me from accessing screening services				

THANK YOU FOR YOU TIME!