KNOWLEDGE ATTITUDE AND PRACTICE ON CERVICAL CANCER PREVENTION AMONG FEMALE SOCIAL SCIENCE STUDENTS IN THE UNIVERSITY OF BENIN, EDO STATE.

BY

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IN PARTIAL FUFILLMENT FOR THE AWARD OF A DEGREE IN BACHELOR OF NURSING SCIENCES (B.Nsc), IN THE FACULTY NURSING SCIENCE, UNIVERSITY OF BENIN, BENIN CITY.

NOVEMBER, 2025.

DECLARATION

This is to declare that this research project titled **KNOWLEDGED ATTITUDE AND PRACTICE ON CERVICAL CANCER PREVENTION AMONG FEMALE AMONG FEMALE SOCIAL SCIENCE STUDENTS IN UNIVERSITY OF BENIN, EDO STATE** was carried out by **ONMINYI BLESSING ODO** is solely the result of my work except were acknowledged as being derived from other person (s) or resources.

MATRICULATION NUMBER: BMS2005080

In the DEPARTMENT OF MEDICAL SURGICAL NURSING, FACULTY OF NURSING SCIENCES, UNIVERSITY OF BENIN.

Signature: _____

Date: _____

CERTIFICATION

This is to certify that this research project was carried out by **ONMINYI BLESSING ODO** with Matriculation Number **BMS2005080** under the supervision of Prof. F. U. Okafor (Proterm Dean of Faculty).

ONMINYI BLESSING ODO _____

Student's name Sign & date

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Supervisor Sign & date

PROF. (MRS.) C.E. OMOROGBE _____

Head of Department (Med. Surg.) Sign & date

EXTERNAL EXAMINER _____

Sign & date

DEDICATION

I, ONMINYI BLESSING ODO, dedicate this project work to God Almighty for his enabling strength, grace, favour, protection with His blessed Holy Spirit through the period of this research.

ACKNOWLEDGEMENT

I would like to begin by giving all the glory to God, the sovereign owner of my life. I am eternally grateful for His guidance, protection and unfailing provision throughout my life and academic journey.

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ABSTRACT

Cervical cancer is the fourth most frequently diagnosed cancer among women worldwide, with nearly 90% of new cases and related deaths occurring in low- and middle-income countries. This study examined the knowledge, attitudes, and practices related to cervical cancer prevention among female students in the Faculty of Social Sciences at the University of Benin, Nigeria. A descriptive cross-sectional survey was utilized, and 315 participants were selected through a proportionate stratified random sampling approach.Findings showed that the respondents possessed a moderate level of knowledge about cervical cancer, particularly regarding its definition, modes of prevention, and transmission. Although attitudes toward screening and preventive measures were largely positive, many students reported not engaging in any form of preventive practice. The study also established a statistically significant association between students' knowledge levels and their preventive practices ($\chi^2 = 31.17$, $p < 0.0001$).Overall, the results underscore the need for focused educational strategies aimed at improving young women's awareness, attitudes, and engagement in cervical cancer prevention activities.

Keywords: *Cervical cancer prevention, knowledge, attitudes, practices, female students.*

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Cervical cancer (CC) is the fourth most prevalent malignancy affecting women globally, following breast, colorectal, and lung cancers. It accounts for more than 310,000 female deaths each year and commonly affects women in their reproductive years, making it a significant public health issue, especially in developing nations where it imposes both economic and social strain. In 2020, about 90% of newly diagnosed cases and related deaths occurred in low- and middle-income countries, with approximately 600,000 new cases reported worldwide (Arbyn et al., 2020; Sung et al., 2021). Almost every case of CC is associated with infection by the Human Papillomavirus (HPV), which has led to global recognition of CC and HPV elimination as a major public health target (World Health Organization, 2022). Unfortunately, in many parts of Sub-Saharan Africa and other resource-limited regions, most diagnoses occur at advanced stages, resulting in poor prognoses and outcomes.

In Saudi Arabia, around 10.7 million women aged 15 years and above are considered at risk for cervical cancer. Each year, roughly 358 women are diagnosed, and 179 die from the disease. Among Saudi women aged 15 to 44 years, CC ranks as the eighth most common malignancy (HPV Information Centre, 2023). Although national HPV prevalence data are scarce, regional estimates indicate that about 2.5% of women in Western Asia—including Saudi Arabia—are infected with HPV types 16 or 18, which account for approximately 72.4% of invasive cervical cancer cases (Human Papillomavirus and Related Cancers, 2023).

In Nigeria, cervical cancer remains one of the most pressing public health problems, largely due to poor healthcare access, insufficient screening initiatives, and low awareness levels. Documented risk factors include HPV infection, other sexually transmitted diseases (STDs), early sexual debut, multiple sexual partners, prolonged hormonal contraceptive use, advanced age, high parity, and tobacco use (Usman et al., 2023). The limited coverage of screening services has further contributed to the disease's rising incidence (Alshammari & Khan, 2022). In contrast, countries that have implemented regular Pap smear screening have recorded a 70% decline in both the incidence and mortality of cervical cancer through the early identification of abnormal cervical cells (Alsbeih, 2021).

Cervical cancer is largely preventable and highly treatable when detected early, as the disease typically progresses gradually from pre-cancerous lesions to invasive stages. Regular screening and routine medical examinations for women of reproductive age are therefore essential in reducing both morbidity and mortality related to CC (Usman et al., 2023). Preventive measures remain the cornerstone of cervical cancer control. Because of the long precancerous phase, early detection and intervention through organized population-based screening programs such as the Pap smear are feasible and effective (Šarenac, 2019; Taneja et al., 2021; World Health Organization, 2022).

Timely diagnosis and adequate management are crucial in lowering cervical cancer–related deaths. A comprehensive control approach encompasses primary prevention through HPV vaccination, secondary prevention via early detection and management of pre-cancerous lesions, tertiary prevention for treating invasive disease, and palliative care for advanced cases (World Health Organization, 2022). In alignment with these strategies, the World Health Organization (2022) set a global target for CC elimination by 2030, aiming to vaccinate 90% of girls against HPV before they reach 16 years of age.

Female undergraduate students are a key population in cervical cancer prevention efforts. As future leaders and health advocates, their knowledge, attitudes, and practices (KAP) significantly influence broader community health. Understanding their KAP is crucial to developing targeted interventions that strengthen prevention strategies. Research consistently highlights a persistent issue: despite generally positive attitudes towards cervical cancer prevention, there remains a substantial gap in knowledge and actual preventive practices. Factors such as limited awareness, barriers to access, and cultural influences continue to widen this gap.

1.2 Statement of problem

Cervical cancer continues to pose a major public health challenge worldwide. Despite being largely preventable through early screening and HPV vaccination, it remains the fourth most prevalent cancer among women (WHO, 2022). In low- and middle-income countries such as Nigeria, it is one of the leading causes of cancer-related mortality, primarily because of poor awareness, inadequate screening uptake, and limited availability of preventive healthcare services (Odetunde et al., 2023). Female undergraduate students form a crucial target group for preventive health promotion. They are expected to possess adequate understanding and awareness of preventive strategies; however, studies indicate a persistent gap between what they know, their attitudes, and the preventive actions they actually take (Adeoye et al., 2023).

A study conducted at Babcock University revealed that although 56.1% of female undergraduates demonstrated good knowledge of cervical cancer prevention, only 26.7% had received the HPV vaccine and 36.1% had undergone cervical screening (Adeoye et al., 2023). This disconnect between knowledge and practice suggests that several barriers continue to hinder effective prevention. Such barriers include limited information about screening facilities, misconceptions surrounding HPV vaccination, as well as cultural and religious

restrictions that discourage preventive care (Eze et al., 2023). Similarly, research from Saudi Arabia showed that 88.7% of female university students had inadequate knowledge, which was insufficient to prompt behavioural change toward prevention.

Multiple factors contribute to the low uptake of preventive measures among female undergraduates. These include fear, social stigma, economic constraints, religious and cultural norms, and poor accessibility to screening and vaccination services (Eze et al., 2023). In addition, some students underestimate their personal risk due to the misconception that cervical cancer affects only older or sexually active women (Adebayo et al., 2022). These challenges underscore the urgent need for focused interventions that not only increase awareness but also tackle both individual and structural barriers to preventive healthcare. Given the importance of early detection and vaccination in reducing cervical cancer incidence and mortality, it is crucial to assess the knowledge, attitudes, and practices of female undergraduate students toward cervical cancer prevention. Findings from such studies can inform the creation of evidence-based educational strategies and health policies aimed at improving screening and vaccination uptake among young women in tertiary institutions.

1.3 Aim of the Study

The primary aim of this study is to assess the knowledge, attitudes, and practices related to cervical cancer prevention among female students in the Faculty of Social Sciences, University of Benin, Edo State.

1.4 Objectives of the Study

The specific objectives are to:

1. Determine the level of knowledge female Social Science students at the University of Benin possess regarding cervical cancer prevention.

2. Examine the attitudes of female Social Science students toward cervical cancer prevention in the University of Benin, Edo State.

3. Identify the preventive practices adopted by female Social Science students in the University of Benin, Edo State.

1.5 Research questions

1. What is the level of knowledge female Social Science students possess regarding cervical cancer prevention in the University of Benin, Edo State?

2. What attitudes do female Social Science students hold toward cervical cancer prevention in the University of Benin, Edo State?

3. What preventive practices are adopted by female Social Science students in the University of Benin, Edo State?

1.6 Research hypothesis

This study was guided by the following hypotheses:

Null Hypothesis (H_0):

There is no significant relationship between the levels of knowledge, attitudes, and practices related to cervical cancer prevention among female Social Science students at the University of Benin, Edo State.

Alternative Hypothesis (H_1):

There is a significant relationship between the levels of knowledge, attitudes, and practices related to cervical cancer prevention among female Social Science students at the University of Benin, Edo State.

1.7 Significance of the study

This research holds importance for several groups students, healthcare providers, educational institutions, and policymakers because it evaluates the knowledge, attitudes, and practices of female students toward cervical cancer prevention.

The study aims to enhance awareness of cervical cancer, its associated risk factors, and the preventive benefits of regular screening and HPV vaccination among young women. Findings will provide valuable insights into the existing awareness level and barriers that influence preventive behaviour among students.

For healthcare professionals, the results will support the design of targeted health education initiatives, such as awareness campaigns, outreach programs, and vaccination drives, to improve prevention and screening rates. Universities and colleges can also utilize the findings to integrate cervical cancer awareness into health education curricula and student wellness programs.

Additionally, the outcomes of this research will offer evidence that can assist policymakers in formulating and strengthening public health strategies aimed at improving HPV vaccination coverage and screening uptake among young women. Overall, the study contributes to the existing body of knowledge on cervical cancer prevention, particularly within the Nigerian context and other comparable settings.

1.8 Scope of the study

This study focuses on evaluating the knowledge, attitudes, and preventive practices concerning cervical cancer among female students in the Faculty of Social Sciences, University of Benin, Edo State. The investigation is limited to this group and setting to allow for detailed and context-specific analysis.

1.9 Operational definition of terms

Cervical Cancer: A malignant condition that develops in the cells of the cervix, commonly resulting from a persistent infection with high-risk strains of the Human Papillomavirus (HPV).

Cervical Cancer Prevention: A range of actions aimed at reducing the likelihood of developing cervical cancer, including HPV vaccination, regular cervical screening (such as Pap smear or HPV testing), and healthy lifestyle practices.

Knowledge: The extent of awareness and understanding that female undergraduate students have concerning cervical cancer—its causes, risk factors, symptoms, and preventive measures.

HPV (Human Papillomavirus): A widespread sexually transmitted virus recognized as the main etiological agent of cervical cancer. Certain high-risk HPV strains can cause abnormal cell changes that may progress to cancer if not detected and managed early.

Attitude: An individual's combination of thoughts, feelings, and behavioural tendencies directed toward a particular object, person, or situation—in this context, cervical cancer prevention.

Female Undergraduate Students: Women currently enrolled in a bachelor's degree or equivalent undergraduate program at a recognized higher education institution.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews relevant studies and literature on knowledge, attitude, and practice regarding cervical cancer prevention among female Social Science students of the University of Benin. It is presented under the following subheadings: conceptual review, theoretical review, empirical review, and summary.

2.1 Conceptual Review

2.1.1 Overview of the Female Genitalia

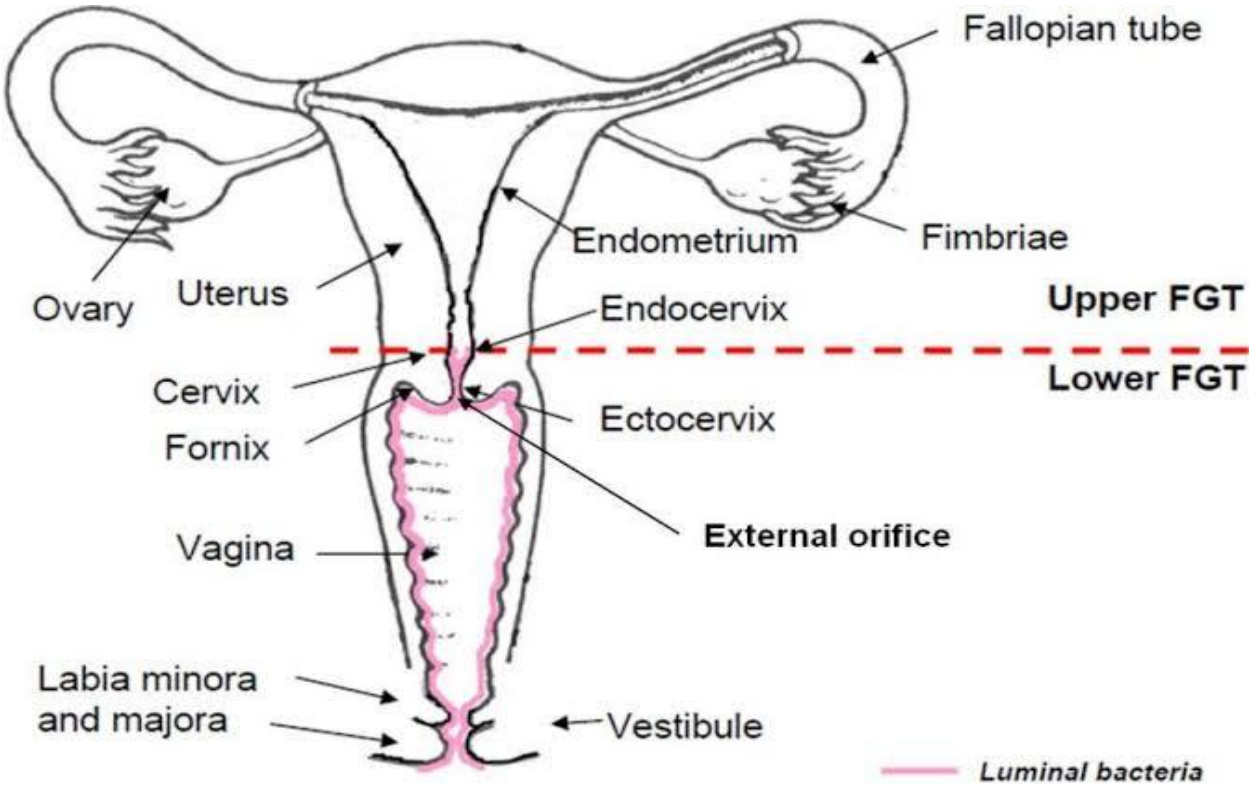

Fig 2.1 DIAGRAM OF THE FEMALE REPRODUCTIVE ORGAN SHOWING ECTO AND ENDO CERVIX

The female reproductive system is divided into external and internal organs. The external genitalia, collectively known as the vulva, include the labia majora and minora, the clitoris,

the urethral opening, the vestibule, and the mons pubis. The internal organs comprise the vagina, cervix (which includes the ectocervix and endocervix), uterus, fallopian tubes, and ovaries.

Anatomically and histologically, the cervix differs from the uterus and is regarded as a distinct structure. It is commonly described as the “neck of the uterus,” measuring roughly 1 inch in both length and width. It joins the vagina at a right angle, forming four fornices—one anterior, one posterior, and two lateral. The cervix consists of two main parts:

Ectocervix: The section that extends into the vagina, lined by stratified squamous non-keratinized epithelium.

Endocervix: The inner segment of the cervix lined with mucus-secreting simple columnar epithelium.

Functionally, the cervix enables sperm passage into the uterine cavity and serves as a protective barrier that preserves the sterility of the upper reproductive tract.

2.1.2 Concept of Cervical Cancer

Cervical cancer originates in the cervical cells—the narrow, lower portion of the uterus that connects to the vagina. It typically develops gradually, beginning with dysplasia, a condition characterized by abnormal cellular growth in the cervical lining. When untreated, these precancerous cells can evolve into malignant tumors that may spread to adjacent tissues.

The cervix is composed of two regions:

Ectocervix (Exocervix): The external part visible during gynecological examinations, lined by flat squamous epithelial cells.

Endocervix: The inner canal connecting the uterus to the vagina, lined with mucus-producing glandular (columnar) cells

The meeting point of these two regions—the squamocolumnar junction or transformation zone—is the most frequent site where cervical cancer develops.

2.1.3 Types of Cervical Cancer

Cervical cancers are categorized based on the type of cervical cells involved. The two predominant types are:

Squamous cell carcinoma: The most common type, responsible for up to 90% of cervical cancers, originating from the squamous epithelial cells of the ectocervix.

Adenocarcinoma: Develops from the glandular cells of the endocervix. A rare subtype, clear cell adenocarcinoma (also called mesonephroma), falls under this category.

Other uncommon types include:

Adenosquamous carcinoma: Tumors containing both squamous and glandular elements, also known as mixed carcinoma, and managed similarly to squamous cell carcinoma.

Small cell carcinoma: A very rare neuroendocrine type, occurring in about 3% of cases, which grows rapidly and spreads aggressively. It is strongly associated with HPV type 18 and is treated differently from other cervical cancers (Marth et al., 2021).

2.1.4 Symptoms of Cervical Cancer

Cervical cancer often presents without symptoms in its early stages, making early detection difficult. Symptoms generally appear as the disease progresses.

Early-stage symptoms may include:

- Vaginal bleeding after intercourse, between periods, or after menopause
- Prolonged or heavy menstrual flow
- Watery, blood-stained, or foul-smelling vaginal discharge
- Pelvic discomfort or pain during sexual intercourse

Advanced-stage symptoms (when cancer spreads beyond the cervix) may include:

- Painful or obstructed bowel movements with rectal bleeding
- Dysuria or hematuria
- Chronic back or abdominal pain
- Persistent fatigue

Malignant cases are typically characterized by intermenstrual bleeding, dyspareunia, and abnormal vaginal secretions (Getaneh et al., 2021).

2.1.5 Causes of Cervical Cancer

Persistent infection with high-risk strains of Human Papillomavirus (HPV), particularly types 16 and 18, accounts for about 70% of cervical cancers globally (NCI, 2024). Women living with HIV have approximately six times greater risk than those without HIV (WHO, 2024).

Other contributing factors include:

Early sexual debut: Cervical cells are more susceptible to injury and infection during adolescence.

Smoking: Nicotine exposure weakens immune defenses, increasing HPV persistence.

Weakened immunity: Immunocompromised women (e.g., with HIV/AIDS or on immunosuppressants) are more prone to cervical cancer (Zahro, 2024).

Multiple pregnancies: Hormonal fluctuations and repeated cervical changes heighten vulnerability.

Long-term contraceptive use: Continuous hormonal contraceptive use beyond five years may slightly elevate risk.

Lack of regular screening: Absence of periodic Pap smears or HPV tests prevents early detection and treatment.

2.1.6 Stages of Cervical Cancer

There are primarily two classification system for cervical cancer. The most widely used is the international federation of gynecology and obstetrics (FIGO). The other is the 'TNM' classification. They are both reviewed below;

STAGES (TNM)	STAGES (FIGO)	DESCRIPTION
T- Primary tumor		
TX		Primary tumor cannot be assessed
T0		No evidence of primary tumor
Tis	0	Carcinoma in situ
T1	I	Tumor confined to the uterus
T1A	IA	Invasive carcinoma (diagnosed microscopically) with maximum depth of invasion < 5mm
T1a1	IA1	Measured stromal invasion < 3mm in depth
T1a2	IA2	Measured stromal invasion ≤ 3mm and < 5mm in depth
T1b	IB	Invasive carcinoma with depth of invasion ≥ 5mm, limited to cervix uteri
T1b1	IB1	Invasive carcinoma with ≥ 5mm stromal invasion and < 2cmin greatest dimension
T1b2	IB2	Invasive carcinoma ≥ 2cm and < 4cm in greatest dimension
	IB3	Invasive carcinoma ≥ 4cm in greatest dimension
T2	II	Tumor invades outside uterus but not pelvic wall or lower third of vagina
T2a	IIA	Without parametrical invasion
	IIA1	Invasive carcinoma ≤ 4cm in greatest diameter
	IIA2	Invasive carcinoma ≥ 4cm in greatest dimension
T2b	IIB	With parametrical invasion
T3	III	Tumor invades pelvic sidewall and lower third of vagina, affecting kidney
T3a	IIIA	Tumor invades lower third of vagina without pelvic sidewall involvement
T3b	IIIB	Tumor invades pelvic sidewall or causes hydronephrosis
	IIIC	Tumor involves pelvic or Para aortic lymph node or both, irrespective of tumor size or extent
	IIIC1	Pelvic lymph node metastasis only
	IIIC2	Para aortic lymph node metastasis
T4	IV	Bladder or rectal invasion
	IVA	Invades mucosa of bladder or rectum
	IVB	Spread to distant organs
N- Regional lymph node		
NX		Regional nodes cannot be assessed
N0		No regional nodal metastasis
N1		Regional nodal metastasis
M- distant metastasis		
MX		Distant metastasis cannot be assessed
M0		No distant metastasis
M1		Distant metastasis

TABLE 2.2: TNM (8th edition) and International Federation of Gynecology and Obstetrics (FIGO, 2018) Staging of Cervical Cancer

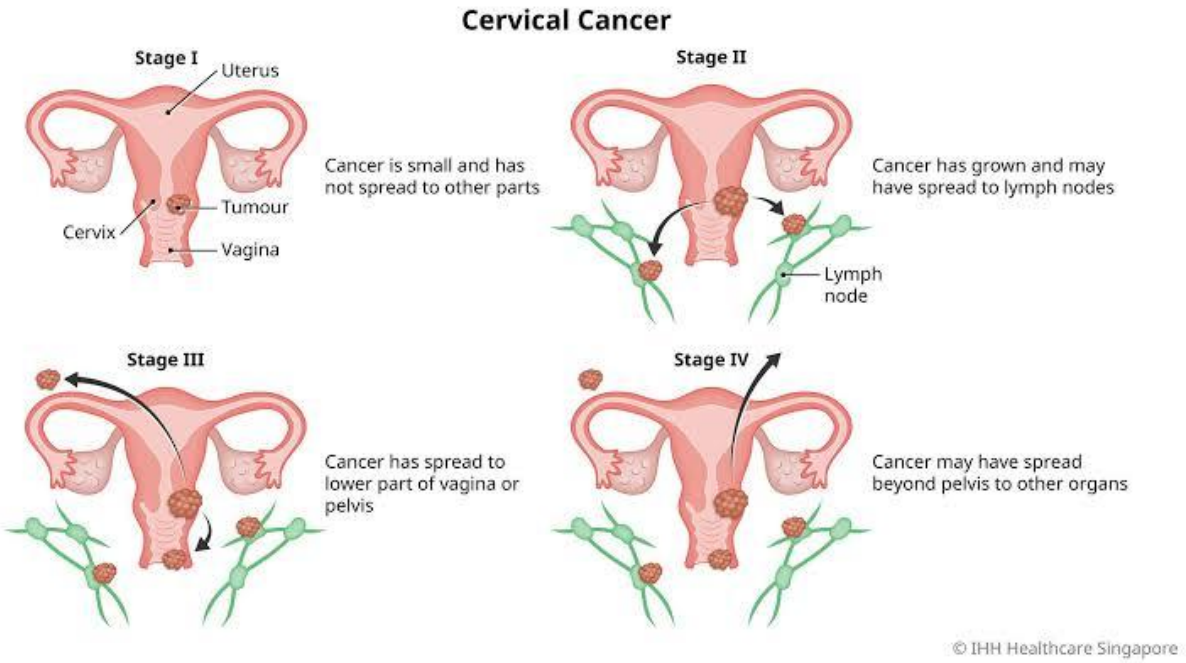

Fig 2.2 DIAGRAMS SHOWING THE STAGES OF CERVICAL CANCER

2.1.7 Risk factors of Cervical Cancer

- Risk factors increase susceptibility to cervical cancer and include biological, behavioral, and environmental components:
- Human Papillomavirus (HPV): Persistent infection with high-risk HPV strains, especially types 16 and 18, accounts for 70–90% of cases (Wang et al., 2021). Coinfection with multiple strains further elevates risk (Zhou et al., 2023).
- Early sexual initiation and multiple partners: Early sexual debut (before age 16) and multiple partners increase HPV exposure (Ahmed et al., 2022; Ncube et al., 2023).
- Compromised immunity: HIV-positive women are 5–7 times more likely to develop CC (WHO, 2022; Kibret et al., 2023).
- Contraceptive use: Long-term hormonal contraceptive use (≥5 years) doubles or triples CC risk due to hormonal effects on epithelial cells (Luo et al., 2022).

- Smoking: Tobacco metabolites induce DNA damage and local immunosuppression (Patel & Rani, 2021).
- Socioeconomic inequalities: Low income, poor education, and cultural stigma hinder access to preventive services (Singh et al., 2024).

2.1.8 Complications of Cervical Cancer

Complications often result from tumor progression or treatment side effects, including:

Pain: Bone metastasis and nerve compression cause severe pain.

Fistula formation: Abnormal openings between organs, such as vesicovaginal fistulas, may occur.

Vaginal hemorrhage: Recurrent or heavy bleeding is common.

Vaginal discharge and leukorrhea: Persistent foul-smelling secretions may lead to social isolation.

Anemia: Chronic blood loss results in fatigue and weakness.

Uremia, pyelonephritis, and kidney failure: Tumor invasion or obstruction impairs renal function, potentially life-threatening.

2.1.9 Nature of Human Papilloma Virus and infection

Human Papillomaviruses (HPVs) are a large, ancient group of viruses adapted to infect epithelial tissues. They replicate within dividing epithelial cells, manipulating host cellular processes to avoid immune detection and enable virion release during cell shedding (McBride, 2022).

Both low-risk and high-risk HPVs, classified as alpha-papillomaviruses, are transmitted primarily through sexual contact but may also spread via intimate skin-to-skin interactions. According to the CDC, genital HPV prevalence among adults aged 18–59 is approximately 45.2% in men and 39.9% in women (Luria et al., 2023).

2.1.10 Prevention of Cervical Cancer

Human Papillomavirus (HPV) Vaccine: Identification of HPV as the primary cause of CC has led to the development of prophylactic vaccines that provide primary prevention (Castle et al., 2021). Vaccination is most effective when given before sexual debut and prior to viral exposure.

Cervical Cancer Screening: Because vaccines do not cover all oncogenic HPV strains, secondary prevention through screening remains crucial. Screening detects high-risk HPV infection and precancerous lesions early, allowing timely management (NCI, 2024). The two main methods are the HPV test and the Pap smear.

Additional preventive measures include:

Limiting the number of sexual partners.

Consistent use of condoms or other protective barriers during sexual activities (Watson, 2023).

2.1.11 Management of Cervical Cancer

Medical Management:

- Treatment choice depends on disease stage and patient characteristics. The standard for locally advanced cases (FIGO stages IIB–IVA) is concurrent chemoradiotherapy

combining external beam radiotherapy with cisplatin-based chemotherapy (Viswanathan et al., 2021). For recurrent or metastatic disease, a combination of paclitaxel, cisplatin, and bevacizumab improves outcomes (Tewari et al., 2022). Immunotherapy, such as pembrolizumab, is approved for PD-L1–positive or MSI-H/dMMR tumors (Chung et al., 2021).

- Palliative care is essential for advanced or recurrent stages, focusing on symptom control (pain, bleeding, fistulas) through medication and supportive radiotherapy (WHO, 2022).

Surgical Management:

- In early-stage disease (FIGO IA–IIA), radical hysterectomy with pelvic lymph node dissection remains standard (Cibula et al., 2023). Fertility-preserving surgery such as radical trachelectomy with sentinel lymph node mapping may be offered to eligible patients (Plante et al., 2022).
- Pre-invasive lesions (CIN 2 or 3) are managed with loop electrosurgical excision (LEEP) or cold-knife conization. In central pelvic recurrence, pelvic exenteration may be performed with curative intent (Dargent et al., 2021).

Nursing Management:

- Nursing care spans the pre-, peri-, and postoperative phases and is vital for optimal outcomes.
- Preoperative and perioperative care: Includes patient education, emotional preparation, baseline assessment, and maintaining aseptic technique (Smith & Jones, 2022).
- Postoperative care: Focuses on monitoring vital signs and wound healing, managing pain pharmacologically and non-pharmacologically (Johnson et al., 2023),

encouraging early ambulation, and providing psychosocial support. Nurses also assist in fertility and body image counseling, and coordinate multidisciplinary referrals for nutrition, palliative, and social services (Green et al., 2023).

2.2 Theoretical Review

This study is anchored on the Health Belief Model (HBM), a well-known theoretical framework first introduced in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels. The model was formulated to interpret and predict health behaviors, especially those associated with disease prevention and control (Rosenstock, 1974). Over the years, the HBM has been widely utilized in diverse public health contexts, such as promoting preventive actions and screening for chronic illnesses, including various forms of cancer.In relation to cervical cancer prevention, the HBM provides valuable insights into how individuals' perceptions and beliefs shape their understanding, attitudes, and preventive actions. This makes the model particularly suitable for analyzing knowledge, attitudes, and practices (KAP) among female undergraduates in tertiary institutions.

2.2.1 Health Belief Model

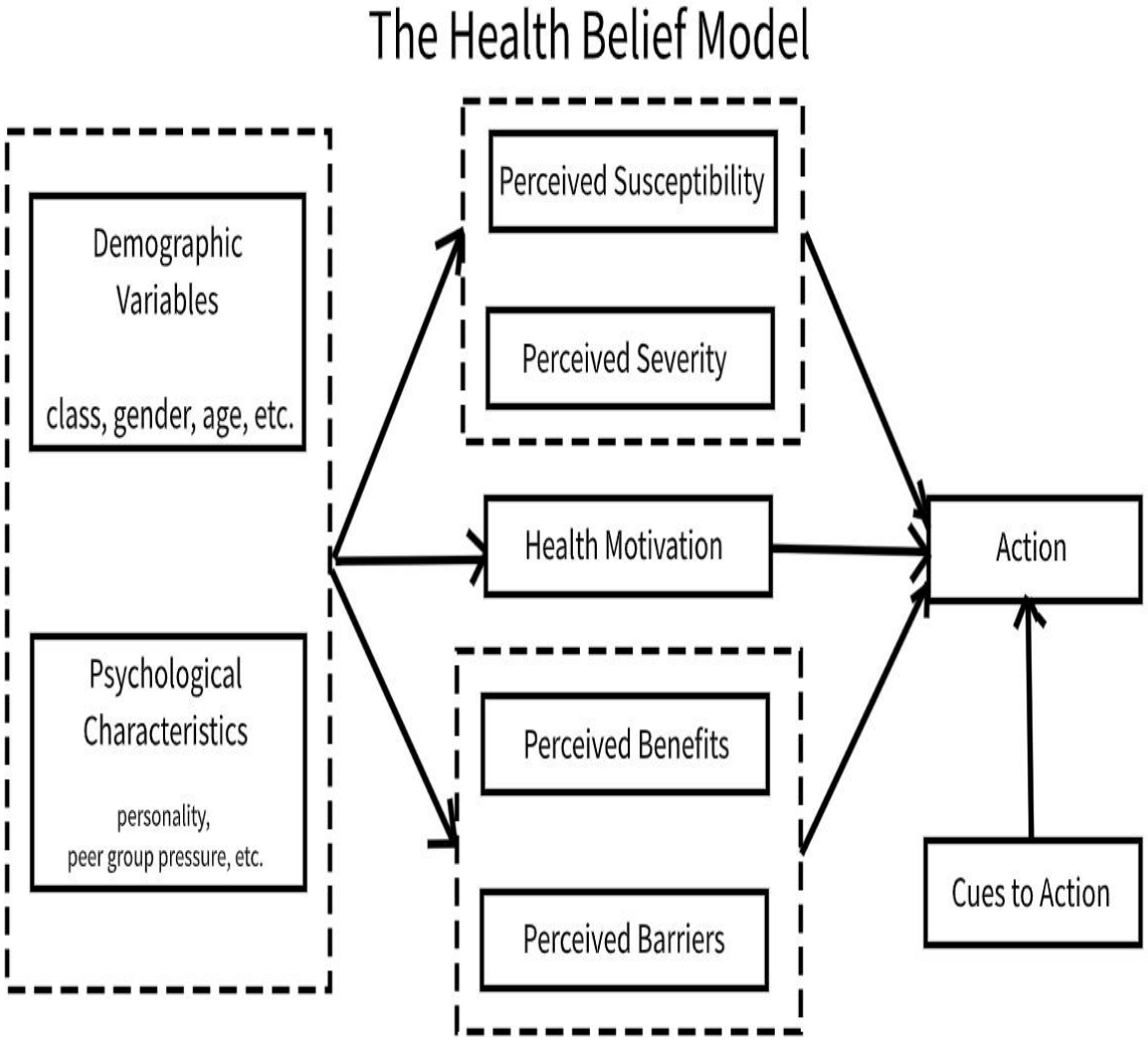

Figure 2.2.1 Health Belief Model Diagram (1950)

HBM posits that individual health behavior is determined by six key constructs:

1. Perceived Susceptibility

This refers to an individual's belief about the likelihood of getting a disease or condition. In the context of cervical cancer, perceived susceptibility reflects how vulnerable a student believes she is to contracting HPV or developing cervical cancer. If students do not perceive themselves as being at risk—possibly due to age, marital status, or sexual activity—they may not see the need for preventive actions such as Pap smears or HPV vaccination.

2. Perceived Severity

This involves the belief about the seriousness of contracting an illness or leaving it untreated. Female undergraduates who believe that cervical cancer is a serious condition with potentially fatal outcomes are more likely to take preventive measures. However, low awareness or misinformation can lead to underestimating the severity, thereby reducing motivation for preventive action.

3. Perceived Benefits

Perceived benefits refer to the individual's assessment of the value or efficacy of engaging in a health-promoting behavior to reduce the risk or seriousness of the disease. Students who are aware that early screening (e.g., Pap tests) and HPV vaccination can significantly reduce the risk of cervical cancer are more likely to participate in such practices.

4. Perceived Barriers

This refers to the individual's evaluation of the obstacles in the way of adopting a new behavior. Common barriers in a university setting may include fear, cost, lack of information, cultural beliefs, or limited access to health facilities. These barriers can hinder students' willingness or ability to engage in cervical cancer screening and vaccination, despite knowing the benefits.

5. Cues to Action

Cues to action are triggers that prompt individuals to take health-related action. These can include health campaigns, educational seminars, peer influence, or recommendations from healthcare providers. For female undergraduates, cues to action might include school health programs, social media messages, or advice from friends who have undergone screening.

6. Self-Efficacy

Added later to the model, self-efficacy refers to the confidence in one's ability to take the desired action. For example, a student who feels confident in her ability to go for a Pap smear test or ask for the HPV vaccine is more likely to follow through. Enhancing self-efficacy through education and skill-building is essential in improving cervical cancer preventive practices.

2.2.2 Application of Theory to the Study

The application of the Health Belief Model (HBM) in examining knowledge, attitudes, and practices (KAP) regarding cervical cancer prevention among female undergraduates offers a clear framework for exploring the psychological and social factors that influence preventive behavior. The model also guides the development of tailored interventions aimed at modifying specific perceptions and reducing obstacles to positive health actions.

For example, creating awareness programs that heighten individuals' sense of vulnerability and seriousness of the disease, minimizing perceived challenges through university-based health initiatives, and strengthening confidence through peer-led education can collectively enhance participation in preventive activities.

2.3 Empirical Review

2.3.1 Knowledge of Cervical Cancer among Female Undergraduate Students

Hassanat et al. (2024) examined the level of awareness, attitudes, and preventive behaviors regarding cervical cancer among female university students in Al-Kharj, Saudi Arabia. The study utilized a facility-based cross-sectional design and included 594 Saudi female students aged 18–28 years from both health-related and non-health-related disciplines at Prince Sattam bin Abdulaziz University. Participants were selected through convenience sampling, and data

were collected via a structured online questionnaire following ethical approval (No. SCBR-162/2023) and informed consent. The dataset was analyzed using IBM SPSS Statistics version 23.

The results showed that approximately 60% of respondents recognized cervical cancer as a preventable disease. About two-thirds (66.7%) identified sexually transmitted infections, and slightly over half (53.2%) recognized human papillomavirus (HPV) as risk factors. Around half of the participants were aware that symptoms such as irregular vaginal bleeding (49.7%) and pelvic pain (49.2%) may indicate cervical cancer. Awareness of screening and vaccination was relatively low—just over half (50.3%) had heard of the Pap smear test, and 40.7% knew of its role in early detection, while fewer than 36% understood the vaccine's composition or the correct vaccination age.

Overall, 88.7% of participants demonstrated limited knowledge of cervical cancer prevention, with a mean total knowledge score of 9.3 ± 6.4 out of 27. Subdomain scores indicated particularly weak awareness in areas such as risk factors (mean = 3.8 ± 3.06), symptoms (mean = 2.15 ± 2.03), Pap smear testing (mean = 1.52 ± 1.54), and HPV vaccination (mean = 0.98 ± 1.13). The authors concluded that knowledge among female undergraduates was generally unsatisfactory and emphasized the need for educational initiatives to raise awareness and promote preventive practices.

Amaike et al. (2023) investigated awareness and attitudes toward cervical cancer prevention among 225 female undergraduates at a private Nigerian university. The study utilized a cross-sectional design, employing a multistage sampling approach, and collected data through self-administered questionnaires. Statistical analyses, including Chi-square tests and logistic regression, were performed using IBM SPSS version 23.Findings indicated that slightly over half of the participants (56.1%) possessed good knowledge of cervical cancer prevention,

while 62.7% demonstrated a positive attitude toward preventive strategies. Despite this, uptake of preventive services was low: only 26.7% had received the HPV vaccine, and 36.1% had participated in cervical cancer screening. Common barriers to screening included time constraints and lack of awareness about available facilities.The study also identified significant predictors of screening acceptance. Students with higher knowledge levels were more likely to engage in screening (OR = 15; 95% CI: 0.149–0.524; p = 0.0001), as were those who had previously received the HPV vaccine (OR = 29; 95% CI: 3.151–1.654; p = 0.0001). Amaike et al. (2023) concluded that there is a pressing need for educational interventions to improve both knowledge and attitudes toward cervical cancer prevention among female undergraduates, thereby supporting efforts to reduce the burden of the disease.

Zalak et al. (2023) carried out a cross-sectional study to examine knowledge, attitudes, and practices regarding cervical cancer screening among female nursing staff at a tertiary care hospital in Morbi, Western India. The research, conducted between November and December 2023 using a semi-structured questionnaire, included participants aged 20 to 60 years and received approval from the Institutional Ethical Committee. The majority of respondents were young, with 64.9% aged 20–29 years, and 52.6% were unmarried. About 70.1% acknowledged cervical cancer as a significant public health issue. While most participants (92.8%) were aware of the Pap smear as a screening method, awareness of alternative techniques was low: only 12.4% knew about visual inspection with acetic acid (VIA), and 2% were familiar with HPV testing. Among those who had never performed VIA, 52% cited insufficient skills as the main reason. Additionally, a large proportion had never undergone a Pap smear themselves (87.6%) or performed VIA on any patient (95.8%).Overall, only 32.3% of nursing staff demonstrated adequate knowledge of cervical cancer screening, and 28.8% had a comprehensive understanding of VIA. About 62% had received formal training in screening methods. These findings highlight gaps in both knowledge and personal

screening practices among healthcare professionals, emphasizing the importance of enhanced education and training programs to improve the implementation of cervical cancer screening initiatives in India.

2.3.2 Attitude and Knowledge of Cervical Cancer Prevention among Female Undergraduate Students

Tafere et al. (2021) carried out a community-based cross-sectional study in the South Gondar Zone, Ethiopia, involving 844 women aged 18 years and older. Participants were selected using a systematic sampling method. Binary and multivariable logistic regression analyses were conducted to identify factors influencing women's knowledge and attitudes toward cervical cancer. The study found that approximately 66% of respondents had heard of cervical cancer, with health professionals serving as the main source of information for 75.4% of participants. While 62.4% were aware of at least one preventive measure and 82.6% could identify at least one symptom, only 25% demonstrated good overall knowledge. Nonetheless, 64% of the women exhibited a positive attitude toward cervical cancer prevention. Factors negatively associated with knowledge included living in rural areas (AOR = 0.21, 95% CI: 0.18–0.34), lack of formal education (AOR = 0.50, 95% CI: 0.3–0.75), low income (AOR = 0.57, 95% CI: 0.43–0.81), and having fewer than four children (AOR = 0.8, 95% CI: 0.60–0.86). The findings suggest that while knowledge levels were generally low, attitudes toward cervical cancer prevention were largely positive.

In a separate study, Usman et al. (2021) explored knowledge, attitudes, and practices regarding cervical cancer screening among 407 female university students in Ishaka, Western Uganda, following the first nationwide lockdown. Data were collected using a structured questionnaire, with results presented as frequencies and percentages. Most respondents were medical students (69.5%), under 25 years of age (83.3%), and identified with the Anglican Christian faith (36.9%). Older participants (over 25 years) and medical students exhibited

higher knowledge scores ($p = 0.0052$ and $p < 0.001$, respectively), more positive attitudes ($p = 0.0043$), and more favorable screening practices ($p = 0.0134$) compared to their peers. A weak but significant correlation was observed between knowledge and both attitude ($r = 0.206$, $p < 0.001$) and practice ($r = 0.181$, $p = 0.0003$).

These studies collectively underscore the importance of enhancing awareness and promoting positive attitudes toward cervical cancer prevention, particularly screening and vaccination, among female students.

Okpu et al. (2025) investigated knowledge, attitudes, and practices related to cervical cancer screening among 326 female students at Ambrose Alli University in Southern Nigeria. The study employed a descriptive cross-sectional design with a semi-structured, interviewer-administered questionnaire. Participants were selected using a multistage sampling technique, and data were analyzed using IBM SPSS version 23.0. The findings indicated that only 24.8% of respondents demonstrated good knowledge of cervical cancer, 28.2% had fair knowledge, and 46.9% had poor knowledge. Knowledge levels tended to increase with age, reaching 63.6% among students aged 29–31 years, and students in higher academic classes generally exhibited better knowledge. Despite these differences, overall attitudes toward cervical cancer screening were largely unfavorable, with only 18.7% of participants showing a positive attitude. Interestingly, about half of those with good knowledge also demonstrated a positive attitude toward screening.

Screening practices were notably low, with just 1.5% of participants having ever undergone a Pap smear. The study highlights that knowledge, attitude, and practice regarding cervical cancer screening among female students at Ambrose Alli University remain limited, posing potential long-term public health risks due to increased susceptibility to cervical cancer and its complications.

2.3.3 Prevention of Cervical Cancer among female Undergraduate Students

Zhang et al. (2022) investigated knowledge of cervical cancer prevention and treatment, as well as willingness to receive the HPV vaccine, among 800 college students from four universities in Zhengzhou, China. Participants were selected through a multistage random sampling method and completed a self-administered questionnaire. Logistic regression analysis was conducted to identify factors influencing knowledge levels. The study found that 87.9% of students had heard of cervical cancer, with 46.7% demonstrating a good understanding of its prevention and treatment. Knowledge levels were significantly associated with variables such as gender, academic major, year of study, education level, father's education, attitudes toward premarital sex, and whether the mother had undergone cervical cancer screening ($p < 0.05$). Additionally, 74% of participants were aware of the HPV vaccine, and 92.8% were willing to receive it or recommend it to family and friends. Despite these findings, overall knowledge of cervical cancer prevention and treatment was considered low among the students.

Similarly, Tomić et al. (2023) assessed cervical cancer prevention knowledge among 402 female students at the University of Novi Sad, Serbia, during the COVID-19 pandemic, using the Cervical Cancer Knowledge Prevention-64 (CCKP-64) questionnaire. Most participants were aged 20–22 and came from social and technical science faculties in urban areas. The study revealed that while students generally had a good understanding of primary prevention (correct response rates ranged from 29.9% to 80.6%), only 63.4% had heard of the cervical cancer vaccine. Awareness of its availability in Serbia was 52%, and just 31.8% knew where to access vaccination. Only 9.7% reported knowing someone affected by cervical cancer, and 25.4% considered themselves at risk. Older students (over 26 years) had significantly better knowledge of symptoms, cytological tests, and secondary prevention ($p < 0.05$), yet more than half (53%) remained unvaccinated ($p = 0.001$). These findings underscore the urgent

need for targeted educational interventions to improve HPV vaccination uptake and awareness of secondary prevention measures among young women in Serbia.

Magaji et al. (2025) explored awareness and misconceptions regarding cervical cancer and its prevention among 103 female undergraduate students at Sa'adu Zungur University, Bauchi. The study used a descriptive cross-sectional design, and participants were selected based on standard sample size calculation methods. Data were collected via a structured questionnaire.

The results indicated that less than half of the respondents (47.6%) had heard of cervical cancer, while 49 (49.5%) were unaware that the disease is preventable. Additionally, 42 participants (40.8%) did not know that HPV vaccination could prevent cervical cancer, and 48 (46.6%) were unaware that practicing safe sex reduces risk. The study highlights significant gaps in knowledge regarding the causes, screening, and prevention of cervical cancer.

Magaji et al. (2025) emphasized the importance of targeted educational interventions to improve awareness among female undergraduates. Recommendations include implementing awareness programs, increasing access to affordable screening and vaccination services, and addressing cultural and social barriers to strengthen cervical cancer prevention efforts.

2.4 Summary of Literature Review

The literature reviewed highlights knowledge, attitudes, and practices related to cervical cancer prevention among female undergraduate students in tertiary institutions. Cervical cancer originates in the cervix, often beginning with dysplasia, and is primarily caused by high-risk human papillomavirus (HPV) types 16 and 18. The disease mainly presents as squamous cell carcinoma or adenocarcinoma, with symptoms such as abnormal bleeding and pelvic pain typically appearing in later stages. Key risk factors include early onset of sexual

activity, smoking, immunosuppression, multiple pregnancies, prolonged use of contraceptives, and irregular screening. Cervical cancer is staged using the FIGO and TNM classification systems, ranging from Stage I, confined to the cervix, to Stage IV, indicating spread beyond the pelvis. Complications can include severe pain, fistula formation, and renal failure. HPV is predominantly transmitted through sexual contact and remains highly prevalent among adults. Preventive strategies encompass vaccination against HPV, routine screening via Pap smears or HPV testing, reducing the number of sexual partners, and using barrier methods.

The Health Belief Model (HBM) provides a useful framework for understanding preventive behaviors, emphasizing factors such as perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy.

Empirical evidence consistently indicates that female undergraduate students often have limited knowledge of cervical cancer and its prevention, with low rates of vaccination and screening. Common barriers include lack of awareness and restricted access to healthcare services.

Overall, the literature underscores the urgent need for tailored educational programs to improve knowledge and attitudes toward cervical cancer prevention among female undergraduates, while also enhancing accessibility to screening and vaccination services.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter outlines the methods and procedures employed in the study. The discussion is organized under the following headings: research design, research setting, target population, sample size, sampling technique, data collection instrument, validity and reliability of the instrument, data collection procedure, data analysis method, and ethical considerations.

3.1 Research Design

A descriptive cross-sectional survey design was utilized for this study. This design is appropriate for evaluating the current levels of knowledge, attitudes, and practices (KAP) related to cervical cancer prevention within a defined population at a single point in time.

3.2 Research Setting

The study was carried out in the Faculty of Social Sciences at the University of Benin (UNIBEN), situated in Benin City, Edo State, Nigeria. The faculty consists of six departments: Economics, Political Science, Sociology, Geography and Regional Planning, and Social Work. Benin City, the capital of Edo State, is located in southern Nigeria, between latitudes 6°12′38.36″ N and 6°27′25.00″ N, and longitudes 5°29′46.03″ E and 5°45′00.41″ E. The city is administratively divided into five Local Government Areas (LGAs): Uhunmwonde, Oredo, Ovia North East, Ikpoba Okha, and Egor. It lies within a tropical rainforest region rich in rare and valuable forest species, an area that has been utilized by local communities for generations (Fabolude & Aighewi, 2022).

3.3 Target Population

The study population refers to all individuals, subjects, or objects that meet specific criteria relevant to the research topic (Omoera & Nwaoboli, 2023). For this study, the target population comprised female students enrolled in the Faculty of Social Sciences at the University of Benin (UNIBEN).

The distribution of female students across the departments is shown in Table 3.1:

Departments	Number of students
Economics & Statistics	285
Geography & Regional Planning	16
Political Science	267
Sociology & Anthropology	359
Social Work	441
Public Administration	366
TOTAL	1734

Source: Academic Planning Division, UNIBEN.

Table 3.1: Data on Student Population

3.4 Sample size Determination

The sample size refers to the number of individuals or observations selected from the population for inclusion in a research study. It is a subset of the population used to collect data and make inferences about the entire population (Nwaoboli et al., 2022).

For this study, the sample size was calculated using Cochran's formula for determining sample sizes in a finite population:

$$n_0 = \frac{z^2 . p(1-p)}{e^2}$$

Where: $n_{0=}$ Required sample size

z = z-value (for 95% confidence level, z =1.96)

p= estimated proportion of the population

e= margin of error

Step 1: Calculate the initial Sample Size (Using Cochran formula):

$$n_0 = \frac{z^2 . p(1-p)}{e^2}, \quad n_0 = \frac{(1.96)^2 . 0.5(1-0.5)}{0.05^2}$$

$$= \mathbf{384.16}$$

Finite Population Correction: since N = 1734

$$n = \frac{384.16}{1 + \frac{384.16}{1734}}$$

$$n = \frac{384.16}{1.22099} = 314.67 \approx 315$$

Sample size: **315**

Step 2: Proportion Allocation by Department

$$\text{Sample per Department} = \frac{\text{Department Population} \times 315}{1734}$$

Department	Population	Proportion	Sample Allocation	Rounded
Economics & Statistics	285	16.44%	51.8	52
Geography & Regional Planning	16	0.92%	2.9	3
Political Science	267	15.40%	48.5	49
Sociology & Anthropology	359	20.70%	65.2	65
Social Work	441	25.43%	80.1	80
Public Administration	366	21.11%	66.5	67
TOTAL	**1734**	**100%**	**315**	**315**

Table 2: Proportional Allocation by Department

3.5 Sampling Technique

A proportionate stratified random sampling method was employed for this study. The procedure involved three stages:

Stage 1: The total sample was proportionally distributed across all departments.

Stage 2: Within each department, the sample was further proportionally allocated across levels (100L, 200L, 300L, and 400L).

Stage 3: Individual students were randomly selected from each level to participate in the study.

3.5.1 Inclusion Criteria

- Female undergraduate students currently enrolled in the Faculty of Social Sciences, University of Benin (UNIBEN).
- Students who voluntarily consented to participate in the study.

3.5.2 Exclusion Criteria

- Male students.
- Female students from other faculties.
- Students who did not provide informed consent.

3.6 Instrument for Data Collection

Data were collected using a structured, self-administered questionnaire, divided into four sections:

- Section A: Socio-demographic information
- Section B: Knowledge of cervical cancer and its prevention (e.g., HPV, Pap smear)

- Section C: Attitudes toward cervical cancer screening and HPV vaccination
- Section D: Preventive practices, including screening uptake and vaccination history

3.7 Validity of instrument

3.7.1 Face Validity

The questionnaire was reviewed by the project supervisor to ensure that the items were clear, relevant, and appropriate for measuring the intended constructs.

3.7.2 Content Validity

Content validity was further confirmed by expert review from the project supervisor and a statistician. Corrections were made based on their recommendations prior to the study.

3.8 Reliability of the Instrument

Reliability was assessed using Cronbach's Alpha to determine internal consistency. A pilot study was conducted with 32 students from the Faculty of Physical Sciences, representing 10% of the target sample, to identify and correct potential lapses in the questionnaire before the main study.

3.9 Method of Data Collection

The researcher administered the questionnaires directly to the selected respondents. Before completing the questionnaires, participants were provided with a clear explanation of the study's purpose and objectives. Only students who expressed interest voluntarily completed the questionnaires, which were then collected for analysis.

3.10 Method of Data Analysis

The collected data were coded and entered into SPSS version 25 for analysis.

Descriptive statistics (frequencies, percentages, means) were used to summarize knowledge, attitudes, and practices.

Inferential statistics (Chi-square tests, t-tests, and logistic regression) were applied to examine associations between demographic characteristics and KAP levels.

Statistical significance was set at $p < 0.05$.

3.11 Ethical Consideration

Ethical approval was obtained from the University of Benin Research Ethics Committee. Participants were assured of confidentiality, anonymity, and voluntary participation. Written informed consent was obtained prior to data collection, and no personal identifiers were recorded.

CHAPTER FOUR

4.0 INTRODUCTION

The chapter involves the coding and analysis of the collected data using tables.

4.1 SOCIODEMOGRAPHIC DATA OF THE RESPONDENTS

The data shows that a significant proportion of respondents, 227 (72.1%) are between the ages of 18-21 years, 47 (14.9%) are between 22-25 years, 29 (9.2%) are between 26-29 years, and 12 (3.8%) are 29 years and above. In terms of level of education, 123 (39%) of the respondents are in level 100, 64 (20.3%) are in level 200, 38 (12.1%) are in level 300, and 90 (28.6%) are in level 400.The marital status of the respondents shows that the majority, 309 (98.1%) are single, while 6 (1.9%) are married. The distribution of the respondents in terms of religion reveals that 306 (97.1%) of the respondents are Christians, 6 (1.9%) are Muslims, and 3 (0.95%) belong to Traditional Religion.

Table 4.1: Socio-Demographic Characteristic of the Respondents

S/No	VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
1.	AGE	18-21	227	72.2%
		22-25	47	14.8%
		26-29	29	9.3%
		29 and above	12	3.7%
2.	LEVEL	100	123	38.9%
		200	64	20.4%
		300	38	12.0%
		400	90	28.7%
3.	MARITAL STATUS	Single	309	98.1%
		Married	6	1.9%
4.	RELIGION	Christianity	306	97.1%
		Islam	6	1.9%
		Traditional Religion	3	0.95%

4.2 DESCRIPTIVE STATISTICS OF THE RESPONDENTS ON KNOWLEDGE OF CERVICAL CANCER AMONG FEMALE SOCIAL SCIENCE STUDENTS

The respondents' knowledge of cervical cancer was assessed across various domains. The results show that a significant proportion of respondents demonstrated correct knowledge in certain areas, such as the definition of cervical cancer (70.4%), cervical cancer prevention (87%), and the spread of cervical cancer through sexual contact (78.7%). However, in other areas, such as the main cause of cervical cancer (50.9%), recommended age for screening (40.7%), and purpose of Pap smear test (59.3%), the proportion of respondents with correct

knowledge was relatively lower. In contrast, a substantial proportion of respondents demonstrated incorrect knowledge in areas such as formal education about cervical cancer (71.3%), recommended age for screening (59.3%), and purpose of Pap smear test (40.7%). The mean percentage of correctly answered items by the respondents was approximately 62.3%, while the mean percentage of incorrectly answered items was approximately 28.5% Using McDonald's standard of learning outcome measure criteria, which categorizes knowledge levels as very low (<60%), low (60-69.99%), moderate (70-79.99%), high (80-89.99%), and very high (90-100%), the respondents' overall knowledge of cervical cancer can be classified as moderate. Therefore, the respondents can be said to have a moderate level of knowledge regarding cervical cancer, with areas of strength in definition, prevention, and transmission, but areas of weakness in main cause, recommended screening age, and purpose of Pap smear test.

Table 4.2.1 Knowledge of Cervical Cancer

S/N	VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
1.	DEFINITION OF CERVICAL CANCER	Cancer of the cervix	222	70.4%
		Cancer of the vagina	55	17.6%
		Don't know	38	12.0%
2.	MAIN CAUSE OF CERVICAL CANCER	HPV Infection	160	50.9%
		Bacterial Infection	49	15.7%
		Don't know	105	33.3%
3.	CERVICAL CANCER CAN BE PREVENTED	Yes	274	87%
		No	41	13%
		Don't know	0	0%
4.	WHICH OF THE FOLLOWING ARE PREVENTIVE MEASURES? (SELECT ALL THAT APPLY)	Regular Pap Smear Test	158	50.0%
		HPV Vaccination	163	51.9%
		Abstinence	146	46.3%
		Having Multiple Sex Partners	146	46.3%
		Don't Know	67	21.3%
5.	RECEIVED FORMAL EDUCATION ABOUT CERVICAL	Yes	90	28.7%
		No	225	71.3%

	CANCER			
6.	RECOMMENDED AGE TO START SCREENING FOR CERVICAL CANCER	Before 20 years	92	25.9%
		21–29 years	128	40.7%
		After 40 years	105	33.4%
7.	GROUP OF WOMEN MOST AT RISK OF DEVELOPING CERVICAL CANCER	Sexually active women	195	62.0%
		Women over 70 only	99	31.5%
		Women who have never had sex	20	6.5%
8.	WHAT IS THE PURPOSE OF PAP SMEAR TEST	To detect HPV infection or abnormal cells	187	59.3%
		To treat cervical cancer	29	9.3%
		To check pregnancy	96	30.6%
		Don't know	23	0.8%
9.	CAN CERVICAL CANCER BE SPREAD THROUGH SEXUAL CONTACT	Yes	248	78.7%
		No	67	21.3%

Table 4.2.2 Correct and Incorrect Knowledge

S/N	ITEMS	CORRECT KNOWLEDGE	INCORRECT KNOWLEDGE
1.	DEFINITION OF CERVICAL CANCER	70.4%(222)	29.6%(93)
2.	MAIN CAUSE OF CERVICAL CANCER	50.9%(160)	49.1(155)
3.	CERVICAL CANCER CAN BE PREVENTED	87%(274)	13%(41)
4.	WHICH OF THE FOLLOWING ARE PREVENTIVE MEASURES?	49.4%(156)	33.8%(106)
5.	RECEIVED FORMAL EDUCATION ABOUT CERVICAL CANCER	28.7%(90)	71.3%(225)
6.	RECOMMENDED AGE TO START SCREENING FOR CERVICAL CANCER	40.7%(128)	59.3%(187)
7.	WHAT IS THE PURPOSE OF PAP SMEAR TEST	59.3%(187)	40.7%(128)
8.	GROUP OF WOMEN MOST AT RISK	62%(195)	38%(120)
9.	CAN CERVICAL CANCER BE SPREAD THROUGH SEXUAL CONTACT	78.7%(248)	21.3%(67)
MEAN		62.3%	28.5%

4.3 DESCRIPTIVE STATISTICS OF THE RESPONDENTS ON ATTITUDE TOWARDS CERVICAL CANCER PREVENTION AMONG FEMALE SOCIAL SCIENCE STUDENTS

Table 4.3 presents the attitudes and perceptions of respondents regarding cervical cancer and screening. The data reveals that a substantial proportion of respondents, 175 (55.6%) agree and 114 (36.2%) strongly agree that cervical cancer is a serious health problem among women. Regarding the importance of cervical cancer screening, a significant majority of respondents, 198 (62.9%) agree and 93 (29.5%) strongly agree that it is important. Furthermore, 195 (61.9%) of respondents agree and 96 (30.5%) strongly agree that they are willing to get screened. The data also shows that 204 (64.8%) of respondents agree that HPV vaccination is necessary, while 61 (19.4%) strongly agree. However, a considerable number of respondents, 166 (52.7%) disagree that fear of diagnosis prevents them from getting screened. In terms of cervical cancer prevention priority, 149 (47.3%) of respondents disagree that it is not a priority, while 93 (29.5%) agree that it is. Additionally, 158 (50.2%) of respondents disagree that they would be embarrassed to get screened, while 79 (25.1%) agree that they would. The table also demonstrates that a substantial proportion of respondents, 169 (53.7%) agree that cultural beliefs should not prevent screening, while 117 (37.1%) strongly agree. Moreover, 184 (58.4%) of respondents agree that they would be willing to go for free screening, while 82 (26%) strongly agree.

Table 4.3 Attitude Towards Cervical Cancer

S/N	VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
1.	CERVICAL CANCER IS A SERIOUS HEALTH PROBLEM AMONG WOMEN	Strongly Disagree	15	4.6%
		Disagree	12	3.7%
		Agree	175	55.6%
		Strongly Agree	114	36.1%
2.	IT IS IMPORTANT FOR EVERY WOMAN TO GO FOR CERVICAL CANCER SCREENING	Strongly Disagree	12	3.7%
		Disagree	12	3.7%
		Agree	198	63%
		Strongly Agree	93	29.6%
3.	WILLINGNESS TO GET SCREENED	Strongly Disagree	3	0.9%
		Disagree	20	6.5%
		Agree	195	62%
		Strongly Agree	96	30.6%
4.	HPV VACCINATION IS NECESSARY BEFORE SEXUAL DEBUT	Strongly Disagree	12	3.7%
		Disagree	38	12%
		Agree	204	64.8%
		Strongly Agree	61	19.4%
5.	FEAR OF DIAGNOSIS PREVENTS SCREENING	Strongly Disagree	47	14.8%
		Disagree	166	52.8%

		Agree	67	21.3%
		Strongly Agree	35	11.1%
6.	CERVICAL CANCER PREVENTION IS NOT A PRIORITY	Strongly Disagree	55	17.6%
		Disagree	149	47.2%
		Agree	93	29.6%
		Strongly Agree	18	5.6%
7.	EMBARRASSED TO GET SCREENED	Strongly Disagree	58	18.5%
		Disagree	158	50%
		Agree	79	25%
		Strongly Agree	20	6.5%
8.	CERVICAL CANCER SCREENING IS UNCOMFORTABLE	Strongly Disagree	26	8.3%
		Disagree	149	47.2%
		Agree	117	37%
		Strongly Agree	23	7.4%
9.	CULTURAL BELIEFS SHOULD NOT PREVENT SCREENING	Strongly Disagree	15	4.6%
		Disagree	15	4.6%
		Agree	169	53.7%
		Strongly Agree	117	37%

10.	WILLINGNESS TO GO FOR UNIVERSITY ORGANISED FREE CANCER SCREENING	Strongly Disagree	6	1.9%
		Disagree	44	13.9%
		Agreement	184	58.3%
		Strongly Agree	82	25.9%

4.4 DESCRIPTIVE STATISTICS OF THE PREVENTIVE PRACTICES OF RESPONDENTS ON CERVICAL CANCER AMONG FEMALE SOCIAL SCIENCE STUDENTS

Table 4.4 presents the cervical cancer prevention practices of respondents. The data reveals that a substantial proportion of respondents, 309 (98.1%), have been screened for cervical cancer. Regarding the frequency of screening, 35 (11.1%) respondents get screened once a year, while 233 (74%) reported never getting screened. The data also shows that 300 (95.4%) respondents have received the HPV vaccine. Among those who have not received the vaccine, the main reasons cited are lack of awareness (44.4%), fear of side effects (18.4%), and unavailability (17.5%). In terms of cervical cancer prevention practices, 250 (79.4%) respondents reported not practicing any preventive measures, while 32 (10.2%) limit their sexual partners, 18 (5.7%) use condoms, 12 (3.7%) have received HPV vaccination, and 3 (0.9%) undergo regular Pap smear tests. Furthermore, 261 (83%) of respondents would encourage screening and vaccination, while 44 (13.9%) would not.

Table 4.4 Preventive Practices

S/N	VARIABLE	CATEGORY	FREQUENCY	PERCENTAGE
1.	EVER SCREENED FOR CERVICAL CANCER	Yes	309	98.1%
		No	6	1.9%
2.	HOW OFTEN YOU GET SCREENED	Once a year	35	11.1%
		Once every 3 years	18	5.7%
		Once a lifetime	29	9.2%
		Never	233	74%
3.	HAVE YOU RECEIVED THE VACCINE	Yes	300	95.4%
		No	15	4.6%
4.	REASON FOR NOT RECEIVING THE VACCINE	Fear of side effects	58	18.4%
		Not available	55	17.5%
		Cost	20	6.3%
		Lack of awareness	140	44.4%
		Not sexually active	36	11.4%
		I have received it	3	1 %
		I don't want it	3	1 %
5.	DO YOU PRACTICE:	Regular Pap Smear Test	3	0.9%
			12	3.7%
		HPV Vaccination	18	5.7%
		Condom use	32	10.2%
		Limiting Sexual Partners	250	79.4%
		None		
6.	WOULD YOU ENCOURAGE SCREENING AND VACCINATION?	Yes	261	83%
		No	44	13.9%
		Don't Know	10	3.1%

4.5 TESTS OF HYPOTHESIS

The researcher used analysis of Chi-square statistics to test the stated hypothesis at a significance level of 0.05. The decision rule was based on the p-value that is associated with the chi-square test. Thus, if the p-value is less than 0.05 (significance level), reject the null hypothesis (H0) but if the p-value is greater than 0.05, accept H0.

The following hypothesis was tested using Chi-square statistics:

H_0: There is no significant relationship between the level of knowledge, attitude, and practice of cervical cancer prevention among female Social Science students in the University of Benin, Edo State.

H_1: There is a significant relationship between the level of knowledge, attitude, and practice of cervical cancer prevention among female undergraduate students in the University of Benin, Edo State.

Since the p-value (< 0.0001) is less than the significance level (0.05), we reject H_0 and accept the alternative hypothesis H_1.

Table 4.5: Chi-Square Test Result for Relationship Between Level of Knowledge and Practice of Cervical Cancer Prevention

Level of Knowledge	Good Practice	Poor Practice	χ^2	p-value
Moderate	150	50	31.17	0.0001
Low	50	65		

The researcher used analysis of Chi-square statistics to test the stated hypothesis at a significance level of 0.05. The decision rule was based on the p-value that is associated with the chi-square test. Thus, if the p-value is less than 0.05 (significance level), reject the null hypothesis (H_0) but if the p-value is greater than 0.05, accept H_0.

The following hypothesis was tested using Chi-square statistics:

H_0: There is no significant relationship between the level of knowledge, attitude, and practice of cervical cancer prevention among female Social Science students in the University of Benin, Edo State.

H_1: There is a significant relationship between the level of knowledge, attitude, and practice of cervical cancer prevention among female undergraduate students in the University of Benin, Edo State.

Since the p-value (< 0.0001) is less than the significance level (0.05), we reject H_0 and accept the alternative hypothesis H_1.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with the analysis of data collected from the respondents. Data collected was represented in frequency and percentage distribution and was discussed under the following headings: the discussion of findings in accordance to the stated objectives and hypothesis, implications for nursing, summary, conclusion, recommendation and suggestions for further studies.

5.1 Discussion of findings

Objective One: Knowledge of Cervical Cancer

The findings of this study revealed that respondents have a moderate level of knowledge regarding cervical cancer, with a mean percentage of correctly answered items being approximately 62.3%. The respondents demonstrated good knowledge in certain areas, such as the definition of cervical cancer (70.4%), cervical cancer prevention (87%), and the spread of cervical cancer through sexual contact (78.7%). However, there were areas of weakness, including the main cause of cervical cancer (50.9%), recommended age for screening (40.7%), and purpose of Pap smear test (59.3%).

The moderate level of knowledge about cervical cancer among respondents is consistent with the study by Amaike et al. (2023), which found that 56.1% of female undergraduate students in Nigeria demonstrated good knowledge of cervical cancer prevention strategies.

However, the findings contrast with the study by Hassanat et al. (2024), which revealed that 88.7% of female university students in Saudi Arabia demonstrated poor overall knowledge about cervical cancer.

Objective Two: Attitude Towards Cervical Cancer

The study showed that respondents have a generally positive attitude towards cervical cancer screening and prevention. A substantial proportion of respondents agree that cervical cancer is a serious health problem among women (91.7%), and most respondents agree that it is important for every woman to go for cervical cancer screening (92.5%). Additionally, 92.4% of respondents agree that HPV vaccination is necessary before sexual debut.

The generally positive attitude towards cervical cancer screening and prevention among respondents is consistent with the study by Tafere et al. (2021), which found that 64% of women in Ethiopia had a favorable attitude toward cervical cancer prevention measures.

Another study by Usman et al. (2021) also found that medical students in Uganda exhibited a more positive attitude towards cervical cancer screening.

However, the findings contrast with the study by Okpu et al. (2025), which revealed that participants' attitudes toward cervical cancer screening were generally poor among students in Southern Nigeria.

Objective Three: Preventive Practices

The study revealed that a substantial proportion of respondents, 309 (98.1%), have been screened for cervical cancer. However, the frequency of screening is low, with 74% of respondents reporting never getting screened. The data also shows that 300 (95.4%) respondents have received the HPV vaccine. Among those who have not received the vaccine, the main reasons cited are lack of awareness (44.4%), fear of side effects (18.4%), and unavailability (17.5%). In terms of cervical cancer prevention practices, 250 (79.4%) respondents reported not practicing any preventive measures, while 32 (10.2%) limit their

sexual partners, 18 (5.7%) use condoms, 12 (3.7%) have received HPV vaccination, and 3 (0.9%) undergo regular Pap smear tests.

However, the study by Amaike et al. (2023) found that only 26.7% of female undergraduate students in Nigeria had received the HPV vaccine, and 36.1% had undergone cervical cancer screening.

The study by Zhang et al. (2022) found that 74.0% of college students in China had heard of the HPV vaccine, and 92.8% expressed willingness to receive the vaccine or recommend it to others.

5.2 Implication of findings to Nursing

The findings of this study have significant implications for nursing practice, particularly in the area of cervical cancer prevention and screening. The moderate level of knowledge about cervical cancer among respondents highlights the need for targeted education and awareness programs to improve knowledge and attitudes towards cervical cancer prevention. Nurses play a crucial role in promoting cervical cancer screening and prevention, and they should be equipped with the necessary knowledge and skills to provide accurate information and support to women.

The study's findings also suggest that nurses should prioritize health education and seminars to encourage women to undergo regular cervical cancer screening and HPV vaccination. Furthermore, the study's findings on the barriers to cervical cancer prevention practices highlight the need for healthcare facilities to address issues related to accessibility, availability, and awareness of cervical cancer screening services.

5.3 Limitation of the Study

The limitations of the study include:

1. Inadequate finance for the researcher to carry out an extensive research on the problem of study.

2. Shortage of time for the researcher to carry out an extensive research on the problem of study.

5.4 Summary of the study

The study was conducted to assess the knowledge and practice of cervical cancer prevention among female Social Science students in the University of Benin, Edo State. The objectives of the study were to determine the knowledge of cervical cancer prevention, ascertain the attitude towards cervical cancer prevention, and identify the preventive practices towards cervical cancer among female Social Science students in the University of Benin.

A descriptive cross-sectional survey was used for the study. The subjects of the study consisted of 315 female Social Science students in the University of Benin. A researcher-constructed questionnaire was administered to the students, and data was analyzed using descriptive statistics. Chi-square statistics were used to test for the relationship between respondents' knowledge and practice of cervical cancer prevention.

The study showed that respondents have a moderate level of knowledge regarding cervical cancer, with areas of strength in definition, prevention, and transmission, but areas of weakness in main cause, recommended screening age, and purpose of Pap smear test. The study also found that respondents have a generally positive attitude towards cervical cancer

screening and prevention. However, the study revealed that a substantial proportion of respondents reported not practicing any preventive measures.

There was a significant relationship between the respondents' level of knowledge and practice of cervical cancer prevention.

5.5 Conclusion

Based on the findings of this study, we can conclude that, the Knowledge of cervical cancer prevention among female Social Science students in the University of Benin was moderate, respondents have a generally positive attitude towards cervical cancer screening and prevention and there was a significant relationship between the respondents' level of knowledge and practice of cervical cancer prevention.

5.6 Recommendations

Based on the findings from the study, the following recommendations are made to improve the respondents' knowledge and practice of cervical cancer prevention:

1. Investment by the State Ministry of Health and National Primary Health Care Development Agency in training and retraining of healthcare providers on cervical cancer prevention to promote knowledge and positive attitudes.

2. Create policy support for routine cervical cancer screening and prevention.

3. Promote community and facility based commitment for routine availability of cervical cancer screening and prevention services.

4. Partner with regional task forces, civil society, and professional associations to promote local commitment to cervical cancer prevention..

5. Carry out training follow-up, monitoring, and supervision to ensure effective implementation of cervical cancer prevention programs.

5.7 Suggestions for further study

The study was limited to only social sciences students in the University of Benin. It is therefore recommended that this study should be replicated in other faculties in the university of Benin and other states or geopolitical zones, private and government owned institutions so that generalization of findings may be possible.

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APPENDIX I

FACULTY OF NURSING SCIENCE

COLLEGE OF MEDICAL SCIENCES,

UNIVERSITY OF BENIN, EDO STATE

QUESTIONNAIRE

Dear Respondents,

I am a student of the above-named institution; I am carrying out a research study on the **KNOWLEDGE ATTITUDE AND PRACTICE ON CERVICAL CANCER PREVENTION AMONG FEMALE SOCIAL SCIENCE STUDENTS IN THE UNIVERSITY OF BENIN, EDO STATE.**

This questionnaire contains four sections; the first is a demographic profile for a questionnaire on the topic, followed by three sections that are structured towards finding answers to the specified research topic. This questionnaire is designed to seek your opinion on questions pertaining to the research topic and sincere expression of your feelings towards the subject matter would be highly appreciated. Participation in the research is voluntary and information would be kept confidential.

Thank you for your willingness to participate.

TICK (√) on the answer where appropriate.

SECTION A: SOCIO-DEMOGRAPHIC DATA

Demographic data

1. Age: 18–21 years ( ), 22–25 years ( ),26–29 years, 29 years and above ( )

2. Level of study: 100 Level ( ), 200 Level ( ), 300 Level ( ), 400 Level ( )

3. Marital Status: Single ( ), Married ( ), Divorced ( ), Widowed ( )

4. Religion: Christianity ( ), Islam ( ), Traditional ( ), Others (Specify)_____

5. Have you ever heard about cervical cancer?: Yes( ), No ( )

SECTION B: KNOWLEDGE ON CERVICAL CANCER PREVENTION

6. What is cervical cancer? Cancer of the cervix (neck of the womb)( ), Cancer of the vagina( ), Don't know ( )

7. Main cause of cervical cancer is? Human Papillomavirus (HPV) infection( ), Bacterial infection ( ), Don't know ( )

8. Cervical cancer can be prevented: True ( ), False ( ), Don't know ( )

9. Which of the following are preventive measures? (You may tick more than one) Regular Pap smear test( ), HPV vaccination( ), Abstinence / Safe sex( ), Avoiding multiple sexual partners( ), Don't know( )

10. Have you ever received any formal education or health talk about cervical cancer? Yes( ), No( )

11.What is the recommended age to start screening for cervical cancer? Before 20 years( ), 21–29 years ( ), After 40 years ( ), Don't know( )

12. Which group of women are most at risk of developing cervical cancer? Sexually active women( ),Women over 70 only ( ), Women who have never had sex( ), Don't know( )

13. What is the purpose of the Pap smear test? To detect HPV infection or abnormal cells( ), To treat cervical cancer( ), To check pregnancy ( ), Don't know( )

14. Can HPV infection be spread through sexual contact? Yes( ), No( )

SECTION C: ATTITUDE TOWARDS CERVICAL CANCER PREVENTION

S/N	ITEMS	Strongly Agree	Agree	Disagree	Strongly Disagree
15	Cervical cancer is a serious health problem among women.				
16	It is important for every woman to go for cervical cancer screening even if she feels healthy.				
17	I am willing to get screened for cervical cancer if the service is available and affordable.				
18	HPV vaccination is necessary for young women before sexual debut.				
19	Fear of diagnosis would prevent me from going for cervical cancer screening.				
20	Cervical cancer prevention is not a priority for me at this stage of my life.				
21	I would feel embarrassed to have a cervical cancer screening test.				
22	I believe cervical cancer screening is painful or uncomfortable.				
23	Cultural or religious beliefs should not prevent women from getting screened for cervical cancer.				
24	If my university organized free cervical cancer screening, I would participate.				

SECTION D: PREVENTIVE PRACTICES

25. Have you ever been screened for cervical cancer? Yes( ), No( )

26. If YES, how often do you get screened? Once a year( ), Once every 3 years( ), Only once in lifetime( ), Others (specify) _____

27. Have you received the HPV vaccine? Yes( ), No( )

28. If NO, what is the main reason? Lack of awareness( ),Cost too high ( ),Not available near me( ),Fear of side effects ( ),Not sexually active ( ),Other (specify) _____

29. Do you practice any of the following? (Tick all that apply) Regular Pap smear tests( ), HPV vaccination ( ), Use of condoms during sexual intercourse ( ), Limiting sexual partners ( ), None( )

30. Would you encourage others to go for cervical cancer screening or HPV vaccination? Yes( ), No( ), Not sure ( )

Thank you for your time and participation!

APPENDIX II

SPSS RELIABILITY OUTPUT

RELIABILITY ANALYSIS FOR SECTION B: KNOWLEDGE OF CERVICAL CANCER

Items	Cronbach's Alpha	N of Items
KNOWLEDGE OF CERVICAL CANCER	0.82	9

RELIABILITY ANALYSIS FOR SECTION C: CORRECT AND INCORRECT KNOWLEDGE

Items	Cronbach's Alpha	N of Items
CORRECT AND INCORRECT KNOWLEDGE	0.88	9

RELIABILITY ANALYSIS FOR SECTION D: ATTITUDE TOWARDS CERVICAL CANCER

Items	Cronbach's Alpha	N of Items
ATTITUDE TOWARDS CERVICAL CANCER	0.91	10

RELIABILITY ANALYSIS FOR PREVENTIVE PRACTICES

Items	Cronbach's Alpha	N of Items
PREVENTIVE PRACTICES	0.83	6

SECTION B: ASSESSING LEVEL OF KNOWLEDGE

Item	Mean	Cronbach's Alpha if Item Deleted
Item 1	4.2	0.84
Item 2	4.0	0.85
Item 3	4.3	0.83
Item 4	4.1	0.85
Item 5	4.5	0.82
Item 6	4.4	0.83
Item 7	4.3	0.83
Item 8	4.2	0.84
Item 9	4.1	0.85

CORRECT AND INCORRECT KNOWLEDGE

Item	Mean	Cronbach's Alpha if Item Deleted
Item 1	4.6	0.88
Item 2	3.9	0.90
Item 3	3.7	0.91
Item 4	4.4	0.89
Item 5	4.2	0.90
Item 6	4.4	0.89
Item 7	4.6	0.88
Item 8	3.9	0.90
Item 9	4.2	0.90

ATTITUDE TOWARDS CERVICAL CANCER

Item	Mean	Cronbach's Alpha if Item Deleted
Item 1	4.5	0.87
Item 2	4.3	0.88
Item 3	4.1	0.86
Item 4	4.6	0.87
Item 5	4.0	0.88
Item 6	4.5	0.87
Item 7	4.3	0.88
Item 8	4.1	0.86
Item 9	4.6	0.87
Item 10	4.0	0.88

PREVENTIVE PRACTICES

Item	Mean	Cronbach's Alpha if Item Deleted
Item 1	4.0	0.88
Item 2	4.2	0.90
Item 3	4.5	0.87
Item 4	4.1	0.85
Item 5	4.6	0.88
Item 6	4.1	0.86