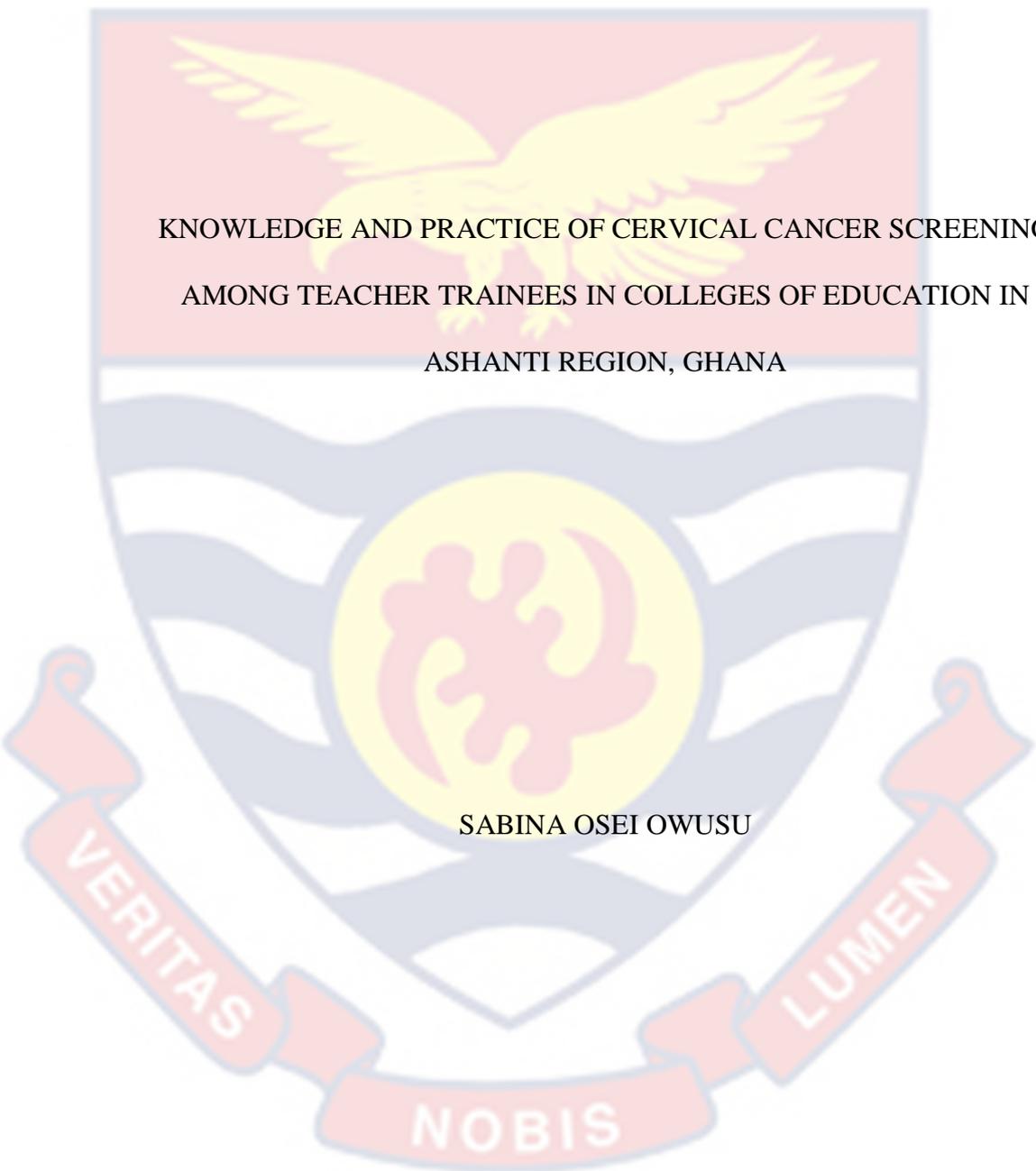UNIVERSITY OF CAPE COAST

KNOWLEDGE AND PRACTICE OF CERVICAL CANCER SCREENING

AMONG TEACHER TRAINEES IN COLLEGES OF EDUCATION IN

ASHANTI REGION, GHANA
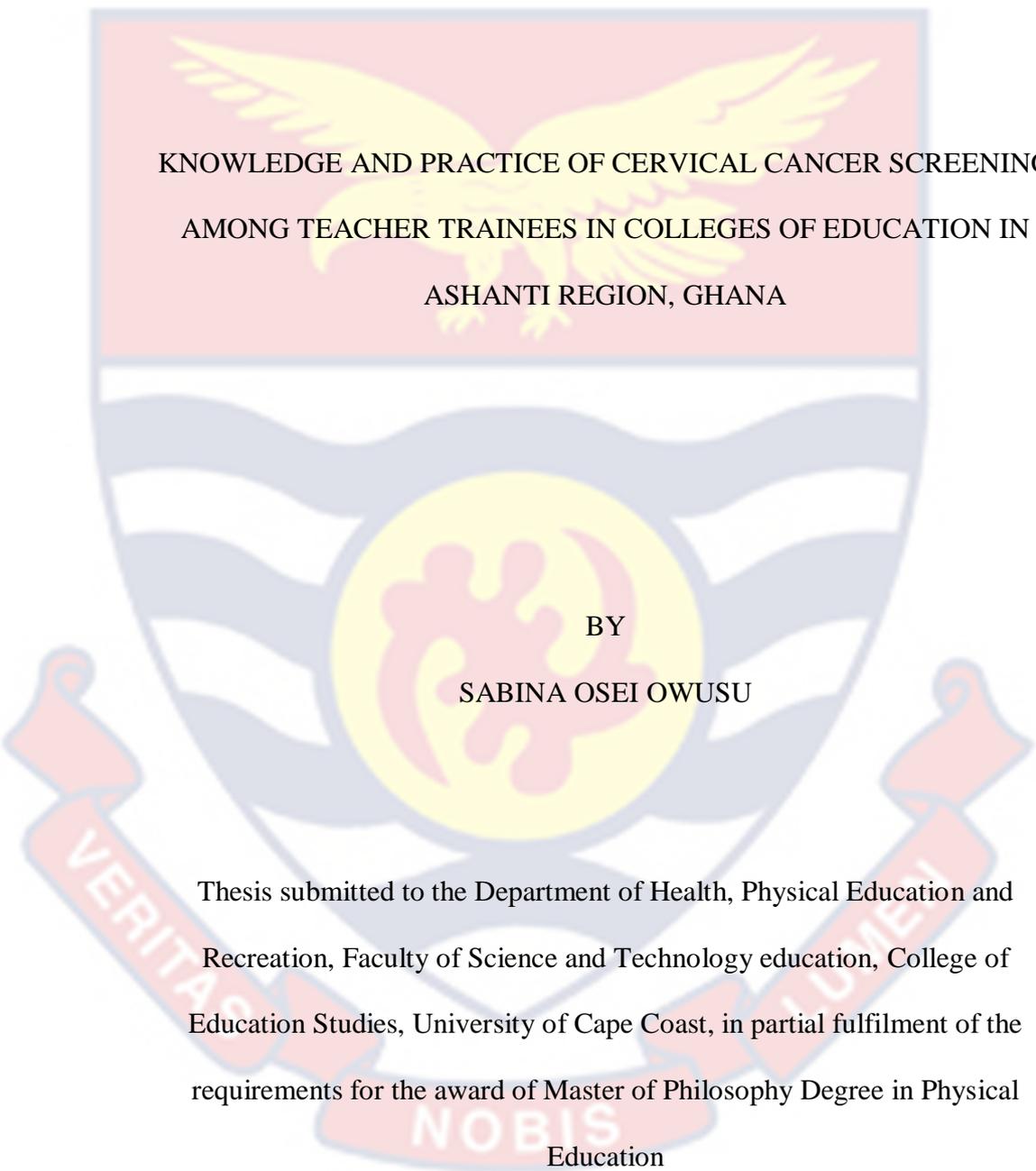
SABINA OSEI OWUSU

2022

© 2022

Sabina Osei Owusu

University of Cape Coast

UNIVERSITY OF CAPE COAST

KNOWLEDGE AND PRACTICE OF CERVICAL CANCER SCREENING

AMONG TEACHER TRAINEES IN COLLEGES OF EDUCATION IN

ASHANTI REGION, GHANA

BY

SABINA OSEI OWUSU

Thesis submitted to the Department of Health, Physical Education and

Recreation, Faculty of Science and Technology education, College of

Education Studies, University of Cape Coast, in partial fulfilment of the

requirements for the award of Master of Philosophy Degree in Physical

Education

APRIL 2022

DECLARATION

Candidate's Declaration

I hereby declare that this is the result of my original research and that no part

of it has been presented for another degree at this university or elsewhere.

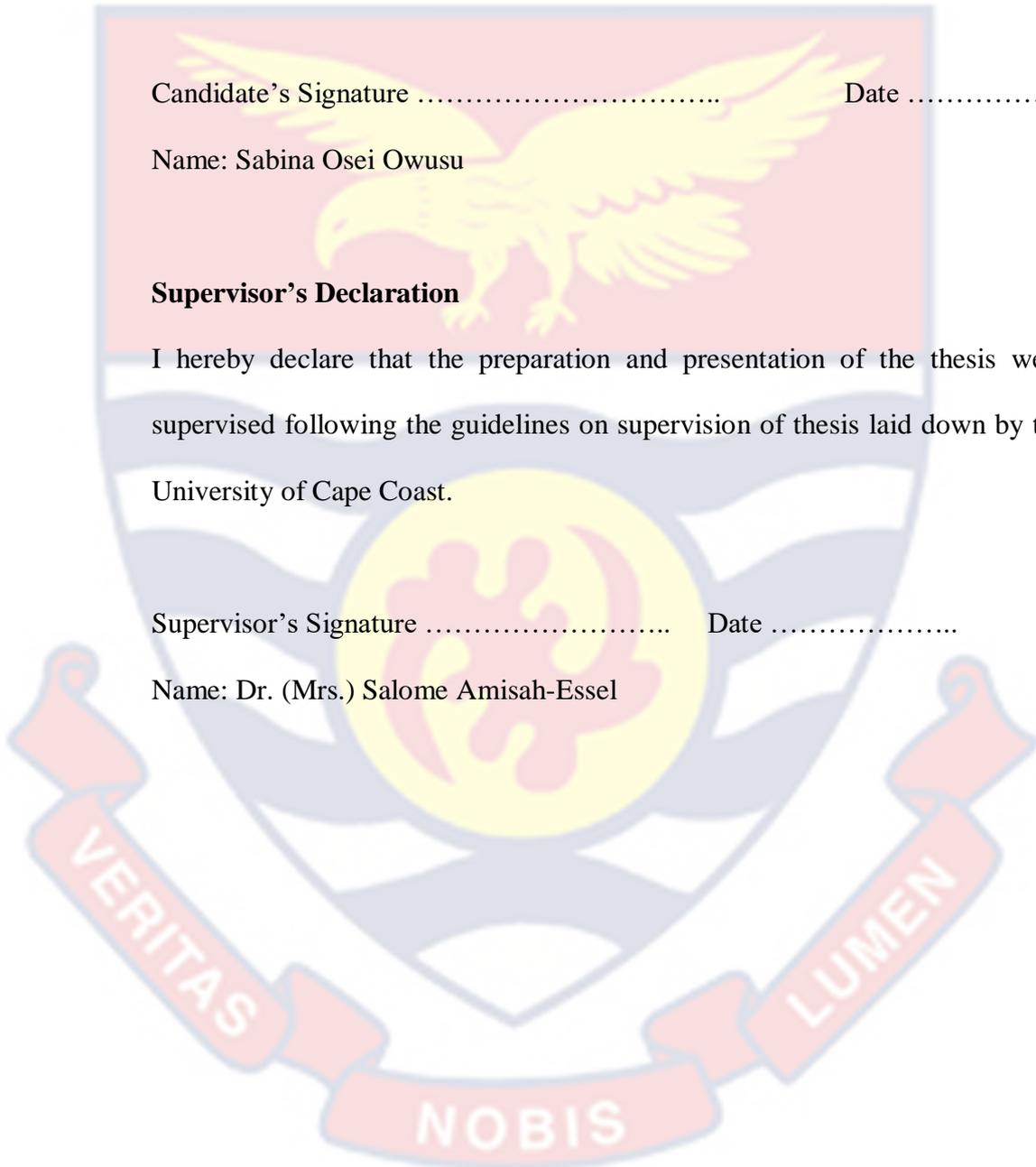Candidate's Signature ………………………..   Date …………….

Name: Sabina Osei Owusu

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were

supervised following the guidelines on supervision of thesis laid down by the

University of Cape Coast.

Supervisor's Signature ……………………..   Date ………………..

Name: Dr. (Mrs.) Salome Amisah-Essel

ABSTRACT

The study's objective was to evaluate the teacher training colleges for education in Ghana's Ashanti Region regarding their knowledge, attitudes, and practices on screening for cervical cancer. A descriptive survey design was used to carry out the survey. A stratified and practical sampling methods were used to choose 582 study participants from a variety of units who completed a series of questionaires. To keep the study on track, five research questions were developed. The researcher designed a questionnaire to be used as a data collection tool. The bulk of survey participants had extensive knowledge of cervical cancer. It was evident that most of the respondents responded negatively when asked whether they had ever had cervical cancer screening. The only item on which respondents were incorrect was their understanding of the availability of cervical cancer vaccinations centers in Ghana. The study discovered that access to screening programmes, fear of positive results, financial cost, and trouble finding a doctor were the biggest barriers to cervical cancer screening. Some other significant barriers were the need for reminders and a male doctor conducting the screening. Since cervical cancer screening was low, it was recommended that the Ministry of Health and authorities of Colleges of Education encourage female teacher trainees to perform cervical cancer screening. The health unit in Colleges of Education should organise intermittent seminars, workshops, and cervical cancer screening outreaches where specific days can be set aside for teacher trainees to go for screening.

ACKNOWLEDGEMENTS

DEDICATION

To my husband, Mr. Venson Addai-Donkor, children, Nana Yaa Serwaa

Addai, Atta Nhyira Nuako Addai and Ataa Nhyira Nuako Addai

v

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

The commonest female genital tract carcinoma globally is cervical cancer. In poorer nations, it is increasingly the most common carcinoma among women. However, cervical cancer is a condition that can be treated, and there has been a chance of curing it when it is discovered at the early stage and appropriate treatment is given (Akinyemiju, 2012).

World Health Organisation (WHO) (2012), stated that, the sickness of "cervical cancer" is a health issue amongst females in the world since the disease has been ranked the second-highest cause of cancer amongst females. However, according to McLay, Foufoulides, and Merrick (2012), cervical cancer can be prohibited using earlier and regularly. As opined by the Centers for Disease Control and Prevention (CDC) (2012), the screening of cervical cancer can be executed using the Papanicolaou (Pap) test," which detects irregular variations of the cervix. If there is early detection of abnormality changes in the cell, treatment may be given before it becomes oncogenic. Many women may be at a high risk of having the disease because they have not taken advantage of the advantages of cervical cancer screening (Nelson, Moser, Gaffey & Waldron, 2009). American Cancer Society (2013) also posited that if ten women are diagnosed, at least one person will be found to have cervical sickness cancer, and every two minutes, a female demise of the sickness worldwide, making it the second commonest diagnosed gynaecological cancer. Because human papillomavirus (HPV) infection is the main cause of the disease (Castellsagué, 2012),

1

inoculation with the human papillomavirus vaccine provides defence against cervical cancer (Lowy & Schiller, 2016). The sickness of cervical cancer occurrence and death are also reduced by screening for precancerous lesions. In affluent countries, cytology-based screening programmes using Pap Smears are successful (Schiffman, Castle, Jeronimo, Rodriguez & Wacholder, 2007); alternate screening procedures that can be most efficient in the settings with low resources are using either VIA or VILI (Saxena, Sauvaget & Sankaranarayanan, 2012). Interestingly, Akyinyemiju and Moore (2016) further showed that the occurrence and burden of the sickness are greater amongst females of low socioeconomic status (SES), likewise amongst rural females. This means a growing trend in sickness among females of low socioeconomic status, and Ghana is part of this (Akyinyemiju, 2016).

Background to the Study

According to CDC (2012), cervical cancer is a sluggish growth cancer in females' cervix. The lower portion of the uterus, known as the cervix, is what joins the vaginal canal to the womb. As soon as cancer cells start to develop, the cells that are not normal gradually attack the entire body causing devastating consequences on health (CDC, 2012). Even though cancer of the cervix is extremely avoidable and curable when detected earlier, numerous females still have the sickness with severe results. To the CDC, the sickness typically occurs in females above age thirty was formerly regarded as a lead cause of demise amongst females in the US. However, cervical cancer and death cases have significantly decreased over the past 40 years as a result of cervical cancer screening, which began in the 1950s. However, cervical cancer and death cases have significantly decreased over the past 40 years as a result of screening,

<p style="text-align:center">2</p>

which began in the 1950s. (National Cancer Institute, 2008).

Although cervical cancer's consequences are decreasing in the US and other industrialized countries, the sickness still causes damage to numerous minorities involving migrants, according to Howell, Gurusinghe, Tabnak, and Sciortino (2009). The guiding principle of the American Cancer Society (2012) has been that females must have screening frequently for cervical cell variations and the existence of HPV, which has been frequently concerned in the sickness. If the abnormal cell change is noticed earlier by screen, quick medical attention may stop irregular cells from developing into aggressive cancerous cells (CDC, 2012). Nevertheless, marginal categories might not have benefited from the accessible screening offers and might agonise a hostile cancer of the cervix, which could cause poor well-being results or demise (Woltman & Newbold, 2007). Whereas some investigators examined the issues which influence the operation of the cervical cancer screening services amongst some minorities, according to Downs, Smith, Scarinci, Flowers, and Groesbeck, 2008; Ross, Nunez-Smith, Forsyth, and Rosenbaum (2008), there is a scarcity of knowledge concerning variables which affected cervical cancer screen position and activities of females from Africa countries that live in the US.

Generally, cancer prevalence and death risk fall in most developed countries due to effective preventive measures such as improved screening and treatment. However, this is an entirely different trend in developing countries, including Ghana; the incidence of cancer and mortality rate is increasing rapidly and projects to even increase faster in the future if effective preventive measures such as early screening and treatment plans, public health education

and awareness are not put in place (Akinyemiju, 2012). Ministry of Health partners with the Ministry of Education to introduce accepted national policies for delivering health services and increasing accessibility for better health services through health education, vaccinations and health screening service in schools and colleges in Ghana. This demonstrates the clear partnership among the departments of the Ministries of Health and Education.

One of the deadliest public health threats to females' lives is cervical cancer (WHO, 2014) which commonly affects women in their adult life or prime (Olubodun, Odukoya & Balogun, 2019). It is considered the 4th commonest cancer globally, leading to about 570,000 new cervical cancer cases and approximately 311 000 deaths in 2018 (Ferlay, Ervik, Lam, Colombet, Mery & Piñeros, 2018). In Ghana, an estimated 8.6 million females over 15 years are at increased danger of having the sickness (Bruni et al., 2015). Additionally, the sickness caused 2119 deaths amongst females in Ghana, and about 3151 women were diagnosed with cancer in 2018 (Bruni et al., 2018).

Despite these increasing numbers, preventing cervical cancer has not been extensively promoted in Ghana compared to diseases like HIV/AIDS, malaria, and breast cancer (Adanu, 2002; Williams & Amoateng, 2012). The most used screening is Papanicolaou (Pap) test available in Ghana's public and private health facilities. Occasionally, non-governmental agencies organise cervical cancer screening in rural and urban communities (Williams & Amoateng, 2012). Additionally, information from WHO/ICO (2017) showed that the vaccine of HPV is accepted in the country "Ghana," and its DNA test is available at a few tertiary community hospitals. (WHO/ICO,

2017). One of the biggest projects on cervical cancer screening uptake in Ghana was published in 2017 (WHO/ICO, 2017) and found an exceptionally low participation rate in both rural (2.2%) and urban (3.2%) areas. According to Saslow and Lawson (2012), screening for cancer must start at 21 years among females. Also, WHO (2014) recommended that women at ages 30 and 49 should at least undergo screening for the sickness of "cervical cancer" to decrease its death.

The sickness is described as a malicious cancerous of the cervix, which starts as insignificant abnormal squamous cellular dysplasia (Dasari, Wudayagiri, & Valluru, 2015). If proper attention is not made, the cell might rapidly advance to serious dysplasia called High-Grade Squamous Intraepithelial Lesion and then into aggressive cancer (Ampofo et al., 2019). The HPV spread by sexuality causes this sickness (Ebu et al., 2019). Infection from HPV can be incubated for about 15-20 years in people with the normal immune systems (Ebu et al., 2019) and 5-10 years in the weakened immune systems (e.g., HIV infected person) before leading to cancer of the cervix (Ferlay et al., 2018). The associated danger factors of the sickness are numerous and include; tobacco smoking, infections with some Sexually Transmitted Infections like chlamydia, HIV, gonorrhoea, women who gave birth at a young age, parity, HPV type affected, frequent use of contraceptive more than one sexual partner, first-time sex at a younger age and poor diet (Fellay et al., 2018; Annan et al., 2019).

The disease is a curable, but previous studies in Ghana had indicated that lack of cervical cancer screening programmes, public education barriers, inadequate level of knowledge and cost of screening were barriers causing

5

cancer among women (Abotchie & Shokur, 2009; Adanu et al., 2010; Binka et al., 2019). Ampofo *et al*. (2019) studied 200 women living in a suburb of Kumasi reported that 69.7% have minimal knowledge concerning the sickness, and 76%, about risk factors associated with the disease. Despite the fact that studies have shown knowledge level and consciousness of cervical cancer screening amongst some females of the Ghanaian population, there is a lack of knowledge among a particular group of women, including teacher trainees, who will impact our children's knowledge. There is also a lack of in-depth but comprehensive information on factors that cause barriers to screening the sickness and treatment in Ghana (Binka et al., 2019). The aim of the study is to analyse screening of cervical cancer knowledge, attitude, and practise among seven teacher trainees from Ashanti Region colleges of education.

Statement of the Problem

Cervical cancer the second main cause of deaths amongst females in Africa and Ghana (Binka, Nyarko, Awusabo-Asare, & Doku, 2019). It was estimated to cause 2119 deaths among women in Ghana, and approximately 3151 newly cervical cancer cases were recorded in 2018 (Bruni et al., 2018). Many cervical cancer diagnosis in the country is done when the disease is advanced where little treatment plan can be offered, and thus, it has emerged as a public health concern and burden to affected families and the healthcare system in the country (Ampofo *et al.*, 2019).

Studies have shown less awareness and knowledge among women in general in Ghana about either cervical cancer screening or risk factors associated with the diseases (Ampofo et al., 2019; Binka et al., 2016; Williams

6

& Amoateng, 2012). Furthermore, other researchers in Ghana had stated that lack of interest in screening results from low awareness lack of interest in cervical cancer screening as a result of low awareness of the disease, lack of cervical cancer screening programs, public education barriers, low knowledge levels and cost were barriers causing cancer among women (Abotchie & Shokur, 2009; Adanu et al., 2010; Binka et al., 2019; Ebu et al., 2015).

There is a dearth of studies on KAP assessment for cervical cancer among key informants such as nurses, teachers, and religious leaders who are the custodians of knowledge sharing in the community. There is high demand for understanding the of knowledge, attitude and practices of cervical cancers among this group of people, and thus the topic assessing the knowledge, attitude and practice towards cervical cancer screening among the seven teacher trainee Colleges of Education in Ashanti Region. Many women in these institutions in Ghana are also prone to cervical cancer. Through health education, immunizations, and health screening services in schools and colleges in Ghana, the Ministry of Health and the Ministry of Education will adopt recognized national policies for health delivery and expand access to better health services. This demonstrates the clear partnership between the Health Ministry and the Education Ministry.

Per the statistics shown and coupled with the WHO predictions on the occurrence of cervical cancer in Ghana by 2025 investigating the population's knowledge, attitudes, and practices around cervical cancer screening in Ghana has become crucial. (particularly; College of Education students in Ashanti region).

Purpose of the Study

This study aimed to assess knowledge and practice toward cervical cancer screening among teacher trainees at Colleges of Education in the Ashanti Region.

Research Questions

1. What is the level of knowledge on cervical cancer among teacher trainees at Colleges of Education in the Ashanti Region?

2. Which practices of cervical cancer screening do female teacher trainees at Colleges of Education in the Ashanti Region engage in?

3. What are the attitudes toward cervical cancer screening among female teacher trainees at Colleges of Education in the Ashanti Region?

4. What are the barriers to cervical cancer screening among female teacher trainee Colleges of Education?

5. What demographic factors are associated with female teacher trainees' knowledge, attitude and practice of cervical cancer screening?

Significance of the Study

The research work will provide light on the obstacles that hinder women from getting screened for cervical cancer (especially among key informants like future teachers) in Ghana, thus providing evidenced-based information, attitude and practices of cervical cancer screening in the key informant population. The study is of relevance in the pursuit of gathering national data on knowledge, attitude and practices of the screening and related barriers, which can be used to develop national public health policy on cervical cancers, as well as effective intervention programs (such as periodic

8

communities screening of the sickness and education) aimed at minimising the cost and burden of the diseases in the Ghanaian population.

Delimitation

As a test case, students from Ashanti Region colleges of education were used. Again, the sample size was derived from entire student population of the seven Ashanti Region Colleges of Education. In terms of content, the study focuses on only the knowledge and practices of participants in screening cervical cancer screening. It is also situated in the contest of barriers that hinder the respondents from undertaking to screen of the sickness.

Limitations

The study did not cover the entire population. A sample selection was adopted, which might influence the entire statistical measurements; however, the sample size was adequate to make a generalised statement. Again, it was stated that there had been limited literature on the knowledge, attitude and practices on screening for cervical cancer in the Ashanti Region; however, similar research conducted in different settings was reviewed.

Organisation of the Study

The study was conducted in five chapters. Chapter one as usual is introduction, background, statement of the problem, purpose of the study, research questions, the significance of the study, delimitations, and limitations. Chapter two examined conceptual, theoretical framework and review of related literature. Chapter three covered research methods making up of the design, population, sampling procedure, instrument for data collection, validity and reliability, data collection procedures and data processing and data analysis. In chapter four, results were presented, and the outcomes were

9

examined. Chapter five is summary of major findings and results as well as

conclusions, recommendations made, and suggestions for future research.

10

CHAPTER TWO

LITERATURE REVIEW

Introduction

The literature review was organised under the following sections, theoretical framework, conceptual review and empirical review. The following headings were reviewed;

1. Social Cognitive Models of Health Behaviour

2. Protection Motivation Theory

3. The Health Belief Model

4. The Theory of Planned Behaviour

5. Katie Eriksson's Theory of Caritative Caring.

6. Limitations of the models of health behaviour

7. Conceptual Base of the Study

8. Cervical Cancer in Africa

9. Cervical Cancer Statistics – Ghana

10. Signs and Symptoms of Cervical Cancer

11. Factors contributing to cervical cancer

12. Screening methods for cervical cancer

13. Knowledge of screening and risk factors associated with cervical cancer

14. Awareness of cervical cancer

15. Attitude and practice toward cervical cancer screening

16. Barriers to effective Diagnosis, management and screening of cervical cancer

17. Demographic variable and knowledge, Attitude and Practice of
cervical cancer screening

Theoretical Framework

This section tries to summarise what authors and theorists have written regarding practices that can lead to cervical cancer and how such people should be treated.

Social Cognitive Models of Health Behaviour

Concerning the behaviour of health, like attendance of cancer screening, exercising the body, stopping smoke or vaccine receiving, it is anticipated that individuals would have engaged in a behaviour whereby the benefit outweighs the cost; nevertheless, it has been shown clearly that this has not been the case at all times. Several theoretical models on health behaviour were developed and verified to describe why people are involved or not involved in conducts that influence their health despite clearly spelt out benefits they will have. The Social-Cognitive Models like *Protection Motivation Theory* (Rogers, 1975), the *Health Belief Model* (Rosenstock, 1974) and the *Theory of Planned Behaviour* (Ajzen, 1991) projected factors which might clarify reasons people are not able to involve in actions which are health benefits. The goal of the theories is to increase the comprehension of the behaviour related to health and recognise factors that could be worked on to advance the engagement of those actions. However, there have been significant variations in how the models predict screening behaviours effectively.

Diverse models of health behaviours recommend that various factors would impact behaviours, even though their general structure is the same. Which is psychological factors like *self-efficacy, perceived risk* and *attitudes*

are being thought to impact a person's intent to engage in certain behaviours. Through higher intents comes an increased probability of the behaviours that are executed. The models recognise that a wider variety of influences like cultural, structural and personality factors affect behaviours. Nevertheless, the model thought that the influences are mainly intermediated by the intra-personal factors which have been delineated within the model and much more practicable to adapt the person-level factor to modify behaviours (Sutton, 2001). The 3 Social-cognitive Models of health behaviours most usually applicable to cervical cancer screening have been delineated below.

Protection Motivation Theory

Rogers (1975) propounded *Protection Motivation Theory* (PMT) to explain the influence of fear appeals on a person's attitude and his/her behaviours. This model explains 2 cognitive procedures that are threat and coping appraisal. The increased *threat appraisal* (i.e., an assessment that risk overshadows the benefit of not executing a health demeanour); and increased *coping appraisal* (i.e., an assessment that efficiency of health conduct overshadows the cost of executing the conduct) was assumed to lead to high intention to engage in an action. The meta-analyses supports PMT's usefulness in predicting intention and behaviour, requesting that self-efficacy, most powerful predictor of the concept (Floyd, Prentice-Dunn, & Rogers, 2000; Milne, Sheeran, & Orbell, 2000). The two meta-analyses looked at researches that utilized cancer prevention, diet, exercise, quitting smoking, and preventing AIDS as output indicators. According to Orbell and Sheeran (1998), only one published research exploited PMT for predicting intention to undertake cervical screening in 166 Scottish females. A

13

year later, the model was revealed to predict intent, not the real screening behaviours.

The Health Belief Model

In the words of Rosenstock (1974), the *Health Belief Model* (HBM) was propounded in around 1950s describes underprivileged interest in preventive health services. The model outlined 4 cognitive processes that suggest that a person is more likely to be involved in healthy behaviours if she perceives that sickness is severe and that she is vulnerable to that sickness, and if advantages exist but fewer blockades to executing the behaviours (Rosenstock, 1974). Moreover, this Model proposes that certain cues to actions could help hasty behaviours; however, this factor has been under-studied and is not frequently involved in empirical studies (Carpenter, 2010). According to Rosenstock (1990), self-efficacy is likewise involved in the model in other research.

The model's compositions have been outlined in Figure 2.1. According to a meta-analysis of eighteen pieces of research, The strongest indicators of behavior are the perceived rewards and obstacles to healthy behavior, which examined how strongly the Health Belief Model variable predicts different health conducts As a result, only two of the research focused solely on cancer screening, while the other sixteen studies included use of drugs, care for the teeth, quiting smoking, use of condom, accepting influenza vaccination, participation in health programs, and exercise. Meta-analyses of the HBM's variables showed that the model's variables have a weak relationship to health behavior, despite the fact that these studies included a wide range of health behaviors like use of drugs, care

14

for the teeth, quiting smoking, use of condom, influenza vaccine uptake, attendance at health programs, and exercise. (Carpenter, 2010). (Carpenter, 2010; Harrison, Mullen, & Green, 1992), though the studies did not explicitly include cervical screening. A few researchers utilised the Health Belief Model to assess cancer screen behaviours by different extents of accomplishment. One hundred and forty-four English females were studied, in the study, the model predicted only four percent of the variances in intentions to undertake screen of cervical cancer, and this fails the prediction of the real commitment of screen exercise 3-month afterwards (Bish, Sutton, & Golombok, 2000). However, two Australian investigations found that the Health Belief Model projected 30% of the variance in screening intentions (Hill, Gardner, & Rassaby, 1985) and 27% (Hennig & Knowles, 1990). A more unexpected conclusion is that Health Belief Model predicts little much differences in conduct (15%) than intent to screening (11%) in a sample of 400 American college students, by the writers who concluded that participants' young ages might be a reason for the outcomes (Burak & Meyer, 1997). Murray and McMillian (1993) found that knowledge of hurdles and breast cancer awareness, but not cervical cancer awareness, the only substantial determinants of screen interest in a sample of 400 women in Northern Ireland, albeit the model's predictive value was not described.

The difference in the degree to which the Health Belief Model describes cervical cancer screening intention and behaviours might be there due to variations in the Health Belief Model variable employed in the studies. For instance, Bish and colleagues (2000) verified 4 central compositions of the Health Belief Model, while Hills and associates' (1985) model also involved

15

measuring healthiness motivations. Furthermore, disparities by what means variables are in operation might influence the outcomes. Bish and colleagues (2000) requested from the females to assess the intentions to screening in 3-months afterwards, while some researchers utilised extended periods. Therefore, additional research is required to explain the usefulness of the Health Belief Model in predicting cervical cancer screening intention and behaviour.
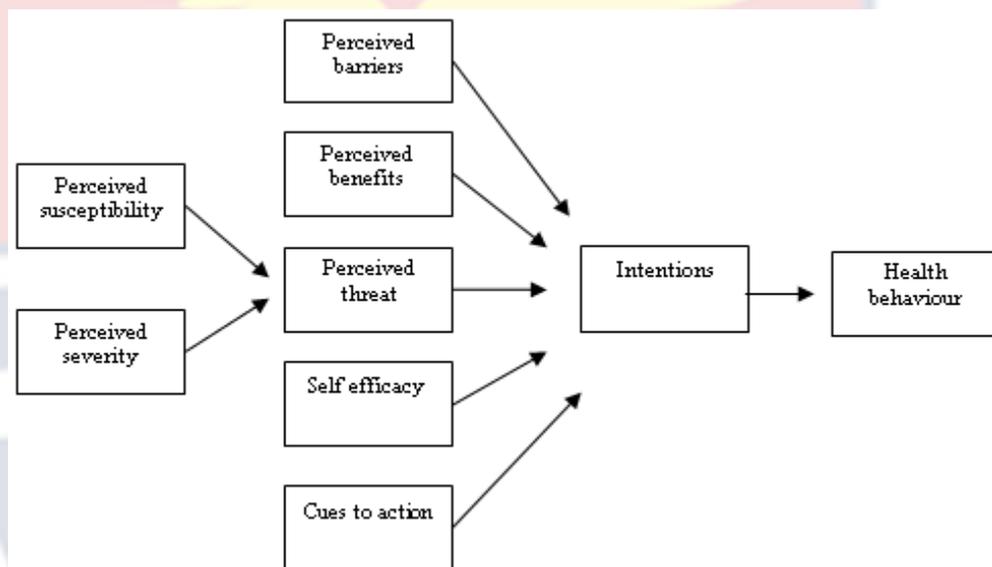
Figure 1: The Health Belief Model

The Theory of Planned Behaviour

Theory of Planned Behaviour (TPB) is based on Theory of Reasoned Action (TRA), which looks at how subjective issues which influences intents and behaviours (Ajzen & Fishbein, 1980). Subjective norm refers to whether a person trusts that people accept his/her behaviours, whereas attitudes are views concerning an anticipated result of acting. The TRA was later called the Theory of Planned Behaviour after it was broadened to incorporate perceived behavioural control (i.e., how simple an individual perceives a behaviour is to accomplish) (Ajzen, 1991). Perceived behavioural control is projected to impact intention likewise behaviours directly. In line with the theory, the intent is the nearest

16

determining factor of behaviours, even though that declaration has minute empirical backing, as shown below. This model is delineated in Figure 2.2. Classically, the predictor in this theory could describe a substantial volume of the variances in healthiness behaviours and intents.

In a previous meta-analysis of health connected conduct, the TPB factors accounted for 41% of the variances in intention and 34% of the variances in conduct (Godin & Kok, 1996). According to Armitage and Conner (2001), a meta-analysis of 185 researchers discovered similar results per the variables, accounting for 39% and 27% of the variances in intents and actions.

Nevertheless, the research has not reported healthy-behaviour results utilised by the study examined. Analogous to a study on PMT, the meta-analysis acknowledged that perception of control of behaviour had been a significant (Armitage & Conner, 2001). Compared to some models, the TPB received more empirical investigations related to cancer screening behaviour, albeit this model might less accurately project screen actions than some conducts like diet or exercise (McEachan, Conner, Taylor, & Lawton, 2011). It must be noted; however, that meta-analysis mentioned are connected to various forms of health conduct. According to Godin and Kok's review (1996), the strength of model variables varies depending on the form of health actions being examined, so to compare outcomes across research might be invalid.

Despite this, a meta-analysis of eight studies that used the TRA or TPB discovered a moderate relationship between subjective norm or attitude and screening intent (r=.43 for both), which was slightly lower than the

17

relationship between perception of behaviour control and intents (r=.58) but slightly higher than the relationship between intention and behaviours (r=.21) (Cooke & French, 2008). Other researchers compared the efficacy of the theories TRA or TPB with that of different models, permitting straight assessment of the model's accuracy in predicting cervical cancer screening. For example, Hill and colleagues (1985) contrasted HBM and TRA, estimating 32 percent and 26 percent intention to screen; however, this could be due to HBM's larger number of predictors. Despite the fact that neither model predicted screening uptake three months later, another study indicated that the TPB predicted 51% of the variance in screening intentions, opposed to 4% for the HBM (Bish et al., 2000). The HBM's inability to represent behaviour, according to Bish and colleagues (2000), may be attributable to a lack of relationship between model component measures and the measure of intention to screen. It specifically inquire from females to make consideration on their behaviours during the following three months, whereas the other measures to find out from them to ponder on opinions without respect to constraints of time.

Lately, TPB is being extended to comprise extra variables to be the *Integrated Behavioural Model* (IBM). The theory IBM involves variables of TPB, likewise the 4 predictors which may impact behaviours directly other than through intention: knowledge, the importance of behaviour, environmental and habit constraints (Montano & Kasprzyk, 2008).
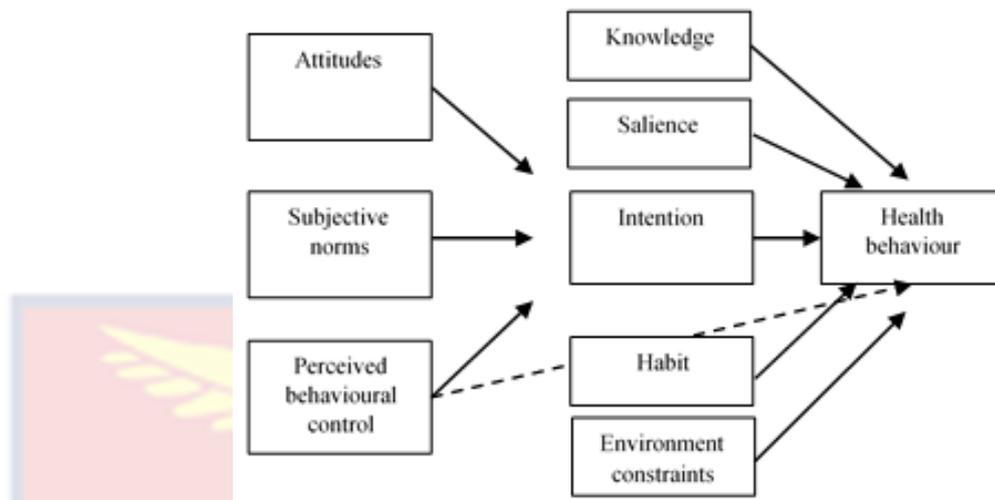
Figure 2: The Theory of Planned Behaviour with Integrated Behavioural Model variables.

Limitations of the models of health behaviour

The 3 Social-cognitive Models can predict a higher proportion of variance in intents to screening than the real commitment of behaviours in the literature discussed above, and if potential designs were employed, the model frequently failed to forecast later screen behaviours. As opined by Sheeran (2002), Sheeran and Orbell (2000), and Webb and Sheeran (2006), whereas intents are somewhat linked to health conduct, the models were not able to explain the reasons people that has strong intentions for screening might refuse to do so. Orbell and Sheeran (1998) discovered that whereas the PMT variable could differentiate among females who had and those who had no intention for screening, it failed to forecast whether females who had a strong intention for screening could have done so. This intended-behavioural gap demonstrates that behaviour of healthiness is affected by a variety of factors other than intentions (Sheeran, 2002). Practical concerns may include whether the females are having adequate periods for attending screening services or could have funds to attend screening services.

19

Katie Eriksson's Theory of Caritative Caring

In Alligood and Tomey's (2010) study, Erikson asserted that man constitutes an entity of body, soul and spirit and is capable of experiencing phenomena. Hence, depicting a man in relation to only the current need is insufficient. The attention given should create this important phenomenon. Caritas' theory suggests love and charity, and through creation, Caritas is an unqualified love. However, this creates awareness that the attention given must have a purpose to mediate faith, hope, love, tending, playing and learning. These important fundamentals drive inspiration for caring and thus creating somewhat invaluable exceptional. Eriksson furthermore declared that the Caritas motives are what drive us to care.

As was cited in Alligood and Tomey's (2010) research, Erikson stated that as caritative motive has been characterised by love and charity, a man by creation is love. Thus, it is through this that caring got its central fundamentals. Displaying this phenomenon is humanitarian by creation and institutes the sense of that adoptive caring. However, Caritas similarly involves love for neighbours and self, for every created thing, love for God, and God's love for mankind. The man, as described, is a spiritual being who is dignified, and it suggests the elements of loving and caring for another.

The Latin expression of the word Caritas is selfless love which is stated in actions. To care is a relationship between nurses and patients, and caring as specified occurs in diverse groups. Factual relationships and the consciousness of the exclusive person are core and significant in caritative care, and it likewise indicates the creation of opportunity for others. According to Alligood and Tomey (2010), genuine care is not about feelings, behaviours

20

or a state of being but a means of living that makes being present alone insufficient.

The caritative philosophy of caring propounded by Eriksson is grounded on 9 principles. Amongst the principles, man is defined as being sanctified and as such human dignity indicates acceptance of the human responsibility to serve with love prevailing for the sake of other people. Holistically, nursing care, holiness, and dignity are supreme in man. All-inclusive health attempts to assist individuals to reach and sustain a state of well-being by which self-healing abilities of body, mind and soul can continue unrestricted (Leathard & Cook 2009). According to the principles of Eriksson, to care is somewhat human by nature and a call to serve in love. However, to care is to lessen anguish in charity, love, faith, hope, and permit healthiness and well-being.

Arman and Rehnsfeldt (2007) declared that anguish as a fundamental area of caring is a clue that represents patients' entire experiences of life, health, and illness in a physical, mental, and spiritual manner. In a way, the race of sorrow happens in human beings' onto-logical dimension. While anguish violates human dignity and might have brought forth loss and dying, it has likewise created the likelihood of novel life and reunion. Caritas as a virtue, anticipation, belief and the Good Samaritan's biblical story has brought light to the phenomenon. This narrative of the Good Samaritan shows the inner meanings of Caritas in an applied way that involves selfless charity and empathy for individuals.

Conceptual Base of the Study

This section examines the following conceptual issues. A review of what authors and thinkers have stated about cervical cancer as a concept is attempted. A diagram depicting the relationship between the study variable and the other variables is also provided.

Limitations of the Models of Health Behaviour

The sickness of cervical cancer is a worldwide health issue as the 4th utmost recurrent cancer in females and the 4th leading cause of mortality amongst women globally (Jemal et al., 2011). Cervical cancer affects 2.3 Million females aged fifteen and over, according to the World Health Organization/International Cancer Organization (WHO &ICO, 2010). From Ferlay, Shin, Forman, Mathers, and Parkin (2010), there were 529,000 and 274,000 new cervical cancer concerns and fatalities globally in 2008. In affluent countries like the United States, enhanced screen procedures and earlier treatments of aberrant cytologic alterations have considerably reduced incidence of cervical cancer and mortality. However, the prevalence remains tall among females in developing nations; somewhere, about eighty percent of cancer has been detected (WHO/ICO). The WHO/ICO estimates that 453,321 novel cases are diagnosed each year, with 241,969 deaths.

Whereas cervical cancer was formerly noted as a lead cause of mortality amongst females in the United States, efforts are being made to minimise the sickness owing to improvements in the screening practice via the Pap test. According to Siegel, Ward, Brawley and Jemal (2011), the mortality rate resulting from cervical cancer declined from 3.49 per 100,000 in 1991 to 2.42 per 100,000 in 2007. Nevertheless, the differences in the burden of the sickness

22

continue to occur owing to the following race, ethnicity, and socioeconomic status. According to United States Cancer Statistics Working Group (2013), in 2007, the occurrence of the sickness amongst black people was rated10.2 per 100,000, 11.5 per 100,000 amongst Hispanics, and 7.5 per 100,000 amongst White people. It has been projected that 12,710 novel issues of cervical sickness cancer in the US in 2011, and 4,290 mortalities were recorded during the same year (Siegel et al., 2011). According to WHO/ICO (2010), there will be a 16.8 percent increase in novel cervical cancer issues and a 24.97 percent increase in deaths in the Americas by 2025. As a result, the number of new instances of sickness and mortality is predicted to rise from 12,491 to 14,590 each year and from 4,431 to 5,515, respectively.

According to Amankwah, Ngwakongnwi and Quan (2009); Jensen et al. (2012), cervical cancer might disproportionately influence minority females. The screening patterns of cervical cancer amongst minority females in the United States were studied likewise, factors that influenced these behaviours (Coker, DeSimone, Eggleston, White, & Williams, 2009; Han et al., 2011; Jensen et al., 2012; McDonald & Neily, 2011; Tabnak, Muller, Wang, Zhang, & Howell, 2010). Nevertheless, only limited research considered the practices, particularly amongst African immigrant females, according to Bigby, Ko, Johnson, David, and Ferrer (2003). Cervical sickness cancer is a progressive-growth cancerous which starts in a female's cervix and affects mostly females above 30 years (CDC, 2012). The end of the uterus is the cervix, which is the the attachment of the vagina to womb. When old and destroyed cells have not died as they should, irregular growths may occur when normal cells in the cervix develop (CDC, 2012). The

23

destroyed cells might have expanded into a benign or cancerous mass of tissue growth. To the National Institute of Health (2008), whereas benign growth cannot pose a health danger and cannot contaminate nearby tissues, malignant growth can develop into cancer. As malignant cell starts to develop, they can gradually penetrate the entire parts of the body, destroying a person's health. Despite the truth that the sickness of cervical cancer could be prevented and treatable when an individual detects it earlier, many females nonetheless suffer the sickness, which has serious consequences.

Sufferers of this sickness (cervical cancer) might not have experienced any signs in the initial periods. However, numerous signs and symptoms can be obvious once cancerous cells have metastasised in bodies. The symptoms involve an abnormality in vaginal bleeding like bleeding within the regular menstrual period, bleeding after having sex, heavy and long periods of menstruation or after menopause bleeding (National Institute of Health, 2008). The National Institute of Health (2008), stated that, other symptoms might be smelly vaginal discharges, pelvic aches and pains when having sex.

Cervical Cancer in Africa

The sickness called cervical cancer remains the main issue in Africa. In the words of Anorlu (2008) and Becker- Dreps et al. (2010), the rate of cancer could be as higher as 15 times in Africa as those in industrial countries. It has been stated by Denny-Smith, Bairan and Page (2006) that from 1993-1995, the age-standardised occurrences of the cervical sickness cancer in females were 22/100,000; however, it is 27/100,000 for African females, and the generation danger of developing the sickness is one in thirty-four for African females whereas it is one in ninety-three for White females. In 2008, the occurrence

24

and death in relation to cervix cancer in Africa ranged from 26.8 to 34.5 and 14.8 to 25.3, correspondingly (Jemal et al., 2011). Occurrence and death amongst industrialised nations range from 4.5 to 6.9 and 2.1 to 2.5 (Jemal et al., 2011). Table 1 shows breakdowns of the occurrence of cervical cancer in Africa, comparing it worldwide, likewise industrialised nations and developing nations.

The high occurrence is ascribed to numerous influences involving socioeconomic, biological, awareness and knowledge, and lack of access to screening (Anorlu, 2008). The difficulties emphasised via Anorlu happen in numerous districts and nations in Africa. Investigators discovered that African females living in Nigeria declined to adhere to the suggested screen procedures of various motives. It was revealed by Aniebue and Aniebue (2010) that only 58.5% of women undergraduates at the University of Nigeria are conscious of screen procedures. According to alternative research conducted by Ogunbowale and Lawoyin (2008), 95 percent of 278 females who participated in the study had never heard of the screening, only 52.8 percent expressed readiness to be screened, and 12.6 percent of participants would refuse screening even if it was free.

Barriers to cancer screening among African women include a lack of knowledge of screening techniques and information on where to conduct screening, as well as preconceptions regarding a cancer diagnosis, claim Becker-Dreps et al. (2010) and Nnodu et al. (2010). Abotchie and Shokar (2009) carried out cross-sectional research involving one hundred and forty college females in Ghana, and it was revealed that the Pap screening rate amongst partakers was 12%. In Kenya, 100% of the 147 females enrol in a

25

study confessed that they were aware of the accessibility of screening services for the cervical sickness cancer; however, only 1% had ever undergone screening service on the sickness, and 2% knew about the accessibility of screening amenities in treatment centres (Becker-Dreps et al., 2010).

Becker-Dreps et al. (2010)'s results have been agreed by Anorlu (2008), who indicated in a study; that less than one percent of females in 4 nations in West Africa have ever had a screening on the sickness. The notion that screening would rob a woman of her virginity, the trust about the painfulness of the test and the absence of trust that screenings may detect cervical sickness cancer were all discovered to be blockades of screening services (Abotchie & Shokar, 2009). Lack of equipment in the African region is another known hindrance to the successful treatment of aberrant cancerous development. Bradley et al. (2006) researched 5 nations in Africa and stated that forty-six percent of provincial hospitals had the fundamental apparatus required to execute the operation on cervical cancer. When the equipment is accessible, there are still difficulties with its operation.

Denny-Smith, Bairan and Page (2006) found that, despite having the world's utmost advanced screening apparatus in some countries, village females in South Africa might not have gotten the opportunity for screenings due to the nation's inequitable health services. Assumed the documented restrictions and challenges to cervical cancer screening experienced by African females, females who immigrated to the US from the African countries might have faced comparable problems. These females might not be reaping the advantages of screening's significant reductions in incidence and mortality. Sanz-Barbero et al. (2011) found that female migrants, particularly those from

26

African countries, are less likely than their Spanish counterparts to get cervical cancer screening.

Table 1: Incidnece of Cervical Cancer Globaly, Developed and Developing Regions, and Africa

Region/Country	Crude Rate	No of Cases	Ranking of all women	Ranking women 15-44 years
World	15.8	529828	3rd	2nd
Developed Regions	12.1	76507	10th	3rd
Developing Regions	16.7	453321	2nd	2nd
Africa	16.2	80419	2nd	2nd

Data from WHO/ICO (2010)

Cervical Cancer Statistics - Ghana

The most dangerous and debilitating diseases that can strike a woman's life is Cervical cancer (WHO, 2014). It most usually strikes women in their forties or fifties (Olubodun, Odukoya, & Balogun, 2019). The sickness is considered the 4th commonest cancer amongst females globally and the eighth (8th) commonest occurring among all types of cancers (World Research Cancer Fund, 2018).

In Ghana, an estimated 8.6 million females above 15 years have an increased danger of having cervical cancer (Bruni et al., 2015). Additionally, cervical cancer also account for 2,119 mortality amongst females in Ghana, with 3,151 persons diagnosed with the disease in 2018 (Bruni et al., 2018). The projected age-standardised occurrence of cervical cancer amongst females in Ghana is between 30 to less than 35 per 100 000 in 2018 (Arbyn et al., 2020).
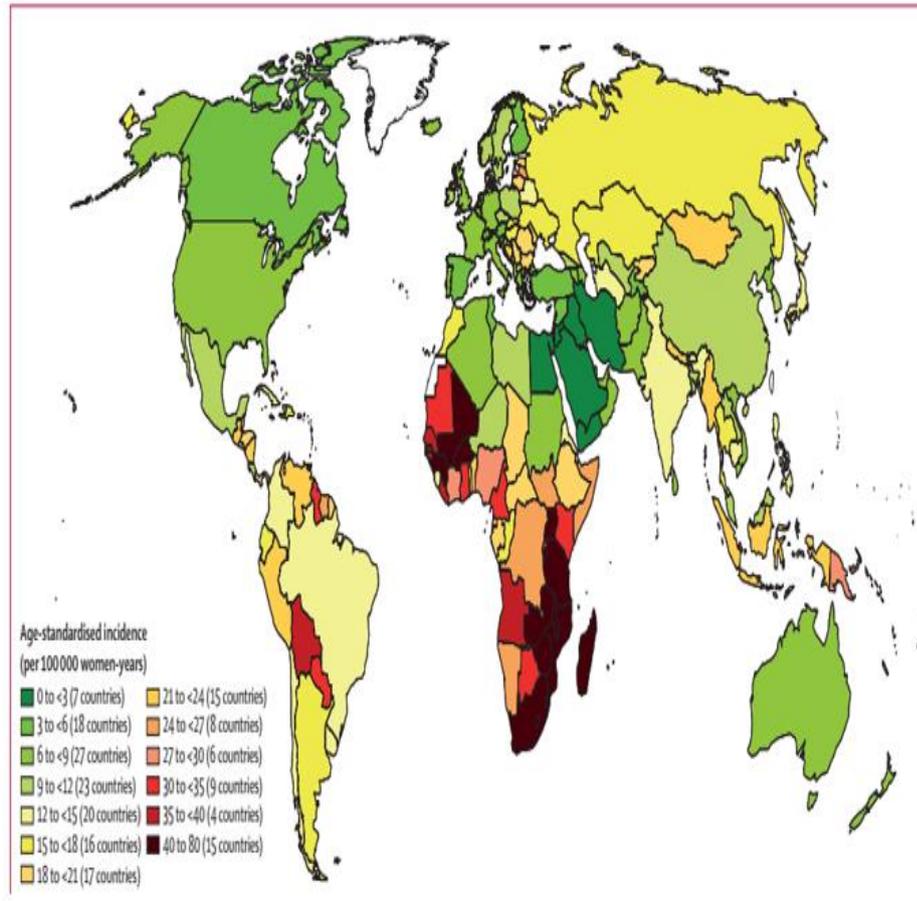
Figure 3: Worldwide distributions of age-standardized occurance of cervical cancer by country in 2018

Signs and Symptoms of Cervical Cancer

Changes in premalignant shows no sign and are regularly invisible on visual examinations. The earlier phases of cervical cancer might be entirely asymptomatic (Kumar et al., 2007). Nevertheless, it becomes abnormal bleeding when the cancer is big and clear to notice visually. Frequently, abnormal bleeding happens afterwards after having sex. Later on, a watery or foul discharge may appear, which is evident and resistant to most vaginal infection treatments (Kumar et al., 2007). Renal failure, unconsciousness, and death can occur if it spreads to the ureters. If cancer spreads to the pelvic wall, it suffocates nerves which run down the leg, causing excruciating leg pain. These are cancer warning symptoms (Zayyan, 2011). Cervical cancer usually

28

does not spread quickly. They have a slow growth rate, and the majority of their problems stem from the pelvis. Metastases may form in the abdomen, lungs, or other body areas in advanced cancer (WHO, 2010).

Late-stage cervical cancer can cause symptoms such as lack of appetite, weight loss, exhaustion, pelvic discomfort, back pain, leg pain, and swollen legs. Vaginal bleeding, urine or faeces leaking, and bone fractures are among indications of late presentation (Royal Thai College of Obstetricians and Gynecologists (RTCOG), 2003).

Factors Contributing to Cervical Cancer

According to Denny-Smith, Bairan and Page (2006), the Human Papillomavirus is the causal agent of the sickness. HPV is the commonest transmitted sexual infection and might be spread via vaginal or anal sex. HPV, which has over 40 varieties, can contaminate the genitalia and cause various illnesses. At least half of the sexual, energetic people would contract HPV at some point in their lives, according to CDC (2011b). The virus causes no symptoms, and it is normally left without causing infections. Nevertheless, the viruses can induce aberrant cell alterations that lead to the sickness (CDC, 2011b).

According to the National Cancer Institute (2008) and Munoz, Castellsagne, Gonzalez, and Gissman (2006), a number of factors, such as smoking, giving birth to more than three to four, weak immune system, use of birth control pills for a long period, being exposed to diethylstilbestrol during pregnancy, engaging in high-risk sexual behaviors, and HIV infection, can cause cervical cancer. Furthermore, intimate spouse abuse that can force a female to engage in activities of sexuality contrary to her will raises the danger of the

sickness (Coker, Hopenhayn, DeSimone, Bush, & Crofford, 2009). The researchers discovered that cruelty against females had been strongly related to an increment in the pervasiveness of aggressive sickness (adjusted OR = 2.6, 95 percent CI = 1.7-3.9) in a study of 4732 participants.

Preventing HPV epidemic and cervical cancer has been a huge success. New cases have decreased by around 50% in wealthy nations like the US over the last three decades (National Cancer Institute [NCI], 2011). Several strategies are beneficial to preventing HPV infection. The self-denial of sex, using contraceptive materials such as condoms when having sex, and immunisation to prevent HPV 16 and HPV 18, the viruses straining most frequently linked to sickness, are among these strategies. Regular gynecologic and cytological examinations are recommended to prevent the sickness. The cervical cancer screening must start 3-years afterwards having the first sex, and continue till 21 years. The American Cancer Society (ACS) published a report in 2012. The following are some cancer screening recommendations:

i. Women above age 30 who have had three normal Pap tests should be screened every two to three years. Such women should get an HPV DNA test in addition to cervical cytology;

ii. Women over 70 who have had three or more normal Pap tests with no abnormal results in the previous ten years may no longer require screening for cervical cancer;

iii. Women who have had a total hysterectomy, which involves the removal of the uterus and cervix, may discontinue getting screened for the disease unless the operation was done in conjunction with treatment for cervical cancer or precancer.

30

iv.   Pap tests should be done routinely for thode who have done a hysterectomy but not a cervix removal (American Cancer Society, 2011; Smith, Cokkinides, & Brawley, 2008; The U.S. Preventive Task Force, 2011).

Risk Factors of Cervical Cancer

Cervix cancer risk factors include early onset of sexual activity, multiple sexual partners, giving birth at early age, multiparty, smoking, prolonged use of oral contraceptives, and immunosuppressed diseases (Oboma & Onyije, 2012; Owoeye & Ibrahim, 2013; Ugochi, 2015). Multiple sexual partners and young age at first encounter are recognized risk factors. A male consort who has had many women's intercourse poses a major risk. Cervical carcinoma is more likely in women who smoke (Arevian, Noureddine & Kabakian, 2007). It is also frequent in immunocompromised women, particularly those who have had a kidney transplant; this could be due to the human papillomavirus (HPV). According to a case-control study, HPV infection considerably increases the relative risk (Fylan, 2008).

According to Rota, Bosetti, Boccia, Boffetta and La Vecchia (2014), Roura et al. (2014), and Silva et al. (2014), numerous epidemiologic researches indicated the significance of several heritable influences in the occurrence of the sickness. In Bosche and Muñoz (2002) and Redding, Brooks, Georgakakos, Habing, Rosenkrantz, Dahlstrom and Plummer (2020), among the influences was contamination of sick persons per one of the HPV oncogenic forms; this influence has been considered the utmost significant etiologic influence on the introduction of the virus. Undeniably, HPV has been the commonest Sexually Transmitted Infection globally (Crosbie *et al*., 2013),

31

and Gold (2016) revealed that 23 percent of the female participant were engaged in a sexual affair with their partners who had two and above sex partners in life, whereas two of the women were having more than four sexual partners, and these women reported of not having thought of becoming a victim of having the sickness.

Screening Methods of Cervical Cancer

Cervical cancers could be averted (up to 90% in theory) when females are accessible and followed by a quality cytologic screen programme (Branoff et al., 2007). Pap smear screening has a 99 percent specificity and is superior for aggressive abnormalities. The testing is less specific for low-grade CIN, which leads to over-diagnosis of the lesion. This is partly owing to the test's incapability to differentiate low-grade CIN from HPV infections (Stevens et al., 2007). The sensitiveness of Pap smear screening is estimated to be between 40% and 70%. The undesirable false rate is commonly estimated to be between 15 and 25 percent. The undesirable false rate has no impact on screening efforts because of the extended period associated with the precursor lesion (CIN), just as smears are conducted regularly enough (Soloman & Gottlieb, 2009).

According to Foster and Anderson (2008), the sensitiveness of the test impacts the frequency of screenings. Based on some conventions concerning the fundamental occurrence of cancer, screening females each 5-years between the ages of 20 and 64 confers 84 percent safety against aggressive cancer in Western countries. An increase in the gap between screenings to three years boosts safety to 91 percent, and a yearly screening boosts it to 93 percent (Khanna & Phillips, 2011). The remaining 7% are lost due to a test's lack of

33

sensitiveness or fast-growing tumours and will pass through the pre-invasive stage in less than a year. For females who are energetic sexually and have cancer, the US Preventive Services Task Force recommends a Papanicolaou (Pap) smear test at least every three years (Branoff et al., 2007). From the American Cancer Society, sexually energetic females must receive yearly Papanicolaou tests and pelvic tests. The Papanicolaou smear could cord regularly at the clinician's decision afterwards with 3 or more undesirable smear outcomes (Annual Report, 2002). Another less utilized but gold standard screening method is the molecular detection of HPV DNA or RNA in any of the hybridization assays (e.g., Southern transfer hybridization, non-amplified hybridization) or polymerase chain reaction assay (PCR) (Tsikouras, Zervoudis, Manav, Tomara, Romanidis, Glazios, 2016).

Conceptual Framework
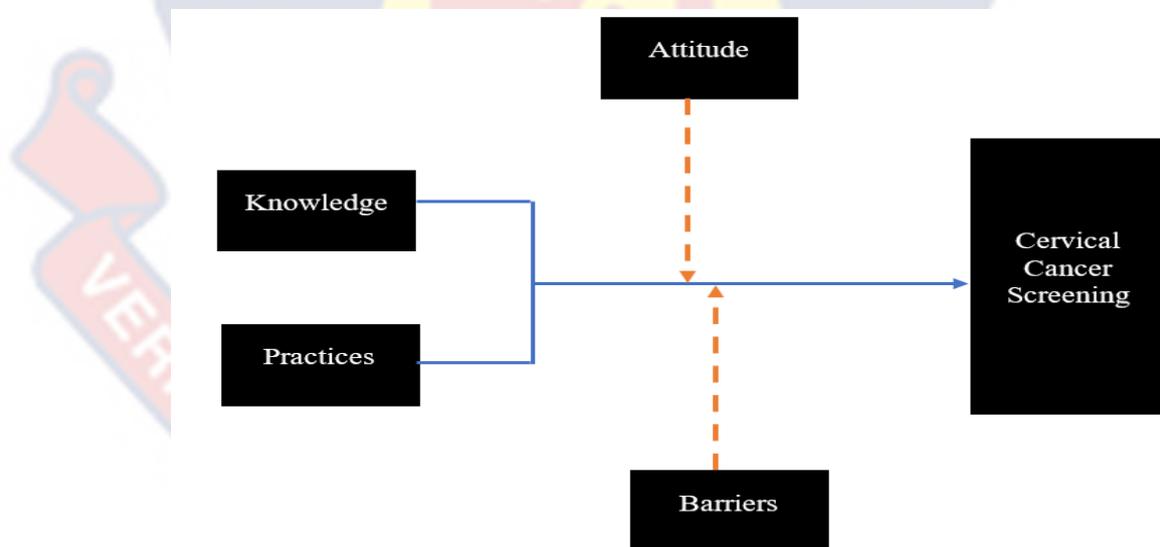
Figure 4: Conceptual Framework

Source: Author's construct

The conceptual base of this study is the Health Belief Model. It illustrates how the study's variables are connected. This model explains 4 cognitive procedures suggesting that a person is more likely to be involved in good

34

conduct if they have perceived that the sickness is serious, so they are vulnerable to it, and if there are more observed rewards, but there are less perceived hurdles to doing the behaviour. This has to do with the knowledge the individual has of the illness, the practices he engages in, and his attitudes. There could also be some barriers to his or her environment to could cause an improvement in recovery or cause a surge in the illness.

Empirical Review

The researcher looked at studies that had an impact on the study's important variables in this section.

Knowledge of Screening and Risk Factors associated with Cervical Cancer

The main cause of morbidity and death in females, specifically in sub–Saharan African nations, is cervical cancer. Cervical cancer is the second most frequent disease in women worldwide, with 529,828 new cases identified each year and 85 percent occurring in developing nations (Laikangbam et al. (2007). It is projected that above 275,000 females die every year of the sickness in less developed nations. It is responsible for 63 percent of all genital malignancies. Cervical cancer affects 14,550 women annually, and 9,659 of them pass away as a result of the disease, according to current figures.

Cervical cancer is a curable sickness, and the main aspect of preventing it is early identification of the pre-malignant through cervical screening; similarly, it is a kind which is preventable and curable when noticed earlier (Gharoro & Ikeanyi, 2013). Even at secondary health care centres, a long transitional period from a pre-malignant lesion to cervix cancer allows for earlier detection and near-complete cure (Pitts & Clarke, 2014). This potential for industrialised countries to lower the prevalence of cervix

35

cancer would be lost if the screening level is inadequate and knowledge and education about cervical cancer are not effectively transmitted (Adanu, 2012). Literature suggests that knowledge concerning cervical cancer and its related danger factors plays a major role in screening activities for cervical cancer amongst females (Adanu, 2002; Mukama et al., 2017). Other studies have indicated that women who have increased information and are conscious of cervical cancer are most likely to undertake the sickness screening activities (Balogun, Odukoya, Oyediran, & Ujomu, 2012; Binka et al., 2016).

In Ghana, previous studies had reported minimal levels of information on the dangerous influences of cervical cancer as a hinderance to causing cancer in women (Adanu, Seffah, Duda, & et al., 2010; Binka, Nyarko, Awusabo-Asare, & Doku, 2019). Alternative research conducted by Ebu et al. (2015) that investigated knowledge of cervical cancer screening amongst 392 females in Elmina, Ghana, found that only 6 percent of respondents had information concerning the risks of the sickness; among this, 2.3 percent had heard of Pap smear test. Ampofo *et al*. (2019) involving 200 women living in a suburb of Kumasi reported that 69.7% have low information/knowledge on cervical sickness cancer, and 76% about risk factors connected to this sickness. Among university students in Northern Ghana, out of 304 female students, only 19.4 percent have information on the sickness, and 4 out of 10 (40.1 percent) lack knowledge about the disease (Boateng & Adesuyi, 2018). A study by Mengasha, Messele, and Beletew (2020) among 770 women between 15 and 49 years in Gondar town, Ethiopia, showed that more than 81.4 percent lacked information on HPV as a causal agent of the sickness.

36

Research has been carried out among educated females to determine the screening for cervical sickness cancer and its risks factor. One cross-sectional survey by Annan, Asante, and Kugbey (2019) among two hundred University students in Ghana indicated that knowledge of the sickness risk was strongly associated with screening behaviour. It was also revealed that knowledge of cervical cancer risk factors was a significant predictor of cancer screening practices amongst university students (Annan et al., 2019). Another study among 339 trained teachers in Kuity County, Kenya, found that 52 percent have minimal information on the sickness screening and HPV vaccine (Masika et al., 2015). The minimal level of information has consequences for future procedures in preventing cervical cancer in the population. Most alarming issue is the inadequaute knowledge about cervical cancer screening, even with the highly educated populace. Hence, it is necessary to promote health education on screening the sickness and the risk factors. This could deter students and the entire female population from getting screened for cervical cancer. Asante, Mohammed, Delle, and Mumuni, for example, discovered that educated women in Tamale knew more about cervical cancer screening than uneducated women.

Awareness of Cervical Cancer Screening

Cancer in women, including breast, cervical, and ovarian cancers, cause thousands of early mortalities. Investment and programs for preventing and treating female cancers like cervical cancer have been enhanced, and this caused sturdy decreases in developed countries (Gonçalves *et al*., 2014). The second most commonest cancer in females in the world is cancer of the cervix. However, due to poor awareness and no access to screening as well as

37

treatment, most demises befall females who Efficient procedures for earlier discovery of precancerous lesions utilizing cytology exist and are being revealed to be efficacious in developed countries.

The creation of awareness is tantamount to education; this can be informal or formal. The effectiveness of awareness creation is, however, hooked on numerous factors. These include the media used to raise awareness, the target audience, the content of the communications, the language used in the messaging, and who is doing the raising of awareness (Momenimovahed et al., 2017). The vigorous role of each stakeholder is important to decrease the danger of the sickness. Research showed that nurses play a significant role in this sickness awareness and preventing it (Ertem, 2009). Because the public trusts nurses and other health professionals to give complete health information in a language that women can comprehend, they play a vital role in public health education (Torre et al., 2016).

In a study of 150 women of reproductive age conducted by Ziba, Baffoe, Dapare, Shittu, and Antuamwine (2015), 70.7 percent were unaware of cervical illness cancer or the symptoms related with it. Amongst the females that were aware of the sickness, mass media (36.7%) and health workers (25.3%) were their sources of information (Ziba et al., 2015). This means that awareness of cervical cancer has not entirely reached many women in the population. Low participation in cervical cancer screening programmes is caused by inadequate knowledge and awareness in Ghanaian communities (Ziba et al., 2015). As pointed out in the study, health professionals and the media can be the leading ambassadors in creating awareness of cervical cancer. In Nigeria, similar research was undertaken among 145 women in

38

Lagos, indicating that 41.4 percent did not have information concerning the screening of the sickness, and 18.4 percent reported low agreement of screening of the sickness owing to the absence of knowledge on the disease (Okunowo & Smith-Okonu, 2020). Hoque, Ghuman, Coopoosmay, and Van Hal (2014) conducted research among 243 university students in South Africa and reported a minimal awareness level (44.8 percent) of the sickness. Regarding the sickness screening, 15 percent of the female respondents who had sex before and had information concerning the sickness had undertaken the Pap smear test.

Only little is being done in public screening programs for cervical cancer in many urban communities in Ghana. There is very low community health awareness and education on cervical cancer in rural areas. Many women may likely receive education on cervical cancer if they visit clinic for medical attention anytime they feel signs that are not comfortable, like the irregular flow of blood, flow of blood between times during sex, leg ache, and pelvic ache (Vaccarella et al., 2013; Torre et al., 2016).

Attitude and Practice towards Cervical Cancer Screening

Knowledge, attitude, and practice level of people, especially females in the community, is very important to know about symptoms, hazard factors of cervical cancer, the benefit of earlier discovery and treatments, access to reproductive healthiness services and preventive procedures (e.g., HPV vaccine) (Aweke, Ayanto, and Esrado, 2017). For women, attitudes and practices on screening for the sickness are most imparted by sociodemographic factors, including age, marital status, sociocultural group, religion and education, poverty, and availability and access to health services

39

(Lewis, 2004; Broutet, 2012). All these factors occurring at the individual level, family, and community level are complex systems that women encounter before having a change in behaviour to undertake cervical cancer screening (Chadza, Chirwa, Maluwa, Malata, Kazembe, and Chimwaza, 2012).

In Ghana, a study by Kwarase, Adu-Kyere, and Der (2019), which investigated the problem knowledge, attitude, and practice of cervical cancer screening among 203 females in the Bongo District, revealed that 85.6% of the participants were willing to undertake to screen off the sickness (cervical cancer) when the services are accessible, whereas, in terms of practice, only 5.9 percent had been screened off the disease. Aweke et al. (2017) found that 34.8 percent of women had negative attitudes toward cervical cancer screening, and females' unwillingness to seek health information and health-seeking behaviour was positively associated with poor knowledge in a study involving 583 women about attitudes and practises of cervical cancer screening. In contrast, a study by Mulatu, Motma, Seid, and Tadesse (2017) among female university students showed that women in the study had 61.2 percent attitudes that are positive toward screening for cervical cancer. Another exploratory study in Uganda revealed that women were less likely to have a public discussion on sexual and reproductive health, likewise about cervical cancer, and therefore, found it difficult to seek health care if these females noticed the sickness symptoms (Katahoire, Jitta, Arrube-Wani, Kivumbi, Murokora, Siu and Lyazi, 2008). Another study by Mengasha *et al.* (2020) among 770 women of ages between 15 and 49 years in Gondar town, Ethiopia, showed that 73.9 percent, 78.0 percent had the attitude that engaging

40

in multiple sexual partners can increase the hazard of cervical cancer and trust that the cancer of the cervix can be prevented respectively.

Barriers to effective Diagnosis, Management, and Screening of Cervical Cancer

A research by Hoque and Hoque (2009) revealed that females, throughout their lifetime, get more recurrent contact with health care services, predominantly during primary care time. High incidence, elongated period of noticeable symptomatic sickness, and accessibility of a high particular screening test make the sickness screening a significant duty to the workers of primary health care. The main source of knowledge concerning the Papanicolaou smear test is being carried out by the gynaecological specialist, which indicates that a primary care health worker does not have a role in providing knowledge concerning the sickness and its discovery through the Papanicolaou smear screening (Herrero, Castle & Schiffman., 2005). This could be explained by the lack of a screening programme. So, programs have been required for the training of primary care physicians concerning the techniques to take a representative to circumvent an error of sampling, and all-inclusive education programs concerning the sickness and Papanicolaou test screening must be introduced via the Mass Media and Primary health workers (Gamarra, Paz and Griep 2005).

Numerous studies have made an effort to determine which factors are related to the non-participation in screening for cervical cancer. Research concerning Papanicolaou smear screening amongst Indian females revealed inadequate access to medical attention, and the absence of information concerning the methods had been blockades Papanicolaou smear use (Ferlay, Bray & Pisani, 2004). Alternative research conducted amongst Korean-

41

American females indicated that the often-mentioned motive that prevented them from taking the test was the lack of sickness signs. Some researchers also revealed that utmost often stated motive for refusal to have a current test was postponing or unbelief that it is important (Elit et al., 2009).

There are no nationwide screening programs for cervical cancer in Ghana, except for a few NGOs and stakeholders who occasionally organise cervical cancer screening in urban areas (Binka et al., 2019; WHO/ICO, 2007; Ziba et al., 2015). Also, most of the cervical screening centres have been situated in Secondary and Tertiary hospitals in cities. This has become a major barrier faced by most rural women due to no access to screening centres for the sickness and the absence of knowledge about screening tests (Udigwe, 2006; Okunowo & Smith-Okonu, 2020). In urban communities where cervical cancer centres can be accessed, some factors were also detected as barricades for uptake of the sickness screening. These blockades are classified as individual, health care providers or system-based barriers (McFarland, Gueldner & Mogobe, 2016). Common examples of these barriers are poverty, poor public health education concerning the sickness, religious and socio-cultural barriers (Ebu, Mupepi, Siakwa, & Sampselle, 2015; Ndikom & Ofi, 2012; Udigwe, 2006).

Some studies in Ghana showed that disbelief in saying; Cervical cancer screening identifies cancer, cervical cancer examination pains, and undertaking screening would devirginize girls have been proven to be the barriers that caused low cervical cancer screening (Abotchie & Shokar, 2009; Williams & Amoateng, 2012). At the individual barriers, feeling wary might be due to cultural effects and doubtlessly had their basis in the females'

42

experience and any general behaviours (Collins et al., 2005). However, Collins et al. (2002) said clinician needs to acknowledge this as a significant influence for some females and make an effort to overcome this if there is a discussion on testing and screening services for the sickness. Other females, nevertheless, can be acquainted by the clinicians being the reason for discomfiture. For the encouragement to take up screening of cancer amongst these categories of females, it might be essential to screen where concealment is guaranteed.

A study by Okunonwo and Smith-Okonu (2020), which assessed a problem on the topic "Barriers and motivators for commitment to cervical cancer screening amongst city females in Nigeria," found that the major barriers were the absence of consciousness of screening tests (64.2%) (e.g., Pap smear test), poor access to knowledge of screening test (43.4%) and non-recommendations by health workers (41.4 percent). The study also showed that recommendations from doctors/nurses (53.3%), advice from relatives/friends (21.7 percent) and media influence (20.7%) were major motivators for the uptake of cervical cancer screening (Okunonwo and Smith-Okonu, 2020). One study by Harper, Plegue, Harmes, Jimbo and Gorin (2020) in the USA reported that health insurance could be a positive predictor or motivator of cervical cancer screening.

In Harper et al. (2020) study, which used a large population database from the Behavioural Risk Factor Surveillance System, the Health Information National Trend Survey and the Health centre Patient Survey, women who were insured health had a higher screening rate than those who were uninsured (aOR: 1.5, 95%CI: 1.3-1.6). In a study by Liebermann, VanDevanter, Shirazian, Guzman, Niles, Healton and Ompad (2020), which conducted six

43

focus group discussions among 64 Dominican women each in Spanish urban, suburban and rural areas, the stigma of having cervical cancer as a result of a screening test, as well as fear, were two most significant barriers to cervical cancer screening. Another study of 119 females aged 25 to 49 years discovered that health care challenges, poverty, fear of screening outcome, and inadequate information about the sickness screening were hinderances to the screening commitment, while having symptoms of the disease, awareness of the disease, and a family history of cervical cancer were motivators for cervical cancer screening (Ndejjo, Mukam, Kiguli and Musoke, 2017). A review by Black, Hyslop and Richmond (2019) on blockades and motivators of sickness screening amongst Ugandan females showed that discomfiture, fear of screening procedures, poor resources in a health facility and rural living were barriers to uptake of cervical cancer screening and recommendation from health workers was the only motivator for cervical screening.

Stakeholders, including nurses, doctors or other health professionals, women groups, and the government, need to engage and find long-lasting solutions to barriers causing low commitment to cervical cancer awareness and screening of cervical cancer in the nation. However, for the time being, a study is needed to understand the barriers to cervical screening faced by female teacher trainees and women in general, so that evidence-based programmes can be designed and implemented to increase the screening rate among women in the community. For example, Tan et al. (2010) can play an important role in health promotion and illness prevention and they in a great position to teach young girls and women about health. Nursing workers must

44

have education on cervical cancer to inform the general population about the disease and how to prevent it.

Demographic Variables and Knowledge, Attitude and Practice of Cervical Cancer Screening

Several researches were conducted to discover how demographic variables are connected with the problem of "knowledge, attitude and practice of cervical cancer screening." Ghosh et al. (2021) studied "knowledge, attitude and practices (KAP) toward cervical cancer screening among tribal women of coastal Karnataka, southern India." A societal-based cross-sectional study included 1140 females from three tribes, ranging in age from 20 to 65. For the sickness screening, semi-structured questionnaires were used to collect data on their KAP. Though 82.9 % of the participants got information concerning the sickness, only 51 percent understood it is preventable, and only 2.3 percent knew it could be discovered early, according to the study. Above 75% of respondents did not adequately understand cervical cancer. However, most of the respondents (99.9%) have a positive behaviour toward screening the sickness. Nobody has undertaken cervical cancer screening before the research. Finally, the participants' knowledge scores were shown to be substantially connected to their age, marital status, level of education, socioeconomic status, and tribal community ($p < 0.05$).

Jassim, Obeid and Al Nasheet (2018) investigated a problem in the knowledge, attitudes, and practices of females who attend primary care health centres for cervical cancer screening in Bahrain. The authors employed a cross-sectional study of 300 females who attend basic healthcare centres in Bahrain and an instrument composed of forty-five items to collect information via face contact interview. The descriptive data presents demographic

45

characteristics and frequencies with percentages for each of the items of pieces of knowledge and attitudes questionnaires. Findings showed that over 64% (194 respondents) had no information about the pap smear process, and only 3.7% (11 respondents) got information about it. Approximately 64% (192 respondents) had a belief that a Pap smear had been supportive in noticing pre-cancerous and the sickness, and 44.3% (133 respondents) had a belief to get Pap smear at least each 3-year. Concerning the practices, 40.7% representing 122 respondents, got a Pap smear. Most participants said they did not feel comfortable if a male doctor examined them (250, 83.3%). Few undertook a Pap smear screening when they did not marry before (69, 23.0%).

Mutambara et al. (2017) conducted research on this topic using females in Zimbabwe. Twenty items of self-administered questionnaires were given to 125 females. The outcomes of the research revealed that information concerning influences that cause the sickness was comparatively high. There were no significant differences among the females regarding their emotions toward the sickness. Nevertheless, the females' attitude toward Pap smear tests" was favourable, majority of the females (89, 71.2%) recognised they would be bothered and try to find health-care when feels symptoms of the sickness.

Nevertheless, a large majority (104, 83.2%) of the females testified that they had never had cervical cancer screening. Females were deterred from getting a Pap smear for various reasons, including a lack of awareness, a perception that cancer was incurable, and religious beliefs that kept them from obtaining medical help. Conclusively, there has been an overall requirement

46

for educating females, particularly in churches, to undergo the sickness screening in Zimbabwe.

In the research conducted amongst market females in Niger by Ahmed, Sabitu, Idris, and Ahmed (2013), it was discovered that while market females had a positivity towards the sickness screen (80.4 percent), their practice level was poor (15.4 percent). According to Maxwell, Bancej, Snider, and Vik (2001), whatever of year, tribe, educational level, or status of marriage, nonfulfillment of the screening was the most common problem amongst females in numerous circumstances.

Furthermore, Bansal, Pakhare, Kapoor, Mehrotra, and Kokane (2015) examined women of reproductive age's knowledge, attitude, and behaviours on cancer of the cervix and screening (15-45 years). An outpatient department at the All-India Institute of Medical Sciences in Bhopal was used to perform a facility-based cross-sectional study on 400 reproductive-age females. Once informed consent was acquired, one of the investigators presented a standardised questionnaire containing 20 knowledge items, 7 attitude items, and a history of pap smear practises. The data was entered and analysed using Epi-Info version 7. The mean and standard deviation were used to represent quantitative factors, whereas counts and percentages were used to represent qualitative ones. Using binary logistic regression analysis, higher knowledge, attitude, and practice predictors were discovered. According to the data, two-thirds of the 400 participants (65.5%) were aware of cervical cancer.

35.25 percent and 39.75 percent of respondents, respectively, got one sign and risk factor. Only 34.5 % of the participants were aware of the screening test, and only 9.5% had had it done; yet, 76.25 percent favoured it.

47

According to a binary logistic regression study, education, age, and income were independent predictors of greater knowledge. Age, income, and marital status all influence attitudes about screening. It was also discovered that females have a good attitude toward screening despite not knowing the sickness. In practice, though, adoption was low. Screening uptake may be boosted by strategic communication aimed at eligible women.

Finally, Tekle, Wolka, Nega, Kumma, and Koyira (2020) evaluated a problem "cervical cancer screening knowledge, attitude, and practice in Wolaita Zone, Southern Ethiopia. The 520 participants were chosen using facility-based cross-sectional research and multi-stage sampling techniques. Face-to-face interviews were employed to collect information on sociodemographic, knowledge, attitude, and cervical cancer screening-related questionnaires. Epi-Data version 3.1 was used to enter and sanitize data before being transferred to SPSS version 20 for analysis". The authors and the ratio and ninety-five percent confidence interval in our research employed logical regression. p 0.05 was used to evaluate statistical significance. About 154 (43.1%) of females had better information about the sickness, 235 (45.5%) did have a positive attitude, and closely a sector (118; 22.9%) underwent screening of the sickness, according to the findings. Women aged 30–34, women with a bachelor's or master's degree, and females who got knowledge of health professionals had all been linked to having strong information about the screening of the sickness. Being single and having good information about cervical cancer had been predictors of an optimistic attitude toward screening the sickness.

Chapter Summary

48

Based on the definitions and discussions seen so far in the literature reviewed, it is apparent that, the prevalence rate of cervical cancer remains tall amongst females in developing nations.

It was evident from the literature reviewed that the occurrence of cervical cancer in Africa is ascribed to numerous influences including socio-economic, biological, awareness and knowledge, lack of access to screening programmes and fear of positive results.

CHAPTER THREE

49

RESEARCH METHODS

Introduction

This study aimed to assess knowledge, attitude, and practice toward cervical cancer screening among teacher trainee Colleges of Education in the Ashanti Region. Therefore, the study focused on the research design, population, sample size and sampling method, research instrument, data collecting and analysis procedures, and ethical considerations.

Research Design

The study design is a blueprint for gathering and analysing data on a certain topic. It provides the procedural outcome of an inquiry. According to Gay (2002), research design includes the study's framework, the hypotheses that will be tested, and the elements that will be studied.

The research design for a given study is defined by the issue under inquiry, (Cohen, Manion & Morrison ,2007; Creswell, 2014). Because this study aims to learn more about the knowledge and behaviours of cervical cancer screening among teacher trainees in Ghana's Ashanti region, a descriptive survey is the best choice. To acquire data and answer research questions, survey techniques would be used. This would help the researcher learn about respondents' perceptions of present practices, providing a straightforward description of the issue and practical suggestions for improvement.

Cohen et al. (2007) posit that surveys are excellent for this type of study because they allow for data collection that can be used to evaluate current practices and situations and develop informed strategies to change them. The goal of survey research is to get responses from a broad group of

50

individuals to a set of well-crafted and delivered questions (Fraenkel and Wallen, 2003).

Study Area

This research was conducted in the Ashanti region of Ghana, at seven college of education. The Ashanti Region is Ghana's third largest administrative region, with a total land area of 24,389 km^2. It is partitioned into thirty districts, consisting of one metropolitan, seven municipals, and twenty-two districts, and its capital is Kumasi.

The Ashanti region has one of Ghana's best educational training centres, with an important educational hub distributed within the region. The region is made of sub-metropolitan districts. Currently, the region boasts seven Colleges of Education out of the 46 national Colleges of Education. These Colleges are; St. Louis College of Education, Wesley College of Education, St. Monica College of Education, SDA College of Education, Offinso College of Education, Akrokerri College of Education, and Agogo Presbyterian College of Education (Wikipedia, 2020).

51
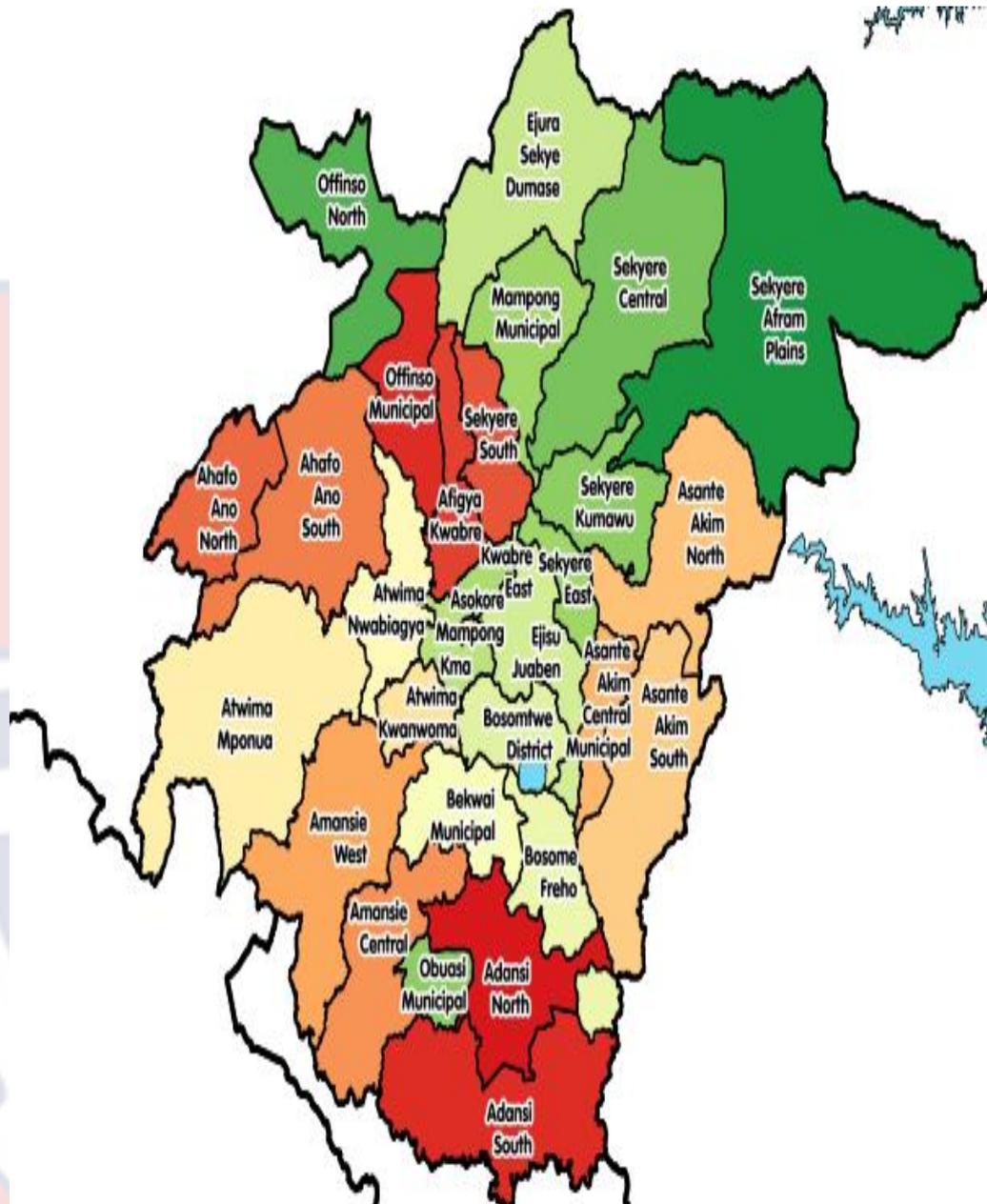
Figure 5: District map of Ashanti Region of Ghana

Population

      A population, according to Enos, Yensu, and Obeng (2020), is a group

of humans, things, or events that share particular characteristics and are used

to generalise study findings. The target population was female students from

the Ashanti region's seven colleges of education. As a result, measuring such a

big population would take a long time, reducing precision. Because the

population's dependent variables may change, this is the case (Wiersma,

52

1980). Therefore, the study centred on the number of female populations in the seven schools is; St. Louis College of Education (n= 900), Wesley College of Education (n=487), and St Monica College of Education (n=820), Offinso College of Education (n= 440), S.D.A College of Education (n=280), Akrokerri College of Education (n= 305), and Agogo Presbyterian College of Education (n=780). Thus, the total female population for this study was 4,012 students (National Commission for Tertiary Education Report, 2019).

Sampling Procedure

Stratified sampling and simple random sampling techniques were employed to select participants at various units for the study. Stratified sampling ensures that each subgroup is adequately represented within the whole sample population of the study. First, all the seven colleges of education were put in one unit as stage one. A list of the female student population in each of the seven colleges were obtained from school authorities.

Then, stratified sampling was employed to select participants from various programmes and levels of study within a particular college since the study population comprises different study areas. The colleges were divided into three strata: programmes (Bachelor of Education in Early Childhood Care and Development, Bachelor of Education in Primary Education, and Bachelor of Education in Junior High School Education) in each College of Education; these strata form the second stage unit. Lastly, the levels were divided into two strata: level 100 and level 200; these strata form the third stage unit. Participants were slected from the various strata using simple random sampling technique to partake in the research.

53

Sample size determination

To determine the sample size from the population, the Krejcie and Morgan sample size determination table was utilised.

The formula is

$$Size = \frac{x^2 NP(1 - P)}{d^2(N - 1) + x^2 P(1 - P)}$$

x^2 = Table value of Chi-Square @ d f= 1 for desired confidence level .01=2.71 .05=3.84 .01=6.64 .001=10.83

N = Population size

P = Population proportion (assumed to be .50)

D = degree of accuracy (expressed as a proportion)

The suitability of the sampling approach utilised, as well as the appropriateness of the procedure and equipment used, define the quality of a study (Dabone, 2018). Krejcie and Morgan (1970) posit that the sample size expands slowly as the population grows, eventually stabilising at around 380 instances.

As a result, a population of 4,012 students equals a sample size of 352. A total of 582 people were sampled using the proportional sample size determination table. According to the sample size determination chart for proportions, a population of 4,012 requires a sample size of 352. However, the researcher increased the sample size by 50% on the theory that if a study is just descriptive, the greater the sample size, the more detailed the description. (Ogah, 2013). In addition, larger sample size may be more appropriate in a descriptive study where the factor being studied is relatively rare in the population (Ogah, 2013).

54

Table 2 represents the Colleges and their respective samples proportionately.

Table 2-*Sample for the Colleges of Education*

Name of College	Population	Sample
St. Louis College of Education	900	118
Wesley College of Education	487	68
St Monica College of Education	820	104
Offinso College of Education	440	58
SDA College of Education	280	37
Akrokerri College of Education	305	40
Agogo Presbyterian College of Education	780	103
Total	4012	528

Osei Owusu (2021)

Data Collection Instrument

The use of a questionnaire elicited information from the teachers-trainees. A questionnaire was used because, according to Curtis (2017), it appears more effective than the interview procedure. It consumes less time, it is comparatively not expensive, and allows data gathering from a bigger sample. A questionnaire is very important if the participants should remain anonymous as it can be administered in ways that participants may have self-confidence that their personalities are not known. Questionnaires, on the other hand, have the potential for a low response rate. The researcher adopted the Cervical Cancer Awareness Measure (Cervical CAM). It has a reliability statistic of 0.7. The resaercher also used the National Cancer Institute of the United States' Breast and Cervical Cancer Screening Questionnaire (2006). It has a reliability coefficient of .83.

The instrument has a total of 42 items, subdivided into 5 sections. The first section, which had six items, concerned the participants' socio-

demographic characteristics. Section two has 10 items, and it deals with information assessment of the sickness screening. Section three deals with attitudes on cervical cancer screening, and it has 10 items. The fourth section has 4 items, and it deals with practices of sickness screening. Section five deals with barriers to sickness screening and comprises 12 items. The questionnaire was on a scale of 'Yes' and 'No.'

Validity and reliability of the instrument

The extent to which a study's findings accurately address the question for which it was designed (Loewen & Plonsky, 2016) or to which a study's results accurately answer the issue that it was designed to answer is defined as validity (Révész, 2012; Gravetter & Forzano, 2018). Validity refers to the appropriateness, significance, accuracy, and convenience of an investigator's interpretations based on collected data (Sileyew, 2019).

Because content validity can be assessed by expert judgment, my supervisor and two other professionals in health education thoroughly analysed the instrument for their assessment to determine its content validity (Gay, Geoffry & Peter, 2009). The instrument was restructured using the suggestions they offered. According to Amedahe (2002), the validity relates to the accuracy of the interpretations given to validated assessment scores rather than the instrument itself. This implies that the instrument is suitable to obtain what it says, ensuring that all tasks are completed in order to meet the objectives. As a result of the pilot test, the research instrument has been improved.

Reliability is the measure of internal consistency of the construct in the study (Clark & Watson, 2019). This means that no matter how many times the

evaluation instrument is used on the same person, the results will be the same or nearly so. A pilot test on 40 teacher trainees was done at Jackson College of Education in Kumasi to determine the instrument's reliability. Jackson College of Education was used for the pilot test because that college was not part of the colleges used for the study. However, the students have similar characteristics like those students used for the study and were able to help the researcher to validate the instruments.

The Kuder-Richardson Formula 20 (KR-20) was utilised to generate the instrument's reliability index from the replies of the forty (40) students. KR-20 viewed as appropriate because is used to measure the internal consistency reliability of a test with binary variables. The scores for KR-20 range from zero (0) to one (1), where 0 is no reliability and 1 is perfect reliability. The questionnaire items yielded KR-20 reliability value of 0.86.

Data Collection Procedure

Before engaging in the data gathering exercises, the researcher acquired an introduction letter from the Head of the University of Cape Coast's Department of Health, Physical Education, and Recreation to the principals of Ashanti Region's colleges of education. The researcher discussed the logic and other ethical considerations in the study to elicit their voluntary concern from the principals and relevant responders.

Data management

Because of the sensitivity of the material, the resaecher only dealt with the completed questionnaire to make sure the information given by participants did not fall into the wrong hands. After gathering the information, it was safely placed in a locked cabinet to prevent unauthorised access. The

information was then entered into a computer and password protected. To protect their identity and safety, respondents did not write their names. Respondents would be identified using the code numbers assigned. To safeguard the study and the University of Cape Coast's integrity, the resaercher made certain that the results were validated with reliable data and that the data could be utilised in the future.

Data Processing and Analysis

Data collected for this study was analysed using the Statistical Package for Service Solutions (SPSS) software version 26.

The research questions one, two, three, and four were answered by means of descriptive statistics, specifically, frequency and percentage. On the knowledge scale, "Yes was scored as '2'while No was scored as '1'. The scoring on the knowledge about cervical cancer was categorised into low (1-10), average (11-20), and high levels (21-30). On the attitude scale, "Yes was scored as '2'while No was scored as '1'. The scoring on the attitude towards cervical cancer was categorised into negative (1-10), neutral (11-20), and positive (21-30). This ceriateria was developed by the researcher to find out the level of knowledge and attitude of female teacher trainee on cervical cancer screening. The Chi-Square test was used to address research question number five. The Chi-Square is commonly used for testing relationships between variables that are categorical in nature. The variables the reseacher intended to measure were age, marital status, and religion and how they are connected to the knowledge level, attitude, and cervical cancer screening practices.

Ethical consideration

The researcher filed a research proposal to the Institutional Review Board (IRB – UCC), outlining the method to be implemented during the fieldwork. In the methods for ensuring confidentiality, voluntary participation, and anonymity, the protocol highlighted the proposed research design, methodologies, written consent forms for teacher-trainees, and explanatory literature. In addition, shortly after the surveys were distributed, information about the study's goals and a debriefing session for responders were offered. The Institutional Review Board at the University of Cape Coast approved this study with an ID (UCC IRB/GES/2020/84), confirming that the research design and fieldwork procedures did not violate ethical criteria (see Appendix C).

59
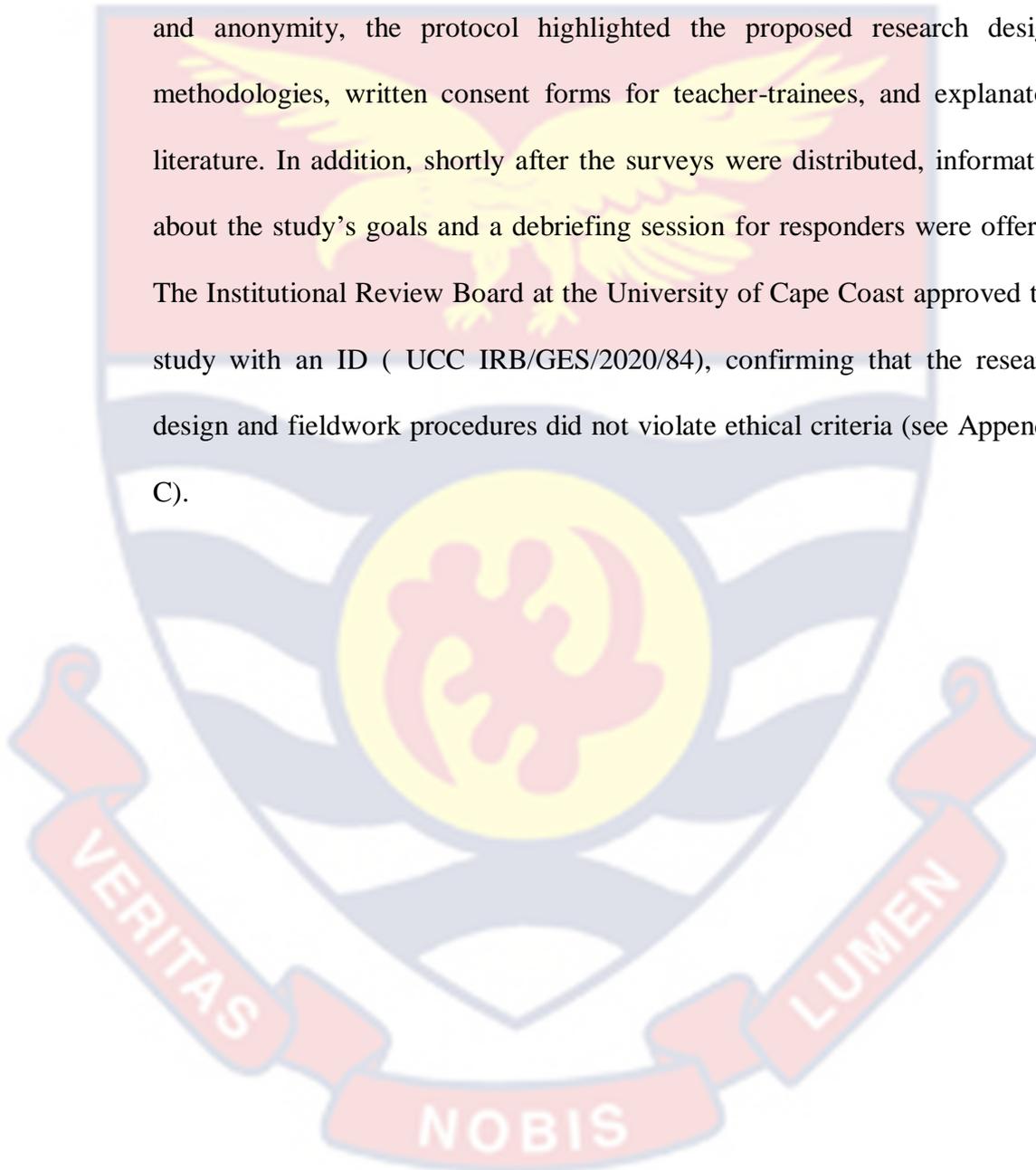
CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This study aimed to assess knowledge, attitude, and practice toward cervical cancer screening among teacher trainees at Colleges of Education in the Ashanti Region. The outcomes of the data collected in the field are presented in this chapter. There are two aspects to the findings. The first section goes over the participants' socio-demographic characteristics, while the second section goes over the primary findings in regard to the research questions. The validity of 514 of the 528 questionnaires distributed resulted in a response rate of 97.3%.

Socio-Demographic Characteristics of Respondents

In this section, the demographic features of respondents are shown. Age, race, religion, and marital status are only a few of the demographics covered. Table 3 presents details on the demographic characteristics of the respondents.

Table 3-*Socio-Demographic Distribution of Respondents*

	Frequency	Percentage (%)
Age		
18 – 22 years	362	70.4
23 – 27 years	131	25.5
28 – 34 years	9	1.8
N/A	12	2.3
Ethnicity		
Akan	457	88.9
Ewe	21	4.1
Mole-Dagbon	6	1.2

60

N/A	30	5.8
Religion		
Christianity	478	93.0
Islam	24	4.7
Traditional	3	0.6
N/A	9	1.8
Marital status		
Single	447	87.0
Married	36	7.0
Co-habiting	11	2.1
Divorced	4	0.8
N/A	16	3.1

Source: Field survey (2021); N/A – Not applicable

From Table 3, the majority of the respondents (70.4%) were aged 18 –
22 years, followed by those aged 23 – 27 years (25.5%), and then those aged
28 – 34 years (2.3%). More Akans (88.9%) than respondents from other ethnic
groups. The majority of the respondents showed that they are Christians
(93%). The study was dominated by single respondents (87%), whereas those
divorced were the least (0.8%).

**Research Question 1; What is the Level of Knowledge on Cervical Cancer
among Teacher Trainees at Colleges of Education in the Ashanti Region?**

The goal of this research question was to assess how well teacher
trainees knew about cervical cancer. Respondents were asked to answer 10
items relating to cervical cancer, and Table 4 presents their responses.

61

Table 4-*Knowledge of Cervical Cancer*

Questions	YES		NO	
	f	%	f	%
Do you know cervical cancer is ranked the second commonest cancer amongst females in Ghana	402	78.2	112	21.8
Do you know that human papillomavirus (HPV) is the cause of cervical cancer?	276	53.7	238	46.3
Multi-sexual partners can increase the risk of getting cervical cancer	421	81.9	93	18.1
Nearly everyone infected with HPV will have cervical cancer symptoms	284	55.3	230	44.7
Family history of cervical cancer can increase the risk of getting cervical cancer	335	65.2	179	34.8
If untreated, cervical cancer can cause death	465	90.5	49	9.5
There is a vaccine that can prevent cervical cancer	270	52.5	244	47.5
Is the vaccine for the prevention of cervical cancer available in Ghana	170	33.1	344	66.9
Is a Pap smear test necessary even if there is no family history of cervical cancer	357	69.5	157	30.5
Healthy adult women should have a Pap test every 2 years	403	78.4	111	21.6

Source: Field survey (2021)

As shown in Table 4, out of the 10 questions, participants answered nine correctly. Even though most had nine of them correct, three had about 40% who did not know them. For instance, 46.3% of the respondents were unaware that HPV causes the sickness. The only question respondents had wrong was their knowledge of the availability of vaccines for the prevention of cervical cancer in Ghana. The responses were further scored as '1' for a 'yes' response and '0' for a 'no' response. The individual scores were summed

62

to generate a total score. Table 5 presents information on respondents' level of knowledge of cervical cancer.

Table 5-*Level of Knowledge in Cervical Cancer*

Level	Score range	Frequency	Percentage (%)
Low	0 – 4	71	13.8
High	5 – 10	443	86.2
Total		**514**	**100.0**

Source: Field survey (2021)

As indicated in Table 5, respondents' total score on knowledge of cervical cancer was categorised as low and high using 0 – 4 and 5 – 10, respectively. The outcomes indicated that most of the respondents, 443 (86.2%), possessed a high level of knowledge of cervical cancer.

Research Question (2); Which Practices of Cervical Cancer Screening do Teacher Trainees at Colleges of Education in the Ashanti Region Engage in?

The purpose of this study was to look into the practise of cervical cancer screening. A number of questions about sickness screening strategies were posed to respondents. Tables 6 to 10 present the findings of this research question.

Table 6-*Test for Cervical Cancer*

Response	Frequency	Percentage (%)
Yes	88	17.1
No	415	80.7
N/A	11	2.1
Total	**514**	**100.0**

Source: Field survey (2021); N/A – Not applicable

63

Table 6 shows that most participants, 415 (80.7%), responded negatively when asked whether they had ever had cervical cancer screening. These respondents were also asked why they did not test, and their opinions are shown in Table 7.

Table 7-*Reasons for Not Testing for Cervical Cancer*

Reasons	Frequency	Percentage (%)
Because I avoid multiple sex partners	2	0.5
Because I have less knowledge about it	114	27.5
Because I have not seen any symptoms of cervical cancer	72	17.3
Fear of testing	48	11.6
I do not have time to visit the hospital	37	8.9
I feel ashamed and uncomfortable for a male doctor to do the test	24	5.8
I have not heard of it before	19	4.6
It is expensive	29	7.0
Total	**415**	**100.0**

Source: Field survey (2021)

From Table 7, predominant among the reasons why people do not screening for cervical cancer was respondents' limited knowledge in cervical cancer (27.5%). The respondents (17.3%) also indicated they had not been screened because they had not seen any cancer symptoms; 11.6% of participants also stated the anxiety of testing as their motive. Few respondents (0.5%) had not been screened before avoiding multiple sex partners. The 88 respondents who responded in affirmative were further asked for details about their screening. The results of their most recent Pap test are shown below.

64

Table 8-*Last Time Respondents had Pap Test*

Response	Frequency	Percentage (%)
Last 12 months	11	12.5
In the last 18 months	9	10.2
In the last 2 years	14	15.9
More than 2 years	22	25.0
None	32	36.4
Total	**88**	**100.0**

Source: Field survey (2021)

Table 8 shows that most respondents (36.4%) said they had no Pap test in the recent two years, while 25% said they had a Pap test more than two years ago. Almost 10.2% did Pap test in the last 18 months. The respondents further reported how often they had had Pap tests. Table 9 contains the specifics.

Table 9-*How Often Respondents had Pap Test*

Response	Frequency	Percentage (%)
Every 12 months	16	18.2
Every 18 months	7	8.0
Every 2 years	22	25.0
None	43	48.1
Total	**88**	**100.0**

Source: Field survey (2021)

From Table 9, 22(25%) of the respondents indicated they do Pap test every 2 years, 18.2% do that every 12 months, while 8% also do the test every 18 months. Table 10 presents results on whether complications were encountered.

65

Table 10-*Complications from Cervical Cancer Screening*

Status	Frequency	Percentage (%)
Yes	12	13.6
No	61	69.6
N/A	15	17.0
Total	**88**	**100.0**

Source: Field survey (2021); N/A – Not applicable

The majority of the respondents (69.6%) indicated they did not have any complications from the sickness screening (Table 10).

Research Question 3; What are the Attitudes Toward Cervical Cancer Screening among Teacher Trainees at Colleges of Education in the Ashanti Region?

The purpose of this study was to find out how prospective teachers perceived regarding health screening. Table 11 presents the respondents' responses.

Table 11-*Attitude towards Cervical Cancer Screening*

Statements	YES		NO	
	F	%	F	%
The thought of cervical cancer screening scares me	325	63.2	189	36.8
Cervical cancer screening would threaten a relationship with my boyfriend/husband	290	56.4	224	43.6
If I developed cervical cancer from screening, I would not live longer than 5 years	139	27.0	375	73.0
I have other health problems more important than having cervical cancer screening	133	25.9	381	74.1
I will never have cervical cancer screening if I have to pay	180	35.0	334	65.0
I would be ashamed to lie on a gynaecologic examination bed and show my private part to have a cervical cancer screening	258	50.2	256	49.8
My religious beliefs/ethnicity prevent me from getting cervical cancer screening	82	16.0	432	84.0
I prefer a female health worker to conduct cervical cancer screening	439	85.4	75	14.6
If there is cancer development in my destiny, having cervical cancer screening will not prevent it	259	50.4	255	49.6
I feel I will get cervical cancer in the next few years	43	8.4	471	91.6

Source: Field survey (2021)

66

Out of the 10 items in Table 11, most respondents responded in the affirmative to 5 of the items, suggesting a negative attitude. The respondents (63.2%), for example, indicated that even thought the screening scares them, 85.4% of the respondents also indicated they desire a female nurse to carry out cervical cancer screening, and 50.4% said that when there is cancer growth in their destiny, to have cervical cancer screening would not stop it. The participants' responses were further graded as a 'yes' or a 'no' response, with a '1' for a 'yes' response and a '0' for a 'no' response. The individual scores were summed to generate a total score. These were further categorised into positive and negative attitudes. Table 12 presents the details of the results.

Table 12-*General Attitude towards Cervical Cancer Screening*

Attitude	Score range	Frequency	Percentage (%)
Positive	0 – 4	296	57.6
Negative	5 – 10	218	42.4
Total		**514**	**100.0**

Source: Field survey (2021)

Generally, 296 (57.6%) respondents positively affect cervical cancer screening. Though most respondents had a positive attitude, many held a negative attitude (n=218, 42.4%).

Research Question 4; What are the Barriers to Cervical Cancer screening among Teacher Trainee Colleges of Education?

The goal of this study was to discover the roadblocks that prevent people from getting screen. The participants were asked to indicate from among a host of factors serving as blockades to the sickness "cervical cancer" screening. Table 13 summarises findings of this research question.

Table 13-*Barriers of Cervical Cancer Screening*

67

Barriers	YES		NO		N/A	
	F	%	f	%	F	%
Will you feel embarrassed by the screening process?	205	39.9	293	57.0	16	3.1
Do you expect pain outcomes during cervical cancer screening?	230	44.7	266	51.8	18	3.5
Do you consider a financial cost during cervical cancer screening?	332	64.6	165	32.1	17	3.3
Will you need reminders for the date of appointment /invitation for cervical cancer screening?	363	70.6	136	26.5	15	2.9
Will fear of positive results of cervical cancer affect your responses to cervical cancer screening?	325	63.2	174	33.9	15	2.9
Will accessing the cervical cancer screening service be necessary for you in cervical cancer screening?	370	72.0	125	24.3	19	3.7
Will you consider a history of cervical cancer screening experience a challenge?	226	44.0	270	52.5	18	3.5
Is difficulty accessing a doctor hindering you in a cervical cancer screening?	253	49.2	242	47.1	19	3.7
Is a male doctor conducting a cervical cancer screening a challenge to you?	320	62.3	178	34.6	16	3.1
Will you like to know your cervical cancer screening status?	437	85.0	58	11.3	19	3.7
Is cervical cancer screening a shame to you?	126	24.5	367	71.4	21	4.1

Source: Field survey (2021); N/A – Not applicable

From Table 13, the respondents identified seven factors as hiderances
to screening for cervical cancer. These were factors they responded to in the
affirmative to. These, among others, include the financial cost of cervical

cancer screening (64.6), the need for reminders for the date of appointment /invitation of cervical cancer screening (70.6%), fear of positive results of cervical cancer affecting their responses to cervical cancer screening (63.2%), accessibility of cervical cancer screening services (72%), and accessibility of a doctor (49.2%).

Research Question 5: **What Extent are Demographic Factors Associated with Teacher Trainees' "Knowledge, Attitude and Practice of Cervical Cancer Screening"?**

This research question focused on establishing whether demographic characteristics such as age category, religion, and marital status are associated with knowledge, attitude, and practice of cervical cancer screening. The Chi-square test of independence was used to analyse the data for this research question. For cases where statistical relationships were found, contingency/phi coefficients were estimated. For the chi-square test, age categories 28 – 34 years and 23 – 27 years were merged to get 23 – 34 years since the frequency counts in each of their observations were less than 5. However, religion and marital status cases, which had sub-categories with frequency counts less than 5, could not be merged meaningfully. In view of that, Fisher's exact test is recommended to be reported since it is robust to small sample sizes (Field, 2009, Fleiss, Levin, & Paik, 2003, Fisher, 1954). Table 14 presents the results of demographic factors and knowledge in cervical cancer.

Table 14-*Demographic Factors and Knowledge in Cervical Cancer*

	Knowledge		χ^2	df	p
	Low	High			
	n (%)	n (%)			
Age category					
18 – 22 years	44(12.2)	318(87.8)	2.77	1	.112
23 – 34 years	25(17.9)	115(82.1)			
Religion					
Christianity	64(13.4)	414(86.6)	1.62	2	.501
Islamic	3(12.5)	21(87.5)			
Traditional	1(33.3)	2(66.7)			
Marital status					
Single	65(14.5)	382(85.5)	3.37	3	.278
Married	2(5.6)	34(94.4)			
Co-habiting	0(0)	11(100)			
Divorced	0(0)	4(100)			

Source: Field survey (2021); N: age=502, religion=505, marital status=498

Table 14 shows that neither of the demographic features (age category, religion, and marital status) had a statistically significant relationship with respondents' level of knowledge. For example, age category, χ^2(n=502, df=1) = 2.77, p = .112. It can be deduced from the findings that knowledge of cervical cancer is connected to age, religion, or marital status. The demographic characteristics and attitudes toward cervical cancer screening are presented in Table 15.

70

Table 15-*Demographic Factors and Attitude towards Cervical Cancer Screen*

	Attitude		χ^2	df	p	Cont.
	Positive n (%)	Negative n (%)				
Age category						
18 – 22 years	206(56.9)	156(43.1)	0.04	1	.920	--
23 – 34 years	81(57.9)	59(42.1)				
Religion						
Christianity	282(59.0)	196(41.0)	6.85*	2	.018	.12
Islamic	8(33.3)	18(66.7)				
Traditional	1(33.3)	2(66.7)				
Marital status						
Single	264(59.1)	183(40.9)				
Married	16(44.4)	20(55.6)	4.69	3	.181	--
Co-habiting	6(54.5)	5(45.5)				
Divorced	1(25.0)	3(75.0)				

Source: Field survey (2021); *Significant, $p < .05$; N: age=502, religion=505, marital status=498

As depicted in Table 15, both age category, χ^2(n=502, df=1) = 0.04, p = .920; and marital status, χ^2(n=498, df=3) = 4.69, p = .181, are not been associated with attitudes toward the screening of the sickness. On the other hand, religion was significantly connected with attitude towards cervical cancer screening, χ^2(n=505, df=2) = 6.85, p = .018. This relationship was positively weak (contingency = .12). Table 15 further shows that most of the participants had a positive attitude toward cervical cancer screening for the Christians. On the part of the Muslims and Traditionalists, the majority had a negative attitude in both cases. Based on the findings, only religion appears to be linked to attitudes about cervical cancer screening.

71

Table 16-*Demographic Factors and Cervical Cancer Practices*

	Screened for Cervical Cancer		χ^2	df	p	Cont.
	Yes	No				
	n (%)	n (%)				
Age category						
18 – 22 years	52(14.7)	302(85.3)	5.23*	1	.032	-.10
23 – 34 years	32(23.4)	105(76.6)				
Religion						
Christianity	78(16.6)	391(83.4)	1.58	2	.369	--
Islamic	5(20.8)	19(79.2)				
Traditional	1(33.3)	2(66.7)				
Marital status						
Single	68(15.5)	371(84.5)	11.56*	3	.006	.16
Married	14(38.9)	22(61.1)				
Co-habiting	2(18.2)	9(81.8)				
Divorced	1(25.0)	3(75.0)				

Source: Field survey (2021); *Significant, $p < .05$; N: age=491, religion=496,

marital status=490

From Table 16, both age category, χ^2(n=491, df=1) = 5.23, p = .032; and marital status, χ^2(n=490, df=3) = 11.56, p = .006, were linked to practicing cervical cancer screen. These relationships are weak. The majority of the respondents had not been screened, as seen in Table 16. Similarly, the majority of respondents in all marital status categories had never undergone a cervical cancer screening. From the data, screening for cervical cancer is linked to age and religion.

Discussion

Level of knowledge on cervical cancer among teacher trainees

The study showed that the teacher trainees had information on the ranking of cervical sickness cancer and some of the risky factors of the sickness. However, the participants have information about the dangers of the

72

sickness and the vaccine which can be used to prevent it. Specifically, the research showed that the respondents majority knew that the sickness was ranked the second commonest cancer amongst females in Ghana. Also, respondents majority knew that HPV was the causal agent for the sickness and did also know that multi-sexual partners can increase the hazard of having the cervical sickness cancer.

Furthermore, the respondents had known that the family's history concerning the sickness could increase the risk of getting the sickness and again knew that it can cause death if untreated. I was also aware that a vaccination exists to prevent cervical cancer, but I was unaware it was available in Ghana. In general, it was discovered that responders have a high degree of knowledge of cervical cancer screening. Only 13.8% of participants have a low level of knowledge concerning sickness screening.

The study results are consistent with those of Boateng and Adesuyi (2018), who found that just 19.4 percent of 304 female university students in Northern Ghana have a low level of understanding of cervical cancer. Annan, Asante, and Kugbey (2019) also did a resarech using 200 university students in Ghana and indicated that knowledge of the sickness was satisfactory. The study of Okunowo and Smith-Okonu (2020) in Nigeria also revealed that the knowledge level of women concerning sickness screening was average. All of these are confirmed in the cureent research.

The finding of this research shows that teacher trainees lacked knowledge about the availability of vaccination to prevent the sickness in Ghana and some of the hazard factors of the sickness confirms what Binka, Nyarko, Awusabo-Asare, and Doku (2019) found in their study that in Ghana,

73

females had a minimal level of knowledge on the provision of vaccine for the sickness. Another study among 339 trained teachers in Kuity County, Kenya, found that 52 percent had minimal information about the sickness vaccine, hazard factors, cervical cancer screening, and HPV vaccine (Maasika, Ogembo, Chabeda, Wamai, & Mugo, 2015).

What needs to be noted is that most of the findings discussed and the current study's findings have focused on educated women or those still in school. Therefore, it is a concern that knowledge about the sickness and its screen activity is not high even in these highly educated populations. This calls for more intensive promotion of education of cervical cancer, the associated hazard factors, and issues concerning the screening since this sickness is one of the commonest cancers amongst Ghanaian females.

Practices for cervical cancer screening teacher trainees engage in

This research showed that only 17.1 percent of respondents underwent screening for the sickness before. About 80.7 of the respondents have not had a screening for the sickness before. Furthermore, it was discovered that most women who had cervical cancer screening have only been screened once. Most females that have gone for cervical cancer screening also reported that they experienced some complications from the screening. Generally, it has become evident that the screening agreement about the sickness was minimal amongst the respondents in this research.

The findings give support to the outcome of several previous studies. Okunowo and Smith-Okonu (2020) revealed that only a small portion of women in Lagos had ever gotten screene. Specifically, only 18.4 percent of 145 females were screened for the sickness. Hoque, Ghuman, Coopoosmay,

74

and Van Hal (2014) also indicated that among 243 university students in South Africa, only a small portion of the students (15%) had undertaken the Pap smear test. In a similar vein, Mutambara, Mutandwa, Mahapa, Chirasha, Nkiwaneb, and Shangahaidonhi (2017) found that women's knowledge and attitudes were relatively high positive toward women the sickness, their practices of the sickness screening were poor.

It was found in the study of Ahmed, Sabitu, Idris, and Ahmed (2013) that while market females in Niger had a positive attitude toward cervical cancer screening (80.4 percent), their level of practice was poor (15.4 percent). Bansal, Pakhare, Kapoor, Mehrotra, and Kokane (2015) also discovered that females' commitment to the sickness screening is low despite having a low level of information and a favourable attitude toward cervical cancer in practice. All of these things were found to be true in the current investigation.

Jassim, Obeid, and Al Nasheet (2018) investigated the problem of "knowledge, attitudes, and behaviours of females who attend primary care health centres in Bahrain for cervical cancer screening." They found that 40.7 percent (122 respondents) have ever undergone a Pap smear. This figure was substantially higher than the present study's figure.

Overall, it has become clear that a small portion of young women have had cervical cancer screening in most societies. This is why the present research findings confirmed the findings of several previous studies.

Attitudes of teacher trainees towards cervical cancer screenings

The research indicated; that most of the participants (57.6%) have favourable attitudes toward screening for cervical cancer, while the remaining 42.4% of respondents had a negative attitude. They had favourable views

75

towards some aspects of cervical cancer screening and unfavourable views towards some other aspects of cervical cancer screening.

Several findings came up regarding the attitude towards specific factors relating to the sickness. Specifically, the participant indicated that the thought of the sickness screening scares them. Furthermore, more than half of the participants expressed concern that sickness screening could jeopardise their relationship with their boyfriend, and they expressed a wish for the screening to be conducted by a female health worker.

However, the respondents disagreed with not having the sickness screening if they were to make payment. In essence, they would have cancer screening even if they are paying. Also, the majority of the respondents did not accept that when there is cancer growth in their destiny, having cervical cancer screening would not stop it. Furthermore, the respondents believed that their ethnicity or religious beliefs would not resist them from receiving cervical cancer screening.

The data support Mutambara et al. (2017) findings that the many females from all socioeconomic classes believe the test is inexpensive, are ready to go for cervical cancer check-ups when they notice precancerous lesions, and that their religious beliefs would not affect the decisions they made to get screened for the sickness. In Ghana, research by Kwarase, Adu-Kyere, and Der (2019), which investigated a problem on "knowledge, attitude and practice of cervical cancer screening among 203 women in Bongo district," showed that 85.6% of respondents were in favour of undertaking the sickness screening if the service is available. Mengasha et al. (2020) conducted a study among 770 women between 15 and 49 years in Gondar

76

town, Ethiopia, and revealed that women sometimes have favourable attitudes toward screening of the sickness and sometimes negative attitudes toward the screening.

Jassim et al. (2018) investigated the knowledge, attitudes, and practises of women attending primary care health centres in Bahrain for cervical cancer screening, finding that most respondents felt ashamed when male doctor examine them and that many had positive attitudes toward the HPV vaccine. A study by Mulatu, Motma, Seid, and Tadesse (2017) among female university students showed that women in the study had a 61.2 percent positive attitude toward cervical cancer screening. Aweke et al. (2017), also surveyed 583 women about their attitudes and practised of cervical cancer screening and found majority of respondents had a negative opinion toward the procedure.

From the discussion, there is no consensus concerning attitudes of females on cervical cancer screening. In some contexts, women showed constructive attitudes toward the screening of the sickness, while in others, women showed negative attitudes toward the screening of the sickness. In this research, however, most respondents were favourable towards some aspects of cervical cancer screening and unfavourable towards some other aspects. Their overall neutral attitude could be because these women were not having enough knowledge concerning the sickness and its screening process.

Barriers to cervical cancer screening among teacher trainees

The researchwork revealed that the main blockades to cervical cancer screening was accessibility to screening services, fear of positive results, financial cost, and difficulty accessing a doctor. Some other

77

significant barriers were the need for reminders and a male doctor conducting the screening. These barriers could be categorised into those relating to the individual, the health care providers, and the economic system.

The findings supports that of McFarland, Gueldner, and Mogobe (2016) that barriers to cervical cancer screening are classified as either individual, health care providers, or system-based barriers. Common barriers are poverty, poor public health education about cervical cancer, religious and socio-cultural barriers (Ebu, Mupepi, Siakwa & Sampselle, 2015; Ndikom & Ofi, 2012; Udigwe, 2006).

Moreover, the findings are consistent with those of Black, Hyslop, and Richmond (2019), who discovered that humiliation, fear of screening procedures and positive results, poor resources in a health facility and difficulty of access to screening centres as the main barrier to cervical cancer screening among Ugandan women. Ferlay, Bray, and Pisani (2004), opined that inadequate health care accessibility and the absence of information concerning the technique have been blockades to Papanicolaou smear usage amongst urban South-Western American Indian females. Access to sickness screening centres is a significant problem that creates a barricade of cervical cancer screening (Okunowo & Smith-Okonu, 2020).

Further, Ndejjo, Mukam, Kiguli, and Musoke (2017) used a focused group discussion of 119 females between 25 and 49 years showed that health care challenges, poverty, fear of screening outcome, and having no information concerning the sickness screening were blockades for uptake of the sickness "cervical cancer" screening. Collins et al. (2002) said health

78

workers have to recognise it as a significant influence on some females and try to assist them to overcome this if having a discussion on screening of the cervix and having the tests. In a study by Liebermann et al. (2020) using six focus group discussions among 64 Dominican women each in Spanish urban, suburban and rural areas, revealed that the stigma of having cervical cancer from screening tests and fear were the major barriers regarding screening of the sickness.

It is obvious from the discussion that the difficulty of access, cost, and anxiety of screening technique and outcome are major barriers to the commitment to the sickness screening. The current study, as well as all of the other studies discussed, have corroborated these findings.

Demographic Factors Associated with Teacher Trainee's Knowledge, Attitude, and Practice of Cervical Cancer Screening

The results indicated that age had no link with knowledge about the screening of the sickness likewise attitude towards its screening. However, age-related to the practice of sickness screening. Furthermore, it had been discovered that while marital status had no bearing on cervical cancer screening knowledge, it influenced attitudes about sickness screening and the practice of sickness screening. Finally, religion was linked to attitudes toward cervical cancer screening and the practice of cervical cancer screening, but not to the knowledge of screening for cervical cancer.

Information concerning the sickness screening is unrelated to any demographic characteristics from the finding. However, the participants' attitudes and practices toward screening the sickness were linked to their age, marital status, and religion. The outcome concur with that of "Jassim et al. (2018) explored the knowledge, attitudes, and practices of women attending

primary care health centres for cervical cancer screening in Bahrain and revealed that cervical cancer screening was dependent on the marital status of the females. Specifically, married women were more likely to screen for cervical cancer than single women". Similarly, Maxwell, Bancej, Snider, and Vik (2001) revealed that nonfulfillment of the sickness screening was the major problematic issue amongst females in several settings apart from their ages, tribe, educational level, and marital status. Bansal et al. (2015) discovered that cervical cancer screening among women is low in India and depends on age and marital status. Also, Tekle, Wolka, Nega, Kumma, and Koyira (2020) assessed a problem in knowledge, attitude, and practice towards cervical cancer screening in Wolaita Zone in Southern Ethiopia and found that the practice of undertaking the sickness screening is dependent upon the age, marital status and religion of women. All of these have been confirmed in the current study. Therefore, for women, attitudes and practices about cervical cancer screening are most influenced by age, marital status, and religious group (Lewis, 2004; Broutet, 2012).

On the other hand, the current research findings contradicts the findings of some studies. For instance, Mutambara et al. (2017) discovered that age, tribe, degree of education, and even marital status had no bearing on cervical cancer preventative measures. Ghosh et al. (2021) investigated the knowledge, attitudes, and practices (KAP) of tribal women in coastal Karnataka, southern India, regarding cervical cancer screening. They discovered that knowledge scores were significantly related to the participants' age, marital status, level of education, socioeconomic status, and tribe. This was in contrast to the findings of this reserach, which found that

80

knowledge of cervical cancer screening was unrelated to any demographic characteristics.

Summary

This chapter contains the study's findings and discussions. Five research questions were answered in this chapter. Frequencies, percentages, and chi-square were employed for analysis. Overall, it was found that knowledge, attitude, and practice of cervical cancer screening were not satisfactory. The findings were discussed in relation to previous literature

81
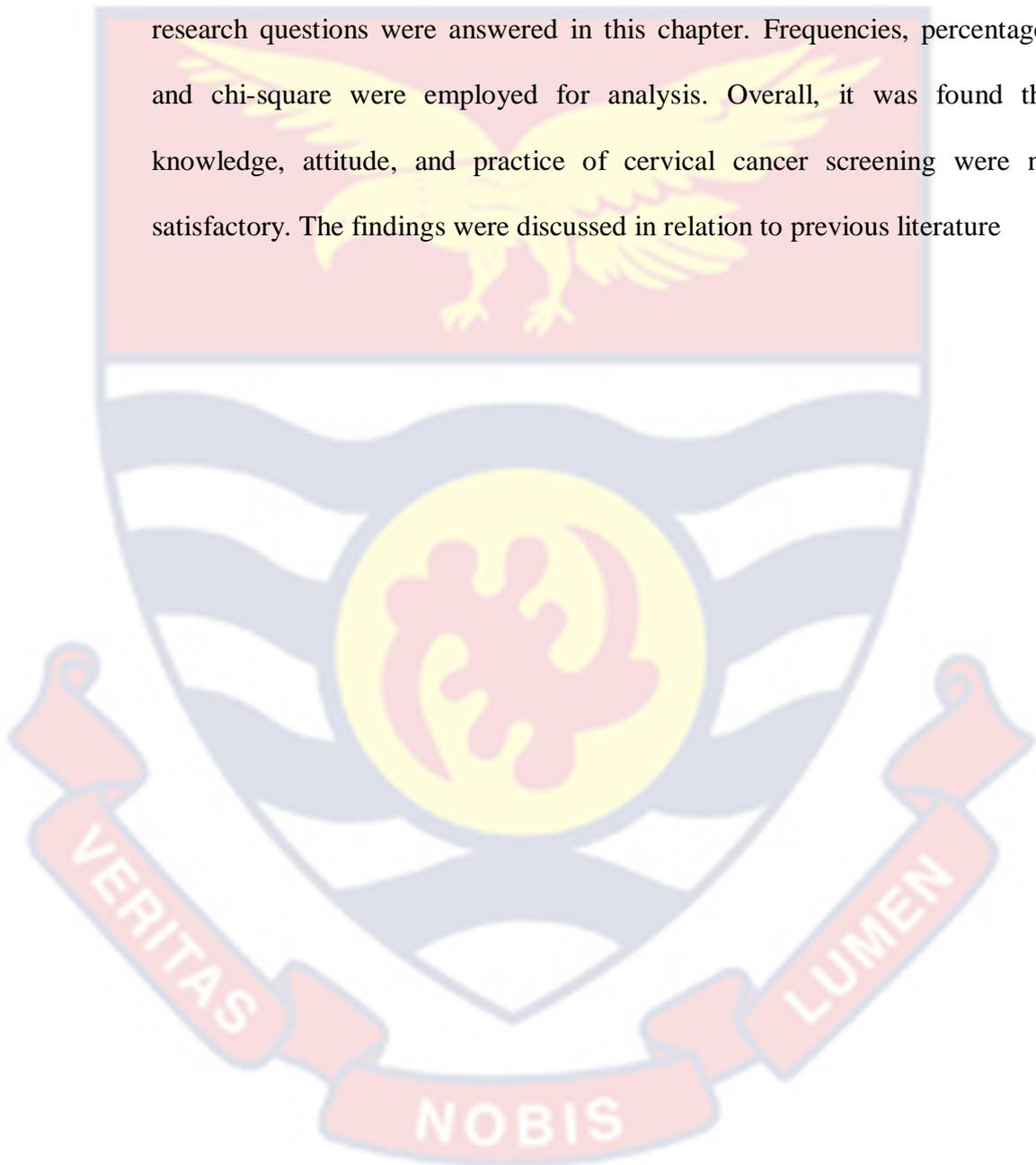
CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This chapter is organised under the following sub-headings: summary, key findings, conclusions, recommendations, and suggestions for further research.

Summary of Key Findings

The knowledge, attitude, and practice of cervical cancer screening among teacher trainees in Ashanti Region colleges of education were investigated. The study aimed to answer five research questions in particular:

1. What is the level of knowledge on cervical cancer among teacher trainees at Colleges of Education in the Ashanti Region?

2. Which practices of cervical cancer screening do female teacher trainees at Colleges of Education in the Ashanti Region engage in?

3. What are the attitudes toward cervical cancer screening among female teacher trainees at Colleges of Education in the Ashanti Region?

4. What are the barriers to cervical cancer screening among female teacher trainee Colleges of Education?

5. What demographic factors are associated with female teacher trainees' knowledge, attitude, and practice of cervical cancer screening?

Literature relating to the study was reviewed. The theoretical aspect of the review dealt with; Social-Cognitive Models of Health Behaviour,

82

Protection Motivation Theory, The Health Belief Model, The Theory of Planned Behaviour, and Katie Eriksson's Theory of Caritative Caring. The second section of the literature review clarified ideas and demonstrated how the study's variables are linked. Some of the concepts reviewed were cervical cancer, cervical cancer in Africa, cervical cancer statistics in Ghana, Signs and Symptoms of cervical cancer, factors contributing to cervical cancer, and cervical cancer risk factors. Some empirical studies about cervical cancer knowledge, attitudes and practices of cervical cancer screening, barriers to screening, and the association between demographic variables and cervical cancer screening were reviewed.

In this study, a descriptive survey design was adopted. The survey population included 4,012 female students from seven different colleges of education. St. Louis College of Education, Wesley College of Education, St. Monica College of Education, Offinso College of Education, S.D.The schools in question were the College of Education, Akrokerri College of Education, and Agogo Presbyterian College of Education. The study's participants were chosen using stratified sampling and convenient sampling approaches. Using a sample size determination chart for proportions, a sample size of 582 was calculated. The Cervical Cancer Awareness Measure (Cervical CAM) and the Breast and Cervical Cancer Screening Questionnaire were employed to collect this study's data. Frequencies and percentages, as well as chi-square, were used for data analysis.

Major Findings

Based on the study, it was determined that female teacher trainees were familiar with some aspects of cervical cancer but were unaware of others.

Specifically, female teacher trainees lacked knowledge about the accessibility of the vaccine, which can be utilised to prevent the sickness and some of its risk factors but had knowledge of the dangers of the cervical sickness cancer.

Secondly, the study revealed that the uptake of the cervical cancer screening with female teacher trainees was low. Thus, only a small portion of teacher trainees has screened for cervical cancer.

Further, it was evident from the study that most teacher trainees have favourable views towards some aspects of the sickness screening and unfavourable views towards some aspects of cervical cancer screening. Specifically, some female teacher trainees were uncomfortable and scared of the process and results of cervical cancer screening, while some teacher trainees did not mind going for the screening even if they had to pay and were sure that their religious belief or ethnicity would not prevent them from having the screening.

In addition, it was also revealed that difficulty in accessing cervical cancer screening centres and doctors for the screening, the cost of screening, and the fear of positive test are the main barriers to cervical cancer screening for teacher trainees.

Finally, it was evident that female teacher trainees' age, marital status, and religion could influence the attitudes toward screening the sickness and the screening practices. However, knowledge about cervical cancer screening was unrelated to the age, marital status, and religion of teacher trainees.

Conclusion

With reference to the findings of the study, the researcher concludes that:

84

Female Teacher trainees in the Ashanti region had indept knowledge of cervical cancer. Also female Teacher trainees in the Ashanti region also had high attitude about cervical cancer screening and were willing to screen for cervical cancer. Variables like knowledge, attitude, age, religion, marital status, and ethnicity had significant influence on willingness to screen for cervical cancer among female teacher trainees in the Ashanti region.

Recommendations

From the findings the following recommendations were made:

1. The Ministry of Education should collaborate with authorities of Colleges of Education in organising seminars to educate female teacher trainees about cervical cancer to improve their knowledge about the illness.

2. The authorities of Colleges of Education should encourage female teacher trainees to screen for cervical cancer.

3. The health unit in Colleges of Education should organise intermittent seminars and workshops for teacher trainees to develop positive attitudes toward cervical cancer screening.

4. The Ministry of Health should prioritise setting up several cervical screening centres at all health centres to increase the accessibility of screening centres in Ghana.

5. Authorities of Colleges of Education should liaise with the Ministry of Health in organising intermittent cervical cancer screening outreaches where specific days can be set aside for teacher trainees to go for screening.

Suggestions for Further Research

Based on the study's findings and conclusions, the following recommendations for future research have been made.

❖ A similar study could be done using participants from other parts of the country for comparison.

REFERENCES

Abotchie, P., & Shokar, N. (2009). Cervical cancer screening among college students in Ghana; knowledge and health beliefs. *Int Gynecol Cancer*, *19*, 412-426.

Adanu, R. (2002). Cervical Cancer Knowledge and Screening in Accra, Ghana. *Journal of Women's Health and Gender-Based Medicine*, *11*, 487-498.

Adanu, R., Seffah, J. D.,, Duda, R, & et al. (2010). Clinic visits and cervical cancer screening in Accra. *Ghana Med Journal*, *44*, 59-74.

Ahmed, S. A., Sabitu, K., Idris, S. H., & Ahmed, R. (2013). Knowledge, attitude and practice of cervical cancer screening among market women in Zaria, Nigeria. *Nigerian Medical Journal*, *54*(5), 316-330.

Ajzen, D. & Fishbein, G. (1980). Physical activity participation: Social cognitive theory versus the theories of reasoned action and planned behavior. *Journal of Sport and Exercise Psychology*, *12*(4), 388-415.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179-201.

Alligood, A. M., & Tomey, L. (2010). Nursing Theorists and Their Work by MR Alligood and AM Tomey (Eds.)(Maryland Heights, MO: Mosby Elsevier, 2010). *Nursing Science Quarterly*, *25*(2), 201-212.

Amankwah, E., Ngwakongnwi, E., & Quan, H. (2009). Why many visible minority women in Canada do not participate in cervical cancer screening. *Ethnicity & Health*, *14*(4), 337-359.

Amedahe, F. K. (2002). *Fundamentals of educational research methods*. Mimeograph, UCC, Cape Coast.

American Cancer Society. (2013). Retrieved from
https://www.cancer.org/research/cancer-facts-statistics/all-cancer-
facts-figures/cancer-facts-figures-2013.html.Accessed on 14/01/2020.

Ampofo, A., Cumber, S. N, Nkrumah, I., Ibitoye, B. M., Agyemang, B. A.,
Ofosu, E. S., & Tsoka-Gwegweni, J. M. (2019). The level of
knowledge and associated socio-demographic factors on cervical
cancer among women: A cross-sectional study at Kenyase Bosore
community, Ghana. *Pan African Medical Journal*, *34*, 44-56.

Aniebue, P. N., & Aniebue, U. U. (2010). Knowledge, perceptions and
practices of lifestyle-modification measures among adult hypertensives
in Nigeria. *Transactions of the Royal Society of Tropical Medicine and
Hygiene*, *104*(1), 55-70.

Annan, F., Asante, K.O,, & Kugbey, N.,. (2019). Perceived seriousness
mediates the influence of cervical cancer knowledge on screening
practices among female university students in Ghana. *BMC Women
Health*, *19*, 140-157.

Anorlu, R. I. (2008). Cervical cancer: The sub-Saharan African
perspective. *Reproductive Health Matters*, *16*(32), 41-49.

Arbyn, M., Elisabete, W., Bruni, L., Saraiya, M., Ferlay, J., & Bray, F. (2020).
Estimates of incidence and mortality of cervical cancer in 2018: A
worldwide analysis. *Lancet Glob Health*, *8*, e191–203.

Arevian, & Noureddine, J., & Kabakian, C. (2007). Knowledge and attitudes
of cervical cancer screening among Caribbean women: A qualitative
interview study from Barbados. *Women & Health*, *55*(5), 566-579.

88

Arman, M., & Rehnsfeldt, A. (2007). Thelittle extra'that alleviates suffering. *Nursing Ethics*, *14*(3), 372-386.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, *40*(4), 471-482.

Asante, K. S., Mohammed, A. G., Delle, A. A. & Mumuni, A. N. (2019). Cervical cancer knowledge and screening among schooling and uneducated females within Tamale-Ghana. *Journal of Advances in Medicine and Medical Research*, *29*(1), 1-15.

Aweke, Y.H., Ayanto, S.Y. & Ersado, T.L. (2017). *Knowledge, attitude and practice for cervical cancer prevention and control among women of childbearing age in Hossana Town, Hadiya zone, Southern Ethiopia:* Community-based cross-sectional study. *PLoS One*,12(7), e0181415.

Balogun, M. R., Odukoya, O. O., Oyediran, M. A. & Ujomu, P. I. (2012). Knowledge of cervical cancer and its risk factors among women residing in two urban slums in Lagos, Nigeria. *Niger Medical Practice*. *61*, 74–91.

Bansal, A. B., Pakhare, A. P., Kapoor, N., Mehrotra, R., & Kokane, A. M. (2015). Knowledge, attitude, and practices related to cervical cancer among adult women: A hospital-based cross-sectional study. *Journal of Natural Science, Biology, and Medicine*, *6*(2), 324-336.

Becker-Dreps, S., Otieno, W. A., Brewer, N. T., Agot, K., & Smith, J. S. (2010). HPV vaccine acceptability among Kenyan women. *Vaccine*, *28*(31), 4864-4877.

Bharadwaj, P., Deutsch, B., & Novotny, L. (2009). Optical antennas. *Advances in Optics and Photonics*, *1*(3), 438-453.

Bigby, J., Ko, L. K., Johnson, N., David, M. M., Ferrer, B., & Boston, R. E. A. C. H. (2003). A community approach to addressing excess breast and cervical cancer mortality among women of African descent in Boston. *Public Health Reports*, *118*(4), 338-452.

Binka, C., Nyarko, S. H. , & Doku, D. T. . (2016). Cervical cancer knowledge, perceptions and screening behaviour among female university students in Ghana. *J Cancer Education*, 31, 322-337.

Binka, C., Nyarko, S. H., Awusabo-Asare, K. , & Doku, D. T. (2019). Barriers to the uptake of cervical cancer screening among women in Ghana. *BioMed Research International*, *2*, 1-8.

Bish, A., Sutton, S., & Golombok, S. (2000). Predicting uptake of a routine cervical smear test: A comparison of the health belief model and the theory of planned behaviour. *Psychology and Health*, *15*(1), 35-50.

Black, E., Hyslop, F. & Richmond, Robyn. (2019). Barriers and facilitators to uptake of cervical cancer screening among women in Uganda. A systematic review. *BMC Women's Health*, *19*, 108-125.

Boateng, A.A. & Adesuyi, T. A. (2018). A statistical approach towards cervical cancer awareness among women in Ghana. *Asian Journal of Medicine and Health*, *13*(3), 1-10.

Bosche, R. M., Muñoz, J. (2008). Drug-associated changes in amino acid residues in Gag p2, p7NC, and p6Gag/p6Pol in human immunodeficiency virus type 1 (HIV-1) display a dominant effect on replicative fitness and drug response. *Virology*, *378*(2), 272-281.

90

Bradley, B. A., Houghton, R. A., Mustard, J. F., & Hamburg, S. P. (2006). Invasive grass reduces aboveground carbon stocks in shrublands of the Western US. *Global Change Biology*, *12*(10), 1815-1832.

Branoff, T., & Wiebe, E. (2007). Face-to-face, hybrid, or online?: Issues faculty face redesigning an introductory engineering graphics course. *The Engineering Design Graphics Journal*, *73*(1), 1-9

Broutet, N. (2012). *Interventions for encouraging sexual behaviours intended to prevent cervical cancer* (last revised: 1 April 2012). The WHO Reproductive Health Library; Geneva: World Health Organization. See at http://apps.who.int/rhl/gynaecology/cancer/cd001035_broutetn_com /en/.

Bruni, L., Barrionuevo-Rosas, L., Albero, G., Aldea, M., Serrano, B., & Valencia, S. (2015). *ICO (Institute Català d'Oncologia)/ IARC Information Centre on HPV and Cancer (HPV Information Centre). Summary Report: Human Papillomavirus and related diseases.* ICO (Institute Català d'Oncologia)/ IARC Information Centre.

Bruni, L., Barrionuevo-Rosas, L., Albero, G., Aldea, M., Serrano, B., & Valencia, S. (2018). *ICO (Institute Català d'Oncologia)/ IARC Information Centre on HPV and Cancer (HPV Information Centre). Summary Report: Human Papillomavirus and related diseases.* ICO (Institute Català d'Oncologia)/ IARC Information Centre.

Burak, L. J., & Meyer, M. (1997). Using the Health Belief Model to examine and predict college women's cervical cancer screening beliefs and behavior. *Health Care for Women International*, *18*(3), 251-262.

91

Carpenter, C. J. (2010). A meta-analysis of the effectiveness of health belief model variables in predicting behavior. *Health Communication*, *25*(8), 661-672.

Castellsagué, X. (2012). Prevalence and genotype distribution of human papillomavirus infection of the cervix in Spain: The CLEOPATRE study. *Journal of Medical Virology*, *84*(6), 937-956.

Chadza, E., Chirwa, E., Maluwa, A., Malata, A., Kazembe, A. & Chimwaza, A. (2012). Factors that contribute to delay in seeking cervical cancer diagnosis and treatment among women in Malawi. *Journal of Scientific Research,* 1015–1035.

Chuang, L.T., Temin, S., & Camacho, R. (2016). Management and care of women with invasive cervical cancer: American society of clinical oncology resource-stratified clinical practice guideline. *J Glob Oncol, 2*, 311–328.

Clark, L. A., & Watson, D. (2019). Constructing validity: New developments in creating objective measuring instruments. *Psychological Assessment*, *31*(12), 1412-1429.

Cochran, W., & Snedecor, G.W. (1989). In W. Cochran, & Snedecor, G.W, *Statistical methods. Ames.* Iowa: Iowa State Press.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education (Sixth).* Oxon: Routledge.

Coker, A. L., DeSimone, C. P., Eggleston, K. S., White, A. L., & Williams, M. (2009). Ethnic disparities in cervical cancer survival among Texas women. *Journal of Women's Health*, *18*(10), 1577-1593.

Coker, A. L., Hopenhayn, C., DeSimone, C. P., Bush, H. M., & Crofford, L. (2009). Violence against women raises risk of cervical cancer. *Journal of Women's Health*, *18*(8), 1179-1195.

Creswel, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Los Angeles: University of Nebraska–Lincoln.

Creswell, J. W. (2014). *A concise introduction to mixed methods research.* . SAGE Publications.

Crosbie, E. J., Einstein, M. H., Franceschi, S., & Kitchener, H. C. (2013). Human papillomavirus and cervical cancer. *The Lancet*, *382*(9895), 889-899.

Curtis, R. (2017). Development of an instrument to measure Faculty's information and communication technology access (FICTA). *Education and Information Technologies*, *23*(1), 253-269.

Dasari, S., Wudayagiri, R., & Valluru, L. . (2015). Cervical cancer: biomarkers for diagnosis and treatment. *Clin Chim Acta*, *4*, 7-21.

Denny-Smith, T., Bairan, A., & Page, M. C. (2006). A survey of female nursing students' knowledge, health beliefs, perceptions of risk, and risk behaviors regarding human papillomavirus and cervical cancer. *Journal of the American Academy of Nurse Practitioners*, *18*(2), 62-79.

Downs, L. S., Smith, J. S., Scarinci, I., Flowers, L., & Parham, G. (2008). The disparity of cervical cancer in diverse populations. *Gynecologic Oncology*, *109*(2), 22-30.

Du Toit, J. (2009). A conceptual framework of designs for urban design research. . *Urban Design Research: Method and Application*, *3*, 90-112.

Durowade, K. A., Osagbemi, G. K., Salaudeen, A. G., Musa, O. I., Akande, T. M., Babatunde, O. A., ... & Kolawole, O. M. (2012). Prevalence and risk factors of cervical cancer among women in an urban community of Kwara State, north central Nigeria. *J Prev Med Hyg*, *53*(4), 213-224.

Ebu, N., Amissah-Essel, S., Asiedu, C., Akaba, S. , & Perek, K. A. (2019). Impact of health education intervention on knowledge and perception of cervical cancer and screening for women in Ghana. *BMC Public Health*, 19, 1505-1515.

Ebu, N., Mupepi, S. C., Siakwa, M.P., & Sampselle, C. M. (2015). Knowledge, practice, and barriers toward cervical cancer screening in Elmina, southern Ghana. *International Journal of Women's Health*, *7*, 31–39.

Ertem, G. (2009). Awareness of cervical cancer risk factors and screening behaviour among nurses in a rural region of Turkey. *Asian Pac J Cancer Prev*, *10*(5), 735-748.

Ferlay, J., Ervik, M., Lam, F., Colombet, M., Mery, L. (2018). Available from: https://gco.iarc.fr/). Global Cancer Observatory: Cancer Today. Lyon, France. *International Agency for Research on Cancer, 5*(7), 1-9.

Ferlay, J., Shin, H. R., Bray, F., Forman, D., Mathers, C., & Parkin, D. M. (2010). Estimates of worldwide burden of cancer in 2008: GLOBOCAN 2008. *International Journal of Cancer*, *127*(12), 2893-2917.

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: SAGE
 Publications Ltd.

Fisher, S. R. A. (1954). *Statistical methods for research workers* (12th ed.).
 New York: Hafner Publishing Company Inc.

Fleiss, J. L., Levin, B., & Paik, M. C. (2003). *Statistical methods for rates and
 proportions* (3rd ed.). New Jersey: John Wiley & Sons, Inc.,
 Publication.

Floyd, D. L., Prentice-Dunn, S., & Rogers, R. W. (2000). A meta-analysis of
 research on protection motivation theory. *Journal of Applied Social
 Psychology*, *30*(2), 407-429.

Foster, A. & Anderson, J. (2008). British HIV Association and Children's HIV
 Association guidelines for the management of HIV infection in
 pregnant women 2008. *HIV Medicine*, *9*(7), 452-470.

Fracnkel, J. R., & Waller, N. E. (2003). *How to design and evaluate research
 in Education*. New York: McGraw-HIV Inc.

Gay, J., Geoffry, L. I. Peter, S. (2013). Data collection techniques a guide for
 researchers in humanities and education. *International Research
 Journal of Computer Science and Information Systems (IRJCSIS)*, *2*(3),
 40-54.

Gay, L. R. (2002). *Education Research Competencies for Analysis and
 Application.* London: Charles E. Milton Keynes Philadelphia
 Company.

Gharoro, F. H., & Ikeanyi, Y. M. (2013). The utilization of Pap tests among
 different female medical personnel: A nationwide study in
 Taiwan. *Preventive Medicine*, *56*(6), 406-419.

Ghosh, S., Moledina, N., Hasan, M. M., Jain, S., & Ghosh, A. (2021). Colossal challenges to healthcare workers combating the second wave of coronavirus disease 2019 (COVID-19) in India. *Infection Control & Hospital Epidemiology*, 1-12.

Godin, G., & Kok, G. (1996). The theory of planned behavior: a review of its applications to health-related behaviors. *American Journal of Health Promotion*, *11*(2), 87-98.

Goncalves, H. (2016). Adverse childhood experiences: Prevalence and related factors in adolescents of a Brazilian birth cohort. *Child Abuse & Neglect*, *51*, 21-30.

Gravetter, F. J., & Forzano, L. A. B. (2018). *Research methods for the behavioural sciences*. Cengage Learning.

Harper, D. M., Pleque, M., Harmes, K. M., Jimbo, M., & SheinfeldGorin, S. (2020). Three large-scale surveys highlight the complexity of cervical cancer under-screening among women 45-65 years of age in the United States. *Preventive Medicine*, *130*, 105-126.

Harrison, J. A., Mullen, P. D., & Green, L. W. (1992). A meta-analysis of studies of the health belief model with adults. *Health Education. Research, 5*(10), 40 – 54.

Hennig, P., & Knowles, A. (1990). Factors influencing women over 40 years to take precautions against cervical cancer. *Journal of Applied Social Psychology*, *20*(19), 1612-1621.

96

Heydari, J., & Basiri, Z. (2017). A mathematical model for green supply chain coordination with substitutable products. *Journal of Cleaner Production*, *145*, 232-249.

Hill, D., Gardner, G., & Rassaby, J. (1985). Factors predisposing women to take precautions against breast and cervix cancer. *Journal of Applied Social Psychology, 15*(1), 59-79.

Hoque, M. E., Ghuman, S., Coopoosmay, R., & Van Hal, G. (2014). Cervical cancer screening among university students in South Africa: A theory-based study. *PLoS One*, *9*(11), 111-125.

Howell, L. P., Gurusinghe, S., Tabnak, F., & Sciortino, S. (2009). Cervical cancer screening in medically underserved California Latina and non-Latina women: Effect of age and regularity of Pap testing. *Cancer Detection and Prevention*, *32*(5-6), 372-381.

Jassim, G., Obeid, A., & Al Nasheet, H. A. (2018). Knowledge, attitudes, and practices regarding cervical cancer and screening among women visiting primary health care Centres in Bahrain. *BMC Public Health*, *18*(1), 1-16.

Jemal, A., Bray, F., Center, M. M., Ferlay, J., Ward, E., & Forman, D. (2011). Global cancer statistics. *A Cancer Journal for Clinicians*, *61*(2), 69-90.

Jensen, H. B., Poulsen, N. A., Andersen, K. K., Hammershøj, M., Poulsen, H. D., & Larsen, L. B. (2012). Distinct composition of bovine milk from Jersey and Holstein-Friesian cows with good, poor, or noncoagulation properties as reflected in protein genetic variants and isoforms. *Journal of Dairy Science*, *95*(12), 6905-6917.

97

Katahoire, A. R., Jitta, J., Arube-Wani, J., Kivumbi, G., Murokora, D., Siu, G. & Lyazi, I. (2008). *Formative research report: An assessment of the readiness for the introduction of a cervical cancer vaccine in Uganda.* Kampala: Child Health and Development Center of Makerere University.

Khanna, A. D., & Phillips, S. D. (2011). Single-center experience with implantable cardioverter–defibrillators in adults with complex congenital heart disease. *The American Journal of Cardiology*, *108*(5), 729-744.

Kobina Enos, B., Yensu, J., & Obeng, H. (2020). Global financial crisis and determinants of capital structure: Evidence from Ghanaian non-financial listed firms. *The International Journal of Business and Finance Research*, *14*(1), 35-56.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement,30*, 607 – 620

Kumar, N. P., Joseph, R., Kamaraj, T., & Jambulingam, P. (2007). A226V mutation in virus during the 2007 chikungunya outbreak in Kerala, India. *Journal of General Virology*, *89*(8), 1945-1958.

Kwarase, R., Adu-kyere, D. & Der, E. M. (2019). Cervical cancer: knowledge, attitude and practice of screening among women in Bongo district of the Upper East Region of Ghana. *GynecolReprod Health*, *3*(4), 1-7.

Laikangbam, P., Sengupta, S., Bhattacharya, P., Duttagupta, C., Singh, T. D., Verma, Y., ... & Mukhopadhyay, S. (2007). A comparative profile of the prevalence and age distribution of human papillomavirus type 16/18 infections among three states of India with focus on northeast India. *International Journal of Gynecologic Cancer*, *17*(1), 80-90.

Leathard, H. L., & Cook, M. J. (2009). Learning for holistic care: Addressing practical wisdom (phronesis) and the spiritual sphere. *Journal of Advanced Nursing*, *65*(6), 1318-1327.

Lewis, M. (2004). *A situational analysis of cervical cancer in Latin America and the Caribbean*. Washington, DC: Pan American Health Organization.

Liebermann, E. J., Van Devanter, N., Shirazian, T., Guzman, N. F., Niles, M., Healton, C., & Ompad, D. (2020). Barriers to cervical cancer screening and treatment in the Dominican Republic perspective of focus group participants in the Santo Domingo area. *Journal of Transcultural Nursing*, *3*(2), 121-127.

Loewen, S., & Plonsky, L. (2016). *An A–Z of Applied Linguistics Research Methods*. Macmillan International Higher Education.

Lowy, D. R., & Schiller, J. T. (2006). Prophylactic human papillomavirus vaccines. *The Journal of Clinical Investigation*, *116*(5), 1167-1183.

Makuza, J. D., Nsanzimana, S., Muhimpundu, M. A., Pace, L. E., Ntaganira, J., & Riedel, D. J. (2015). Prevalence and risk factors for cervical cancer and pre-cancerous lesions in Rwanda. *Pan African Medical Journal*, *22*(1), 1-9.

99

Masika, M. M., Ogembo, J. G., Chabeda, S. V., Wamai, R. G., & Mugo, N. (2015). Knowledge on HPV vaccine and cervical cancer facilitates vaccine acceptability among school teachers in Kitui County, Kenya. *PLoS One*, *10*(8), 135-148.

McDonald, J. T., & Neily, J. (2011). Race, immigrant status, and cancer among women in the United States. *Journal of Immigrant And Minority Health*, *13*(1), 27-35.

McEachan, F. F., Conner, J., Taylor, H. G., & Lawton, V. (2014). Time to retire the theory of planned behaviour. *Health Psychology Review*, *8*(1), 1-7.

McFarland, D. M., Gueldner, S. M., & Mogobe, K. D. (2016). Integrated review of barriers to cervical cancer screening in Sub-Saharan Africa. *J NursScholarsh*, *48*, 490-512.

Mengasha, A., Messele, A., & Beletew, B. (2020). Knowledge and attitude towards cervical cancer among reproductive age group women in Gondar town, Northwest Ethiopia. *BMC Public Health*, 20, 209-216.

Milne, S., Sheeran, P., & Orbell, S. (2000). Prediction and intervention in health-related behavior: A meta-analytic review of protection motivation theory. *Journal of Applied Social Psychology*, *30*(1), 106-120.

Mukama, T., Ndejjo, R., Musabyimana, A., Halage, A. A. & Musoke, D. (2017). Women's knowledge and attitudes towards cervical cancer prevention: a cross-sectional study in eastern Uganda. *BMC Women's Health*, *17*, 9-18.

100

Mulatu, K., Motma, A., Seid, M., & Tadesse, M. (2017). Assessment of Knowledge, Attitude, and practice on Cervical Cancer Screening among Female Students of Mizan Tepi University, Ethiopia, 2016. *Cancer BiolTherOncol*., 1, 1-10.

Munoz, S. L., Castellsagne, L. S., Gonzalez, A. R., & Gissman, A. T. (2006). Cervical cancer screening: past, present, and future. *Sexual Medicine Reviews*, *8*(1), 28-37.

Murray, F., & McMillian, S. (1993). Breast Self-Examination. *Nursing for Women's Health*, *10*(1), 66-75.

Mutambara, J., Mutandwa, P., Mahapa, M., Chirasha, V., Nkiwane, S., & Shangahaidonhi, T. (2017). Knowledge, attitudes and practices of cervical cancer screening among women who attend traditional churches in Zimbabwe. *Journal of Cancer Research and Practice*, *4*(2), 53-68.

National Cancer Institute. (2008). National cancer institute patient navigation research program: methods, protocol, and measures. *Cancer*, *113*(12), 3391-3399.

National Cancer Institute (2011). National Cancer Institute pediatric preclinical testing program: model description for in vitro cytotoxicity testing. *Pediatric Blood & Cancer*, *56*(2), 239-249.

National Commission for Tertiary Education Report. (2019). Does higher education equip graduate students with the employability skills employers require? The perceptions of employers in Ghana. *Journal of Further and Higher Education*, *45*(10), 1311-1324.

National Institute of Health. (2008). Saying no isn't NICE—the travails of Britain's National Institute for Health and Clinical Excellence. *New England Journal of Medicine*, *359*(19), 1977-1989.

Ndejjo R., Mukama T., Kiguli, J., & Musoke, D. (2017). Knowledge, facilitators, and barriers to cervical cancer screening among women in Uganda: A qualitative study. *BMJ Open*, *7*, 16-28.

Ndikom, C. M. & Ofi, B. A. (2012). Awareness, perception, and factors affecting utilization of cervical cancer screening services among women in Ibadan, Nigeria: A qualitative study. *Reproductive Health*, 9, 11-19.

Nelson, W., Moser, R. P., Gaffey, A., & Waldron, W. (2009). Adherence to cervical cancer screening guidelines for US women aged 25–64: Data from the 2005 Health Information National Trends Survey (HINTS). *Journal of Women's Health*, *18*(11), 1759-1768.

Nnodu, O., Erinosho, L., Jamda, M., Olaniyi, O., Adelaiye, R., Lawson, L., ... & Zamani, A. (2010). Knowledge and attitudes towards cervical cancer and human papillomavirus: A Nigerian pilot study. *African Journal of Reproductive Health*, *14*(1), 1-10.

Oboma, Y. I., & Onyije, F. M. (2012). Cervical Cancer: An emerging public health issue in Bayelsa state metropolis. *J Phys Pharm Adv*, *2*, 133-139.

Ogah, O. S. (2013). Cardiovascular risk factors and non-communicable diseases in Abia state, Nigeria: report of a community-based survey. *International Journal of Medicine and Biomedical Research*, *2*(1), 57-68.

Ogunbowale, T., & Lawoyin, T. O. (2008). Cervical cancer risk factors and predictors of cervical dysplasia among women in south-west Nigeria. *Australian Journal of Rural Health*, *16*(6), 338-348.

Okunowo, A. A. & Smith-Okonu, S. T. (2020). *Cervical cancer screening among urban women in Lagos, Nigeria: Focus on barriers and motivators for screening*. Niger J Gen Pract, *18*, 10-19

Olubodun, T., Odukoya, O. O., & Balogun, M. R. (2019). Knowledge, attitude and practice of cervical cancer prevention among women residing in an urban slum in Lagos, South West, Nigeria. *Pan African Medical Journal*, *32*, 130-141.

Opoku, C. A., Browne, E. N. L., Spangenberg, K., Moyer, C., Kolbilla, D., & Gold, K. J. (2016). Perception and risk factors for cervical cancer among women in northern Ghana. *Ghana Medical Journal*, *50*(2), 84-96.

Owoeye, I. O. G., & Ibrahim, I. A. (2013). Knowledge and attitude towards cervical cancer screening among female students and staff in a tertiary institution in the Niger Delta. *Int J Med Biomed Research*, 2, 48–56.

PATH and National AIDS Research Institute. (2009). HIV care visits and time to viral suppression, 19 US jurisdictions, and implications for treatment, prevention and the national HIV/AIDS strategy. *PloS One*, *8*(12), 843-858.

Pitts, M. A., & Clarke, S. (2014). Isolating neural correlates of conscious perception from neural correlates of reporting one's perception. *Frontiers in Psychology*, *5*, 1078-1088.

Randall, T.C. and Ghebre, R. (2016). Challenges in prevention and care delivery for women with cervical cancer in sub-Saharan Africa. *Front Oncol*, *6*, 160-171.

Redding, L. E., Brooks, C., Georgakakos, C. B., Habing, G., Rosenkrantz, L., Dahlstrom, M., & Plummer, P. J. (2020). Addressing individual values to impact prudent antimicrobial prescribing in animal agriculture. *Frontiers in Veterinary Science*, *7*, 297-310. research on Protection Motivation Theory

Révész, A. (2012). 11 Coding Second Language Data Validly and Reliably. *Research methods in second language acquisition*, *6*(11), 203-213.

Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change1. *The Journal of Psychology*, *91*(1), 93-114.

Rosenstock, I. M. (1974). The health belief model and preventive health behavior. *Health Education Monographs*, *2*(4), 354-376.

Ross, J. S., Nuñez-Smith, M., Forsyth, B. A., & Rosenbaum, J. R. (2008). Racial and ethnic differences in personal cervical cancer screening amongst post-graduate physicians: Results from a cross-sectional survey. *BMC Public Health*, *8*(1), 1-16.

Rota, M., Bosetti, C., Boccia, S., Boffetta, P., & La Vecchia, C. (2014). Occupational exposures to polycyclic aromatic hydrocarbons and respiratory and urinary tract cancers: an updated systematic review and a meta-analysis to 2014. *Archives of toxicology*, *88*(8), 1479-1490.

Roura, A., & Rasel, E. M. (2014). Quantum test of the universality of free fall. *Physical Review Letters*, *112*(20), 203-216.

Royal Thai College of Obstetricians and Gynecologists. (2003). Royal Thai College of Obstetricians and Gynaecologists (RTCOG)/JHPIEGO Corporation Cervical Cancer Prevention Group [corrected]. Safety, acceptability, and feasibility of a single-visit approach to cervical-cancer prevention in rural Thailand: A demonstration project. *Lancet*, *361*(93), 814-820.

Sanz-Barbero, B., Regidor, E., & Galindo, S. (2011). Impact of geographic origin on gynecological cancer screening in Spain. *Revista de Saude Publica*, *45*, 1019-1026.

Saslow, D., & Lawson, H.W. (2012). "American cancer society, American society for colposcopy and cervical pathology, and American society for clinical pathology screening guidelines for the prevention and early detection of cervical cancer," CA. *A Cancer Journal for Clinicians*, *62*(3), 147-159.

Saxena, U., Sauvaget, C., & Sankaranarayanan, R. (2012). Evidence-based screening, early diagnosis and treatment strategy of cervical cancer for national policy in low-resource countries: example of India. *Asian Pacific Journal of Cancer Prevention*, *13*(4), 1699-1703.

Schiffman, M., Castle, P. E., , Jeronimo, J., , Rodriguez, A. C., & Wacholder, S. (2007). Human papillomavirus and cervical cancer. *The Lancet*, *370*(9590), 890-907.

Sheeran, P. (2002). Intention—behavior relations: a conceptual and empirical review. *European Review of Social Psychology*, *12*(1), 1-26.

Sheeran, P., & Orbell, S. (2000). Using implementation intentions to increase attendance for cervical cancer screening. *Health psychology*, *19*(3), 283-295.

Siegel, R., Ward, E., Brawley, O., & Jemal, A. (2011). Cancer statistics, 2011: the impact of eliminating socioeconomic and racial disparities on premature cancer deaths. *CA: A Cancer Journal For Clinicians*, *61*(4), 212-236.

Sileyew, K. J. (2019). *Research design and methodology*. In *Cyberspace* (pp. 1-12). Rijeka: Intech Open.

Smith, R. A., Cokkinides, V., & Brawley, O. W. (2008). Cancer screening in the United States, 2008: A review of current American Cancer Society guidelines and cancer screening issues. *CA: A Cancer Journal for Clinicians*, *58*(3), 161-179.

Sutton, S. (2001). Back to the drawing board? A review of applications of the transtheoretical model to substance use. *Addiction*, *96*(1), 175-186.

Tabnak, F., Müller, H. G., Wang, J. L., Zhang, W., & Howell, L. P. (2010). Timeliness and follow-up patterns of cervical cancer detection in a cohort of medically underserved California women. *Cancer Causes & Control*, *21*(3), 411-420.

Tekle, T., Wolka, E., Nega, B., Kumma, W. P., & Koyira, M. M. (2020). Knowledge, attitude and practice towards cervical cancer screening among women and associated factors in hospitals of Wolaita Zone, Southern Ethiopia. *Cancer Management and Research*, *12*, 993-1010.

Torre, L. A., Sauer, A. M. G., Chen Jr, M. S., Kagawa-Singer, M., Jemal, A., & Siegel, R. L. (2016). Cancer statistics for Asian Americans, Native Hawaiians, and Pacific Islanders, 2016: Converging incidence in males and females. *CA: A Cancer Journal for Clinicians*, *66*(3), 182-192.

Tsikouras, P., Zervoudis, S., Manav, B., Tomara, E., Romanidis, C., & Glazios, G. (2016). Cervical cancer: screening, diagnosis & staging. *JBUON*, *21*(2), 320-325.

Udigwe, G. O. (2006). Knowledge, attitude, and practice of cervical cancer screening (pap smear) among female nurses in Nnewi, Southeastern Nigeria. *Niger J Clin Pract,* 9, 40-49.

Ugochi, R. I. (2015). Comparative assessment of the knowledge, attitude, and practice of cervical cancer and its screening among clinical students in Nigeria. *Niger Health J*, *15*, 55–71.

United States Cancer Statistics Working Group. (2013). *United States cancer statistics: 1999–2010 incidence and mortality web-based report.* Atlanta: US Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, 201.

Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, *132*(2), 249-258.

WHO. (2012). *Comprehensive Cervical Cancer Control: A Guide to Essential Practice, 1ˢᵗedition,*. Geneva, Switzerland: World Health Organization.

WHO. (2014). *Comprehensive cervical cancer control: A Guide to Essential Practice, (2nd edd).* Geneva, Switzerland: World Health Organization.

WHO/ICO. (2007). *Information Centre on HPV and Cervical Cancer (HPV Information Centre). Summary report on HPV and cervical cancer statistics in Ghana* . WHO/ICO.

Wiersma, D. A. (1980). Optical dephasing and vibronic relaxation in molecular mixed crystals: A picosecond photon echo and optical study of pentacene in naphthalene and p-terphenyl. *The Journal of Chemical Physics*, *73*(2), 648-663.

Williams, M., & Amoateng, P. (2012). Knowledge and beliefs about cervical cancer screening among men in Kumasi, Ghana. *Ghana Medical Journal*, 147-162.

Woltman, K. J., & Newbold, K. B. (2007). Immigrant women and cervical cancer screening uptake. *Canadian Journal of Public Health*, *98*(6), 470-485.

World Health Organization. (2018). *Cancer: cervical cancer*. Accessed online at https://www.who.int/cancer/prevention/diagnosis-screening/cervical-cancer/en/ (12/02/2020).

World Research Cancer Fund. (2018). *Cervical cancer statistics*. Accessed online at https://www.wcrf.org/dietandcancer/cancer-trends/cervical-cancer-statistics, (12/02/2020).

Yin, S. G. (2017). Descriptor reduced-order sliding mode observers design for switched systems with sensor and actuator faults. *Automatica*, *7*(12), 282-292.

Yin, S., Gao, H., Qiu, J., & Kaynak, O. (2017). Descriptor reduced-order sliding mode observers design for switched systems with sensor and actuator faults. *Automatica*, *76*, 282-292.

Zayyan, M. (2011). Objective structured clinical examination: the assessment of choice. *Oman Medical Journal*, *26*(4), 219-227.

Zhi-Chang, L., Wei-Dong, L., Yan-Hui, L., Xiao-Hua, Y. & Si-Dong, C. (2015). Multiple sexual partners as a potential independent risk factor for cervical cancer. A meta-analysis of epidemiological studies. *Asian Pacific Journal of Cancer Prevention*, *16*(9), 3893-3900.

Ziba, F. A., Baffoe, P., Dapare, P.P.M., Shittu, S.O. & Antuamwine, B.B. (2015). Awareness and knowledge of cervical cancer among women of reproductive age in Bolgatanga municipality. *Journal of Medical and Biomedical Sciences*, *4*(2), 1-16.

109

APPENDICES

110
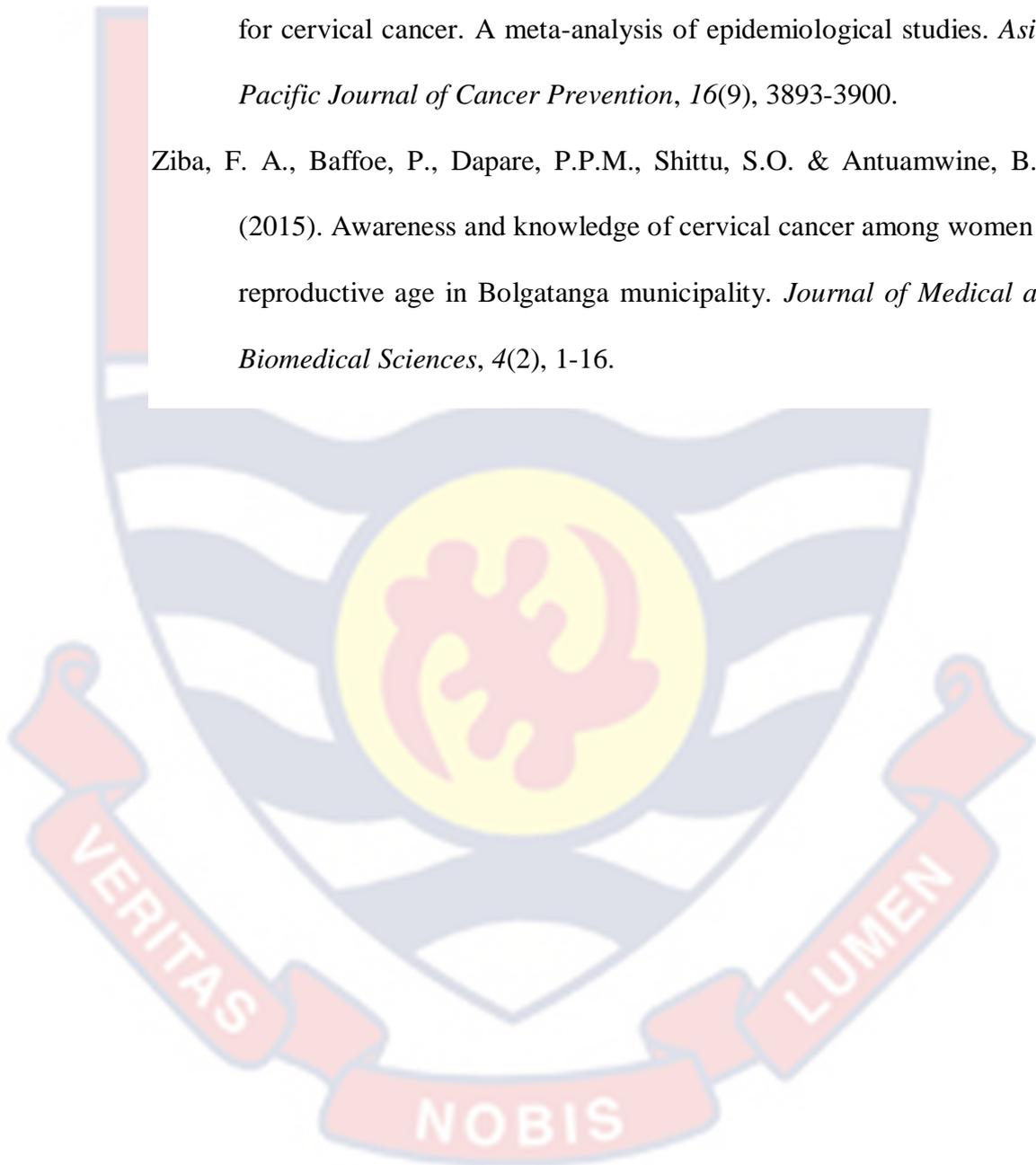
APPENDIX A

UNIVERSITY OF CAPE COAST

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND

RECREATION (HPER)

QUESTIONNAIRE FOR TEACHER TRAINEES IN COLLEGES OF

EDUCATION, ASHANTI REGION-GHANA

STUDY QUESTIONNAIRE

I am **SABINA OSEI OWUSU**, a postgraduate student of University of Cape
Coast; I am conducting a research on the topic "**Assessing knowledge, attitude
and practice towards cervical cancer screening among teacher trainees in
colleges of education in the Ashanti Region**". The information pooled from this
questionnaire would be used solely for research purposes and will be kept
completely confidential.   Kindly therefore provide honest answers to all the
questions to the best of your ability.

**NB: Please read carefully and indicate your answers in the provided boxes by
ticking in box and provide answers where necessary.**

Code Number..

Date………………………

111

SECTION 1: SOCIO-DEMOGRAPHIC

1. Age: ……….

2. Year of study: □ Year one   □ Year 2   □ Year 3

3. Course of study: □ Bed Early Childhood Care and Development

   □ Bed Primary Education   □ Bed Junior High School Education

4. Ethnicity: □ Ashanti □ Fante □ Ewe   □ Akuapem   □ Bono

   □ Dagomba   □ Other (specify)……………………….

5. Religious status: □ Christian   □ Muslim   □ Traditionalist

6. Marital status: □ Single   □ Married   □ Co-habiting   □ Divorced
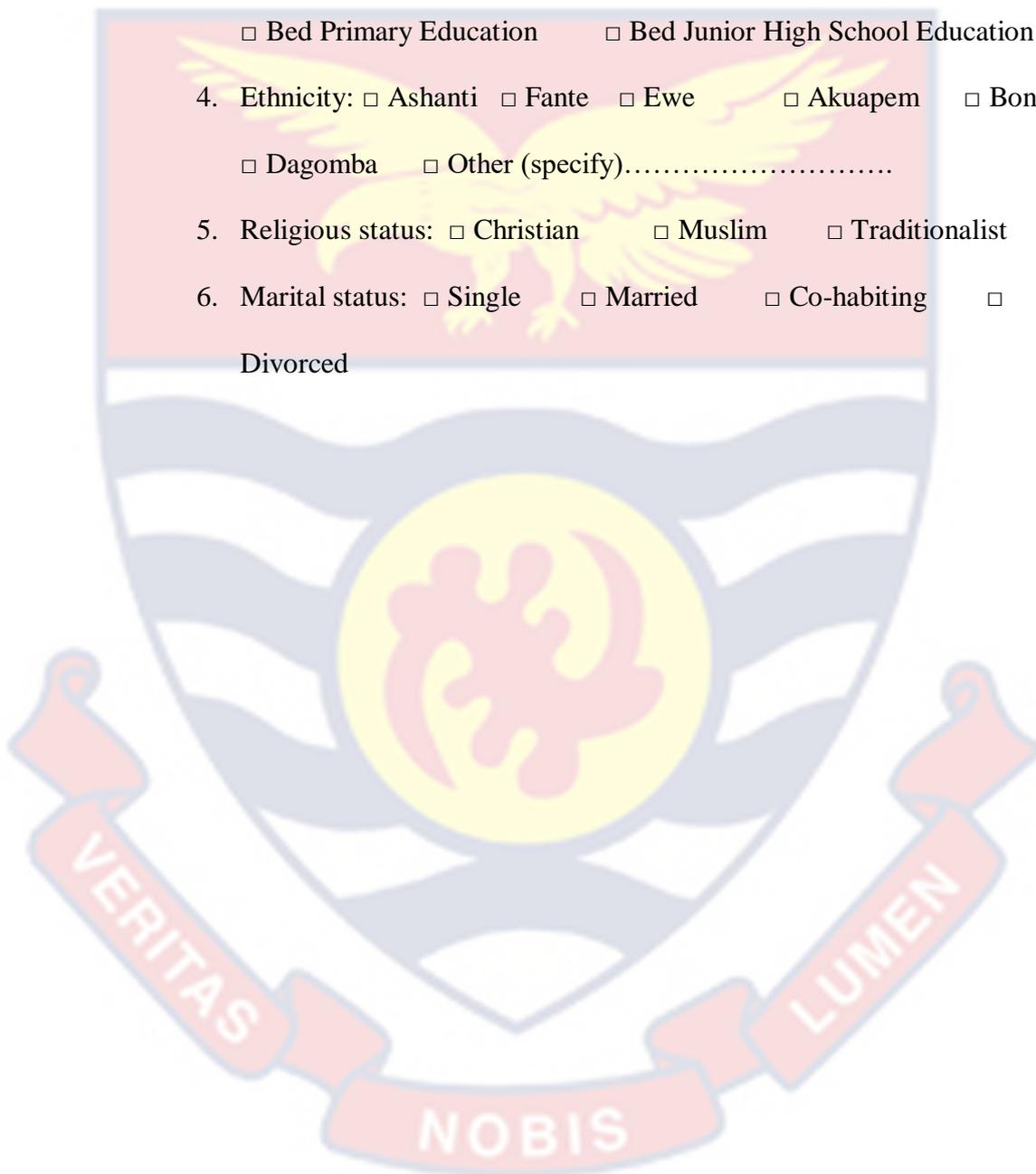
SECTION 2: KNOWLEDGE ASSESSMENT OF CERVICAL CANCER

SCREENING

(Tick where applicable)

Questions	YES	NO
1. Do you know that cervical cancer is ranked the second most common cancer among women in Ghana		
2. Do you know human papillomavirus (HPV) is the cause of cervical cancer?		
3. Multi-sexual partners can increase the risk of getting cervical cancer		
4. Nearly everyone infected with HPV will have cervical cancer symptoms		
5. Family history of cervical cancer can increase the risk of getting cervical cancer		
6. If untreated, cervical cancer can cause death		
7. There is a vaccine that can prevent cervical cancer		
8. Is the vaccine for the prevention of cervical cancer available in Ghana		
9. Is a Pap smear test necessary even if there is no family history of cervical cancer		
10. Healthy adult women should have a Pap test every 2 years		

113

Total Knowledge score……….

SECTION 3: ATTITUDE TOWARD CERVICAL CANCER SCREENING

	YES	NO
1. The thought of cervical cancer screening scares me		
2. Cervical cancer screening would threaten a relationship with my boyfriend/husband		
3. If I developed cervical cancer from screening, I would not live longer than 5 years		
4. I have other health problem more important than having cervical cancer screening		
5. I will never have cervical cancer screening if I have to pay		
6. I would be ashamed to lie on a gynaecologic examination bed and show my private part to have a cervical cancer screening		
7. My religious belief/ethnic prevent me from getting cervical cancer screening		
8. I prefer a female health worker to conduct cervical cancer screening		
9. If there is cancer development in my destiny, having cervical cancer screening will not prevent it		
10. I feel I will get cervical cancer in next few years		
Total Attitude score		

114

SECTION 4: PRACTICES OF CERVICAL CANCER SCREENING

1. Have you had cervical cancer screening before?   □Yes   □ No

1b. If No, why?

....

.………………………………………………………………………………

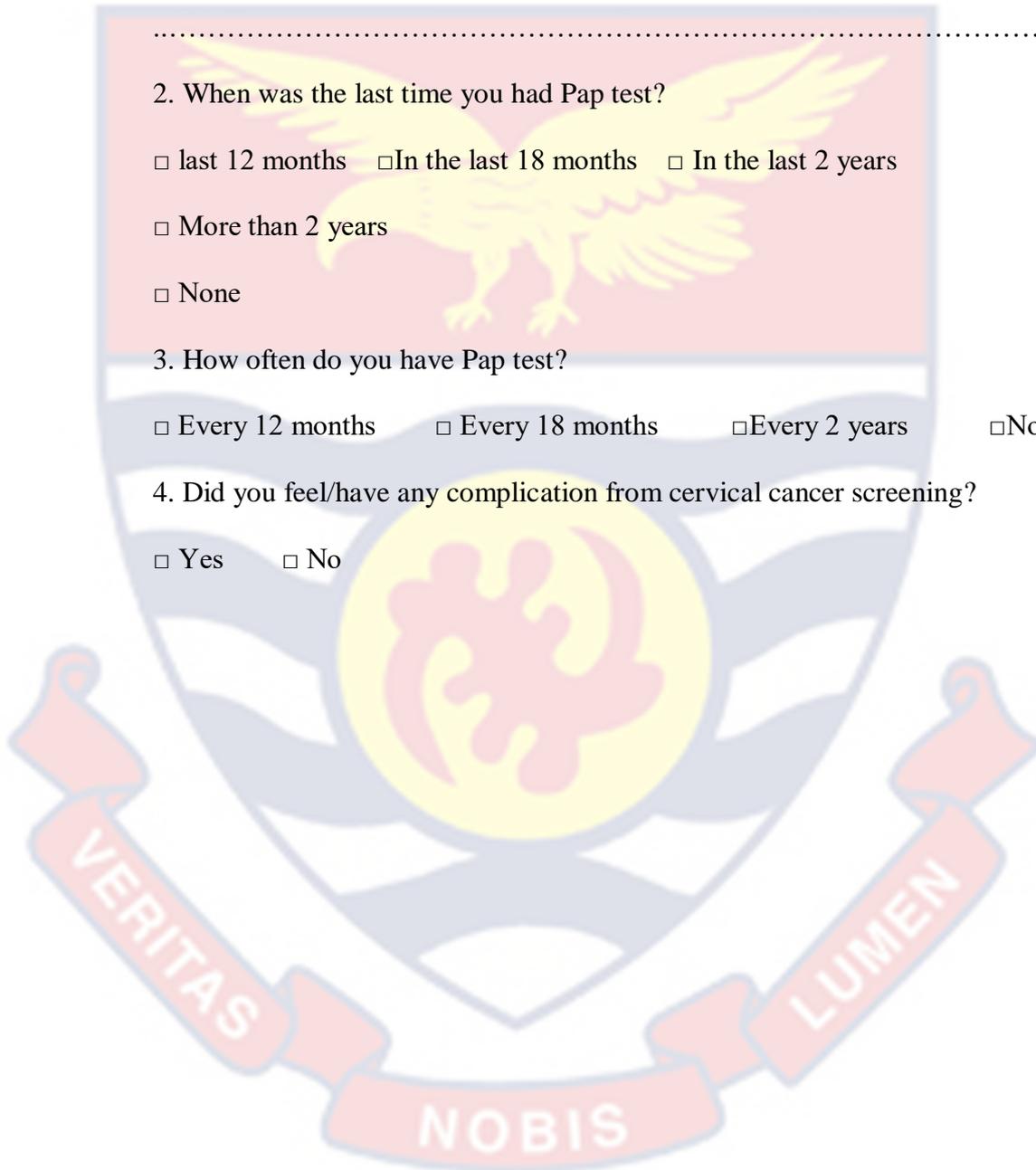2. When was the last time you had Pap test?

□ last 12 months   □In the last 18 months   □ In the last 2 years

□ More than 2 years

□ None

3. How often do you have Pap test?

□ Every 12 months   □ Every 18 months   □Every 2 years   □None

4. Did you feel/have any complication from cervical cancer screening?

□ Yes   □ No

115

SECTION 5: BARRIERS OF CERVICAL CANCER SCREENING

SN	Item	Yes	No
1	Will you feel embarrassed by the screening process?		
2	Do you expect pain outcomes during cervical cancer screening?		
3	Do you consider a financial cost during cervical cancer screening?		
4	Do you think a lack of reminder/invitation affects appointment dates for cervical cancer screening?		
5	Do you think anxiety about results interferes with responses to cervical cancer screening?		
6	will appointment availability be a necessity to you in cervical cancer screening?		
7	Will you consider a history trauma for a cervical cancer screening?		
8	Is difficulty accessing a doctor hindering you in a cervical cancer screening?		
9	Is a male doctor conducting a cervical cancer screening a challenge to you?		
10	Will you consider cervical cancer screening a bad experience as a hindrance to another one?		
11	Is cervical cancer screening a shame to you?		
12	Will you like to be self-conscious about cervical cancer screening status?		

116

APPENDIX B

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION
DEPARTMENT OF HEALTH, PHYSICAL EDUCATION & RECREATION

TELEPHONE: +233 - (0)206610931 / (0)543021384 /
(0)268392819

TELEX: 2552, UCC, GH.

Our Ref: ET/HLE/19/0005/

EMAIL: hper@ucc.edu.gh

Cables & Telegrams:
UNIVERSITY, CAPE COAST

16th February, 2021.

TO WHOM IT MAY CONCERN

INTRODUCTORY LETTER: SABINA OSEI OWUSU (ET/HLE/19/0005)

The bearer of this letter is an MPhil (Health Education) student of the above department. In partial fulfilment of the requirements for the programme, She is conducting a research for her thesis titled **"Attitude and Practice Towards Cervical Cancer Screening Among Teacher Trainees in Colleges of Education in the Ashanti Region"** and would need assistance from your outfit. The data collected will be used for academic purposes only and its confidentiality is assured.

We would therefore be most grateful if assistance could be offered to her to carry out the research.

We count on your co-operation.

Thank you.

Daniel Apaak (Ph.D)
HEAD

117

APPENDIX C

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST

INSTITUTIONAL REVIEW BOARD SECRETARIAT

TEL: 0558093143 / 0508878309
E-MAIL: irb@ucc.edu.gh
OUR REF: UCC/IRB/A/2016/859
YOUR REF:
OMB NO: 0990-0279
IORG #: IORG0009096

9TH DECEMBER, 2020

Ms. Sabina Osei Owusu
Department of Health, Physical Education and Recreation
University of Cape Coast

Dear Ms. Owusu,

ETHICAL CLEARANCE – ID (UCCIRB/CES/2020/84)

The University of Cape Coast Institutional Review Board (UCCIRB) has granted **Provisional Approval** for the implementation of your research titled **Knowledge and Practice of Cervical Cancer Screening among Teacher Trainees in Colleges of Education in Ashanti Region, Ghana.** This approval is valid from 9th December, 2020 to 8th December, 2021. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.

Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.

You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours faithfully,

Samuel Asiedu Owusu, PhD
UCCIRB Administrator
ADMINISTRATOR
INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF CAPE COAST

118