CHAPTER ONE

INTRODUCTION

Background to the Study

Health is a major index of well-being of an individual and the entire society. According to World Health Organization [WHO] (2016a), good health is central to human happiness and well-being. Good health contributes to economic progress because a population lives longer and saves more when they are healthy. For this reason, Goal 3 of the Sustainable Development Goals [SDGs] is concerned with ensuring healthy lives and promoting well-being for all (United Nations, 2015). This is borne out of the fact that United Nations appreciates that health and well-being of citizenry is pivotal to social and economic development of any nation. Although health has been defined by WHO as a state of complete physical, mental and social well-being and not merely the absence of diseases or infirmity; physical health is still very critical for overall well-being and is the most visible of the various dimensions of health. Any disease that attacks physical health is an enemy of progress.

Diseases may attack an individual to the extent that the person cannot serve his family and society adequately. This condition affects productivity from family to national level. Lots of diseases exist but some are more devastating than others. For example, malaria cannot be compared with cancer. Whenever cancer is named in the life of an individual what strikes people's mind is that the end of life is near. Cancer is a deadly disease in which the cells of a tissue undergo uncontrolled (and often) rapid proliferation (Cancer, 2016). Many new growths of disorganized tissues form solid tumours which can be benign or malignant. Benign tumours do not pose any serious threat to life while malignant tumour which is cancer tends to result to death. There are many types of cancer. They are often described according to the part of the body in which the tumour is located. For example, breast cancer form in the

breast, prostate cancer form in the prostate and brain cancer form in the brain. Cervical cancer occurs in the cells of the cervix. Cervix is the lower, narrow portion of the uterus where it opens into the roof of the vagina. Cervix can also be described as the mouth of the womb. Cervical cancer is a disease in which malignant cells form in the cervix (National Cancer Institute, 2015a). In this study, the researcher is interested in cervical cancer because its impact on human life has multiplier effect which is devastating.

Cervical cancer is mainly caused by a viral infection that is related to Human Papilloma Virus (HPV). HPV infection increases risk of cancers of the penis, vagina, anus and oropharynx (National Cancer Institute, 2015a). Majority of HPV infections do not cause symptoms or disease and resolve spontaneously (WHO, 2016b). However persistent infection with specific types of HPV (most frequently types 16 & 18) may lead to precancerous lesions. If untreated, these lesions may progress to cervical cancer but this progression usually takes many years. According to Committee Encouraging Corporate Philanthropy [CECP] (2015), tissue changes that lead to cervical cancer usually develop very slowly over a period of 5 - 30 years, contributing to the process that causes some cells on the surface of the cervix to become cancer cells if untreated. According to WHO (2016b), it takes 15 - 20 years for cervical cancer to develop in women with normal immune system and 5 - 10 years in women with weakened immune system such as those with untreated HIV infections.

Almost all women who have had sexual relations, even without having had penetrative sexual intercourse, can be infected with HPV and are therefore at risk of cervical cancer. CECP (2015) disclosed that 30% of sexually active women have had HPV infection at one point or the other in their lives. In most cases, the body's immune system contends with this virus and it phases out with time in 9 out of 10 women infected. Only 10% of HPV survive in the body to attack cells and cause a tumour eventually. If undetected early and treated, it

spreads by causing the attacked cells to uncontrollably multiply and spread to the rest of the body. This often results in death because cancer cells destroy the organs of the body.

Available statistics show that cervical cancer is among the major threats to women's lives. WHO (2013) disclosed that globally, 530,000 new cases of cervical cancer are identified each year, with 270,000 deaths. Approximately 85% of these deaths occur in low/middle income countries. Nigeria accounts for more than 10% of the occurrence in low/middle income countries. Cervical cancer ranks second among cancers that kill Nigerian women (Gharoro, 2013). Breast cancer is number one killer. According to Okoye (as cited in Olayiwo, 2014), cervical cancer was killing more people worldwide than HIV/AIDS, tuberculosis and malaria put together. Okoye asserted that 26 women die on daily basis from cervical cancer in Nigeria. Society for Family Health (SFH) as reported by Nwachukwu (2015) corroborated this statistics. CECP (2015) placed the figure of women who die daily of cervical cancer at 22. Nevertheless, going by the two figures, the incontrovertible fact remains that death toll from cervical cancer in Nigeria is alarming.

Most women who die from cervical cancer are in the prime of their lives, and these losses are made more tragic by the fact that cervical cancer is considered one of the most preventable and treatable forms of cancer as long as it is detected early and treated effectively (WHO, 2006). The burden of cervical cancer has reduced in most western countries because screening tests and vaccines to prevent HPV are available (Centre for Disease Control [CDC], 2016) but the case of developing countries is abysmal (WHO, 2013).

Notwithstanding the fact that a lot of women die daily from cervical cancer and that WHO (2013) made a strong case for putting in place a national cervical cancer prevention and control programme as a fundamental step in reducing incidence of cervical cancer, Nigeria is yet to have a working national cervical cancer prevention and control programme. Efforts at a similitude of a national programme were those made by charitable organisations such as

Mass Medical Mission (MMM), which later was known as National Cervical Cancer Prevention Programme (NCCPP) and subsequently National Cancer Prevention Programme (NCPP) when other types of cancers were included in their campaign. Other Non-Governmental Organizations (NGOs) such as Marie Stopes International, Breast without Spot (BWS) and Medical Women Association of Nigeria (MWAN) have organized programmes aimed at reducing the burden of cervical cancer. Although activities of NGOs have contributed in enlightening the populace about cervical cancer, this researcher observed that their impact is limited due to paucity of funds, personnel and other resources among other things. The prevalence of the disease suggests that efforts made by governmental agencies and non-governmental organisations to enlighten people on the disease are not adequate to address the needs of the population.

Leaders of Titans against Cervical Cancer [TITANACS] (a consortium of stakeholders and NGOs involved in the war against cervical cancer), during a press briefing at Medical Women Association Centre in 2016 unanimously affirmed that their efforts were limited by challenges of which underfunding is top on the list. They called for support from philanthropic individuals and governmental agencies. The TITANACS also expressed a willingness to partner with private organizations and volunteers. Members of the public and various communities were called upon by the group to sponsor outreach programmes. Members of the public were also challenged to proffer ideas which could help in overcoming the challenges. To this effect, Unachukwu Chinenye, a representative of Breast Without Spot [BWS] proffered the use of birthday celebration platforms to give talks on cancers and other diseases and sponsor the vaccination of people. This study among other things determined more mobilization platforms for raising awareness on cervical cancer.

Leaders of TITANACS also lamented the Federal Government's inability to institute a viable national cancer control and prevention programme. One may wonder the reason for the

seeming lack of political will and apathy on the part of the government and policy makers to minimize this disease which affects majority of the women folk. Women constitute a significant proportion of the population of Nigeria. Based on the 2006 National Population and Housing Census, females make up 69,086,302 (49%) of the 140,431,790 citizens of the Nigerian population (Nigeria, Federal Republic, 2006). Similarly, the 2013 estimate of total population of 174 million people consisting of 86,121,532.3 females (49.49%) and 87,754,876.7 males also show that females still made up virtually half of the population (National Bureau on Statistics, 2013). For this reason of numerical strength and for their enormous contribution in national development they should not be neglected. It is quite pertinent that issues that constitute threat to their lives such as cervical cancer should be adequately tackled.

From the researcher's observation from national events and information from Gharoro (2013), successive governments have not done much to tackle cervical cancer. NGOs have tried but they are few in this crusade and are not able to meet the awareness needs of the populace. In the absence of political will to tackle the problem, information and education of women and other family and community members on the dangers of cervical cancer through research findings becomes very fundamental for prevention, treatment and cure of the disease.

Unfortunately, researchers and experts in the field of medicine (Fawcett, 2013; Oche, Kaoje, Gana & Ango, 2013; Okwara, 2015; Udigwe, 2006) have asserted that women die of cervical cancer because of ignorance of its preventability, risk factors, symptoms, treatment options, vaccination and screening services for prevention and early detection of cervical cancer. Some women are apathetic due to belief in baseless myths and misconceptions. From association with different groups of women overtime, the researcher also observed that "not my portion syndrome" (a situation where people are encouraged to reject medical

intervention by some faith healers on diagnosis of a disease) have further complicated issues related to the disease. According to Chinaka and Udeajah (2012) Nigerian women would rather live in blissful ignorance than know that they have a disease where adequate treatment is practically non existence, unaffordable and results of attempts at treatment is poor. Poverty, socio-economic status and prevailing cultural orientation can also play a part in women's chances of developing cervical cancer (WHO, 2014b).

In Nigeria, victims of cervical cancer face a lot of unnecessary challenges. It is pathetic that due possibly to corruption, scarce funds are invested in obsolete radiotherapy equipment while existing infrastructures are left to dilapidate. The cost of treatment of cervical cancer is prohibitive in Nigeria. National Health Insurance Scheme does not cover treatment of cancer. Many people cannot afford treatment even if facilities and personnel were to be available. On the other hand, the patriarchal nature of Nigeria, does not give women much bargaining power in sex negotiation. They sometimes succumb to sexual advances even when it is inimical to their health in order to secure their homes. This exposes them to sexually transmitted infections [STIs]. According to Foreman (as cited in Flood, 2014), married women's greatest risk factor for STIs is sexual behaviour of their husbands. The implication of this is that efforts to minimise incidence of cervical cancer and other STIs should involve males for it to succeed. This study on awareness of cervical cancer involved males and females as a means to an end and as end itself. They were to supply data needed to ascertain awareness level and as well be provoked to pay more attention to issues concerning cervical cancer.

Women cannot battle this disease alone because of finance and the fact that the virus affects both men and women. The war against cervical cancer has to involve all persons. It must be multi-sectoral in order to succeed. It is therefore necessary to get different groups of people aware of the disease. Recent innovations in HPV vaccines prompted United States

Food and Drug Administration (USFDA) to approve Gardasil 9 (Human Papilloma Virus 9-valent Vaccine, Recombinant) for use in females ages 9 through 26 and males ages 9 through 15 (US FDA, 2014). This move by USFDA further buttresses the need for male involvement in the war against cervical cancer. The vaccine can protect both males and females from other ailments caused by HPV too. Although vaccines such as cervarix and gardasil have been in use, gardasil 9 can protect from infections from more strains of HPV (United States Department of Health & Human Services, 2016).

Creation of awareness is quite imperative to the understanding of the need for prevention of cervical cancer. Awareness of the public is quite critical to the quality of health of an individual because it is a prerequisite for health action (Obidiegwu & Anurugwo, 2016). According to the authors many rural women in Nigeria seem not to seek for primary health care services because they are not aware and are ignorant of the services. Awareness in Adult Education is a period of critical consciousness in which a person is alert and ready to take action against any impeding element. In this study, awareness of cervical cancer therefore refers to the extent people are conscious and are ready to take action against its existence, occurrence, causes, symptoms, risk factors, treatment options and preventive measures. An individual tends to take a health-related action if that person understands why a negative health condition will be avoided.

A person's awareness of the risk factors of a disease has the potentials of affecting the extent the person takes action to guard against the disease. Risk factors of a disease can be referred to as something or a situation that increases a person's chances of developing a disease. Basically, being infected with HPV types that cause cervical cancer poses the greatest threat among the risk factors. According to Gharoro (2013), early sexual debut is among the high risk factors for HPV infection. Other risk factors of cervical cancer include

tobacco use, having multiple sexual partners and having sex with a male partner who is not circumcised (WHO, 2015b).

Awareness of signs and symptoms of cervical cancer is also important in the fight against it. According to Medicinenet (2016), signs of a disease refer to any objective evidence of disease, as opposed to a symptom which can be recognized by the patient, physician, nurse, or someone else. Symptom in medicine refers to a perceived change in some function, sensation or appearance of a person that indicates a disease or disorder (Symptom, 2015). Cervical cancer does not often give warning signs till it has reached an advanced stage (National Health Scheme [NHS], 2015). However, signs and symptoms of cervical cancer may occur in form of irregular vaginal bleeding (which is sometimes mistaken for menstruation), foul smelling vaginal discharge, fatigue, body weakness, loss of weight, and general feeling of unwell. Symptoms are not same for everybody. They differ according to the stage of the cancer and could manifest as symptoms for other diseases (Gharoro, 2013).

Awareness of existence (occurrence), susceptibility (vulnerability), risk factors, signs and symptoms of a disease is important because it affects the rate of success of any preventive measure put in place to avoid the disease or tackle incidence of such disease. According to Segen Medical Dictionary (2012), disease prevention is a general term for a manoeuvre intended to minimise the incidence or effects of disease. An individual must be aware that a disease exists before such a person can take conscious preventive action against the disease. Awareness of the existence of cervical cancer and knowledge of one's susceptibility to the disease are pivotal to the fight against cervical cancer. Awareness of the existence of cervical cancer simply conceptualizes the fact that it exists and poses a real threat while susceptibility simply means vulnerability. It is the state or fact of being likely or liable to be influenced or harmed by cervical cancer.

Although cervical cancer is peculiar to women as prostate cancer is to men, male folks have a great contribution and role to play in fighting the disease. The fact that HPV infection, which causes cervical cancer is mainly transmitted sexually, portends that men must of necessity be conscious of the disease and contribute their quota in fighting it. In view of this, the respondents of this study comprised male and female academic and non-teaching staff within academic communities of tertiary institutions in Anambra State. The study sought to find out whether their responses would differ with respect to their marital status, age and academic qualifications. This would help to channel future planning, decision taking and intervention programmes to the right direction towards preventing and minimizing the scourge of the disease.

WHO's (2013) directives on the utilization of culturally specific communication campaigns and education efforts in fighting cervical cancer also influenced the need to carry out this study. The need to expand the efforts and interventions of few NGOs involved in the fight against cervical cancer motivated embarkation on this study. In addition, the study attempted to determine some strategies for creating awareness on cervical cancer in order to ameliorate its devastating effects.

Statement of the Problem

In Nigeria, many women die from cervical cancer. According to Okoye (as cited in Olayiwola, 2014), 48 million women were at risk, 17,500 women were diagnosed yearly, 9,659 die annually and 26 women die on daily basis in Nigeria. Meanwhile, lack of awareness of cervical cancer has been identified as one of the factors contributing to the high prevalence of cervical cancer in the developing world compared to the condition in the developed world (WHO, 2012). In the developed countries, people are made aware of this kind of disease by creating relevant awareness through research and dissemination of

information from research findings, inventions, provision of adequate fund, equipment, materials, health insurance and other resources needed for prevention and early detection of the disease.

However, in Nigeria, most often, lack of political will stalls progress in most of the health campaigns. This is exacerbated by lack of funds for meaningful researches and provision of necessary resources. This is part of the reason greater percentage of women die in developing than in developed countries from the scourge of this disease. If death of women through cervical cancer is left unchecked, Nigeria will lose greater percentage of women who otherwise could have contributed greatly to the effective development of their families and the country.

Additionally, states deemed more educated than others, are sometimes neglected in apportionment of interventions they need because of erroneous assumptions that they know better. Incidentally, Anambra is among the five most educated states in Nigeria (UNESCO, as cited by Uzoka, 2016) and it might be suffering disadvantage in attracting interventions against cervical cancer. Hence, the need for this study that would generate empirical evidence on the level of awareness of cervical cancer in order to attract interventions to the State and save women from untimely death. The need for identification of strategies for enlightenment so that the public would form part of the national prevention plan and campaign is also compelling. This will enable women to live long and healthy lives. Therefore, the problem of this study is to determine the awareness status of citizens of Anambra State on the existence and susceptibility, risk factors, signs and symptoms, preventive measures of cervical cancer and strategies for public enlightenment using staff of tertiary institutions in the state.

Purpose of the Study

The main purpose of this study is to determine the level of academic community awareness of cervical cancer and strategies for enlightenment of the public in Anambra State using staff of tertiary institutions in the state. Specifically, the study sought to determine the:

1. Level of awareness of existence and susceptibility of cervical cancer.
2. Level of awareness of the risk factors of cervical cancer.
3. Level of awareness of the signs and symptoms of cervical cancer.
4. Level of awareness of the preventive measures of cervical cancer.
5. Strategies for enlightenment of the populace on cervical cancer.

Significance of the Study

The findings of this study would be of great benefit to government agencies, non-governmental organizations; women, men, other family members; researchers; academic and non-teaching staff and adult educators. The findings of this study would be beneficial to government agencies, non-governmental organizations and adult educators because it will disclose the level of awareness of the preventive measures of cervical cancer. The fact that this study ascertained cervical cancer awareness level of men and women in tertiary institutions has a platform from which government can estimate the situation of other groups of people such as women in rural and urban areas and adolescent. This will help the government plan better intervention programmes for prevention of cervical cancer.

The findings of this study can help the government to determine where and how to channel their efforts and resources towards minimizing the deadly disease. Governmental and non-governmental agencies will also be better guided by the findings of the study on the level of prominence to give to any of the issues on cervical cancer while planning their enlightenment and other programmes. NGOs can utilize strategies determined by this study

for their enlightenment programmes thereby cutting costs of logistics, funding and entertainment.

The outcome of the study when published will provide more understanding of the disease for men, women and other family members and engender synergy in tackling the disease at the home front. For researchers, this study will form a framework or insight for further studies, a good source of reference material and basis for expansion of knowledge.

The findings of this study will enable academic and non-teaching staff to be exposed to issues on cervical cancer. This may cause their level of awareness on causes, risk factors and prevention of cervical cancer to be raised. When their awareness is raised, they can be motivated to integrate cervical cancer education in their lectures. In addition, they can plan seminars on the area. Pupil tutors under the lecturers can be influenced to key into the fight against cervical cancer and they will in turn educate or organize the educating of their adolescent students who are the most susceptible group for HPV infection. Furthermore, by determining more strategies for enlightenment of the populace on cervical cancer, the study will boost activities of adult educators in the fight against cervical cancer.

Scope of the Study

The study was delimited to determination of the level of awareness of existence and susceptibility, risk factors, symptoms and preventive measures of cervical cancer among staff of tertiary institution within academic communities in Anambra State. The study excluded people that are exclusively students. It also focussed on determining tertiary institutions' staff ratings on strategies for enlightenment of the populace in the war against cervical cancer. The study tested for significant differences in the scores and ratings of staff based on age, gender, marital status, academic qualification and staff type. The study did not cover awareness of the stages of cervical cancer. Such areas are better left for experts in medical science. It covered

conventional tertiary institutions in Anambra State but did not include Open University campus.

Research Questions

The following research questions guided the study:

1. What is the awareness status of tertiary institutions staff in Anambra State on the existence and susceptibility of cervical cancer?
2. What is the awareness status of tertiary institutions staff in Anambra State on risk factors of cervical cancer?
3. What is the awareness status of tertiary institutions staff in Anambra State on signs and symptoms of cervical cancer?
4. What is the awareness status of tertiary institutions staff in Anambra State on preventive measures of cervical cancer?
5. What are the mean ratings of staff of tertiary institutions on items relating to strategies for enlightenment of the populace on cervical cancer?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between the mean awareness scores of male and female staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer.
2. There is no significant difference between the mean awareness scores of male and female staff of tertiary institutions in Anambra State on risk factors of cervical cancer.

3. There is no significant difference between the mean awareness scores of male and female staff of tertiary institutions in Anambra State on signs and symptoms of cervical cancer.
4. There is no significant difference between the mean awareness scores of male and female staff of tertiary institutions in Anambra State on preventive measures of cervical cancer.
5. Male and female staff of tertiary institutions in Anambra State do not differ significantly in their ratings on strategies for enlightenment on cervical cancer.
6. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their academic qualifications.
7. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on risk factors of cervical cancer based on their academic qualifications.
8. There is no significant difference in the mean awareness scores of male and female staff of tertiary institutions in Anambra State on signs and symptoms of cervical cancer based on their academic qualifications.
9. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on preventive measures of cervical cancer based on their academic qualifications.
10. Staff of tertiary institutions in Anambra State do not differ significantly in their ratings on the strategies for enlightenment on cervical cancer based on their academic qualifications.

11. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on marital status.
12. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on risk factors of cervical cancer based on their marital status.
13. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on signs and symptoms of cervical cancer based on their marital status.
14. There is no significant difference in the mean awareness scores of staff of tertiary institutions in Anambra State on preventive measures of cervical cancer based on their marital status.
15. The ratings of staff of tertiary institutions in Anambra State do not differ significantly on strategies for enlightenment on cervical cancer based on their marital status.
16. The mean awareness scores of staff of tertiary institutions in Anambra State do not differ significantly on the existence and susceptibility of cervical cancer; risk factors of cervical cancer; signs and symptoms of cervical cancer and preventive measures of cervical cancer based on age.
17. The ratings of staff of tertiary institutions in Anambra State do not differ significantly on strategies for enlightenment on cervical cancer based on staff type.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter reviewed literature related to this study. The related literature was organized under the following sub-headings:

Conceptual Framework

Awareness

Enlightenment

Cervical Cancer

Strategies

Academic Community

Theoretical Framework

Freire's Theory of Conscientization

Male Involvement Theory

Health Belief Model [HBM]

Theoretical Studies

Existence and Susceptibility of Cervical Cancer

Risk Factors of Cervical Cancer

Symptoms and Signs of Cervical Cancer

Preventive Measures of Cervical Cancer

Myths and Misconceptions about Cervical Cancer

NGOs and Challenges faced in Fighting Diseases (Cancer)

Adult and Non-Formal Education Strategies/ Programmes for fighting Diseases

Review of Related Empirical Studies

Studies on Awareness of Existence and Susceptibility; Risk Factors; Symptoms and Signs; and Preventive Measures of Cervical Cancer

Studies that Applied Educative Preventive Measures in Tackling Health Issues

Summary of the Review of Related Literature

Conceptual Framework

This section attempts to explain the key concepts in the study under the following sections:

Awareness

Awareness refers to the state of being conscious of or knowledgeable about something. 'To be aware' entails being vigilant or on one's guard against danger or difficulty (Aware, 2016). Words that are synonyms with aware include wary, watchful, sensitive, alert, attentive and observant. Other words that describe aware are apprised, informed, cognizant, conscious and mindful. Awareness is also explained as the ability to perceive, to feel or to be conscious of events, objects, thoughts, emotions or sensory pattern.

Awareness can also be described as the state of consciousness. It is a relative concept. Accordingly, an animal may be partially aware, subconsciously aware, acutely aware, or acutely unaware of an event (Weschcke & Slate, 2015). Level of awareness can also be graduated as low or high or as the case may be. Survey Legends (2014) proffered Likert-type level of awareness measure under – not at all aware; slightly aware; somewhat aware and extremely aware. Some studies on level of awareness deemed awareness as synonymous with knowledge and used a cognitive test to assess awareness level while others used a combination of cognitive and Likert type scale (Atuluoma, Olarewaju, Amosu & Adedeji, 2010; Cancer Research UK, 2011) . In some disciplines, to be aware of something refers to

having peripheral knowledge of that subject or event. However, in Adult Education, awareness is not just knowledge but rather as a stage of critical consciousness. This stance was greatly influenced by Paulo Freire a great adult educator and philosopher in his theory of conscientization. According to Freire (as cited in Ezimah, 2004 & *The New Observer*, 2012) awareness involves a dialectical movement that goes from action to reflection and from reflection to a new action. This theory is discussed under theoretical framework in this study. It emphasized that change comes through critical consciousness which leads to action. For the purpose of this study, awareness does not merely refer to having heard about cervical cancer but having a fairly good understanding of key facts about it which could lead an individual to take health action.

Awareness of cervical cancer refers to the state of a person's consciousness in relation to the disease. In effect, this study is of the view that for anybody to be deemed aware of cervical cancer, such a person should be able to answer some questions on the what, where, who, when and how of cervical cancer. For instance, the person should know what cervical cancer is, where it occurs, who suffers it, when it occurs and how it presents. Thus in a bid to ascertain extent of awareness of cervical cancer in Anambra State, this study sought to assess knowledge of its existence, susceptibility, risk factors, symptoms and preventive measures. This would help estimate how conscious the citizens are of the disease. Inquiring into the awareness of the disease would show the awareness status of participants.

Awareness-raising also called consciousness-raising is also a form of activism popularized by Paulo Freire (Freire, 1972) and US feminists in the 1960s (National Women Liberation, 2018). It takes the form of a group of people attempting to focus the attention of a wider group on some cause or condition. The essence of awareness-raising is to appeal to people's mind in order to influence their attitude. Raising awareness also influences how institutions handle issues. Simply packaging awareness programmes without a clear understanding of the

status quo of the recipients on that issue can result to unnecessary under or over expenditure and misplacement of priority. Awareness-raising has been used to combat stereotypes, prejudices and diseases.

Enlightenment

Enlightenment is an act of enlightening or the state of being enlightened or instructed (The English Dictionary, 2017). The English dictionary also described enlightenment as a concept in spirituality, philosophy and psychology related to achieving clarity of perception, reason and knowledge. The term 'to enlighten' means to supply with light; to illuminate; as the sun enlightens the earth. It also means to make clear to the intellect or conscience; to shed light of truth and knowledge; to instruct; in order to enlighten the mind or understanding (The English Dictionary). According to Vocabulary.Com Dictionary (2018), enlightenment is education or awareness that brings change, such as your enlightenment about nutrition that leads you to throw out every last bit of your family's junk food. It is education that results in understanding and the spread of knowledge. The term also accommodates freeing from false belief or illusions. This study sought to identify strategies that will be adopted to make the populace understand the dangers of cervical cancer, debunk false beliefs held about the disease as well as bring about the level of clarity of perception that will lead to taking right actions against the disease.

Cervical Cancer

Cervical cancer is one of the numerous types of cancers that terrify man. Cancer is a disease in which the cells of a tissue undergo uncontrolled and often rapid proliferation. Cancer has also been described as something which spreads within something else, damaging the latter (Cancer, 2015). Many cancers form solid tumours, which are masses of tissue.

Tumours can be benign or malignant. Benign tumours do not spread into, or invade nearby tissues and do not often grow back when removed but cancerous tumours are malignant and spread into nearby tissues. As these tumours grow, some cancer cells can break off and travel to distant places in the body through the blood or the lymph system and form new tumours far from the original tumours. In this way, they cause havoc to the body. There are more than 100 types of cancers. Cancers are usually named after the organ or tissues where they form. For example, brain cancer form in the cells of the brain while cervical cancer forms in the cervix. Cancer does not spare any group of person (National Cancer Institute, USA, 2015). There exist childhood cancers, aged cancers, men and women cancers but adults die mainly of breast, cervical, and prostate cancers. Whereas men exclusively suffer prostate cancer and females exclusively suffer cervical cancer, breast cancer was earlier classified as solely women disease but it has been discovered that few men also suffer it. Out of the breast and cervical cancers which have afflicted more women than any other types of cancer, cervical cancer is said to be virtually preventable (Okoye, as cited in Olayiwola, 2014).

Cervical cancer is a type of cancer that occurs in the cells of the cervix. It is a disease in which malignant (cancer) cells form in the cervix (National Cancer Institute, 2015). Cervix is the lower part of the uterus that connects to the vagina. Cervix can be described as the mouth of the womb. Unlike some other cancers, cervical cancer is mainly caused by a viral infection that is related to human papilloma virus [HPV]. HPV also increases risk of cancers of the penis, vagina, anus and oropharynx (National Cancer Institute, 2015). Various strains of the HPV, a sexually transmitted infection [STI], play a role in causing most cervical cancer (Mayo Clinic Staff, 2003). When exposed to HPV, a woman's immune system typically prevents the virus from doing immediate harm. In some women, however, the virus survives for years. According to WHO (2016b), majority of HPV infections do not cause symptoms or disease and resolve spontaneously. However persistent infection with specific types of HPV

(most frequently types 16 & 18) may lead to precancerous lesions. If untreated, these lesions may progress to cervical cancer but this progression usually takes many years. According to CECP (2015), tissue changes that lead to cervical cancer usually develop very slowly over a period of 5-30 years, contributing to the process that causes some cells on the surface of the cervix to become cancer cells if untreated. According to WHO (2016b), it takes 15-20 years for cervical cancer to develop in women with normal immune system and 5 to 10 years in women with weakened immune system such as those with untreated HIV infections.

Although most HPV infections clear up on their own and most precancerous lesions resolve spontaneously, there is risk for all women that HPV lesions may become chronic and precancerous lesions progress to invasive cancer. Survival rate of patients with cervical cancer depends on the stage at presentation. There are clearly delineated stages that guide the choice of treatment option but the pervading problem of late diagnoses leads to many regrettable and painful deaths of women. In fact, studies show that even health professionals in Nigeria have not embraced vaccination and screening practices in a measure expected of people that should know the dangers of cervical cancer (Oche, Kaoje, Gana & Ango, 2013; Udigwe, 2006). This calls for evolving a well-thought out strategy for enlightenment.

Strategies

The word strategy simply means plan. A plan of action intended to accomplish a specific goal (Strategy, 2015). For the purpose of this study, strategy is seen as a line of approach which can be in form of ideas or actions intended to deal with a problem. This is not to suggest that the study proffered only new methods for creating awareness, rather, the focus is on ensuring that existing but not so popular means of creating awareness would be listed for the staff of tertiary institutions to express their agreement or disagreement with such strategies for minimising cervical cancer. This study is concerned with ways of expanding the

reach of NGOs, government agencies and other stakeholders involved in enlightening the populace on cervical cancer. Thus this study seeks to determine more strategies that can be used to boost awareness-raising on cervical cancer so that the work of enlightenment on the disease will be expanded.

In addition, strategies as envisaged in this study encompass medium and channel elements of communication process. According to Adebola (2014), channel provides a link that enables the sender and the receiver to communicate. It is such links that this study also refers to as strategy. This study is also concerned with aspects of traditional communication system that have been neglected and which can be adapted for enlightening the populace on cervical cancer. According to Adebola (2014), channels through which people communicate in traditional system include the following:

1. Market place – Market place is a place where people from different parts of the community converge for the purpose of buying and selling. According to the author, the market place can be used effectively to disseminate information to the entire community or village. Market days in Igbo land are Eke, Orie, Afor and Nkwo. Every community observe special market days. The special market day sometimes becomes synonymous with the location of the market (e.g. Eke Awka). In modern times, this can be referred to as place of work of different people.
2. Town criers – Village announcer and village gong man moves round the village to disseminate information stopping at strategic places. This practice has been advanced in some places as village announcers move about in motor bikes or cars with loud speakers and mega phones to pass across information. Some of them even play pre-recorded messages. They work very early in the morning and late at night when the atmosphere is peaceful and calm.

3. Visits to designated places
4. Churches and mosques
5. Village square meetings
6. Annual conference

The populace can also be educated through modern means such as radio, community radio, television, newspapers, bulletins, posters and billboards. Information communication technologies enable the use of telephones, internet – email, social networks (such as whatsapp, facebook, instagram), newsgroups, video transmission, instant messaging, tweeting, video conferencing and lots of other platforms that keeps evolving even as the older ones are continually upgraded. Some of these communication media and channels are already being utilized by both local and international NGOs to create awareness on significant days to mark events like world cancer day.

Academic Community

This study used members of staff within academic communities in Anambra State as respondents. The term academic community is made up of two words 'academic' and 'community'. Both words belong to groups of words regarded as systematically ambiguous due to the fact that it is elastic in usage and therefore capable of multiple meanings. A lot has been written about the two terms. Suffice it to say that academic pertains to academy. An academy has been variously defined as the garden where Plato taught; a school or place of training in which some special art is taught; a body of opinion in a particular field regarded as authoritative; and an institution for the study of higher learning, a college or a university (Academy, 2015). This study is concerned with academy as an institution; a place where people study and work.

The definition of a community includes a group of people living in the same place or having a particular characteristic in common; and the condition of sharing or having certain attitudes and interests in common (Oxford University Press, 2018). Community has also been defined as a body of persons of common and especially professional interests scattered through a larger society (Community, 2018). People in a community must have something in common and sometimes engage in joint action in a particular location. Members of academic community do this. Their work place, in this case, the tertiary institution where they work is the location that binds them together.

Ideally, an academic community is a structure that fosters creating, sharing, and applying knowledge. According to (Murtagh, 2018), an academic community involves the students, the faculty, and a halo of interested parties. This study is only concerned with academic community as staff of tertiary institutions. Tertiary institutions are commonly called higher institutions because after successful completion of secondary school education or college, they are the next level for acquisition of formal education. They provide higher education. Higher education is defined as education beyond high school, especially, that provided by colleges and graduate schools and professional schools (Higher education, 2016). These institutions are owned by federal government, state government and private proprietors. Joint Admissions and Matriculations Board [JAMB] (2013) listed tertiary institutions in Anambra State and they include conventional universities, polytechnics, colleges of education, monotechnics and innovative institutions. These institutions are scattered across the three senatorial zones in Anambra State. They provide employment for various categories of people. These employees are grouped under academic and non-teaching staff. They have various cadres of workers under these two major groups.

Members of the academic staff of various tertiary institutions are popularly called lecturers. A lecturer is a person who gives lectures especially as a profession at a college or

university. Other people that give lectures in public places are also called lecturers such as a member of the Church of England clergy whose main task was to deliver sermons (lectures) in the afternoons and evenings. This study sees lecturers purely as all academics in tertiary institutions irrespective of rank. Lecturers as academics are men and women of letter, highbrow, thinkers, egg heads, book worms, tutors, trainers, instructors, dons, teachers and scholars (Academics, 2016). Academics are highly regarded in the society and are often sought after to educate the people in the communities on pressing issues. Academics have served as umpires during national and state elections. They have also contributed greatly in enlightening and educating the populace on various issues outside their core engagements in consonant with their three core duties of teaching, researching and community services. Lecturers are highly qualified to educate the populace. They possess the know-how for facilitating learning. They possess the experience and education needed to represent the educated people's awareness level. Academics do not work alone. Their activities are supported by non-teaching staff.

Non-teaching staff has junior and senior cadre in the tertiary institutions. Non-teaching staff are also grouped under administrative and executive cadres. Technicians, security personnel, hostel wardens, labourers also work in tertiary institutions. They constitute both highly educated people and people with lower levels of education. The positions staff hold often depend on their academic qualifications. Tertiary institutions have males and females staff of various ages and marital statuses. Some of these personnel live inside campus while most of them live outside in various towns and communities. The researcher therefore considered them suitable to be used for the study. Tertiary institutions staff can be said to be a true representative of a community that exists in the larger society.

Theoretical Framework

Theories are frameworks on which ideas are built. Theoretical framework refers to a group of related ideas that provide guidance to a research project (Web Finance, 2015). It provides rationale for embarking on research. This study, which is designed to contribute to the solution of the menace of cervical cancer, was based on the following theories:

Conscientization Theory

The theory of conscientization was a brainchild of Paulo Freire. Paulo Freire, a Brazilian educator, activist and theorist in his 1970 work titled – Pedagogy of the Oppressed, promoted education for critical consciousness which was later termed conscientization. Freire postulated that education is not merely a rigid transmission process but a problem solving process based on reflection and action towards achieving learners' needs. The theory of conscientization was postulated as a result of the need to address the seeming contradictions Freire observed in his society. Freire sought to uplift the material benefit of the needy class. Freire postulated three kinds of consciousness, thus – naive, magic and critical consciousness. He was a protagonist of critical consciousness which to him leads to action (Ezimah, 2004). He criticized the over compartmentalization of knowledge through the formal education system. He condemned the 'banking concept' of education where a teacher sees himself as the oracle who pours his wealth of knowledge into an empty student. On the contrary, he saw adults as possessing wealth of experiences that should be engaged in solving problems. He also advocated for training in small groups and relaxed atmosphere.

Conscientization also fosters breaking through prevailing mythologies to reach new levels of awareness such as awareness of oppression, awareness of being an object of others' will rather than self-determining subject. Conscientization is a real instrument for fighting poverty, corruption, ignorance and diseases. The application of conscientization theory in the effort at preventing cervical cancer will go a long way in minimising the scourge of the

disease and sensitizing people to actively participate in waging war against the disease by adopting healthy lifestyles and encouraging others to do same. Communities could be sensitized to actively be involved in organizing enlightenment campaigns and immunization programmes without necessarily waiting for government agencies and NGOs. This involvement has the capability of influencing community people to play significant role in the implementation of programmes and also take responsibility for continuity of programmes. This is especially needed in the war against cervical cancer where very essential preventive measures (screening and vaccination) are required at intervals. Freire's small groups approach is a model to be considered by adult educators and programme facilitators such as NGOs in providing counselling services on healthy lifestyles and in achieving male involvement in the fight against cervical cancer.

Freire's approach is so much related to this work because it emphasized critical consciousness in order to transform limiting situations and circumstances to enable people find solution to their problems. In the same vein, the approach to finding solution to the threat of cervical cancer requires the level of awareness that must lead to action. People cannot take up preventive measures unless they are critically aware. Conscientization has been applied widely in North East Brazil and found very successful especially in teaching literacy amongst rural populations (Onyeozu, 2007). It is also a veritable tool in addressing socio-cultural and political issues. Same can be done in working towards achieving health literacy on cervical cancer. Establishment and use of Community Development Education Centres (CDECs) in every community to provide avenue for engaging adults in group discussions is necessary for addressing the problem of cervical cancer. Obidiegwu's (as cited in Obiozor & Obidiegwu, 2013, p.77) opinion that "such development can be achieved by detecting the problems of the people through joint discussion and solving community problems which is achievable

through community learning centres" supports Freire's position. Such discussions have the potential of helping to get to the root of the problem.

Health Belief Model (HBM)

The Health Belief Model (HBM) was one of the earliest theories of health behaviour change. HBM relates largely to the cognitive factors predisposing a person to a health behaviour. HBM is based on the understanding that a person will take a health related action (such as routine immunisation) if that person feels that a negative health condition can be avoided. This is because the person has a positive expectation that by taking a recommended action, he or she will avoid a negative health condition. HBM was developed in the 1950s by a group of United States Public Health Service Social Psychologists (WHO, 2012). Some authors specifically attributed the development of the theory to Hochbaum, Rosenstock and Kegels (University of Twente, 2017). The model was developed in response to the failure of a free tuberculosis (TB) health screening programme. The social psychologists sought to explain why so few people participated in chest x-rays to detect TB even though it was free. They examined what discouraged people from participating in the programmes. They discovered that people's beliefs about the severity of a disease and their susceptibility to it influenced their willingness to take preventive action. The model was furthered by Becker and colleagues in the 1970s and 1980s. Subsequent amendments to the model were made in 1988 to accommodate evolving evidence generated within health community about the role that knowledge and perceptions play in personal responsibility (Glanz, Lewis & Rimer as cited in Anene, 2012). Eventually, the theory was modified to include six constructs to help predict whether people will take action to prevent, screen for and control illness thus:

The Health Belief Model

Concept	Definition	Examples	Potential Change Strategies
Perceived susceptibility	Beliefs about the chances of getting a condition	Individual perceptions to personal susceptibility to specific illness or accidents often vary widely from the realistic appraisal of their statistical probability. The nature and intensity of these perceptions may significantly affect their willingness to take preventive action	• Define what population(s) are at risk • Tailor risk information based on an individual's characteristics or behaviour • Help the individual develop an accurate perception of his or her own risk
Perceived Severity	Beliefs about the seriousness of a condition and its consequences	People may not respond to suggestions that they obtain flu shots because they do not view influenza as a serious disease. The person must perceive the potential seriousness of the condition in terms of pain or discomfort , time lost from work, economic difficulties, etc.	• Specify the consequences of a condition and recommended action
Perceived Benefit	Beliefs about the effectiveness of taking action to reduce risk or seriousness	Individuals generally must believe that the recommended health action will actually do some good if they are to comply. Some long-time cigarette smokers, for example, seem to believe that, "I've smoked for so many years that it's too late to quit. It couldn't help now anyway, so why bother?"	• Explain how, where and when to take action and what the potential positive results will be
Perceived Barriers	Beliefs about the material and psychological costs of taking action	If the change is perceived as difficult, unpleasant or inconvenient and outweighs the perceived benefits, it is less likely to occur	• Offer reassurance, incentives, and assistance; correct information
Cues to Action	Factors that activate 'readiness to change" – a trigger Mechanism	A reminder note from a dentist that it is time for a check-up may be sufficient to prompt action	• Provide "how to" information, promote awareness and employ reminder systems
Self-Efficacy	Confidence in one's ability to take action	One's opinion of what one is capable of doing is based largely on experience with similar actions or circumstances encountered or observed in the past	• Provide training and guidance in performing action • Use progressive goal setting • Give verbal reinforcement • Demonstrate desired Behaviour

Source: Adopted from Rimer and Glanz (2011) as cited in WHO (2012, p. 22)

Quite a number of health-based researches are based on HBM. Anene (2012) adopted this theory in a study on the determination of the knowledge of vaccine preventable diseases and routine immunisation among mothers in Ugwogo Nike. Abiodun, Fatungase and Olu-Abiodun (2014) based their study on knowledge, perception and predictors of uptake of cervical screening among rural Nigerian women on HBM.

HBM was initially spelt out in terms of four constructs of the core beliefs of the individuals based on the following perceptions - Perceived condition; perceived severity (one's opinion or assessment of how serious a condition is and its consequences are); perceived barriers (an individual's assessment of the influences that facilitate or discourage adoption of the promoted behaviour or advised action); perceived benefits (an individual's assessment of the positive consequence of adopting the behaviour). Constructs of mediating factors were later added to connect the various types of perceptions with the predicted health behaviour.

In a nutshell, HBM proposed that the perception of the severity of illness, susceptibility to illness and its consequences are the factors that predict the likelihood of a person taking recommended preventive health action. This study is related to this theory because the study intends to determine awareness level of cervical cancer among staff of tertiary institutions. This is related to perception which four of the major constructs of the theory is concerned with. This study is designed based on the belief that the status of awareness of staff about cervical cancer affects the uptake of preventive measures (such as vaccination and screening) against cervical cancer by the staff or their family members. The public will utilize these preventive measures only when they realize their benefits. They can realize the benefits through awareness-raising. This study also intends to determine strategies for creating awareness.

Male Involvement Theory

The International Conference on Population and Development [ICPD] held in Cairo in 1994, also known as Cairo '94, underscored the importance of male involvement in reproductive health programmes. The conference drew attention to the fact that men have an important influence on women's and children's health and also distinctive reproductive

health needs of their own. The conference emphasized ‘male responsibilities and participation’ in sexual and reproductive health. The conference’s programme of action stressed that efforts should be made to emphasize men’s shared responsibility and promote their active involvement in responsible parenthood, sexual and reproductive behaviour, including family planning, prenatal, maternal and child health, prevention of sexually transmitted diseases, including HIV, prevention of unwanted and high risk pregnancies, shared control and contribution to family income, children’s education, health and nutrition, and recognition and promotion of the equal value of children of both sexes (Interagency Gender Working Group [IGWG], 2004). The same message was reinforced at the 1995 World Conference on Women in Beijng where it was emphasized that shared responsibility between men and women in matters related to reproductive and sexual behaviour is essential to improving women’s health. This may have been informed by the realisation that gender inequalities between women and men have a significant influence on sexual health.

Male involvement theory has evolved over time. Prior to Cairo ’94, efforts geared to improve sexual and reproductive health was concentrated on women and what they should do. Subsequently it was realised that men have vital role to play in family planning towards population control. Programme coordinators started involving men as a more effective population control measure. Men’s involvement was in three phases – Men as clients with their own needs; men as partners; and men as agents of positive change which reflects the intent of Cairo ‘94. AIDS epidemic necessitated the drawing of men into reproductive health programmes (Greene et al., 2004). It was realized that combating sexually transmitted infections (STIs) and heterosexual spread of HIV is impossible without involving men. According to Greene et al, a growing body of ethnographic and anthropological qualitative research has been reinforcing these recommendations, examining even more closely the

impact of men as individuals, as social gatekeepers and as powerful family members who enforce cultural practices, often to the detriment of women's reproductive health.

Men are important as partners, fathers, brothers, boyfriends, friends, mentors and health care providers. Men's effect can be direct or indirect, biological or social. According to IGWG (2004), the ways men can have positive effect on women's health include - preventing the spread of STIs to their partners; preventing all forms of violence against women; working to end harmful health practices such as Female Genital Mutilation [FGM]; assisting during ante-natal, delivery and post-natal periods; sharing financial resources with women including support for shared property rights; supporting women's full participation in civil society, including access to social, political and educational opportunities, many of which have a direct or indirect impact on women's health; supporting daughters' right to health care , education, and respect in equity with sons. Men's involvement in the health of family is also beneficial to men because such men may enjoy better health and closer relationship with family members.

The foregoing considerations provide basis for involving men in this study as HPV which is a sexually transmitted infection is responsible for most incidents of cervical cancer. Strengthening this development is the position of the World Health Organization [WHO] (as cited in Williams & Amoateng, 2012) when they recommended involving men in the prevention of cervical cancer in the middle and low income countries. According to Flood (2014), enlisting men in the war against STIs/HIV/AIDs is particularly important because some men transmit STIs to their monogamous partners. Research has shown that married woman's greatest risk factor for STIs is the sexual behaviour of their husbands (Foreman, as cited in Flood, 2014). Flood also asserted that since men often perpetuate violence against women in sexual matters, men must also take responsibility for preventing the transmission of STIs such as HPV that causes cervical cancer. Men are in a better position especially in

patriarchal society such as Nigeria to influence culture and environment that can promote men's responsibility in prevention of cervical cancer. This informed this study's interest in seeking to also assess the awareness level of male workers.

Theoretical Studies

A theoretical study is one that does not depend on experiment, manipulation of variables or empirical evidence. It is based on testing, exploring or developing theories, and it generally involves observation or the compilation of information (Jax, 2017). Theoretical studies pertaining to the present study are discussed under the following headings:

Existence and Susceptibility of Cervical Cancer

Cervical cancer has resulted in the death of many women globally. Worldwide, 530,000 new cases of cervical cancer are identified each year, with 270,000 deaths. Approximately 85% of these deaths occur in low/middle income countries (WHO, 2013). Nigeria accounts for more than 10%. Cervical cancer is the number two cancer killing Nigerian women (Gharoro, 2013). According to Okoye (as cited in Olayiwola, 2014), cervical cancer was killing more people worldwide than HIV/AIDS, tuberculosis and malaria put together. According to her, 26 women die daily. Society for Family Health (SFH) as reported in Nwachukwu (2015) corroborated this statistics. The Committee Encouraging Corporate Philanthropy (CECP) Nigeria (2015) placed the figure of women that die daily at 22. The difference between 22 and 26 may be due to difference in time of studies among other things. Besides, it could be that efforts made by government agencies and NGOs to create awareness on this, which though insufficient, must have elicited some sensitivity towards cervical cancer. CECP confirmed this position by attributing the 15% reduction of cervical cancer deaths between 2008 and 2012 to what they described as the monumental efforts of National

Cancer Prevention Programme (NCPP) - a charitable organisation. Nevertheless, going by the two figures, the incontrovertible fact remains that death toll from cervical cancer in Nigeria is massive and therefore alarming. There is need to mitigate the problem.

According to Committee Encouraging Corporate Philanthropy (2015), cervical cancer kills about one woman every hour in Nigeria. Women in their 30s, 40s and 50s are the major victims of cervical cancer. Partnership for Eradication of Cancer in Africa [PECA] (2017) stated that cervical cancer is most common in women aged 15 - 44 years in Nigeria. PECA further disclosed that HPV infection which cause cervical cancer are so common that nearly all men and women will get at least one type of HPV at some point in their lives and that most people never knew that they have been infected and transmit HPV to their partners without knowing it. People with weak immune system are very susceptible to contracting HPV.

Due to the prevalence of cervical cancer globally and particularly in Sub-Saharan Africa, the Federal Ministry of Health promised to unveil a five-year strategic plan for control of the disease in Nigeria. Yauri (2017) reported that Dr Ramat Hassan, the national coordinator of the National Cancer Control Programme, in an interview with News Agency of Nigeria said that the ministry is working with WHO, assisted with funding from Bill Gates Foundation, to train personnel who will implement the strategic plan. If this plan is implemented it will reduce the sufferings a lot of Nigerians go through due to this silent killer.

Cervical cancer attacks both the rich and the poor and does not respect socio-economic position but women from low socio-economic background may be more vulnerable because they cannot afford treatment. In fact every sexually active woman is at the risk of contracting cervical cancer (Entonu, as cited in Nwachukwu, 2015). People living with conditions that make their immune system low are also susceptible.

Due to the fact that cervical cancer is prevalent, stakeholders in the fight against cervical cancer have also tagged January as the cervical cancer awareness month (CECP Nigeria, 2015). 22nd to 28th January 2017 was cervical cancer prevention week (Ehonwa, 2017). According to Ehonwa, this was done to help address the low level of awareness that surrounds cervical cancer, a disease that kills more women than any other cancer except breast cancer.

Risk Factors of Cervical Cancer and Other Preventive Measures

It is not usually possible to know exactly why one person develops cancer and another does not but research has shown that certain factors called risk factors may increase a person's chances (National Cancer Institute, USA, 2015a). A risk factor is a variable associated with increased risk of disease or infection. It is something that increases a person's chances of developing a disease. Several risk factors predispose people to cervical cancer but being infected with HPV is the known cause of the disease. According to WHO (2015b), in Africa, HPV infection prevalence is estimated at 21.3% with significant variations from region to region, thus – 33.6% in East Africa, 21.5% in West Africa and 21% in Southern Africa. According to WHO, other major risk factors include tobacco use and lack of adequate treatment of precancerous lesions. According to United States Department of Health and Human Services (2016), about 20 million people in the United States, most in their teens and early 20s are infected with HPV. The general lack of documentation and dearth of statistics precludes access to information on the prevalence of HPV in Nigeria.

HPV is sexually transmitted but penetrative sex may not be required before transmission. Skin to skin genital contact is a well-recognized mode of transmission (WHO, 2016b). Other factors that are known to increase the risk of cervical cancer include early sexual debut, keeping multiple sexual partners, cigarette smoking and high parity (Balogun et al, 2012;

Abiodun, Fatungase, Olu-Abiodun, 2014; Oche et al., 2013 & Igwilo et al., 2012). Gharoro (2013) grouped the risk factors under living pattern and biological environment. According to Gharoro, these factors include the following:

1. Sexual behaviour
2. Multiple sexual partners
3. Young age at first intercourse (below 16 years)
4. Unprotected sexual intercourse (any age)
5. Having a promiscuous male partner
6. Having sex with a male partner who is not circumcised
7. Non penetrative sexual contact

The biological and environmental risk factors include the following:

1. Poor nutrient status (diets low in fruits and vegetables)
2. High parity
3. Advanced age
4. Smoking
5. Immuno-compromise

Risk factors like old age cannot be avoided but others like smoking can be.

Oche et al. (2013) added co-infection with HIV, Chlamydia trachomatis, herpes simplex virus type-2, immune-suppressants and certain dietary deficiencies. Oche et al. also observed that findings from studies have suggested that unscreened women were at high risk of cervical cancer while Igwilo et al. (2012) added prolonged oestrogen contraceptive use and poor genital hygiene to the list. They also asserted that it had been found that diets deficient in carotenoids, vitamin A, vitamin E and folate increase the risk. Lack of physical exercise which may be in form of sedentary lifestyle and exposure to radiation can predispose to cancers generally.

Symptoms and Signs of Cervical Cancer

Cervical cancer shares the same symptoms with other diseases so it is important to note that cervical cancer can only be diagnosed by microscopic examination of tissue removed from a lesion (WHO, 2014a). According to WHO (2016b), majority of HPV infections do not cause symptoms or diseases and resolve spontaneously while symptoms of cervical cancer tend to appear only after the cancer has reached an advanced stage and may include:

1. Irregular, inter-menstrual (between periods) or abnormal vaginal bleedings after sexual intercourse
2. Back, leg or pelvic pain
3. Fatigue, weight loss, loss of appetite
4. Vaginal discomfort or odorous discharge
5. A single swollen leg

According to WHO (2014b), more severe symptoms may arise at advanced stage.

Cervical cancer practice sheet 6.1 specified that symptoms of early invasive cervical cancer may include:

1. Vaginal discharge not resolved by common treatments, sometimes foul-smelling
2. Irregular bleeding in women aged in their mid-30s and above
3. Bleeding after intercourse in women of any age,

While symptoms of more advanced cancer can include all of the above 3 items, plus:

1. Urinary frequency and urgency or decreased urination
2. Leakage of urine or faeces from the vagina (due to fistula)
3. Severe backache and lower abdominal pain
4. Severe swelling of one or both legs and feet
5. Weight loss
6. Breathlessness (due to anaemia or, rarely lung metastases or effusion).

The practice sheet also emphasized that there are no signs and symptoms for the early changes of pre-cancer and that screening is the only way of knowing about a pre-cancer state.

Preventive Measures of Cervical Cancer

Cervical cancer prevention refers to action that can be taken to lower the chances of getting cervical cancer. The good news is that outside being infected with HPV types that cause cervical cancer, anybody that takes the risk factors into cognisance and generally adopts a healthy lifestyle may be protected from developing cervical cancer. Igwilo et al (2012) observed that the risk of progression of cervical cancer can also be reduced by measures such as the following - abstinence, discouraging the use of diethysilbestrol in pregnancy, uptake of human papilloma virus vaccination, male circumcision, and promoting educational awareness of the disease and its associated risks.

Comprehensive prevention involves the use of diverse tools suitably applied to the resources available (Global Guidance for Cervical Cancer Prevention and Control [FIGO], as cited in Gharoro, 2013). WHO (2013) advocated for a national level comprehensive approach to cervical cancer prevention and control which benefits from being multidisciplinary. This approach is made up of various key components ranging from community education, social mobilization, vaccination, screening, and treatment to palliative care. WHO emphasized that it is important to involve representatives from various disciplines and national health programmes such as immunization, reproductive health, cancer control and adolescent health. It further advocated for the introduction of screening programmes in countries where HPV vaccine is introduced. Thus, it can safely be said that prevention strategies are in three levels - primary, secondary and tertiary.

Primary Prevention of cervical cancer is concerned with promotion of healthy lifestyles and vaccination against HPV. According to WHO (2015b), two types of vaccines against

HPV infection were available on the market. One acts against HPV genotype 6, 11, 16 and 18 (quadrivalent vaccine) and the other against genotypes 16 and 18 (bivalent vaccines). The WHO recommended group for vaccination is 9 -13 year old girls who have not yet become sexually active (WHO, 2013). Subsequently, the United States of America Food and Drug Administration (2014) approved the use of Gardasil 9 (nanovalent) vaccine in December 2014. This new vaccine can be administered on both male and female adolescents. The vaccines cannot treat HPV infection or HPV associated diseases. All the vaccines work best if administered prior to exposure to HPV.

In fact, any female no matter the age, who has not been sexually exposed, is qualified to take the vaccination. Targeting girls of 9-13 years for vaccination is because studies have established that people that had early sexual debut (below 16 years at first coitus) are more susceptible to being infected with HPV than women that were exposed to sex at advanced age. This could be because advanced people have gathered immunity that enables their body fight infection.

Moreover, government agencies or any other stakeholder may not afford the cost of providing for every eligible woman at the same time. Women that have been sexually exposed can take the vaccine depending on the outcome of proper screening. Both vaccines require 3-doses administered over a period of 6 months (Agbara, as cited in Olayiwola, 2014). Agbara further explains that the vaccine is given at first contact, at the fourth week and at sixth month in the upper arm. According to Agbara, the vaccination, like all vaccines, has side effects, but the side effects are tolerable ranging from fatigue, pain in the joints and general body weakness to gastro-intestinal symptoms. Agbara described the side effects as a passing phase and described the vaccine as relatively safe.

Problems of lack of follow-up of initial vaccines should be anticipated and strategies for overcoming it should be mapped out. According to WHO (2015b), safety of these vaccines

are being closely monitored. The good news is that every woman can be vaccinated provided due process is followed, e.g. screening before vaccination for those beyond 9-13 years who have been exposed. Even HIV-infected individuals can be vaccinated.

Secondary prevention is done by screening for precancerous lesions and early diagnosis followed by adequate treatment. According to WHO (2013), cervical cancer screening is the systematic application of a test to identify cervical abnormalities in an asymptomatic population. Targeted women may feel perfectly healthy and see no reason to visit health facilities. Women, who have been sexually active, were formerly advised to do a pap smear test to know the state of the cells at the neck of their wombs before the vaccination but the popular recommendation now is that women below 26 years should take the vaccine whether previously exposed or not while vaccinated women should start screening at 30. The main techniques used are cytological screening of cervical cells and visual inspection of the cervix. WHO directs that screening services may be provided as organized or opportunistic (i.e. taking advantage of a woman's visit to the health facility for another purpose) service or a combination of both. There is a consensus that organized screening is more cost-effective than opportunistic screening. Part of the reason for this position is that available resources can be used better and it will ensure that greater number of women will benefit.

WHO (2013) highlighted key facts about cervical cancer screening and treatment which include - that screening is recommended for every woman 30 - 49 years of age at least once in a life time; early detection and treatment of precancerous lesions can prevent the majority of cervical cancers; and HPV vaccination does not replace cervical cancer screening. Cervical cancer screening in the developed world has been a great public health achievement as most cases are caught in the precancerous stages and prevented from proceeding to invasive cancer (Adimorah, 2013). Screening should be given adequate attention by developing nations and

be made to complement vaccination if the burden of cervical cancer can be reduced. Any positive test should be followed by adequate treatment.

Tertiary Prevention involves the diagnosis and treatment of confirmed cases of cancer. Treatment is through surgery, radiotherapy and sometimes chemotherapy. Palliative care is provided for patients when the disease has already reached an incurable stage (WHO, 2015b). Treatment of cervical cancer is very expensive and cumbersome even if detected early. The situation of victims at incurable stage that require palliative care is even worse. Palliative care is all about ensuring that patients with life-threatening cervical cancer are provided with relief from pain and suffering (both physical and psychological). This requires resources, special skills and supervision. Effective palliative care engages a team of doctors, nurses, other specialists and community members who work together in health facilities, the community and homes (WHO, 2013).

Unfortunately, there is insufficient capacity to provide the services needed at this level in most countries including Nigeria. Even the few available services are not optimally used because of lack of awareness of available services and understanding of the benefits (Salako, as cited in Okafor, 2015). According to Gharoro (2013), people still die of cervical cancer because of the following - Policy makers are reluctant to fund projects with no immediate self benefit; individuals feel that investing in treating cancer is money wasted because they believe that cancer has no cure therefore money spent on providing services is a waste; the community is uninformed about the natural history of cancer, care and prevention; surgical treatment of cancer is expensive and this view is strengthened by the fact that cancer is a chronic disease and treatment is expensive both in time and money.

In addition to the physical problem and emotional distress caused by cervical cancer, the high cost of care is also a burden to patients, their families and to the public. The fact that government alone cannot provide all the resources needed to win the war against cervical

cancer can never be over-emphasized. This uphill task of preventing cervical cancer is not only against battling a dreadful disease and lack of awareness that surround it but also encompasses dispelling the myths and misconceptions in its trail.

Common Myths and Misconceptions about Cervical Cancer

Wrong ideas about cervical cancer can lead to needless worry and even hinder good prevention and treatment decisions. Some of the following misconceptions and myths about causes of cervical cancer as identified by Fawcett, 2013; Chirwa et al., 2010; Abrahams, 2014; and Nzelu, 2016 are as follows:

1. Cervical cancer cannot be prevented. The truth remains that cervical cancer is virtually preventable.
2. We do not know the cause of cervical cancer. The truth is that infection with HPV is the cause of most cervical cancers.
3. Some people feel they are too young to worry about cervical cancer. The truth is that younger people are more susceptible to be infected by HPV. This is why age bracket of 9-13 is targeted for vaccine. In addition, HPV though transmitted through sexual intercourse can stay for 10 years and above before manifesting (Entonu, as reported by Nwachukwu, 2015). According to Nzelu (2016), cervical cancer kills more 24-35 years old women in developing countries than in any other part of the world. Besides, HPV infection and the precancerous condition are common in younger women. Nzelu recommends that in Nigeria, a woman's first screening should be done when she turns 18 or three years after she begins having sex, whichever comes first. She disclosed that teenagers with cervical cancer have presented in Nigeria.
4. Some people erroneously believe that because they do not have sexual intercourse, they should not worry about cervical cancer. According to Nzelu (2016), although

HPV can be spread during sex – including vaginal, anal and oral intercourse; sex doesn't have to occur for the infection to spread. Skin-to-skin contact with an area of the body that is infected with HPV is enough for the virus to be transmitted. Nzelu emphasized that having only one partner does not also preclude one from HPV infection.

5. The view that cancer surgery or tumour biopsy cause cancer to spread in the body is wrong. Biopsy is the removal and examination of a sample of tissue from a living body for diagnostic purposes. A lot of people have paid the ultimate price because they rejected biopsy on account of this belief. Any spread of cancer had already happened before biopsy.
6. Some people believe that since they had the vaccine they don't need to use condom during sex. Similarly, others believe that once they have had hpv vaccine, they cannot develop any other cancers in the reproductive tract. The truth is that current HPV vaccines protect from only infection from nine types of HPV but there are other strains of HPV coupled with a whole lot of other types of sexually transmitted diseases. Abstinence is the best protection.
7. The belief that a person found to have cervical cancer is a prostitute is also wrong. This group of people feel that only promiscuous women are at risk of developing cervical cancer but they are wrong.
8. People think that cervical cancer does not result from sex but that it is a satanic curse or as a result of spiritual manipulation or bewitchment and therefore should be treated solely spiritually. This is wrong.
9. Some people believe that having had HPV vaccine dispenses with the need to get screened for cervical cancer. The truth is that vaccine does not protect against all the types of HPV that can cause cervical cancer, so it is very important to continue

regular screening. According to experts the most important thing you can do to prevent cervical cancer is to get screened (American Cancer Society, 2016).

10. Some people erroneously feel that family planning medicines that they give out in clinics causes cervical cancer.
11. Some people wrongly think that every female member of a family where there has been a cervical cancer victim must suffer cervical cancer. They believe that cervical cancer is hereditary but the truth is that being infected with the virus that causes cervical cancer depends to a great extent on lifestyle and some other controllable factors. However, recent research findings have shown that a breast cancer [BRCA] 1 mutation can lead to increased risk of cervical cancer (Gates, 2013). People with such gene in their families should take screening seriously.
12. Some people believe that cervical cancer prevention does not concern men. The truth is that the disease is transmitted by a sexually transmitted HPV and this implies that men are involved in the transmission. Besides every woman that is affected by cervical cancer could be sister, aunt, daughter, niece, wife and mother to a man.
13. Some people believe that HPV vaccine is meant for females alone. The truth is that three types of vaccine exist – Cevarix, Gardasil and Gardasil 9. The gardasils prevents most cases of cervical and other cancers caused by HPV infection including a portion of genital, anal, oral and throat cancers. It also prevents genital warts and Recurrent Respiratory Pappilomatosis (RPP). The gardasils are therefore approved for both males and females. Vaccinating boys against HPV might also help protect girls from the virus by decreasing transmission. The US Centre for Disease Control (CDC) recommends that people should get the same vaccine brand for all three doses i.e. cervarix and gardasil should not be used interchangeably.

According to Chirwa et al., 2010; CECP, 2015 and Nzelu, 2016, some misconceptions and myths which may cause some people to shy away from screening services include the following:

1. Nurses who do the screening services may be diabolical people that will take our children.
2. The instrument they use causes a lot of pain
3. Cervical cancer diagnosis implies they will remove my womb and I don't want to reincarnate without womb.
4. Screening destroys the ability of a woman to have a baby.
5. There is no privacy, I m just too scared to be screened by people who may know me.
6. I don't have symptoms of cervical cancer so I don't need screening. The truth is that cancer screening means testing for cancer before symptoms develop. Moreover cervical cancer is usually asymptomatic in the early stage, hence it is known as the silent killer. No woman should be deceived to dodge screening because of absence of symptom.
7. Cervical screening was abnormal but vaccination can treat the problem. The truth is that vaccination taken before exposure protects from some types of HPV infections but HPV vaccine does not treat HPV infection or the abnormal changes.

Early detection of cancer greatly increases the chances for successful treatment. According to WHO (2015c), screening through the pap smear (cytology) is the only test that has been used in large populations and that has been shown to reduce cervical cancer incidence and mortality. Other tests (visual inspection with acetic acid VIA, visual inspection with Lugol's iodine VILI, HPV) show promise but there is as yet no comparable evidence on their effectiveness (WHO, 2015c). There is need to remove every obstacle that militates against women's adoption of screening.

In addition, if these unfounded fears and misconceptions are not dealt with, they will continue to discourage both men and women from taking up available preventive measures. The task of wiping out cervical cancer cannot be tackled alone by medical officials. Presently, government efforts is inadequate and below expectation (WHO, 2014b). A multi-sectoral and interdisciplinary approach through the application of adult and non-formal education programmes and approaches appear to be a better strategy for creating the much needed awareness among the populace. This can be achieved through involving the NGOs.

NGOs Efforts in Fighting Cervical Cancer in Nigeria

Undoubtedly, cervical cancer threatens the well being of members of the community and negatively affects efforts at community development. Governments of developing nations have not been able to do much to help the communities against this scourge. Nigeria is said to have a national cancer control programme which has developed the National Cancer Control Policy and also provided guidelines for private sector involvement in the cervical cancer control (Nwachukwu, 2015). The fact remains that the impact of the said programme or policy is yet to be significantly felt across the nation. Just as in other issues where government could not do much to help the people, NGOs contributed greatly in highlighting the issues of dangers of cervical cancer and have been in the vanguard of the fight to reduce death tolls from cervical cancer scourge.

World Bank (as cited in Akani, 2015, p.413) defines NGOs as "private organisations that pursue activities to relieve the suffering, promote the interest of the poor, protect the environment, provide basic social services, or undertake community development". Similarly, Barikor (2005) stated that NGOs can be formed by individuals, groups and associations to provide services or resources that seek to promote, protect or even advance the interests and needs or even solve the problems of another especially the needs of a sub-

group like women, the sick, the poor, disabled and the adults which may not be met by government assistance due to ignorance or lack of resources and other constraints.

The Company and Allied Matters Act, 1990, Section 26(1) permits NGOs to be registered as companies limited by guarantee. The income and property of such companies are applied solely towards the promotion of their purposes. Indeed certain NGOs are permitted by law to solicit support in terms of funding, manpower and equipment supply from even international publics because the demand for their activities, which are based on charity and voluntarism, are often too wide and cumbersome for them to handle with internally generated fund. NGOs are often referred to as civil society organisations (CSOs). According to Adamu (2015) the role of CSOs worldwide is essentially to facilitate the design of strategies for development; to act as service providers under the aegis of community and national non-governmental organizations; and to be watchdogs in order to make governments accountable for their commitments.

Some NGOs work with international organisations while others collaborate with professional and private organisations to enlighten the people on preventive measures and also bring treatment. This researcher's searches show that some NGOs have contributed in creating awareness, organizing screening programmes and facilitating treatment of cervical cancer cases alone or in concert with governmental agencies and other private organizations such as the media. The general public can recourse to them for information on cervical cancer in Nigeria. These NGOs include:

1. Mass Medical Mission (MMM), which started with the campaign against cervical cancer in 2007 and later incorporated other types of cancer, now known as National Cancer Prevention Programme (NCPP).
2. Medical Women Association of Nigeria (MWAN).

3. Well Women Centre - The centre at No. 28 Abakaliki Road Enugu runs all year round breast and cervical cancer screening services.
4. Breast Without Spot (BWS) - an NGO that works with Union for International Cancer Control (UICC), with a mission to create increased awareness of the preventability and early detection of cancers in general and other non-communicable diseases with shared risk factors in Nigeria. BWS runs monthly awareness, screening and educative programmes against cancers at Good Shepherd Hospital, Uwani Enugu. BWS also has a screening, wellness and entrepreneurship centre at No. 4 Chime Lane (Off Abalkiliki Road, Opposite State School Board), GRA Enugu where they work every day of the week.
5. The Committee Encouraging Corporate Philanthropy, Nigeria (CECP) - whose focus includes to acquire and deploy Mobile Cancer Centres (MCC) and reach every local government at least once in a year for screening as well as publish educative articles to enlighten people about cancers.
6. Anambra Women in USA (ASA women) - who, through their medical mission programme centred on cancer and maternal health, promote community educational workshops on cervical cancer and promote their proposed pet project (construction of ultra modern cancer treatment centre at Awka).
7. Society for Family Health (SFH).
8. Planned Parenthood Federation of Nigeria (PPFN)
9. Marie Stopes Nigeria (MSN) - This organisation periodically organizes awareness and screening programmes in some states in Nigeria including Anambra State through their subsidiary organization Blue Star Network.

The list is by no means exhaustive. SFH, PPFN and MSN subscribed to the National Cancer Control Programme and inaugurated a four year cervical cancer screening and preventive

therapy (CCS & PT) that was supposed to last from 2012 to 2016 in some states in Nigeria. Nwachukwu (2015) reported that the programme provides cervical cancer screening services and cryotherapy (i.e. the removal of heat in order to reduce cellular metabolism) to women who have precancerous cervical lesion across the country. They also provided for referrals to government facilities for people that require higher treatment. Therapy is said to be available for women of 30 - 49 years in Abuja, Lagos, Kaduna, Enugu, Ibadan, Owerri, Makurdi among others. Nwachukwu also revealed that SFH said the programme is funded by the Bill and Melinda Gates Foundation through Marie Stopes International as the principal recipient in Nigeria, Tanzania, Uganda and Kenya.

These organisations have done well to do the much they have done but one cannot truly commend them without evaluating their activities against the objectives which they sought to achieve. Besides, it is no longer strange for NGOs to exist and front their activities in the pages of the newspaper and electronic media without being found to exist or have carried out claimed activities in any identifiable physical location. Some NGOs touted to be fighting cervical cancer may not be immune from this practice. The situation and the fact that it is suspected that a lot of NGOs sprang up to attract and siphon funds from international donors for personal use led to calls for stricter regulation of NGOs above what Corporate Affairs Commission currently does. If the war against cervical cancer must be won, NGOs in this course must be sanitised, supported and sustained. This study will seek strategies that will help NGOs overcome some of their challenges and expand their reach.

There is no gainsaying the fact that NGOs are major implementers of adult and non-formal education programmes. They work in conjunction with other agencies at both local and international levels to bring progress globally. This study will discuss adult and non-formal education and their strategies by specifically highlighting programmes that are suitable for use in fighting cancers hereinafter.

Adult and Non-Formal Education Programmes and Strategies for Fighting Cancer

It is remarkable that most literature consulted for this study on cervical cancer recommended that concerted efforts should be made to package a well designed health and community education programme to be used in creating awareness of the dangers of cervical cancer, its preventability and treatment through the usage of screening services; prompt treatment of early cases and referrals of advanced cases or as the case may be. This shows that the battle against cervical cancer largely depends on awareness for it to succeed. In effect, to survive man must have awareness and to become aware, man must be educated (Oreh, 2014).

Education is a powerful driver of development. It is said to be one of the strongest instrument for reducing poverty, raising income, promoting economic growth, shared prosperity, improving health, gender equality, peace and stability (World Bank, as cited in Akani, 2015). Unfortunately, developing countries face peculiar challenges that include ignorance, illiteracy, poverty, gender inequality and apathy on the part of the adult population among others. Government neglect of corporate responsibility to citizenry also escalates these problems. All these, directly and indirectly, affect chances of avoiding and surviving cervical cancer respectively. Since the problem of morbidity from cervical cancer is largely a result of ignorance and seeming apathy on the part of the adult populace, it stands to reason that adult education should be looked upon as the best form of education to be employed to tackle the problem of cervical cancer. This is more so because both the people that suffer cervical cancer, their care givers and health educators are adults - the clientele of adult education and the vectors of development.

The term ‘adult’ is a subjective term because it means different things to different people. Complicating the issue further is the fact that words used to define or describe adult such as mature, grown-up, independent, responsible, and so on mean different things to different

people. Moreover, various people of different cultural backgrounds have differing opinions concerning who an adult is. This is because they see the issue from different perspectives. Scholars have also tried to define adult from different forms/aspects (e.g. biological - those with reproductive ability; social - those deemed adult by their culture; situational - those whom playing the role of adults are thrust upon by the situation they find themselves in, such as untimely deaths of parents). Such other parameters that include age, marriage, sense of economy, stock of energy, intelligence have also been used to define who an adult is (Ugwoegbu, 2003). Nevertheless authors have not been able to find a well delineated and generally acceptable stage in the life of a man that defines adulthood. The definition by UNESCO (as cited in Onyeozu, 2007; Nzeneri, 2010) that an adult is a person regarded as an adult by the society he belongs is widely accepted.

Interestingly, the fact that adolescents are very susceptible to HPV infection on account of early sexual debut makes them an adult for this purpose. Most cultures see sexual intercourse as the exclusive reserve of adults not children but due to moral degradation in the society, the age of sexual debut has reduced drastically. It is as low as 9 years in some societies. This supposes that adult educators and other agents of adult education should equally take whatever campaigns and programmes they have to the adolescents, their parents and their teachers in order to reduce death from cervical cancer.

Moreover the popular maxim that ‘prevention is better than cure’ particularly holds sway for cervical cancer. Prevention of cervical cancer through adult education will save the nation and victims from daunting problem and cost of treatment and management of cervical cancer. Victims of cervical cancer face the challenges of lack of availability of adequate number of experts (especially oncologists and medical physicists) for treatment coupled with lack of access to few available treatment and screening centres. Indeed, everything about cervical cancer is very expensive. CECP (2015) cited the case of a well known Nigerian

Philanthropist, who was said to have died of cervical cancer on September 18, 2014. It was reported that ₦36 million had just been raised by her well-wishers in a last minute attempt to save her life. At the time she died, she owed ₦25 million in hospital bills in Germany. Meanwhile cervical cancer is virtually 100% preventable.

Due to the fact that cancer is a chronic disease, treatment is expensive both in time and money. Even the vaccine has to be greatly subsidized for the common man to want to put scarce resources into that. According to Gharoro (2013), the cost of surgical treatment is prohibitive, approximately ₦450, 000 per surgical operation. He also explained that the expenditure on radiotherapy used to be as high as ₦300, 000 until the World Atomic Energy intervention, through the federal government, which reduced the cost to below ₦100, 000 in federal government treatment centres. This massive expenditure will be avoided if due attention will be paid to efforts at creating awareness of risk factors and promotion of utilisation of prevention measures through Adult education.

Adult education comprehends formal, informal and non-formal education. Every individual learn as long as they live through adult education processes regardless of age and previous education (Nzeneri & Haliyu as cited in Nzeneri, P. & Abe, 2013). Adult education lasts through entire life span. It is dynamic. Adult education encompasses multiplicity of programmes and its programmes are designed according to the peculiar circumstances of a particular group of people in order to meet their peculiar needs (Obidiegwu, as cited in Obiozor and Obidiegwu, 2013). Adult education is meant to help adults improve their skills, knowledge, attitude and behaviours for their personal, family and community well-being. Loss as a result of cervical cancer threatens personal, family and community well being.

Age old clarion calls for public enlightenment by researchers and efforts of other concerned groups such as NGOs towards the improvement of awareness level of the threat, acceptability of screening and vaccination to preserve lives of women persist. However, they

do not appear to have significantly brought the problem under perspective. There appears to be no significant increase in the level of awareness and attitude to dangers of cervical cancer and its preventability. Thus the situation calls for conscious application of the principles, theories and practice of adult education in the delivery of strategies for prevention of cervical cancer. Adult and non-formal education strategies seem to be a veritable tool to bring about attitudinal and behavioural changes that will positively affect rate of intake of vaccines and screening by women.

Adult education is provided by trained adult educators and other groups of people that may not even be aware that they are adult educators. Adult education is provided by NGOs such as Community based organisations [CBOs], trade unions, faith based organisations, universities and others. It is also provided by International Organisations such as UNESCO, UNICEF, UNDP and Action Aid (Obidiegwu & Obiozor, 2014). The scope of adult education is as wide as life itself. According to Obidiegwu (as cited in Obiozor & Obidiegwu, 2013), the field of adult education cuts across all disciplines and the purpose is to facilitate the learning of adults in all its contexts. UNESCO (as cited by Obidiegwu in Obiozor & Obidiegwu, 2013) asserted that Adult Education activities are viewed as forming part of life-long education and learning. It has no specific theoretical boundaries and should meet the particular situation created by the specific needs of development, of participation in community life and all fields of knowledge and are addressed to all people whatever their level of achievement.

The scope of adult education includes but is not limited to remedial education, continuing education, literacy education, labour education, functional literacy, women education, retirement education, civic education, environmental education, extension education (e.g. health extension education is utilized to provide preventive health care delivery services to the masses and this includes immunization programmes [Ijah, 2014]), community

development and distance education. These areas are very wide in scope too. For instance, the scope of Community Development is as wide as community life itself. The scope covers agriculture, health, domestic science, rural industries, housing, cooperatives, public amenities and recreation. The scope expands to accommodate new challenges that may arise as a result of break-through in science and technology, natural occurrences and all other needs that affect the lives of adults in the community. Barikor (as cited in Ezima, 2004) emphasized that a mandatory function of community development programme should be to improve ways by which target community is educated and motivated to promote the quality and scope of personal and communal life and their contribution to nation building.

According to Barikor, aspects of community development programmes include those programmes which enhance the living conditions and health of people. Community development's emphasis is on bringing about positive change that makes the life of the people better. NGOs undertake development activities for the benefit of communities with or without the aid of any government. They are adult education agents and will be more successful if they apply adult and NFE programmes and strategies.

Application of some Adult and Non-Formal Education programmes through its various approaches by its agencies whether in formal school settings or non formal school settings via their work places, rural and urban community social gatherings, cooperative societies, door to door campaigns or as the case may be, can contribute substantially in the fight against cervical cancer. Adekola and Uzoagu (2014) described adult education as all forms of education that are acquired by individuals at their matured years. Non-Formal Education [NFE] programmes are activities organized for people outside the formal school system to meet them at the point of their needs and situations. Adult and NFE programmes necessarily encompasses a list of educational and learning programmes for those regarded as adults. They are potentially strategic education tools of action to combat diseases and similar problems.

Quite contrary to the common view that adult education is used to tackle merely the basic literacy needs of adults, adult and NFE is the tool per excellence for tackling every need of an adult. Adult education provides the necessary channel for enlightenment of adults on healthy practices that will result in reduction of infant and maternal mortality rates, improved sexual reproductive practices, increasing life expectancy and reduction of the spread of diseases such as HIV/AIDS, VVF and of course HPV which is the main cause of cervical cancer.

Scholars in the field of adult and NFE evolved various approaches to facilitate adult learning which include - Functional literacy approach, Andragogy, REFLECT, Conscientization and Each - One -Teach - One (Adekola & Uzoagu, 2014). In discussing ways awareness of cervical cancer can be created, Chukwuemerie and Tedjere (2016) canvassed that Each - One -Teach - One accommodates the other approaches and at the same time has the potential of being adapted to spread information on cervical cancer in geometrical proportion. The phrase 'each-one-teach- one' is said to have originated in the US during slavery period when black people and their descendants were denied access to formal education. The phrase was popularized by Frank Laubach, a missionary to the Philippines who had adopted the programme in order to continue to teach literacy to the people he was evangelizing despite lack of funds. The approach involves a literate person voluntarily taking up an illiterate and teaching him to become literate.

This approach was advocated for use in Nigeria to wipe out illiteracy in 1990 by late Professor Babs Fafunwa. Fafunwa added the phrase 'and fund the teaching of one' to it. This was informed by the principle that every literate person owes it a duty to make one illiterate person literate or pay somebody else to do so. Chukwuemerie and Tedjere (2016) recommended this approach as being apt for tackling cervical cancer because concentrating efforts at its prevention is the more viable option for a nation like Nigeria that can scarcely afford resources for treatment of its teeming populace. Besides, a lot depends on knowledge

of risk factors and preventive measures and this can be spread and better explained on one-on-one basis. In this way proper language (mother tongue of learner where necessary) can be used and explanation is done to accommodate reasoning power of the adult learner among other benefits.

Chukwuemerie and Tedjere (2016) also recommended that adult educators can formulate primers based on cervical cancer key facts and these can be used in literacy classes. Adults can be conscientized to sponsor the education of others by donating funds to NGOs to organize seminars and workshops to enlighten the populace or even sponsor the vaccination of women. Since Nigerians like marking events, they can sponsor such to mark their birthdays or as part of funeral programmes for the burial of their loved ones or their remembrance (Chukwuemerie & Tedjere).

Similarly, Obiozor (2016) discussed some non-formal education programmes for combating HIV/AIDS which could be adapted for use in tackling cervical cancer. They include but are not exclusively the following:

1. Mass awareness and enlightenment programmes carried out through field visits, production of reading materials, posters, brochures, jingles and movies and other video documentations.
2. Community mobilization programmes where programme providers and facilitators meet with traditional rulers, community opinion leaders, youths in clubs such as Boys and Girls Brigade, people in the market places, churches, mosques and other local gatherings to stimulate and sensitize them for them to initiate and sustain programmes.
3. Counselling services provided at grass root levels especially for adolescent girls and boys who are the most susceptible while victims of cervical cancer and their families should also be counselled on what to expect and how to go about things. If

government can enable the diagnosis of the stage of the disease by making adequate manpower, machines and other resources available and affordable, counselling services will reduce the trauma people go through.

4. Health education programmes provided by experts or their trained agents to reach every community and school. Pupils of senior primary schools and secondary schools should be compulsorily educated on the dangers of cervical cancer and the preventive measures. Agents of adult education such as NGOs can collaborate with Ministry of Education, Health, Youths and Women of Affairs to facilitate this and also organize programmes to educate out-of -school youths, orphans, non-literate adults and other groups meant to be catered for through NFE. They can show home videos based on cervical cancer in public places such as in community education/ literacy centres and during wake-keeping/ vigils organised as part of funeral rites.
5. Civic education should be used to emphasize the responsibility to tell others about the disease in order to save their lives.

The implication of the immediately preceding section of this study which can also be deduced from other sections is that NGOs are the major catalysts needed to mobilize other sectors and groups in the fight against cervical cancer. NGOs need to increase their labour force to meet the enlightenment and other needs of the populace in the fight against cervical cancer. NGOs have tried to enhance their work through partnering with other organizations and individuals. This is made manifest in the ways NGOs involved in the war against cancer mark World Cancer Day which is mainly an educative platform for enlightening the populace.

World Cancer Day [WCD] is an initiative of the Union for International Cancer Control [UICC]. The objective of this body is global cancer control. WCD was established by the Paris Charter adopted at the world summit against cancer for the new millennium in Paris on 4th February 2000. The Charter aimed at the promotion of the research for curing as well as

preventing the disease, upgrading the provided services to patients, sensitization of the common opinion and mobilization of the global community against cancer. The charter established February 4 as World Cancer Day to keep alive the Charter of Paris (Swankpharm, 2017). WCD has become a global observance that helps raise awareness of cancer and how to prevent, detect, or treat it.

UICC directs and coordinates activities for marking WCD (UICC, 2015), building on the Global Non-Communicable Disease [NCD] Action Plan (2013-2020), identified a set of immediate actions for all stakeholders to advance the World Cancer Declaration, thus:

1. Strengthen health systems for effective cancer control
2. Measure cancer burden and impact of all cancer plans in all countries
3. Reduce exposure to cancer risk factors
4. Universal coverage of HPV and HBV vaccination
5. Reduce stigma and dispel myths about cancer
6. Universal access to screening and early detection of cancer
7. Improve access to services across the cancer care continuum
8. Universal availability of pain control and distress management
9. Improve education and training of health care professionals.

UICC seeks to sensitize people all over the world by directing attention on various aspects of the set targets annually which member organizations key into to plan programmes. Currently, UICC established a 3-year campaign (2016 - 2018) for reach and impact with the theme 'We can, I can'. This theme encourages everybody's involvement in the fight against cancer collectively or as individual. UICC emphasized that just as cancer affects everyone in different ways, people have the power to take various actions to reduce the impact that cancer has on individuals, families and communities. According to UICC, World Cancer Day is a chance to reflect on what you can do, make a pledge and take action. They emphasize that

every action counts in the fight against cervical cancer as well as other cancers and everybody is needed. This is the main point of their three year campaign for continued impact (UICC, 2015).

WHO (2017) described WCD as opportunity to rally the international community to end the injustice of preventable suffering from cancer. WHO highlighted the need for multi sectoral partnership in the war against cancer. WHO produced a booklet titled 'Guide to Cancer Early Diagnosis' as its contribution to mark 2017 WCD.

MERCK (named after a German family), a leading science and technology company, joined partners to mark 2017 WCD by increasing awareness about cancer through social media. MERCK's strategies for fighting cancer include the following:

1. Social Media Campaign – MERCK produced short video messages on youtube for educating the public on various types of cancers.
2. MERCK Africa Oncology Fellowship Programme in Kenya and India was established to increase the limited number of oncologists in the continent.
3. 'MERCK More Than a Patient' was introduced to empower women cancer survivors. They support women cancer survivors and build cancer care capacity in Africa to reduce the global burden of cancer (NewsExpress Nigeria, 2017).

Simon (2017) writing for The American Cancer Society, reported that in the United States, WCD was marked in New York by lighting the Empire State building with blue and orange for the 7th year in a row. The colours are those of UICC. The American Cancer Society expected that communities around the world would hold festivals, walks, seminars, public information campaigns and other events to raise awareness and to educate people on how to fight cancer through screening, early detection, physical activities, by quitting of smoking and by urging public officials to make cancer issues a priority. According to Simon (2017), campaign outlines actions that individuals and communities can take as follows.

Individuals can:

1. Make healthy choices that include avoiding tobacco, getting plenty of physical activity, eating a healthy diet, limiting alcohol, and staying safe in the sun.
2. Know about signs and symptoms of cancer and early detection guidelines because finding cancer early makes it easier to treat
3. Seek out cancer care patients and survivors with the physical and emotional impacts of cancer even after treatments ends
4. Share stories about their own cancer experiences, communicate with decision-makers, and join support groups to help make positive change for all people affected by cancer.
5. When possible return to work after cancer treatment is possible, encourage and empower victims to return to work in order to restore normality, routine, stability, social contact and income

Communities can:

1. Call on government to commit adequate resources to reduce cancer deaths and provide a better quality of life for patients and survivors.
2. Educate people about the link between lifestyle behaviours (including smoking, poor diet, and lack of physical activity) and cancer risk.
3. Dispel myths that lead to stigma and discrimination against people with cancer in some communities.
4. Encourage schools and workplaces to implement nutrition and physical activity policies that can help people to adopt healthy habits for life.
5. Improve access to affordable cancer care to all populations.

Nigeria now joins the rest of the world to mark cervical cancer awareness in the month of January every year (Nzelu, 2016). There are also other programmes designed to create

awareness on cervical cancer such as using the colour pink to symbolize female cancers (such as breast, cervical and ovary) and to promote excellent health and the need for people to go for regular health screening. Men can tell people they care for about cervical cancer and remind them of the vaccination and screening schedules. Everybody can partake in template messages-sharing amongst their networks, sensitize organizations they belong in to get involved in the fight against cervical cancer, put up posters on their doors and cars and generally use social media to communicate their plans on creating awareness. This study hopes to contribute to progress in fighting cervical cancer by determining and highlighting culturally existing strategies that can be utilized for awareness-raising on cervical cancer without incurring much cost.

Review of Related Empirical Studies

Related empirical studies were discussed as follows:

Empirical Studies on Awareness of Existence and Susceptibility; Risk Factors; Symptoms and Signs; and Preventive Measures of Cervical Cancer

A study conducted by Balogun, Odukoya, Oyediran and Ujomu (2012), titled "Cervical Cancer Awareness and Preventive Practices: A challenge for Female Urban Slum Dwellers in Lagos", adopted a descriptive cross-sectional survey design. Multi-staged sampling technique was used to select 240 women used for the study. A structured questionnaire which contained questions on awareness of cervical cancer among other ideas was used to collect data for the study. Data collected were analyzed using frequency distribution for the research questions and. Chi-square to test the hypotheses. The result showed that only 10 respondents (4.2%) were aware of cervical cancer prior to the study and none of them believed they were at risk of developing the disease. The study's findings include statistically significant association between age, education and a willingness to undergo a screening test for cervical cancer. None of the women interviewed in either community was aware of a screening test for

cervical cancer. The study found awareness of cervical cancer to be dismally low and attributed it to low educational level of the women that participated in the study and the fact that they were underserved population with limited access to health information and services.

The belief in personal susceptibility was also low as none of the women felt they were at risk of cervical cancer. Balogun et al. concluded that efforts need to be intensified to increase awareness of this condition and promote low-cost cervical screening among underserved population at high-risk for cervical cancer. Balogun et al. differ from the present study because it examined women of little or no academic qualification but the present study assessed the awareness level of a population that cuts across people of various levels of academic qualifications who work in different academic settings.

In a similar study by Ubajaka, Ukegbu, Ilikannu, and Ibeh (2015) titled "Knowledge of Cervical Cancer and Practice of Pap Smear Testing among School Teachers in Nnewi-North Local Government Area of Anambra State, South Eastern Nigeria", the researchers adopted descriptive cross-sectional survey research design. The population consisted of female teachers of reproductive age group. A total of 142 female teachers in 4 secondary schools were selected for the study. The instrument for data collection was a semi-structured questionnaire designed to elicit information on socio-demographic characteristics, knowledge of cervical cancer and Pap smear, practice of pap smear and the reasons for the practice and non-practice of pap smear. The findings indicated a high level of awareness of cervical cancer among the study population (76.4%). Ubajaka et al. also showed that 41.5% of the respondents were aware of pap smear test. According to Ubajaka et al., the study disagreed with several reports in which awareness of cervical cancer and pap smear was low. These researchers attributed the high level of awareness in their study to the high educational status of the population. Increased awareness of cervical cancer and pap smear screening test is reported to promote the utilization of cervical cancer screening services.

In addition, Ubajaka et al. reported a low knowledge of the risk factors of cervical cancer among respondents because only 30.2% knew HPV infection to be a risk factor for the development of cervical cancer. Out of this number, 21% of the respondents were reported to have at least undergone one pap smear. Ubajaka et al. further discovered major reasons for low uptake of pap smear among respondents to include – not deeming the test necessary, not knowing where it could be done, not being at risk, fear of pain and cost. Ubajaka et al. is related to the present study because both studies deal with some common variables such as awareness of cervical cancer, awareness and knowledge of risk factors and preventive measures. However, Ubajaka et al.'s study differs from the present study because it used only female secondary school teachers as its respondents while the present study will involve male as well as female staff of tertiary institutions. Furthermore, the present study went further to determine strategies for creating awareness.

Moore and Driver (2014) conducted a cross-sectional survey titled "Knowledge of Cervical Cancer Risk Factors among Educated Women in Lomé, Togo : Half-Truths and Misconceptions" involving 97 educated women in Togo to assess what educated Togolese women knew about cervical cancer and the accuracy of their knowledge of cervical cancer risk factors. They examined factors that correlate with accurate knowledge among educated women. Participants were asked to freely list risk factors for cervical cancer that they knew and explain the reason why they thought those factors were risk factors. The women were also asked questions on established risk factors of cervical cancer in which they had options to choose from "yes", "no" or "don't know". Descriptive statistics was used to analyze result. Frequency distribution and knowledge scores were presented. Lack of personal hygiene (including poor sanitation, poor sexual hygiene, and washing with dirty water), botched induced abortions, and STIs were the top three factors listed as risk factors of cervical cancer, closely followed by vaginal infections and use of contraceptives especially IUD. None of the

participants mentioned HPV which is the primary risk factor of cervical cancer. The study revealed the inaccuracy of knowledge harboured among educated Togolese women on the risk factors of cervical cancer.

The study also found that educated women in Togo harboured lots of misconceptions and half-truths about cervical cancer. Although some were able to identify STIs as risk factors, they mostly did not understand that HPV was the virus that causes cervical cancer. It was also found that women erroneously believed that using IUD for months can be a source of infection which can lead to cervical cancer. Even when participants were given a list of established risk factors to choose from, only 4 of the 11 factors were accurately identified by most of the participants. The study by Moore and Driver showed that educated women studied were poorly knowledgeable of HPV as the primary cause of cervical cancer. Having multiple sexual partners was the second highest identified risk factor, followed by HIV/AIDS. Mean and standard deviation were used to analyze the knowledge score. The multiple linear regression analysis showed that only two variables significantly affect knowledge of cervical cancer risk factors among educated women – age and years of education. None of the other factors significantly correlate with accurate knowledge of cervical cancer risk factors among study participants. The study concluded that education on risk factors of cervical cancer is important to dispel the identified inaccurate beliefs. Finally, they recommended that cervical cancer awareness programmes and campaigns must be carefully developed and must not assume accurate knowledge in any specific sub-group if campaign and programmes are to be effective, bearing in mind that educated women in this study had such inaccurate knowledge of risk factors of cervical cancer. It was also recommended that women with different levels of education should be trained as opinion leaders so that they can disseminate information on risk factors of cervical cancer among their community members.

Moore and Driver (2014) is similar to the present study because it assessed knowledge and awareness of cervical cancer risk factors which this study also did but this study also assessed other issues about cervical cancer. The respondents of the present study were not only highly educated people but comprised of men and women.

Ekine, West and Gani (2015) carried out a study titled "Awareness of Female Health Workers and Non-Health Workers on Cervical Cancer Screening: South-South Nigeria" in which they investigated the awareness of cervical cancer screening practice among female health workers and female non-health workers of all works of life in parts of South-South Nigeria. It was a cross sectional study that used questionnaire for data collection. The researchers found that the respondents demonstrated high awareness of cervical cancer and high awareness of screening services but involvement in screening was unfortunately low. 60.7% of the respondents were of the opinion that screening is necessary. The study by Ekine, West and Gani (2015) is related to the present study because it is concerned with issues pertaining to the prevention of cervical cancer. The study was carried out in South-South Nigeria while the present study was carried out in South-East Nigeria.

In a study conducted by Ajah, Iyoke, Ezeonu, Ugwu, Onoh and Ibo (2015), the researchers sought to describe the association between knowledge of cervical cancer/ screening and attitude of teachers of secondary schools in Abakaliki towards HPV vaccination. Ajah et al. also sought to determine if the attitude of teachers support a possible role for teachers in promoting the uptake of vaccine. It was a cross-sectional questionnaire-based study involving secondary school teachers. 412 teachers participated in the study. Out of all the participants, 75% were aware of cervical cancer and 75% of these respondents were aware of at least one method of cervical cancer prevention. Out of those aware, 86% knew that HPV infection was the cause of cervical cancer. Ajah et al. concluded that a good majority of secondary school

teachers in Abakaliki were aware of HPV vaccine for preventing cervical cancer and over two-thirds of these respondents were favourably disposed to recommending its use.

Marlow, Klausner, Reingold, Madhivanan, Knupp and Yashodha (2009) carried out a study on the attitude of parents of adolescent girls towards HPV vaccination in India. They collected their data through focussed group discussions. The sample was stratified by sex, religion and region. The study found that while parents have limited knowledge of HPV and cervical cancer, most are highly accepting of the vaccine. Marlow et al. observed that high acceptability levels appear to be a reflection of positive attitudes towards the government universal immunisation programme in general, rather than to the HPV vaccine in particular. The study highlighted the need for additional education and health promotion regarding HPV and cervical cancer prevention in India. The study by Marlow et al. was a qualitative survey while the present study is a quantitative survey.

Ilika et al. (2016) investigated the sexual behaviour pattern, cervical cancer awareness and screening practices among female undergraduates of the universities in Anambra State. It was a descriptive cross sectional study of 342 female undergraduate students. A semi-structured questionnaire was used to collect data. Chi-square test was used to identify statistically significant associations between variables. The result show that about 310 (90.6%) have heard of cervical cancer and 269 (78.8%) were aware of cervical screening. Out of respondents that were aware of cervical screening, 108 (40.2%) were aware of pap smear. Ilika et al. concluded that there was a good level of awareness of cervical cancer but involvements in cervical cancer screening practices were inadequate. The researchers recommended educational programmes and comprehensive cervical screening programme as panacea to the prevalence of cervical cancer. Although Ilika et al. conducted their study in some tertiary institutions in Anambra State. Their respondents differ from the respondents to

the present study. The respondents for present study were older and were made up of both males and females.

Mwaka, Orach, Were, Lyratzopoulus, Wabinga, Roland (2012) assessed community awareness on cervical cancer risk factors, symptoms and perceptions on prevention and cure in Gulu, Uganda, in order to provide data to inform interventions for improvement of cervical cancer survival. The outcome of their study showed that most participants had heard about cervical cancer. Known risk factors including multiple sexual partners, HPV infection and early onset of sexual activity were affirmed by 88%, 82% and 78% of respondents respectively. Majority of the participants recognized symptoms of cervical cancer to include inter-menstrual bleeding (85%), post-menstrual bleeding (84%) and offensive vaginal discharge (83%). Seventy-five percent believed that cervical cancer is preventable and 92% believed that it could be cured if diagnosed early. Mwaka et al. concluded that recognition of cervical cancer risk factors and symptoms was high among study participants.

Ahmed, Sabitu, Idris and Ahmed (2013) conducted a study titled ‘knowledge, Attitude and Practice of Cervical Cancer Screening among Market Women in Zaria, Nigeria’ and reported that respondents exhibited a fair knowledge of cervical cancer and cervical screening (43.5%), poor knowledge of risk factors, good attitude to screening (80.4%) but low level of screening practice (15.4%). The result of the study showed an improvement of some sort as against what obtained among non-health workers and poorly educated population in other regions of Nigeria (Igwilo et al., 2012; Aminu, Dattijo & El-Nafaty, 2013).

Abiodun, Fatungase, Olu-Abiodun, Idowu-Ajiboye and Awosile (2013) carried out a study in Ogun State in order to assess women’s awareness and knowledge of cervical cancer. The researchers reported that awareness of cervical cancer and screening was very low and that women couldn’t identify a virus as the cause of cervical cancer. As much as 97% had no or poor knowledge of risk factors. The present study is similar to Abiodun et al. as both

studies were concerned with awareness of cervical cancer but they differ in terms of location studied.

Empirical Studies on Male Involvement in Women Sexual and Reproductive Health Issues

A study by Williams and Amoateng (2012) investigated knowledge and beliefs about cervical cancer screening among men in Kumasi, Ghana. The study was hinged on the fact that increased spousal support for cervical cancer screening may increase screening rates in Ghana. Five focus groups discussions were conducted with Ghanaian men to assess their cervical cancer screening knowledge and belief. The study identified targets for education interventions and inaccurate knowledge about cervical cancer risk factors. Cultural taboos regarding women health care behaviour were also identified. They include being uncomfortable with the idea of male doctors screening their wives, lack of trust in the health care system and the fact that screening result may not remain confidential. Several participants were reported to have indicated willingness to provide spousal support for cervical cancer screening if they knew more about the disease and the screening methods. The study concluded that males play a significant role in the health behaviours of some Ghanaian women and that cervical cancer education interventions targeting Ghanaian men were needed to correct misconceptions and increase spousal support for screening. Williams and Amaoteng (2012) and the present study are similar in their interest on male involvement in tackling female sexual and reproductive health issues. While the study identified taboos that hinder male involvement as a way of identifying areas for education intervention with the ultimate aim of boosting women uptake of screening, the present study involved males as respondents as a way of eliciting their awareness level and provoking their interest in the war against cervical cancer. It is also hoped that their involvement in the present study would

raise their awareness on the need to be more sexually responsible and proactive in issues that concern family health especially women sexual health.

Similarly, a study conducted in Western Kenya by Onyango, Owoko and Oguttu (2010) sought to establish status of male involvement in reproductive health services and also explored the best strategy for involving men in reproductive health programmes. The method was a qualitative descriptive design. In-depth interviews with individual participants and focussed group discussion were used to collect data. Stratified purposive and snowball sampling techniques were used. The study found that males were not sufficiently involved. Cultural practices that impact male involvement were identified and they include – polygamy, naming of newborn children after relatives, preference of children of certain sex over the other and socialization of male children. Majority of the participants lamented that men do not fulfil their responsibility of informing their partners when they are experiencing a reproductive health-related illness. They agreed that men who contract STIs usually seek treatment secretly without informing their wives. The present study involved men as participants to determine their knowledge level on cervical cancer. The result will help stakeholders in planning for adequate educational programme to address men's responsibility in tackling cervical cancer.

Studies that Applied Educative Preventive Measures in Tackling Health Issues

A study conducted by Wright, Kuyinu and Faduyile (2010) evaluated the effect of a health education programme on knowledge of cervical cancer among women at risk in Africa. The result showed the most common sources of information were friends and media prior to the intervention. Significant increase of 61.7% was recorded after intervention. The study recommended reaching women through well organized health education programmes.

The study conducted by Abiodun, Olu-Abiodun, Sotunsa, Oluwole (2014) used structured health education based on a culturally appropriate health movie titled ‘Asunle’. The movie was developed and targeted at women, young girls and the general public. The purpose was to promote the uptake of cervical screening among adult women and promote vaccination among eligible girls by highlighting risk factors and symptoms of cervical cancer and educating them about ways of preventing cervical cancer. The result showed that the intervention raised the level of awareness of cervical cancer and screening to 100% ($p<0.0001$). The mean knowledge and the mean perception were also increased. There was increase in the proportion of women who had undertaken cervical screening from 4.3% to 8.3% ($p=0.038$). The major reason stated by women for not having had cervical screening done was lack of awareness about cervical cancer and screening. There was statistically significant difference between the intervention and control groups concerning their knowledge, attitude and practice towards cervical screening after the intervention. The study concluded that multiple media health education based on a movie is effective in creating awareness for and improving the knowledge and perception of adult women about cervical cancer and screening

Summary of the Review of Related Literature

The literature reviewed for this study was carried out under conceptual framework, theoretical framework, theoretical studies and empirical studies. In the conceptual framework, the following concepts were defined and discussed – awareness, enlightenment, cervical cancer, strategies and tertiary institutions staff. To provide a theoretical framework for the study, conscientization, health belief model and male involvement theories were reviewed. People need to be aware or conscious of the danger posed by a disease, perceive their susceptibility and also be aware that they can utilize available preventive measures in order to help themselves. Their awareness must translate to action for it to be of any use. The

importance of male responsibility and involvement in fighting STDs was also underscored. Under theoretical studies, literature were reviewed as they pertain to the following headings - existence and susceptibility of cervical cancer, risk factors of cervical cancer, symptoms and signs of cervical cancer, preventive measures of cervical cancer, myths and misconceptions about cervical cancer, NGOs and challenges faced in fighting diseases (e.g. cancer), adult and non-formal education strategies/ programmes for fighting diseases. Under empirical studies, several related studies conducted by researchers were reviewed as they pertain to awareness of cervical cancer, its risk factors, signs and symptoms and preventive measures. In addition, studies that relate to male involvement in women sexual and reproductive health issues were reviewed. Studies that applied educative preventive measures in tackling health issues were also reviewed

Although a wide range of related literature exist on some aspects of the present study, to the best of this researcher's knowledge, none has attempted to investigate the awareness of cervical cancer and determination of more strategies for enlightenment using male and female staff of tertiary institutions in Anambra State. Most studies reviewed by this researcher on cervical cancer focussed on health workers and those that visit health institutions and few others studied rural women's awareness or those of urban slum dwellers. It is therefore needful to assess the position of other groups of people especially non-health workers in order to be able to arrive at better strategies in the fight against cervical cancer. This research work seeks to fill these gaps.

CHAPTER THREE

METHOD

This chapter describes different procedures adopted in executing this study. In simple terms, the chapter is concerned with explaining the processes taken by the researcher in achieving the stated objectives. It is discussed under the following sub-headings: Research design, area of the study, population of the study, sample and sampling technique, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

Research Design

This study adopted descriptive survey research design. A survey research design is one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire population (Nworgu, 2015). According to Nworgu, descriptive survey aims at collecting data on, and describing in a systematic manner the characteristics, features or facts about a given population. According to Maduekwe (as cited in Obiozor, 2016), descriptive survey is most applicable in situations demanding the opinions and perceptions of persons on existing facts, conditions and events. This method was adopted to enable the researcher describe the extent of awareness of cervical cancer using staff of tertiary institutions in Anambra State. This design also enabled the researcher to describe the opinions and perceptions of tertiary institutions staff on strategies which could be utilized to enlighten the populace on dangers of cervical cancer.

Area of the Study

The study was carried out in Anambra State. Anambra is one of the states in the South-East geopolitical zone of Nigeria. The people are predominantly Igbos. The capital of Anambra State is Awka. Anambra State is bounded on the East by Enugu State, West by Delta State, North by Kogi State and South by Imo and Rivers States (Anambra State Government, 2016). Abia State also share border with Anambra State at Umunze axis. Anambrarians are industrious and are particularly noted for their quest for knowledge. Although many are engaged in commerce and agriculture, many are highly educated and work as public servants and civil servants. Anambra State boasts of not less than five universities which include Nnamdi Azikiwe University Awka, Chukwuemeka Odimegwu Ojukwu University Igbariam, Paul University Awka, Tansian University Umunya, and Madonna University Campus Okija. There are also both federal and state colleges of education as well as a federal polytechnic in the state. There are many other post-secondary education institutions and colleges scattered all over the state. Some new tertiary institutions are slated to take off in the near future. A sizeable number of residents in Anambra State work in public and private tertiary institutions. Anambra State was chosen as the area of the study because it possesses large number of staff in its tertiary institutions. The absence of record of worst hit states with regards to incidents of cervical cancer strengthened this choice.

Population of the Study

The population of this study was made up of 8,487 staff of conventional tertiary institutions in Anambra State with the exception of staff of Madonna University Okija (who refused to participate in the study).The population of the study is made up of 3907 male and 4580 female academic and non-teaching staff of universities, polytechnics and colleges of education based on statistics supplied through the authorization of the registrars of these institutions. Tertiary institutions in Anambra State possess adequate number of staff for this

study. In addition, the fact that the tertiary institutions are distributed across the three senatorial zones implies an adequate coverage of the state. The population distribution of workers is as shown in Appendix F, p. 128.

Sample and Sampling Techniques

The sample size of the study which was 382 was determined by using Taro Yamane's formular for computing sample size. According to Quora (2015), Taro Yamane's formular can be used when working with a finite population and if population size is known. These are applicable in this study. Taro Yamane's formula is as follows: $n = N/ (1+N (e)^2)$. The computation is shown in Appendix G, p.129. The sample size for each stratum was statistically determined thus: Number in each stratum (such as institutions, staff type, and gender) divided by the population and then multiplied by the sample size. This was done to ensure adequate representation of each stratum. The sample frame for the present study is shown in Appendix F, p. 128. Grab sampling technique was used to collect data for the strata.

Instrument for Data Collection

An instrument titled 'Cervical Cancer Awareness Test and Questionnaire [CCAT & Q] 2017' (Appendix C, p. 119) constructed by the researcher was used to collect data from male and female staff of tertiary institutions in Anambra State. The instrument had two major parts. Part one solicited information on personal data of the respondents while part two was made up of 60 items divided under 5 sections (A, B, C, D, E). Section A (items 1-10) elicited responses to information on existence and susceptibility of cervical cancer; Section B (items 11-20) elicited responses to information on risk factors of cervical cancer; Section C (items 21-30) sought responses to information on symptoms and signs of cervical cancer; Section D (items 31-50) elicited information on preventive measures of cervical cancer; and Section E (items 51-60) elicited responses to information on strategies for enlightenment of the

populace. The instrument adopted various rating responses as deemed appropriate for the research questions. For Sections A to D (item numbers 1 – 50) response options of yes, no and don't know were provided. On the other hand, four point scale responses of Strongly Agree [SA], Agree [A], Disagree [D] and Strongly Disagree [SD] were provided to guide responses to Section E (items 51 – 60) in order to answer research question 5. The instrument for study is shown in Appendix C, p.119.

Validation of the Instrument

The validity of an instrument represents the extent to which an instrument measures what it ought to measure. The validity of the instrument for this study was ascertained by giving copies of the Cervical Cancer Awareness Test and Questionnaire [CCAT & Q], research questions and hypotheses alongside the purpose of the study to three experts – one in the Department of Adult Education, one in Measurement and Evaluation and one in Human Kinetics and Health Education, all in the Faculty of Education, Nnamdi Azikiwe University, Awka. These experts were requested to check the face and content validity of the instrument to determine if it will achieve its aim. These experts were also required to assess the instrument with regards to relevance, adequacy of language, accuracy and comprehensiveness of the items. Their reports were shown in Appendix I, (pp. 139-141). Amendments were thereafter made based on their suggestions and recommendations in the production of the final draft which is shown in Appendix C, pp.119.

Reliability of the Instrument

Reliability of an instrument simply refers to the degree of consistency of an instrument. In order to determine the reliability co-efficient estimates of the instrument, Cronbach Alpha method was adopted. This method was used because the items in the instrument measure inter-related concepts that are in clusters which has different rating scales. According to

Uzoagulu (as cited in Obiozor, 2016), Cronbach alpha method was used because the items in the instrument were polychotomous. The researcher administered the instrument to 10 members of staff of Federal College of Education Asaba, Delta State. This was done because these respondents shared similar characteristics with the respondents in the present study but were not part of the area of study. Data generated was analyzed and reliability coefficients of 0.90, 0.86, 0.89, 0.92, and 0.74 were established for items under sections A, B, C, D and E respectively. According to Osisioma, Egbunike and Adeaga (2015), a Cronbach's alpha estimates of 0.65 to 0.8 of an instrument are reliable. Hence, the reliability coefficient of the instrument for this study is adjudged high enough and considered adequate. The reliability analysis for the instrument is shown in Appendix E, pp.124 – 127.

Method of Data Collection

The researcher sought the assistance of some members of staff in the institutions used for the study in the administration and retrieval of the instrument. These assistants were informed on how to distribute the questionnaire according to the proportion selected for each stratum. They were also instructed to interpret the items in native language when necessary. An introductory letter (Appendix A, p. 117) was sent to heads of various institutions while copies of the letter of transmittal (Appendix B, p.118) were distributed along with the instrument when necessary. The instrument was administered to academic staff in their personal offices, departmental offices and staff lounges. Most non-teaching staff were reached in their personal offices, departmental, faculty and general offices and other units in the various schools, colleges and directorates of their institutions. The researcher distributed 425 copies of the instrument. She distributed 43 copies in excess of the required number. This was done to replace cases of incorrect and incomplete filling and copies that were not returned. The first sets of correctly filled and retrieved required number from each stratum in each

institution were included in the study. Those that were not correctly filled were discarded. 382 copies of the instrument were used for analysis.

Method of Data Analysis

Data obtained from the 382 copies were coded and double-entered into Micro-Soft Excel package analysis and screened. Each section of research questions (1- 4) of the instrument were marked manually with each correct answer attracting one mark. Analyses of the scores were done using the Statistical Package for Social Sciences (SPSS) software. Some key items from each research question were also subjected to further analysis to enable adequate comparison with other related studies in the discussion of result. The study applied a variety of statistical tools in analyzing the data. Descriptive statistics was used for the research questions while inferential statistics were used to test the hypotheses at 0.05 level of significance.

Frequency distribution and percentage were used to analyze part one of the instrument tagged personal data. The scores of the answers to research questions 1 – 4 in sections A to D of part two of the instrument were also analyzed in form of frequency distribution and percentage. Frequency distribution of the result of analysis of sections A, B, C and D was presented to show the range of scores. Scores 0 – 2 represented not aware; 3 – 4 represented poorly aware; 5 – 6 represented moderately aware while 7 – 10 represented highly aware with respect to sections A, B and C (this refers to items 1 - 10, 11 - 20 and 21 – 30 respectively). In order to answer research question 4 with 20 items (31 – 50), scores 0 – 4 showed that respondents were not aware, 5 – 9 depicted poorly aware, 10 – 14 represented moderately aware while 15 – 20 represented highly aware. This enabled the researcher to ascertain the number and percentage of respondents whose scores fell within the various ranges used for this work. Mean statistics was also used to corroborate the outcome of the analysis in order to arrive at a

shorter summary of findings (Appendix K, p.146). Thus, if mean score of respondents to any of sections A to D is below 4.5, it depicts poor awareness; 4.5 to 6.5 shows moderate awareness while 6.5 and above show high awareness. Mean score of section D which has 20 items is divided by 2 for uniformity.

Mean statistics was employed to analyze the responses to the questionnaire items under section E (items 51-60) in order to answer research question 5. The decision rule for items 51 to 60 was based on the boundary limits of the four point rating scale as follows:

Response Options	**Rating Point**	**Boundary Limits**
Strongly Agree	4	3.50 - 4.00
Agree	3	2.50 - 3.49
Disagree	2	1.50 - 2.49
Strongly Disagree	1	1.00 - 1.49

The extent of agreement or disagreement to any strategy for enlightenment was shown as follows: Items with mean rating of 2.49 and below showed that respondents disagreed with an item while items with 2.50 and above showed that respondents agreed with an item. Criterion mean of 2.50 was calculated from the rating points as (4+3+2+1)/4 = 10/4 = 2.50

A null hypothesis (H_0) was rejected if the p-value was equal to or greater than the level of significance (5%= 0.05) or otherwise null hypothesis was reject and the alternate hypothesis (H_a) was accepted.

The statistic used to test null hypotheses 1, 2, 3, 4, 5, 16, and 17 is t-test because it is an appropriate statistics for testing the difference between two means. ANOVA was used to test null hypotheses 6, 7, 8, 9, 10, 11, 12, 13, 14 and 15 because they involve testing the difference among more than two means. The SSPS output is attached as Appendix H, p.130.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected from the field for this study were analysed and the summaries were presented in tables to highlight the findings. The presentation was sequentially done starting with the answers to the research questions and then the testing of hypotheses. SPSS output of various analyses done is shown in Appendix H (p.130-138).

Research Question 1

What is the awareness status of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer?

Table 1: Range of Scores on the Awareness of Staff of Tertiary Institutions in Anambra State on the Existence and Susceptibility of Cervical Cancer

Range of scores	N	%	Remarks
0 – 2	92	24.1	Not aware
3 – 4	90	23.5	Poorly Aware
5 – 6	113	29.6	Moderately Aware
7 – 10	87	22.8	Highly Aware

Table 1 shows that only 87(22.8%) of the staff in tertiary institutions with scores ranging from 7 to 10 were highly aware of the existence and susceptibility of cervical cancer, while 113(29.6%) who scored between 5 and 6 were moderately aware of the existence and susceptibility of cervical cancer. The remaining 90(23.5%) were poorly aware while 92(24.1%) were not aware of the existence and susceptibility of cervical cancer. Mean score of the respondents is 4.5 (Appendix K, p. 146).

Research Question 2

What is the awareness status of staff of tertiary institutions in Anambra State on risk factors of cervical cancer?

Table 2: Range of Scores on the Awareness of Staff of Tertiary Institutions in Anambra State on the Risk Factors of Cervical Cancer

Range of scores	N	%	Remarks
0 – 2	127	33.2	Not aware
3 – 4	111	29.1	Poorly Aware
5 – 6	91	23.8	Moderately Aware
7 – 10	53	13.9	Highly Aware

In table 2, it was observed that only 53(13.9%) of the staff in tertiary institutions withscores ranging from 7 to 10 were highly aware of the risk factors of cervical cancer, while 91(23.8%) who scored between 5 and 6 were moderately aware. The remaining 111(29.1%) were poorly aware while 127(33.2%) were not aware of the risk factors of cervical cancer. A mean score of 3.6 was realized for the respondents (Appendix K, p.146).

Research Question 3

What is the awareness status of staff of tertiary institutions in Anambra State on the signs and symptoms of cervical cancer?

Table 3: Range of Scores on the Awareness of Staff of Tertiary Institutions in Anambra State on the Signs and Symptoms of Cervical Cancer

Range of scores	N	%	Remarks
0 – 2	185	48.4	Not aware
3 – 4	85	22.3	Poorly Aware
5 – 6	65	17.0	Moderately Aware
7 – 10	47	12.3	Highly Aware

Table 3 shows that only 47(12.3%) of the staff in tertiary institutions in Anambra State withscores ranging from 7 to 10 are highly aware of the signs and symptoms of cervical

cancer, while 65(17.0%) who scored between 5 and 6 are moderately aware of the signs and symptoms of cervical cancer. The remaining 85 (22.3%) and 185 (48.4%) were poorly aware and not aware respectively. The respondents had a mean score of 2.9 under this section (Appendix K, p.146).

Research Question 4

What is the awareness status of staff of tertiary institutions in Anambra State on preventive measures for cervical cancer?

Table 4: Range of Scores on the Awareness of Staff of Tertiary Institutions in Anambra State on the Preventive Measures of Cervical Cancer

Range of scores	N	%	Remarks
0 – 4	106	27.7	Not aware
5 – 9	111	29.1	Poorly Aware
10 – 14	126	33.0	Moderately Aware
15 – 20	39	10.2	Highly Aware

Table 4 indicates that only 39(10.2%) of the staff in tertiary institutions with scores ranging from 15 to 20 are highly aware of the preventive measures for cervical cancer, while 126(33.0%) who scored between 10 and 14 are moderately aware of the preventive measures for cervical cancer. The remaining 111(29.1%) and 106(27.7%) were respectively poorly aware and not aware of the preventive measures of cervical cancer. The respondents had a mean score of 3.96 for this section (Appendix K, p.146).

Research Question 5

What are the mean ratings of staff of tertiary institutions on items relating to strategies for enlightenment of the populace on cervical cancer?

Table 5: Mean Ratings of Staff of Tertiary Institutions on the Items Relating to Strategies for Enlightenment of the Populace on Cervical Cancer

S/N	Strategies	Mean	Remarks
51.	Making it mandatory for church members to include articles on women cancers (including cervical cancer) and other non-communicable diseases) in burial programmes of members	3.23	Agree
52.	Including slots in key festivals and events (such as Ofala festival, new yam festival, annual kindred meetings) in various communities to educate the people on deadly diseases and healthy lifestyle	3.41	Agree
53.	Making it compulsory for Parent Teachers Associations (PTAs) of every secondary school to include a programme on cervical cancer/ human papilloma virus awareness at least once in their yearly programmes	3.44	Agree
54.	Giving slots for health talks during wake-keeping and vigils	2.92	Agree
55.	Arranging for health workers to go round the town, village by village, very early in the mornings with megaphones/ microphones in order to give information about cervical cancer	3.40	Agree
56.	Incorporating cervical cancer enlightenment campaigns as part of activities of various institutions' staff welfare programmes	3.61	Strongly Agree
57.	Producing and making available pamphlets on cervical cancer at strategic public places such as market place, government offices, reception halls of both private and public organization, hotels, restaurants, beer parlours, hairdressing places, mechanic and tailor workshops	3.60	Strongly Agree
58.	Including mobile cervical cancer screening and education programmes in annual general meeting programme of women of various towns and religious organisations (e.g. August Meeting)	3.57	Strongly Agree
59.	Encouraging the inclusion of talks on healthy lifestyles in birthday party programmes of well-meaning and philanthropic adults	2.98	Agree
60.	Organizing and dedicating one Saturday in every month for road walk and exercise in various neighbourhoods in urban and rural area where few minutes can be dedicated to education on ways of preventing prevalent diseases such as cervical cancer	3.38	Agree

Table 5 reveals that with mean scores ranging from 3.57 to 3.61 the respondents strongly agreed to three out of the ten strategies for spreading awareness of cervical cancer and agreed to the remaining seven of the strategies with the mean scores ranging from 2.50 to 3.49.

Testing the Null Hypotheses

Null Hypothesis 1

There is no significant difference in the awareness mean scores of male and female staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer.

Table 6: t-test on the Awareness Mean Scores of Male and Female Staff of Tertiary Institutions in Anambra State on the Existence and Susceptibility of Cervical Cancer

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Male	181	4.20	2.35				
				380	2.42	0.016	S
Female	201	4.80	2.41				

Table 6 indicates that at 0.05 level of significance and 380 degrees of freedom the calculated t is 2.42 with calculated p. value 0.016 is less than the critical p.value 0.05. The first null hypothesis is therefore rejected. Then, there is significant difference between the awareness means scores of male and female staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer.

Null Hypothesis 2

There is no significant difference in the awareness mean scores of male and female staff of tertiary institutions in Anambra State on the risk factors of cervical cancer.

Table 7: t-test on the Awareness Mean Scores of Male and Female Staff of Tertiary Institutions in Anambra State on the Risk Factors of Cervical Cancer

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Male	181	3.17	2.51				
				380	2.97	0.003	S
Female	201	3.93	2.48				

Table 7 reveals that at 0.05 level of significance and 380 degrees of freedom the calculated t is 2.97 with calculated p. value 0.003 which is less than the critical p.value 0.05. The second null hypothesis is therefore rejected. Then, there is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the risk factors of cervical cancer.

Null Hypothesis 3

There is no significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on signs and symptoms of cervical cancer.

Table 8: t-test on the Awareness Mean Scores of Male and Female Staff of Tertiary Institutions in Anambra State on Signs and Symptoms of Cervical Cancer

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Male	181	2.19	2.47				
				380	5.18	0.000	S
Female	201	3.54	2.59				

In table 8, it was observed that at 0.05 level of significance and 380 degrees of freedom the calculated t is 5.18 with calculated p. value 0.000 which is less than the critical p.value 0.05. The third null hypothesis is therefore rejected. Then, there is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the symptoms of cervical cancer.

Null Hypothesis 4

There is no significant difference in the awareness mean scores of male and female staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer.

Table 9: t-test on the Awareness Mean Scores of Male and Female Staff of Tertiary Institutions in Anambra State on the Preventive Measures of Cervical Cancer

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Male	181	7.34	4.78				
				380	3.15	0.002	S
Female	201	8.86	4.66				

Table 9 shows that at 0.05 level of significance and 380 degrees of freedom the calculated t 3.15 with calculated p. value 0.002 is less than the critical p.value 0.05. The fourth null hypothesis is therefore rejected. Then, there is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer.

Null Hypothesis 5

The mean ratings of male and female staff do not differ significantly on the items related to strategies for enlightenment on cervical cancer.

Table 10: t-test on the Mean Ratings of Male and Female Staff of Tertiary Institutions in Anambra State on Items Related to Strategies for Enlightenment on Cervical Cancer

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Male	181	33.96	4.52				
				380	1.53	0.127	NS
Female	201	33.20	5.10				

Table 10 indicates that at 0.05 level of significance and 380 degrees of freedom the calculated t is 1.53 with calculated p. value 0.127 which is greater than the critical p. value 0.05. The fifth null hypothesis is therefore accepted. Then, the mean ratings of male and female staff do not differ significantly on the strategies for enlightenment on cervical cancer.

Null Hypothesis 6

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their educational level.

Table 11: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on the Existence and Susceptibility of Cervical Cancer based on their Educational Level

Source of variation	SS	df	MS	Cal.F	Cal.P value	P≥ 0.05
Between Groups	172.042	3	57.347	10.74	0.000	S
Within Groups	2019.364	378	5.342			
Total	2191.406	381				

Table 11 reveals that at 0.05 level of significance 3 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 10.74 with calculated P value 0.000 which is less than 0.05.The sixth null hypothesis is therefore rejected. Then, there is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their educational level.

Null Hypothesis 7

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on the risk factors of cervical cancer based on their educational level.

Table 12: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on the Risk Factors of Cervical Cancer based on their Educational Level

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	193.730	3	64.577	10.98	0.000	S
Within Groups	2223.861	378	5.883			
Total	2417.592	381				

Table 12 shows that at at 0.05 level of significance 3 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 10.98 with calculated Pvalue 0.000 which is less than 0.05 the seventh null hypothesis is therefore rejected. Then there is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the risk factors of cervical cancer based on their educational level.

Null Hypothesis 8

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on the symptoms of cervical cancer based on their educational level.

Table 13: ANOVA on the Awareness Mean Scores of Staff of Tertiary Institutions on Symptoms of Cervical Cancer based on their Educational Level

Source of variation	SS	df	MS	Cal.F	Cal.P value	P≥ 0.05
Between Groups	106.919	3	35.640	5.36	0.001	S
Within Groups	2512.497	378	6.647			
Total	2619.416	381				

In table 13, it was observed that at 0.05 level of significance 3 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 5.36 with calculated Pvalue 0.001 which is less than 0.05, the eighth null hypothesis is therefore rejected. Then there is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the symptoms of cervical cancer based on their educational level.

Null Hypothesis 9

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on preventive measures of cervical cancer based on their educational level.

Table 14: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on Preventive Measures of Cervical Cancer based on their Educational Level

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	954.586	3	318.195	15.63	0.000	S
Within Groups	7694.335	378	20.355			
Total	8648.921	381				

Table 14 reveals that at 0.05 level of significance 3 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 15.63 with calculated Pvalue 0.00 which is less than 0.05 the ninth null hypothesis is therefore rejected. Then there is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer based on their educational level.

Null Hypothesis 10

The mean ratings of staff do not differ significantly on the strategies for enlightenment on cervical cancer based on their educational level.

Table 15: ANOVA on the Mean Ratings of Staff on Strategies for Enlightenment on Cervical Cancer based on their Educational Level

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	651.685	3	217.228	9.92	0.000	S
Within Groups	8280.548	378	21.906			
Total	8932.233	381				

Table 15 indicates that at 0.05 level of significance 3 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 9.92 with calculated Pvalue 0.000 which is less than 0.05 the tenth null hypothesis is therefore rejected. Then the mean ratings of staff differ significantly on the strategies for enlightenment on cervical cancer based on their educational level.

Null Hypothesis 11

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their marital status.

Table 16: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on the Existence and Susceptibility of Cervical Cancer based on their Marital Status

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	10.726	4	2.681	0.46	0.762	NS
Within Groups	2180.680	377	5.784			
Total	2191.406	381				

Table 16 reveals that at 0.05 level of significance 4 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 0.46 with calculated Pvalue 0.76 which is greater than 0.05 the eleventh null hypothesis is therefore accepted. Then there is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their marital status.

Null Hypothesis 12

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on risk factors of cervical cancer based on their marital status.

Table 17: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on the Risk Factors of Cervical Cancer based on their Marital Status

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	31.260	4	7.815	1.24	0.296	NS
Within Groups	2386.332	377	6.330			
Total	2417.592	381				

Table 17 shows that at 0.05 level of significance 4 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 1.24 with calculated Pvalue 0.296 which is greater than 0.05 the twelfth null hypothesis is therefore accepted. Then there is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the risk factors of cervical cancer based on their marital status.

Null Hypothesis 13

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on symptoms of cervical cancer based on their marital status.

Table 18: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on Symptoms of Cervical Cancer based on their Marital Status

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	20.160	4	5.040	0.731	0.571	NS
Within Groups	2599.257	377	6.895			
Total	2619.416	381				

Table 18 indicates that at 0.05 level of significance 4 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 0.73 with calculated Pvalue 0.571 which is greater than 0.05, the thirteenth null hypothesis is therefore accepted. Then there is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on symptoms of cervical cancer based on their marital status.

Null Hypothesis 14

There is no significant difference in the awareness mean scores of staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer based on their marital status.

Table 19: ANOVA on the Awareness Scores of Staff of Tertiary Institutions on Preventive Measures of Cervical Cancer based on their Marital Status

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	117.864	4	29.466	1.302	0.269	NS
Within Groups	8531.057	377	22.629			
Total	8648.921	381				

In table 19, it was observed that at 0.05 level of significance 4 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F 1.30 with calculated Pvalue 0.269 which is greater than 0.05 the fourteenth null hypothesis is therefore accepted.

Then there is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer based on their marital status.

Null Hypothesis 15

The mean ratings of staff of tertiary institutions in Anambra State do not differ significantly on the strategies for enlightenment on cervical cancer based on their marital status.

Table 20: ANOVA on the Mean ratings of Staff on Strategies for Enlightenment on Cervical Cancer based on Marital Status

Source of variation	SS	df	MS	Cal.F	Cal.Pvalue	P≥ 0.05
Between Groups	278.346	4	69.587	3.03	0.02	S
Within Groups	8653.887	377	22.955			
Total	8932.233	381				

Table 20 reveals that at 0.05 level of significance 4 degrees of freedom numerator and 381 degrees of freedom denominator, the calculated F of 3.03 with calculated Pvalue 0.02 which is less than 0.05, the fifteenth null hypothesis is therefore rejected. Then the mean ratings of the staff differ significantly on the strategies for enlightenment on cervical cancer based on their marital status.

Null Hypothesis 16

The mean ratings of staff of tertiary institutions in Anambra State do not differ significantly on the existence and susceptibility of cervical cancer; risk factors of cervical cancer; signs and symptoms of cervical cancer and preventive measures of cervical cancer based on age.

Table 21: t-test on the Mean Ratings of Staff of Tertiary Institutions in Anambra State on Existence and Susceptibility of Cervical Cancer; Risk Factors of Cervical Cancer; Signs and Symptoms of Cervical Cancer and Preventive Measures of Cervical Cancer based on Age.

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Existence and susceptibility							
39 years and below	173	4.4046	2.2664				
				380	0.823	0.411	NS
40 years and above	209	4.6077	2.5037				
Risk Factors							
39 years and below	173	3.5549	2.3535				
				380	0.111	0.912	NS
40 years and above	209	3.5837	2.6537				
Signs and Symptoms							
39 years and below	173	2.8556	2.4865				
				380	0.323	0.747	NS
40 years and above	209	2.9426	2.7345				
Preventive Measures							
39 years and below	173	8.4104	4.4863				
				380	1.024	0.307	NS
40 years and above	209	7.9091	4.9823				

Table 21 indicates that at 0.05 level of significance and 380 degrees of freedom the calculated t with calculated p. value of various headings are greater than the critical p. value 0.05. The sixteenth null hypothesis is therefore accepted. Then, the mean ratings of staff did not differ significantly on the existence and susceptibility of cervical cancer; risk factors of cervical cancer; signs and symptoms of cervical cancer and preventive measures of cervical cancer based on age.

Null Hypothesis 17

The mean ratings of staff of tertiary institutions in Anambra State do not differ significantly on the strategies for enlightenment on cervical cancer based on staff type.

Table 22: t-test on the Mean Ratings of Staff of Tertiary Institutions in Anambra State on Strategies for Enlightenment on Cervical Cancer based on Staff Type

Source of variation	N	X	sd	df	Cal.t	P. Cal	P≥ 0.05
Academic	145	34.50	4.22				
				380	3.02	0.003	S
Non- Teaching	237	32.98	5.11				

Table 22 indicates that at 0.05 level of significance and 380 degrees of freedom the calculated t is 3.02 with calculated p. value 0.003 which is less than the critical p. value 0.05, the seventeenth null hypothesis is therefore rejected. Then, the mean ratings of academic and non-teaching staff differ significantly on the strategies for enlightenment on cervical cancer.

Summary of the Findings

From the analysis the following major findings were made:

1. The staff of tertiary institutions in Anambra State who were highly aware of the existence and susceptibility of cervical cancer were 87 (22.8%) while 113 (29.6%) were moderately aware of the existence and susceptibility of cervical cancer. The mean score of 4.5 (Appendix K, p.146) shows that the level of awareness is on the low side of moderately aware.
2. The staff of tertiary institutions who were highly aware of the risk factors of cervical cancer were 53 (13.9%) while 91(23.8%) were moderately aware of the risk factors of cervical cancer. The mean score of 3.6 shows poor awareness of risk factors.
3. The staff of tertiary institutions who were highly aware of the signs and symptoms of cervical cancer were 47(12.3%) while 65(17.0%) were moderately aware of the signs and symptoms of cervical cancer. The mean score of 2.9 shows poor awareness of signs and symptoms of cervical cancer.
4. The staff in tertiary institutions who were highly aware of the preventive measures for cervical cancer were 39(10.2%) while 126(33.0%) were moderately aware of the

preventive measures for cervical cancer. The mean score of 3.96 shows poor awareness of preventive measures of cervical cancer.

5. The staff in tertiary institutions identified ten strategies for spreading awareness of cervical cancer in Anambra State.
6. There is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer.
7. There is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the risk factors of cervical cancer.
8. There is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the symptoms of cervical cancer.
9. There is significant difference in the awareness means scores of male and female staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer.
10. The mean ratings of male and female staff do not differ significantly on the strategies for enlightenment on cervical cancer.
11. There is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their educational level.
12. There is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the risk factors of cervical cancer based on their educational level.
13. There is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on signs and symptoms of cervical cancer based on their educational level.

14. There is significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer based on their educational level.
15. The mean ratings of staff differ significantly on the strategies for enlightenment on cervical cancer based on their educational level.
16. There is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the existence and susceptibility of cervical cancer based on their marital status.
17. There is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the risk factors of cervical cancer based on their marital status.
18. There is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the symptoms of cervical cancer based on their marital status.
19. There is no significant difference in the awareness scores of staff of tertiary institutions in Anambra State on the preventive measures of cervical cancer based on their marital status.
20. The mean ratings of staff in tertiary institutions in Anambra state differed significantly on the strategies for enlightenment on cervical cancer based on their marital status.
21. Age did not significantly affect the mean ratings of staff on the existence and susceptibility of cervical cancer; risk factors of cervical cancer; signs and symptoms of cervical cancer and preventive measures of cervical cancer.
22. The mean ratings of staff of tertiary institutions in Anambra State differ significantly on the strategies for enlightenment on cervical cancer based on staff type.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the results obtained from data analysis. It also presents the implications of the study, conclusion, recommendations, limitations to the study and suggestions for further studies.

Discussion of Findings

Findings of the study were discussed under the following subheadings; profile of the respondents in the study, awareness status on the existence and susceptibility of cervical cancer, awareness status on risk factors of cervical cancer, awareness status on signs and symptoms of cervical cancer, awareness status on preventive measures of cervical cancer and strategies for enlightenment on cervical cancer. To facilitate fair comparison with other studies item by item analysis of items 1-50 was done and the result shown as Appendix J, p.142.

Profile of the Respondents

The outcome of the analysis with the SPSS showed that the 382 sample size used comprised 181 (47.4%) males and 201 (52.6%) females. Similarly, the sample size is made up of 145 (38.0%) teaching staff and 237 (62.0%) non-teaching staff. 173 (45.3%) were below 39 years while 209 (54.7%) were 40 years and above. The analysis of marital status of participants showed that 122 (31.9%) were singles, 215 (56.3%) were married, 23 (6%) were separated, 5 (1.3%) were divorced, while 17 (4.5%) were widowed. 173 (45.3%) had Masters/Ph.D degrees, 150 (39.3%) had First degree/HND/NCE, 49(12.8%) had WASC while 10(2.6%) had FSLC. Majority of the participants in this study are very well educated.

Awareness Status on the Existence and Susceptibility Cervical Cancer

The result of the study on the awareness of the existence and susceptibility of cervical cancer as shown in Table 1, p. 75 indicated that 87 (22.8%) of the staff of tertiary institutions in Anambra State were highly aware while 113 (29.6%) were moderately aware. The result also showed that 192 (47.6%) of the respondents are either not aware or at best poorly aware. The awareness of existence of cervical cancer is moderate but not good enough as the ignorance of 47.6% of the respondents portends serious impediment to the fight against cervical cancer.

The result of a similar study by Abiodun et al. (2013) in which only women were respondents showed that the awareness of cervical cancer was very low (6.5%). The difference in the result is most likely due to educational level of respondents. Most of the respondents in Abiodun et.al had secondary education as their highest qualification. Lack of awareness was actually identified as a barrier to their uptake of screening. Efforts at sensitization in the interim may be responsible for the moderately good awareness of the existence of cervical cancer as depicted in the analysis of responses to critical items in research question one (Appendix H, p. 132 and more clearly interpreted in Table 1, p. 79). The result of the analysis of item 1 p. 142 'Have you heard of cervical cancer?' in the present study, shows that 335 (87.69%) have heard of cervical cancer. In another study by Williams and Amaoteng (2012) in Kuumasi Ghana it was reported that majority of the male participants had not heard of cervical cancer. Only one of them identified HPV as risk factor of cervical cancer. The study recorded a general low level of awareness among respondents. Although fewer men were involved in Ghana study, the outcomes of these studies still emphasize the need for male involvement in reproductive matters.

Ubajiaka et al. (2015) corroborated the present result as it indicated a high level of awareness of cervical cancer among their study population. Ajah et al. (2015) which involved

male and female teachers just like the present study which involved male and female staff also found that 320 (77.7%) of their 412 male and female were aware of cervical cancer. The present study differs by assessing the ingredients of the awareness of respondents beyond mere hearing of cervical cancer.

The present study also enquired on how aware the respondents were about the indices as regards the existence and susceptibility of the disease such as knowing people that have had the disease, being aware that many people die of the disease, when the disease occurs and whether the threat has become an issue of public health concern. Determination of awareness status of issues on susceptibility to cervical cancer which include who can suffer it; who can transmit the virus that mainly causes it; and what age group is most vulnerable to the virus were also made.

The summary of the result of present study showed that awareness by respondents is moderate. This situation is not satisfactory for a disease that is a threat to the lives of over 40 million women in Nigeria (Okoye, as cited in Olayiwola, 2014). The fact that the cost of treating cancer is prohibitive emphasizes the need for creating awareness of the disease and ensuring that people get the right information in order to tackle it.

Lack of awareness of cervical cancer has been identified as one of the factors contributing to the high prevalence of this condition in the developing world compared to the developed world (WHO, as cited in Balogun et al., 2012). Only 44 (21.89%) out of 201 women shown by the result of SSPS analysis to have participated in the present study were aware of their susceptibility to the disease. According to HBM, people are more likely to take action to prevent a disease when they are aware that they are susceptible to be infected. Personal awareness of susceptibility to cervical cancer and awareness of susceptibility of loved ones will propel women and men to take up preventive measures.

The present study shows that gender, staff type and educational level appear to have significantly affected mean score of staff on awareness of existence and susceptibility of cervical cancer (Appendix H, pp 130-138). Female staff, academic staff and those with Masters/Ph.D degrees had higher mean scores than their counterparts. This shows that they were more aware of cervical cancer than their counterparts. Education must be a key pursuit in fighting cervical cancer. There is no significant difference in the result of respondents based on age and marital status with regards to research question one.

The outcome of this study on gender is not surprising as it is expected that women should know more about something they suffer personally. The study points to the need for male involvement in educational interventions for fighting the disease as partners. More men need to know that cervical cancer exists and that their acquaintances and relative can be infected. Similarly, Balogun et al. (2012) reported a statistically significant association between education and willingness to undergo a screening test. Education of the citizenry is imperative.

Awareness Status on Risk Factors of Cervical Cancer

Participants were given a list of combination of established risk factors and some factors perceived from existing literature as misconception to tick correct statement. This was meant to assess the accuracy of knowledge of risk factors of cervical cancer. The fact that health care services for cervical cancer are not generally available coupled with the fact that low available service is very costly makes treatment option bleak. It therefore becomes imperative that Nigerian women and men have accurate knowledge of cervical cancer risk factors to enable them adopt healthy behaviour that will reduce the risk of acquiring the disease.

The result of research question 2, table 2 showed tertiary institutions' staff awareness score on risk factors of cervical cancer thus; 53 (13.9%) are highly aware, 91(23.8%) are

moderately aware. In effect, only 37.7% got up to half of the correct answers. 63.3% are either not aware or poorly aware. Furthermore, due to the fact that HPV is the major known cause of cervical cancer, item 11 was subjected to further analysis to display responses to HPV as a risk factor of cervical cancer. The finding on HPV as risk factor shows that 138(36.12%) were aware that HPV is a risk factor of cervical cancer, while 25 (6.54%) chose the wrong option and the rest 219 (57.33%) did not know. The result of further analysis on item 12 which was on early sexual debut as a risk factor showed that 134 (35.07%) were aware, 74 (19.37%) were wrong while 174 (45.55%) did not know. Furthermore on the very important issue in item 17 pertaining to not going for regular screening, 192 (50.26%) of respondents were able to identify it as a risk factor, 45 (11.78%) chose the wrong option while 145(37.96%) did not know.

The result of the present study is similar to those of earlier studies that recorded low awareness of risk factors such as Ubajiaka et al. (2011) which reported that only 30.2% knew HPV to be a risk factor. Moore and Driver (2014) found that without prompting, none of the educated women sampled were able to name HPV infection as a risk factor of cervical cancer. Women harbour half-truths and misconceptions about the disease. There is urgent need for enlightenment of the citizenry to ensure adequate knowledge of this disease which will necessitate taking adequate preventive action. The present study's result where only 33.7% were fairly aware of cervical cancer risk factor is not good enough. This level of ignorance is dangerous given the fact that the best form of protection against cervical cancer is regular screening. Screening is the tool for early detection of cervical cancer. Lack of awareness of the importance of screening is a major set-back to efforts at prevention of cervical cancer.

Elsewhere in South West Nigeria, Abiodun, Fatungase, Olu-Abiodun, Idowu-Ajiboye and Awosile (2013) reported that only 2.3% of women could identify a virus as the cause of

cervical cancer while abysmal 4.1% identified cervical screening as a way to prevent cervical cancer. 97.9% had no or poor knowledge of cervical cancer risk factors. Abiodun et al. also identified lack of awareness as a barrier to uptake of screening. The distinction between the two results may be due to academic levels of respondents and the availability of more information on the disease. The present study's respondents are fairly educated while those in Abiodun et al. were not as educated. Although formal education is very important, people without formal education can be enlightened through non-formal education strategies which can make them identify early symptoms of cervical cancer where it shows sign. They stand chances of being saved through early diagnosis and treatment if they present early.

Awareness Status on Signs and Symptoms of Cervical Cancer

The result of the study on signs and symptoms indicated that 29.3 % of staff are fairly aware, while 70.7% are either not aware at all or poorly aware. In effect, awareness of signs and symptoms among staff of tertiary institutions in Anambra State is poor. Chinaka and Udeajah (2012) reported poor knowledge of symptoms of cervical cancer among women attending antenatal and gynaelogical clinics at Federal Teaching Hospital Abakiliki. 50.6% of the respondents could not identify any symptom in that study. Similarly, Abiodun et al. (2013) reported that respondents also posted poor knowledge of symptoms of cervical cancer among respondents in Ogun State. Surprisingly, a study by Ahmed, Sabitu, Idris and Ahmed (2013) showed fairly good knowledge of symptoms of cervical cancer among market women in Northern Nigeria. This impressive awareness status, among a population that is not as educated as the population of the present study, was explained to be the result of recent community health outreach programmes that usually target market women and the visit of a group of American cancer experts to the market near the time of their study. This kind of attention should be paid to other regions of Nigeria. The recent report by World Bank (2017)

that they have now focussed their developmental programmes on Northern Nigeria as advised by President Buhari is worrisome as it will continue to foster lopsidedness in addressing issues, even issues related to prevention of cervical cancer.

Elsewhere in Uganda, East Africa, Mwaka, Orach, Were, Lyratzopoules, Wabinga and Roland (2016) found that recognition of cervical cancer symptoms was good (above 80%) among majority of the participants that constituted men and women. The poor cervical cancer awareness status reported in the present study among mainly educated folks is worrisome. It buttresses the fact that issues regarding this disease should not be tackled based on mere assumptions. The present study has presented statistics that is hoped would influence requisite agencies to extend their interventions to Southern Nigeria especially Anambra State. Moreover, it is important that people should be aware that cervical cancer can occur without any symptom. The present study discloses that only 89 (23.30%) of the participants recognized that cervical cancer can occur without any symptom. This is dangerous for a disease that major chance of successful treatment depends on early detection. This also emphasizes the need for adoption of preventive measures

Awareness Status on Preventive Measures of Cervical Cancer

Based largely on WHO (2013) recommendation for a comprehensive approach to cervical cancer prevention and control, pertinent issues regarding prevention of cervical cancer which includes health education, HPV vaccination and cervical screening were raised for respondents to identify in order to assess their awareness of them. The result of present study showed that 163 (43.2%) respondents scored up to half of the total mark while the rest 217(56.8%) of the staff exhibited low awareness. Ajah et al. reported that majority of secondary school teachers were aware of HPV vaccines for preventing cervical cancer although only 40.3% of them knew that vaccine was available in Abakaliki. The study by

Ajah et al. sought to find out knowledge and attitude of teachers towards promoting the uptake of vaccine among their students while present study determined awareness of staff of tertiary institutions on preventive measures of cervical cancer generally. Ajah et al. recommended that public health practitioners could enlist teachers in programmes for influencing girls and their parents towards increased uptake of HPV vaccine. The present study aimed at sensitizing participants to adopt preventive measures and/or encourage relatives to do same.

Similarly, Arulogun and Maxwell (2012) conducted a study among nurses in Ibadan, Nigeria and found that 88% of their respondents were in the affirmative that cervical cancer can be prevented, 70.6% agreed that it can be treated, 51.7% agreed that regular pap smear can be used to prevent cervical cancer although this level of knowledge did not influence their utilization of cervical screening services, 30.8% assented to early diagnosis, 11.9% early treatment, 8.0% avoidance of sexual intercourse while 6.6% agreed to health education. Their overall analysis showed that 84.9% scored up to the average knowledge score while 14.3% had poor knowledge and only 0.8% had very good knowledge score. Majority 465 (92.4%) of the respondents were aware of pap smear, 81.7% responded that a woman should commence screening when she starts having sex while 62 (12.3%) gave an age range of 15 – 39 years. On how often screening should be done 30.2% said twice a year and 38.0% said once a year. Expectedly, nurses in Arulogun's study scored higher than mainly non-health professionals that were the participants in the present study.

This researcher noted that most studies on cervical cancer used hospital workers especially nurses as respondents. This study tried to get the awareness status of others. This is necessary because the awareness of others is necessary for effective tackling of the disease. Additionally, participating in the study may sensitize participants to seek for more information on the subject. The large number that chose wrong options across the 50 items

under sections A - D indicate that many people still harbour misconceptions about the disease.

Strategies for Enlightenment on Cervical Cancer

The result of the study on strategies for enlightenment indicated that staff of tertiary institutions in Anambra State agreed that all the strategies listed can be used to enlighten the populace on cervical cancer. Strategies strongly agreed on include incorporating cervical cancer enlightenment campaign as part of activities of various institutions' staff welfare programmes, making educative pamphlets on cervical cancer available in strategic places and including mobile cervical cancer screening and education programme in annual general meetings of women of various towns and religious organizations (e.g. August meeting). Item 54 on giving slots for health talks during wake-keeping and vigils though accepted had the lowest mean rating of 2.92. This researcher did not come across any study that sought for educational strategies for fighting against cervical cancer in the manner it is done in the present study but there are studies that have sought for educational interventions in the past. Abiodun et al. (2014) found that health education on cervical cancer through a Yoruba movie titled 'Asunle' was effective in creating awareness and improving the knowledge and perception of adult women about cervical cancer and screening. Similarly, Wright, Kuyinu and Faduliye (2010) conducted a quasi-experimental study amongst market women in an urban area of Lagos where the respondents in the intervention group received sessions of community based educational messages on cervical cancer and its prevention. Their study found significant increase in the awareness of the group that received the intervention. The present study is similar to Wright's study in propagating education of the populace but varies in seeking out appropriate strategies that could be used to widen the reach of educational interventions.

The present study also found that educational qualifications, marital status, age and staff type significantly affected the mean ratings of staff on strategies for enlightenment. Although majority of the respondents agreed to all the listed strategies they may have differed on the extent they agreed to each strategy based on their exposure and what is obtainable in their home communities. Gender did not have significant effect on mean ratings of staff on strategies for enlightenment.

Conclusion

Based on the findings, the study concludes that staff of tertiary institutions in Anambra State exhibited poor awareness of the risk factors, symptoms and preventive measures of cervical cancer. Their awareness of existence of cervical cancer, though fair, is still inadequate and unless serious efforts are made by every stakeholder to properly educate the citizenry on the key facts for the prevention of cervical cancer, the battle may not be won. A lot of people still harbour misconceptions about cervical cancer. The study also determined strategies for enlightenment on cervical cancer which include - making pamphlets on cervical cancer available in strategic places; including mobile cervical cancer screening and education programmes in annual general meetings of towns, religious organizations and various institutions' staff welfare programmes; inclusion of HPV awareness programmes in PTA meetings of every secondary school. If the strategies are put to use, successful inroad will be made in the war against cervical cancer.

Implications of the Study

The findings of the study have far reaching implications to male and female members of the society and particularly staff of tertiary institutions, funding agencies, government and non-

governmental agencies, other adult and non-formal education agencies and various communities.

1. The implication for women, the people that directly suffer cervical cancer, is that they should adopt a self-help approach, mobilize in their various groups and communities and ensure the inclusion of enlightenment and screening programmes on cervical cancer in their activities in order to prevent the disease.
2. Men should be involved in health educational programmes especially as it pertains to STIs and women diseases that arise from STIs.
3. Governmental and non-governmental organizations involved in the fight against cervical cancer should be dynamic in the strategies they employ and utilize the identified strategies to correctly educate the masses on the disease.
4. The implication for staff of various institutions is that they should include programmes for cervical cancer enlightenment, vaccination and screening in their yearly programmes.
5. Cervical cancer educational programme designers should deliberately give attention to sections on symptoms of cervical cancer.

Recommendations

Based on the findings of the study, the researcher made the following recommendations.

1. The federal ministry of health in collaboration with other governmental agencies and NGOs should design health educational pamphlets on key facts on cervical cancer and spread same across the nation particularly in states like Anambra that have not benefitted well from past interventions.

2. Anambra State government and all local government areas in the state should establish women centres in every local government headquarter where women can be educated and routinely screened and young ladies vaccinated against HPV at least twice yearly.
3. Women organizations should be in the vanguard of organizing enlightenment and screening programmes in collaboration with NMA and Medical Women Association of Nigeria.
4. Adult educators and Community development workers in every community should liaise with the town union executives so that they can initiate the inclusion of health talks/education in key festivals and other suitable functions.

Suggestions for Further Studies

Further studies related to the present study can be carried as follows:

1. The study can be replicated in rural communities in Anambra State and other states in Nigeria in order to assess their awareness levels of key facts about cervical cancer.
2. Impact of a movie based on cervical cancer key facts in Igbo language can be examined through a quasi experimental study.
3. The impact of short movies through social media platforms on the awareness of risk factors of cervical cancer among young school leavers can be investigated.
4. Influence of a health education pamphlet (based on HPV and cervical cancer key facts) on married men's sexual behaviour can be studied.
5. A study to find out the extent of awareness of availability of vaccination, screening services and women's uptake of pap smear can be embarked on in Anambra State in order to advance the war against cervical cancer.

6. There is need to carry out a similar study on young girls awareness of HPV, existence of HPV vaccine and the extent of their uptake of HPV vaccine.
7. A study can be conducted to assess the awareness levels of male and female members of academic community in Anambra State on the risk factors and preventive measures of prostate cancer.

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APPENDIX A
INTRODUCTORY LETTER TO INSTITUTIONS

Department of Adult Education,
Faculty of Education,
Nnamdi Azikiwe University,
Awka.
17th March, 2017.

.....

.....

.....

Dear Sir,

An Introductory Letter

I am a post graduate student of the above named institution. I am carrying out a research on the awareness of cervical cancer and determination of strategies for enlightenment of the populace in Anambra state using staff of tertiary institutions.

I solicit the cooperation of your academic and non-academic staff to fill the questionnaire meant for the study. The questionnaire is meant to assess the level of awareness of cervical cancer as well as highlight more strategies that can be used to expand the reach of NGOs and other stakeholders in the fight against cervical cancer. The study is necessary because through its findings the status of awareness of various individuals on key factors of cervical cancer will be revealed. The status of awareness of other groups in the state can be estimated and this information will engender making efforts in the right direction by different bodies to adequately provide health education on cervical cancer by the populace among other things.

The information to be obtained will be used solely for academic purposes and all information will be treated with absolute confidentiality. Thank you Sir.

Yours faithfully,

Chukwuemerie, Obiageli C. (Mrs)
(Researcher)

APPENDIX B

A LETTER OF TRANSMITTAL

Department of Adult Education,
Faculty of Education,
Nnamdi Azikiwe University,
Awka.
18th March, 2017

Dear Respondent,

Request to Complete Questionnaire Items for Research Purpose

This study is concerned with awareness of cervical cancer and determination of strategies for enlightenment using male and female staff of tertiary institutions in Anambra state. As you are a staff in a tertiary institution in Anambra State, the researcher solicits your cooperation in responding to the items in the attached questionnaire.

Section A is on personal data. Section B contains questions about your awareness of cervical cancer. The questions are not assessing your personal risk of cancer. The researcher is merely interested in your understanding of the various key aspects of the disease as a way of gauging the level of awareness in Anambra state. All your answers are confidential.

Please do not return to previous items to amend answers because your answers before any prompting from subsequent questions are important in this research. Thank you.

Yours faithfully,

Chukwuemerie, Obiageli C. (Mrs)
(Researcher)

APPENDIX C
CERVICAL CANCER AWARENESS TEST AND QUESTIONNAIRE (CCAT & Q) 2017

PART ONE

Personal Data

Please check (√) on the following personal information as it applies to you.
1. Age Distribution: Below 39 years ( ); 40 years and above ( )
2. Gender: Male ( ); Female ( )
3. Marital Status: Single ( ); Married ( ); Separated ( ); Divorced ( ); Widowed ( )
4. Staff Type: Academic ( ); Non- Teaching ( );
5. Highest Academic Qualification of staff:
   a. Post Graduate degrees ( ); b. Bachelors Degree/ HND/NCE ( );
   c. WASC/ NECO/ NABTEB ( ); d. First School Leaving Certificate [FSLC] ( )

PART TWO

General Instruction for Responding to Items in all Sections: Please **do not go back to alter responses** you checked earlier**.** Your candid opinion is required for valid findings in this study**.**

Section A: Awareness of existence and susceptibility of cervical cancer
Instruction: Please kindly check (√) on the option(s) that is your chosen answer(s) to the following questions.

S/N	Questions on existence and susceptibility of cervical cancer	Yes	No	Don't Know
1.	Have you heard about cervical cancer before?			
2.	Do you know of anyone that has had cervical cancer before?			
3.	Are you aware that many people die of cervical cancer?			
4.	Is it true that cervical cancer occurs many years after one is affected with the virus that causes cervical cancer?			
5.	Is cervical cancer currently among issues of public health globally?			
6.	Is it true that cervical cancer occurs in the intestine of men and women?			
7.	Do you think it is possible for you to suffer cervical cancer?			
8.	Is it true that every sexually active human male and female can be infected with the virus that causes cervical cancer?			
9.	Is it true that only women suffer cervical cancer but men can transmit the virus that causes cervical cancer to women?			
10.	Is it true that adolescents are very much likely to be affected with the virus that causes cervical cancer?			

Section B: Awareness of Risk Factors of Cervical Cancer

Instruction: Please check (√) in the column you consider correct or as applicable to you.

S/N	**The risk factors of cervical cancer include:**	**True**	**False**	**Don't know**
11.	Human Papilloma Virus (HPV) infection			
12.	Starting to have sex at young age (before 17 years)			
13.	Having many sexual partners			
14.	Not cleaning the vagina with soap every morning and night			
15.	Having too much sex with one partner			
16.	Being exposed to tobacco			
17.	Not going for regular pap smear test or other cervical screening			
18.	Having a sexual partner who is not circumcised			
19.	Having a weakened immune system e.g. because of HIV/ AIDs, immunosuppressant drugs or having a transplant.			
20.	Being infected with toilet disease			

Section C: Awareness of Signs and Symptoms of Cervical Cancer.

Instruction: Please check (√) in the column you consider correct or as is applicable to you.

S/N	**The following are signs and symptoms of cervical Cancer:**	**True**	**False**	**Don't know**
21.	Vaginal bleeding between periods			
22.	Persistent foul smelling vaginal discharge			
23.	Bleeding during and after sex			
24.	Blood in the stool or urine			
25.	Vaginal bleeding after menopause			
26.	Discomfort or pain during sex			
27.	Frequent urination			
28.	Persistent lower back pain			
29.	Persistent diarrhea			
30.	Cervical cancer may present without any noticeable signs and Symptoms			

Section D: Awareness of Preventive Measures of Cervical Cancer

Instruction: Kindly check (√) the correct option as regards the following statements on preventive measures of cervical cancer.

S/N	Statements on Preventive Measures of Cervical Cancer	True	False	Don't Know
31.	Cervical cancer can be prevented, treated and cured.			
32.	The virus that causes cervical cancer can be prevented by taking vaccination.			
33.	Vaccination against HPV works better if it is taken before one starts engaging in sex.			
34.	Vaccines against HPV can prevent males that take them from contracting other cancers caused by HPV such as cancer of the anus and penis.			
35.	Vaccination against human papilloma virus (HPV) can cure a person already infected with HPV.			
36	Women that have received the HPV vaccine do not need to be screened for cervical cancer throughout their life time.			
37.	Use of condoms affords 100% protection against the virus that cause cervical cancer			
38.	Abstinence from sex (vaginal, oral and anal) can protect one from cervical cancer.			
39.	Adoption of healthy lifestyle can help protect one from cervical cancer.			
40.	Educating citizens on risk factors of cervical cancer is a way of preventing cervical cancer.			
41.	Early detection of cancerous cells in the cervix increases the chances of successful treatment of cervical cancer.			
42.	Pap smear is the most popular screening test for detecting abnormal cervical cell.			
43.	At a minimum, a national programme on prevention of cervical cancer should prioritize women who are between 30 – 40 years old for screening			
44.	It is necessary for every woman involved in sexual relationship to consistently abide with their screening schedule.			
45.	The pap smear checks for several kinds of cancers.			
46.	Abnormal pap smear result should be followed up by undergoing other types of HPV test.			
47.	Screening should only be done where there are symptoms			
48.	It is very necessary for young girls of 9 to 17 years who have not had sex to do pap smear at their age.			
49.	Pap smear test should be done 3-yearly for women under 65 years			
50.	Regular cervical screening is the best form of protection against cervical cancer.			

Section E: Determination of Strategies for Enlightenment on Cervical Cancer

Instruction: Stated below are some strategies which could be used by NGOs and other stakeholders to expand their work of enlightening people on cervical cancer. Please indicate the extent you agree or disagree with the items using the following response categories:

SA – Strongly Agree; A- Agree; D- Disagree; SD - Strongly Disagree

S/N	Statements	SA	A	D	SD
51.	Making it mandatory for church members to include articles on women cancers (including cervical cancer) and other non-communicable diseases) in burial programmes of members				
52.	Including slots in key festivals and events (such as Ofala festival, new yam festival, annual kindred meetings) in various communities to educate the people on deadly diseases and healthy lifestyle				
53.	Making it compulsory for Parent Teachers Associations (PTAs) of every secondary school to include a programme on cervical cancer/ human papilloma virus awareness at least once in their yearly programmes.				
54.	Giving slots for health talks during wake-keeping and vigils				
55.	Arranging for health workers to go round towns and villages in the morning hours with megaphones/microphones in order to give information about cervical cancer				
56.	Incorporating cervical cancer enlightenment campaigns as part of activities of various institutions' staff welfare programmes				
57.	Producing and making available pamphlets on cervical cancer at strategic public places such as market place, government offices, reception halls of both private and public organization, hotels, restaurants, beer parlours, hairdressing places, mechanic and tailor workshops				
58.	Including mobile cervical cancer screening and education programmes in annual general meeting programme of women of various towns and religious organisations (e.g. August Meeting)				
59.	Encouraging the inclusion of talks on healthy lifestyles in birthday party programmes of well-meaning and philanthropic adults				
60.	Organizing and dedicating one Saturday in every month for health workers to embark on road walk and exercise in various neighbourhoods in urban and rural areas where few minutes can be dedicated to education on ways of preventing prevalent diseases such as cervical cancer				

APPENDIX D

ANSWERS TO CERVICAL CANCER AWARENESS TEST (CCAT) 2017

Answers to Section A, items 1 to 10 are as follows:

1. Yes	2. Yes	3. Yes	4. Yes	5. Yes	6. No
7. Yes for females; No for males;			8. Yes	9. Yes	10. Yes

Section B Answers

11. True	12.True	13. True	14.False	15. False
16. True	17. True	18.True	19.True	20. False

Section C Answers

21. True	22. True	23.True	24.False	25. True
26. True	27. False	28.True	29.False	30. True

Section D Answers

31. True	32. True	33.True	34.True	35. False
36. False	37. False	38.True	39.True	40. True
41. True	42. True	43.True	44.True	45. False
46. True	47. False	48.False	49.True	50. True

APPENDIX E

ALPHA RELIABILITY CO-EFFICIENT OF THE INSTRUMENT

Statistical Data Analysis output from Statistical Package for Social Science Students (SPSS) Version-23.

Overall Reliability (Section-1 to 5)

```
 /VARIABLES=Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24
Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49
Q50 Q51 Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q59 Q60
 /SCALE('ALL VARIABLES') ALL
 /MODEL=ALPHA.
```

Reliability

Notes		
Output Created		16-AUG-2017 15:38:45
Comments		
Input	Data	C:\Users\NWOKOCHA\Downloads\EDUCATION DEPT\Oby cervical cancer Reliability.sav
	Active Dataset	DataSet 1
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	10
	Matrix Input	C:\Users\NWOKOCHA\Downloads\EDUCATION DEPT\Oby cervical cancer Reliability.sav
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30 Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49Q50 Q51 Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q59 Q60 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA.
Resources	Processor Time	00:00:00.03

	Elapsed Time	00:00:00.17

[DataSet0] C:\Users\NWOKOCHA\Downloads\EDUCATION DEPT\Oby cervical cancer Reliabilty.sav

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Overall Reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.962	60

Section-1 RELIABILITY

```
/VARIABLES=Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha[a]	N of Items
.904	10

Section-2 RELIABILITY

/VARIABLES=Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.869	10

Section-3 RELIABILITY

/VARIABLES=Q21 Q22 Q23 Q24 Q25 Q26 Q27 Q28 Q29 Q30
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.891	10

Section-4 RELIABILITY

```
/VARIABLES=Q31 Q32 Q33 Q34 Q35 Q36 Q37 Q38 Q39 Q40 Q41 Q42 Q43 Q44 Q45 Q46 Q47 Q48 Q49
Q50
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.928	20

Section-5 RELIABILITY

```
/VARIABLES=Q51 Q52 Q53 Q54 Q55 Q56 Q57 Q58 Q59 Q60
/SCALE('ALL VARIABLES') ALL
/MODEL=ALPHA.
```

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.748	10

Overall Reliability is 0.962

APPENDIX F

Population Distribution of Teaching and Non-Teaching Staff of Tertiary Institutions in Anambra State

Institutions	Teaching Staff		Non-Teaching Staff		Total
	Males	Females	Males	Females	
Chukwuemeka Odimegwu Ojukwu University, Igbariam	444	172	314	523	**1453**
Nwafor Orizu College of Education, Nsugbe	106	140	146	388	**780**
Nnamdi Azikiwe University, Awka	419	903	1171	886	**3379**
Federal Polytechnic Oko	212	240	474	624	**1550**
Federal College of Education Technical Umunze	144	154	262	414	**974**
Paul University, Awka	90	28	51	43	**212**
Tansian University, Umunya	51	27	25	36	**139**
TOTAL	**1466**	**1664**	**2441**	**2916**	**8487**

Source: The Registry of the Institutions Concerned

Sample Distribution of Teaching and Non-Teaching Staff of Tertiary Institutions in Anambra State

Institution	Population	Teaching Staff		Non-Teaching Staff		Total Sample Size
		Males	Females	Males	Females	
Chukwuemeka Odimegwu Ojukwu University, Igbariam	1453	20	8	14	24	**65**
Nwafor Orizu College of Education, Nsugbe	780	5	6	7	17	**35**
Nnamdi Azikiwe University, Awka	3379	19	41	53	40	**153**
Federal Polytechnic Oko	1550	10	11	21	28	**70**
Federal College of Education Technical Umunze	974	7	7	12	17	**43**
Paul University, Awka	212	4	1	2	2	**9**
Tansian University, Umunya	139	2	1	1	2	**6**
TOTAL	**8487**	**67**	**75**	**110**	**130**	**382**

APPENDIX G

COMPUTATION OF SAMPLE SIZE USING TARO YAMANE'S FORMULA

Taro Yamane's Formula for sample size is $n = N/ (1+N (e)^2)$

Where:

n = sample size

N = signifies the population under study

e = the margin error (it could be 0.10, 0.05 or 0.01. in this case it is 0.05).

The total population for this study is 8487.

Therefore $n = 8487/ (1+ 8487 (0.05)^2)$

n = 8487/ (1 + 8487 (0.0025)

n = 8487/ (1 + 21.2175)

n = 8487/ 22.2175

n = 381.97

n, which is sample size, is approximately 382.

APPENDIX H
SPSS OUTPUT FOR CERVICAL CANCER AWARENESS TEST AND QUESTIONNAIRE (CCAT & Q) 2017

Frequencies

Statistics

		AGE	GENDER	MARITAL STATUS	STAFF TYPE	EDUCATIONAL LEVEL	AWARENESS 1
N	Valid	382	382	382	382	382	382
	Missing	0	0	0	0	0	0

		AWARENESS 2	AWARENESS 3	AWARENESS 4
N	Valid	382	382	382
	Missing	0	0	0

FREQUENCY TABLE OF AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BELOW 39 YEARS	173	45.3	45.3	45.3
	40 YEARS AND ABOVE	209	54.7	54.7	100.0
	Total	382	100.0	100.0	

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	181	47.4	47.4	47.4
	FEMALE	201	52.6	52.6	100.0
	Total	382	100.0	100.0	

MARITALSTATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SINGLE	122	31.9	31.9	31.9
	MARRIED	215	56.3	56.3	88.2
	SEPARATED	23	6.0	6.0	94.2
	DIVORCED	5	1.3	1.3	95.5
	WIDOWED	17	4.5	4.5	100.0
	Total	382	100.0	100.0	

STAFF TYPE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ACADEMIC	145	38.0	38.0	38.0
	NON-ACADEMIC	237	62.0	62.0	100.0
	Total	382	100.0	100.0	

EDUCATIONAL LEVEL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MASTERS/PHD	173	45.3	45.3	45.3
	FIRST DEGREE/HND/NCE	150	39.3	39.3	84.6
	WASC	49	12.8	12.8	97.4
	FSLC	10	2.6	2.6	100.0
	Total	382	100.0	100.0	

AWARENESS 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	23	6.0	6.0	6.0
	1.00	21	5.5	5.5	11.5
	2.00	48	12.6	12.6	24.1
	3.00	34	8.9	8.9	33.0
	4.00	56	14.7	14.7	47.6
	5.00	62	16.2	16.2	63.9
	6.00	51	13.4	13.4	77.2
	7.00	54	14.1	14.1	91.4
	8.00	16	4.2	4.2	95.5
	9.00	10	2.6	2.6	98.2
	10.00	7	1.8	1.8	100.0
	Total	382	100.0	100.0	

AWARENESS 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	75	19.6	19.6	19.6
	1.00	18	4.7	4.7	24.3
	2.00	34	8.9	8.9	33.2
	3.00	65	17.0	17.0	50.3
	4.00	46	12.0	12.0	62.3
	5.00	48	12.6	12.6	74.9
	6.00	43	11.3	11.3	86.1
	7.00	30	7.9	7.9	94.0
	8.00	18	4.7	4.7	98.7
	9.00	3	.8	.8	99.5
	10.00	2	.5	.5	100.0
	Total	382	100.0	100.0	

AWARENESS 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	115	30.1	30.1	30.1
	1.00	31	8.1	8.1	38.2
	2.00	39	10.2	10.2	48.4
	3.00	50	13.1	13.1	61.5
	4.00	35	9.2	9.2	70.7
	5.00	30	7.9	7.9	78.5
	6.00	35	9.2	9.2	87.7
	7.00	32	8.4	8.4	96.1
	8.00	10	2.6	2.6	98.7
	9.00	4	1.0	1.0	99.7
	10.00	1	.3	.3	100.0
	Total	382	100.0	100.0	

AWARENESS 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	20	5.2	5.2	5.2
	1.00	12	3.1	3.1	8.4
	2.00	34	8.9	8.9	17.3
	3.00	17	4.5	4.5	21.7
	4.00	23	6.0	6.0	27.7
	5.00	20	5.2	5.2	33.0
	6.00	20	5.2	5.2	38.2
	7.00	19	5.0	5.0	43.2
	8.00	29	7.6	7.6	50.8
	9.00	23	6.0	6.0	56.8
	10.00	38	9.9	9.9	66.8
	11.00	27	7.1	7.1	73.8
	12.00	19	5.0	5.0	78.8
	13.00	24	6.3	6.3	85.1
	14.00	18	4.7	4.7	89.8
	15.00	12	3.1	3.1	92.9
	16.00	16	4.2	4.2	97.1
	17.00	10	2.6	2.6	99.7
	18.00	1	.3	.3	100.0
	Total	382	100.0	100.0	

SECTION 5: **Determination of Strategies for Enlightenment on Cervical Cancer**

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EA1	382	1.00	4.00	3.2330	.76379
EA2	382	1.00	4.00	3.4136	.69616
EA3	382	1.00	4.00	3.4424	.68396
EA4	382	1.00	4.00	2.9241	.91474
EA5	382	1.00	4.00	3.4031	.79684
EA6	382	1.00	4.00	3.6099	.61239
EA7	382	1.00	4.00	3.6021	.65911
EA8	382	1.00	4.00	3.5681	.63933
EA9	382	1.00	4.00	2.9764	.90896
EA10	382	1.00	4.00	3.3848	.81719
Valid N (listwise)	382				

T-Test

Group Statistics

	AGE	N	Mean	Std. Deviation	Std. Error Mean
AWARENESS 1	BELOW 39 YEARS	173	4.4046	2.26664	.17233
	40 YEARS AND ABOVE	209	4.6077	2.50368	.17318
AWARENESS 2	BELOW 39 YEARS	173	3.5549	2.35353	.17894
	40 YEARS AND ABOVE	209	3.5837	2.65372	.18356
AWARENESS 3	BELOW 39 YEARS	173	2.8555	2.48646	.18904
	40 YEARS AND ABOVE	209	2.9426	2.73449	.18915
AWARENESS 4	BELOW 39 YEARS	173	8.4104	4.48632	.34109
	40 YEARS AND ABOVE	209	7.9091	4.98231	.34463

Independent Samples Test

		t-test for Equality of Means			
		T	df	Sig. (2-tailed)	Mean Difference
AWARENES 1	Equal variances assumed	-.823	380	.411	-.20303
AWARENES 2	Equal variances assumed	-.111	380	.912	-.02882
AWARENES 3	Equal variances assumed	-.323	380	.747	-.08709
AWARENES 4	Equal variances assumed	1.024	380	.307	.50131

T-Test

Group Statistics

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
AWARENESS 1	MALE	181	4.2044	2.35164	.17480
	FEMALE	201	4.7960	2.41105	.17006
AWARENESS 2	MALE	181	3.1713	2.51185	.18670
	FEMALE	201	3.9303	2.47692	.17471
AWARENESS 3	MALE	181	2.1934	2.47233	.18377
	FEMALE	201	3.5423	2.59412	.18298
AWARENESS 4	MALE	181	7.3370	4.77519	.35494
	FEMALE	201	8.8557	4.65017	.32800

Independent Samples Test

		t-test for Equality of Means			
		t	df	Sig. (2-tailed)	Mean Difference
AWARENESS1	Equal variances assumed	-2.423	380	.016	-.59160
AWARENESS2	Equal variances assumed	-2.971	380	.003	-.75908
AWARENESS3	Equal variances assumed	-5.189	380	.000	-1.34892
AWARENESS4	Equal variances assumed	-3.147	380	.002	-1.51870

T-Test

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Group Statistics

	STAFF TYPE	N	Mean	Std. Deviation	Std. Error Mean
AWARENESS1	ACADEMIC	145	5.1586	2.36489	.19639
	NON-ACADEMIC	237	4.1224	2.33747	.15184
AWARENESS2	ACADEMIC	145	4.1310	2.63327	.21868
	NON-ACADEMIC	237	3.2278	2.38791	.15511
AWARENESS3	ACADEMIC	145	3.2276	2.66600	.22140
	NON-ACADEMIC	237	2.7046	2.58034	.16761
AWARENESS4	ACADEMIC	145	9.0069	4.45268	.36977
	NON-ACADEMIC	237	7.6034	4.87849	.31689

Independent Samples Test

		t-test for Equality of Means			
		T	df	Sig. (2-tailed)	Mean Difference
AWARENESS1	Equal variances assumed	4.186	380	.000	1.03626
AWARENESS2	Equal variances assumed	3.449	380	.001	.90319
AWARENESS3	Equal variances assumed	1.898	380	.058	.52294
AWARENESS4	Equal variances assumed	2.819	380	.005	1.40352

Oneway

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ONEWAY AWARENESS1 AWARENESS2 AWARENESS3 AWARENESS4 TSCORE BY
EDUCATIONALLEVEL
  /MISSING ANALYSIS.
```

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
AWARENESS 1	Between Groups	172.042	3	57.347	10.735	.000
	Within Groups	2019.364	378	5.342		
	Total	2191.406	381			
AWARENESS 2	Between Groups	193.730	3	64.577	10.976	.000
	Within Groups	2223.861	378	5.883		
	Total	2417.592	381			
AWARENESS 3	Between Groups	106.919	3	35.640	5.362	.001
	Within Groups	2512.497	378	6.647		
	Total	2619.416	381			
AWARENESS 4	Between Groups	954.586	3	318.195	15.632	.000
	Within Groups	7694.335	378	20.355		
	Total	8648.921	381			
TSCORE	Between Groups	651.685	3	217.228	9.916	.000
	Within Groups	8280.548	378	21.906		
	Total	8932.233	381			

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ONEWAY AWARENESS1 AWARENESS2 AWARENESS3 AWARENESS4 TSCORE BY
MARITALSTATUS  /MISSING ANALYSIS.
```

Oneway

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
AWARENESS 1	Between Groups	10.726	4	2.681	.464	.762
	Within Groups	2180.680	377	5.784		
	Total	2191.406	381			
AWARENESS 2	Between Groups	31.260	4	7.815	1.235	.296
	Within Groups	2386.332	377	6.330		
	Total	2417.592	381			
AWARENESS 3	Between Groups	20.160	4	5.040	.731	.571
	Within Groups	2599.257	377	6.895		
	Total	2619.416	381			
AWARENESS 4	Between Groups	117.864	4	29.466	1.302	.269
	Within Groups	8531.057	377	22.629		
	Total	8648.921	381			
TSCORE	Between Groups	278.346	4	69.587	3.031	.018
	Within Groups	8653.887	377	22.955		
	Total	8932.233	381			

T-Test

Group Statistics

	AGE	N	Mean	Std. Deviation	Std. Error Mean
TSCORE	BELOW 39 YEARS	173	32.5896	4.65299	.35376
	40 YEARS AND ABOVE	209	34.3589	4.85961	.33615

Independent Samples Test

		t-test for Equality of Means			
		T	df	Sig. (2-tailed)	Mean Difference
TSCORE	Equal variances assumed	-3.611	380	.000	-1.76926

T-Test

Group Statistics

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
TSCORE	MALE	181	33.9558	4.51519	.33561
	FEMALE	201	33.1990	5.10296	.35994

Independent Samples Test

		t-test for Equality of Means			
		T	df	Sig. (2-tailed)	Mean Difference
TSCORE	Equal variances assumed	1.528	380	.127	.75680

T-Test

Group Statistics

	STAFFTYPE	N	Mean	Std. Deviation	Std. Error Mean
TSCORE	ACADEMIC	145	34.5034	4.22151	.35058
	NON-ACADEMIC	237	32.9789	5.10769	.33178

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Independent Samples Test

		t-test for Equality of Means			
		T	df	Sig. (2-tailed)	Mean Difference
TSCORE	Equal variances assumed	3.018	380	.003	1.52455

APPENDIX

Validation of instrument on the Topic

Awareness of Cervical Cancer and Determination of Strategies for Enlightenement in Tertiary Institutions in Anambra State.

This is to certify that I---Prof. Uche Obidiegwu---

Validated the above mentioned instrument and made corrections/recommendations on the following areas:

Restructured the title, purpose of the study, research questions and hypotheses. Worked on the items of the instrument make them clearer and more specific in relation to the content area.

After the amendments, I considered the instruments fit / ~~unfit~~ for the study which it is designed for.

Signature

Date 15/03/17

APPENDIX

Validation of instrument on the Topic

AWARENESS OF CERVICAL CANCER AMONG LECTURERS AND DETERMINATION OF NON-FORMAL EDUCATION STRATEGIES FOR ENLIGHTENMENT IN SOUTH EAST NIGERIA

This is to certify that I---Prof Jerome O. Ollaru.

Validated the above mentioned instrument and made corrections/recommendations on the following areas:

The title is not suitable as it is.
All the test items are on knowledge.
I suggest the following title.
"Knowledge of Cervical Cancer and Determination of non-formal education strategies using lecturers in Universities in South East Nigeria."
If this is accepted the purposes, research questions should be in line with it.
There should be answers to the research items.
If the instrument is restructured it will be fit for the study.

After the amendments, I considered the instruments fit / unfit for the study which it is designed for.

Signature

Date 29/01/16

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APPENDIX

Validation of instrument on the Topic

Extent of Awareness of Cervical Cancer and Application of Preventive Measures among Lecturers in Anambra and Rivers States

This is to certify that I Prof. Ngozi Agu

Validated the above mentioned instrument and made corrections/recommendations on the following areas:

- The specific purposes should be in line with the topic. The specific purposes have items that are not part of the topic and the major variable in the topic — Application — was not reflected.
- The research questions and hypotheses should be reviewed in line with the reviewed specific purposes.
- The measuring instrument for awareness should not be a questionnaire but an achievement test as it is a measure of knowledge of something. Instrument should be reconstructed entirely.

After the amendments, I considered the instruments fit/unfit for the study which it is designed for.

Signature:

Date: 7/12/2016

APPENDIX J

RESULT OF ITEM BY ITEM ANALYSIS OF DATA

Item by Item Analysis Result of Answers to Section A (Research Questions 1 – 10)

S/N	**Awareness of Existence and Susceptibility of Cervical Cancer**	**Yes (Percent)**	**No (Percent)**	**Don't Know (Percent)**	**Remark**
1.	Have you heard about cervical cancer before?	335 (87.69%)	43 (11.26%)	4 (1.05%)	
2.	Do you know of anyone that has had cervical cancer before?	135 (35.34%)	223 (58.38%)	24 (6.28%)	
3.	Are you aware that many people die of cervical cancer?	246 (64.40%)	78 (20.42%)	58 (15.18%)	
4.	Is it true that cervical cancer occurs many years after one is affected with the virus that causes cervical cancer?	117 (30.62%)	37 (9.69%)	228 (59.69%)	
5.	Is cervical cancer currently among issues of public health globally?	243 (63.61%)	29 (7.60%)	110 (28.80%)	
6.	Is it true that cervical cancer occurs in the intestine of men and women?	51 (13.35%)	142 (37.17%)	189 (49.48%)	
7.	Do you think it is possible for women around you to suffer cervical cancer?	**F**: 44 (11.52% of the 382 participants & 21.89% of 201 women that responded) M: 26 (6.81%)	**F**: 115 (30.10%) M: 111 (29.06%)	**F**: 46 (12.04%) M: 40 (10.47%)	
8.	Is it true that every sexually active human male and female can be infected with the virus that causes cervical cancer?	143 (37.43%)	93 (24.35%)	146 (38.22%)	
9.	Is it true that only women suffer cervical cancer but men can transmit the virus that causes cervical cancer to women?	137 (35.86%)	79 (20.68%)	166 (43.46%)	
10.	Is it true that adolescents are very much likely to be affected with the virus that causes cervical cancer?	87 (22.78%)	98 (25.65%)	197 (51.57%)	

Item by Item Analysis Result of Answers to Section B (Research Questions 11 – 20)

S/N	**Awareness of Risk Factors of Cervical Cancer**	**True (Percent)**	**False (Percent)**	**Don't Know (Percent)**	**Remark**
11.	Human Papilloma Virus (HPV) infection	138 (36.12%)	25 (6.54%)	219 (57.33%)	
12.	Starting to have sex at young age (before 17 years)	134 (35.08%)	74 (19.37%)	174 (45.55%)	
13.	Having many sexual partners	220 (57.59%)	32 (8.38%)	130 (34.03%)	
14.	Not cleaning the vagina with soap every morning and night	65 (17.02%)	162 (42.41%)	155 (40.58%)	
15.	Having too much sex with one partner	47 (12.30%)	186 (48.69%)	149 (39.00%)	
16.	Being exposed to tobacco	78 (20.42%)	116 (30.37%)	188 (49.21%)	
17.	Not going for regular pap smear test or other cervical screening	192 (50.26%)	45 (11.78%)	145 (37.96%)	
18.	Having a sexual partner who is not circumcised	37 (9.69%)	180 (47.12%)	165 (43.19%)	
19.	Having a weakened immune system e.g. because of HIV/ AIDs, immunosuppressant drugs or having a transplant.	139 (36.39%)	58 (15.18%)	185 (48.43%)	
20.	Being infected with toilet disease	118 (30.89%)	86 (22.51%)	178 (46.60%)	

Item by Item Analysis Result of Answers to Section B (Research Questions 11 – 20)

S/N	**Awareness of Signs and Symptoms of Cervical Cancer**	**True (Percent)**	**False (Percent)**	**Don't Know (Percent)**	**Remark**
21.	Vaginal bleeding between periods	154 (40.31%)	33 (8.64%)	195 (51.05%)	
22.	Persistent foul smelling vaginal discharge	163 (42.67%)	22 (5.76%)	197 (51.57%)	
23.	Bleeding during and after sex	121 (31.68%)	35 (9.16%)	226 (59.16%)	
24.	Blood in the stool or urine	92 (24.08%)	55 (14.40%)	235 (61.52%)	
25.	Vaginal bleeding after menopause	152	36	194	

		(39.79%)	(9.42%)	(50.79%)	
26.	Discomfort or pain during sex	123 (32.20%)	44 (11.52%)	215 (56.28%)	
27.	Frequent urination	47 (12.30%)	97 (25.39%)	238 (62.30%)	
28.	Persistent lower back pain	82 (21.47%)	62 (16.23%)	238 (62.30%)	
29.	Persistent diarrhea	45 (11.78%)	80 (20.94%)	257 (67.28%)	
30.	Cervical cancer may present without any noticeable signs and symptoms	89 (23.30%)	84 (21.99%)	209 (54.71%)	

Item by Item Analysis Result of Answers to Section B (Research Questions 31 – 50)

S/N	**Statement**	**True (Percent)**	**False (Percent)**	**Don't Know (Percent)**	**Remark**
31.	Cervical cancer can be prevented, treated and cured.	247 (64.66%)	28 (7.33%)	107 (28.01%)	
32.	The virus that causes cervical cancer can be prevented by taking vaccination.	160 (41.88%)	29 (7.59%)	193 (50.52%)	
33.	Vaccination against HPV works better if it is taken before one starts engaging in sex.	100 (26.18%)	29 (7.59%)	253 (66.23%)	
34.	Vaccines against HPV can prevent males that take them from contracting other cancers caused by HPV such as cancer of the anus and penis.	80 (20.94%)	42 (10.99%)	260 (68.06%)	
35.	Vaccination against human papilloma virus (HPV) can cure a person already infected with HPV.	62 (16.23%)	77 (20.16%)	243 (63.61%)	
36.	Women that have received the HPV vaccine do not need to be screened for cervical cancer throughout their life time.	44 (11.52%)	127 (33.25%)	211 (55.24%)	
37.	Use of condoms affords 100% protection against the virus that cause cervical Cancer	55 (14.40%)	187 (48.95%)	140 (36.65%)	
38.	Abstinence from sex (vaginal, oral and anal) can protect one from cervical cancer.	169 (44.24%)	69 (18.06%)	144 (37.70%)	
39.	Adoption of healthy lifestyle can help protect one from cervical cancer.	291 (76.18%)	28 (7.33%)	63 (16.49%)	

40.	Educating citizens on risk factors of cervical cancer is a way of preventing cervical cancer.	321 (84.03%)	18 (4.71%)	43 (11.26%)	
41.	Early detection of cancerous cells in the cervix increases the chances of successful treatment of cervical cancer.	251 (65.71%)	14 (3.66%)	117 (30.63%)	
42.	Pap smear is the most popular screening test for detecting abnormal cervical cell.	147 (38.48%)	15 (3.93%)	210 (54.97%)	
43.	At a minimum, a national programme on prevention of cervical cancer should prioritize women who are between 30 – 40 years old for screening	58 (15.18%)	46 (12.04%)	278 (72.77%)	
44.	It is necessary for every woman involved in sexual relationship to consistently abide with their screening schedule.	207 (54.19%)	13 (3.40%)	162 (42.41%)	
45.	The pap smear checks for several kinds of cancers.	80 (20.94%)	50 (13.09%)	252 (65.97%)	
46.	Abnormal pap smear result should be followed up by undergoing other types of HPV test.	146 (38.22%)	19 (4.97%)	217 (56.81%)	
47.	Screening should only be done where there are symptoms	69 (18.06%)	175 (45.81%)	138 (36.13%)	
48.	It is very necessary for young girls of 9 to 17 years who have not had sex to do pap smear at their age.	87 (22.77%)	90 (23.56%)	205 (53.66%)	
49.	Pap smear test should be done 3-yearly for women under 65 years Regular cervical screening is the best form of protection against cervical cancer.	102 (26.70%)	26 (6.81%)	254 (66.49%)	
50.	Regular cervical screening is the best form of protection against cervical cancer.	232 (60.73%)	13 (3.40%)	137 (35.86%)	

APPENDIX K

Result of Mean Statistics Analysis of Responses to Research Questions 1 - 4

Items	Section A (Research Question 1: Awareness of Existence & Susceptibility) Over 10	Section B (Research Question 2: Awareness of Risk Factors) Over 10	Section C (Research Question 3: Awareness of Signs & Symptoms) Over 10	Section D (Research Question 4: Awareness of Preventive Measures)	
				Over 20	Over 10
No. of Respondents	382	382	382	382	382
Total Scores of Respondents	1730/3820	1362/3820	1098/3820	3026/7640	1513/3820
Average Scores	4.53/10	3.62/10	2.87/10	7.92/20	3.96/10