Scicom Journal of Medical and Applied Medical Sciences
Scicom J Med Appl Med Sci, 1(2): 1-10 (2022)
DOI: https://doi.org/10.54117/sjmams.v1i2.5

Awareness level of Women of Abua Central on Cervical Cancer Screening and the Practice

Jane Baridah Kue, Udo Orukwowu* and Mercy Mgbere

Department of Nursing Sciences, Faculty of Basic Medical Sciences, College of Medical Sciences, Rivers State University, Nigeria.

*Corresponding author: udocd27@gmail.com; Phone: +2349060039098

Abstract

This study was carried out in Abua Central in Abua/Odual Local Government Area, Rivers State on the awareness and practice of cervical cancer screening among women aged 30 - 60 years. The objective of the study was to determine the awareness level of women of Abua central on cervical cancer screening and the practice, and the objectives were translated into research questions. Literature was reviewed, a purposeful sampling technique was used to select a sample size of (50) fifty from a target population of (200) two hundred women, the instrument used for the study was a self-developed questionnaire. The questionnaire consisted of two sections A and B, section A consisted of personal data's and section B consisted of questions on the variables used to answer the research questions. The questionnaire a design of four Likert scales of agree, strongly agree, disagree and strongly disagree was used. Fifty (50) questionnaire was administered face to face and the (50) fifty were retrieved. Percentage tables, bar chart, pie chart were used to represent the finding of the study while the chi-square X2 statistical tool was used to test the hypothesis at an alpha level of 0.05 significance, from the research analysis chi-square value of 15.2 degree of freedom at 6 and critical value 12.592 was gotten. After analysis of data, the result showed that women of Abua central are aware of cervical cancer screening but they do not participate in the screening programme. The implication for nursing is that nurses should work with other health teams in stressing the importance of cervical cancer screening. Based on the findings of the study, recommendations were made: women should be health educated on the importance of cervical cancer screening also government should provide cervical cancer screening units in a close-by hospital.

Keywords: *Cervical cancer, Cervical screening, Cervical diagnosis, Cancer screening, Cancer in women*

Article History
Received: 23 Dec 2021
Accepted: 24 Jan 2022
Published: 15 Feb 2022

Scan QR code to view•

How to cite this paper: Kue, J.B., Orukwowu, U. and Mgbere, M. (2022). Awareness level of Women of Abua Central on Cervical Cancer Screening and the Practice. *Scicom J Med Appl Med Sci*, 1(2), 1–10. https://doi.org/10.54117/sjmams.v1i2.5

Introduction

Cervical Screening is still a controversial issue that provokes a wide divergence of opinions. Medical advances have shown that cervical cancer if diagnosed sufficiently early is potentially curable. This observation demands that cancer screening should be of increasing priority in the healthcare programmes in developing countries (Kayode, 2004; Egbuna, 2020).

A potentially important strategy in reducing cervical cancer is the use of screening to achieve earlier detection. Early diagnosis usually results in treatment before metastasis and signifies a better outcome of management; cervical cancer screening involves testing of apparently healthy people for signs that could show that cancer is beginning to develop. Cervical screening can actually prevent cancer by finding and treating early changes in the neck of the womb (cervix). The changes could lead to cancer if left untreated.

According to recent statistics by WHO about 85% of estimated 483,000 new cases are diagnosed every year and over 273,000 deaths from cervical cancer occur in developing countries and Nigeria is one of such countries. It is less common in the United State because of the routine check of pap. Also, in other developed countries, the widespread use of cervical screening programmes has dramatically reduced rates of cervical (Kumas, 2007).

Most of the time, early cervical cancer has no symptoms since it is a slow-growing cancer that may not have symptoms at the early stage but can be detected through regular Papanicolaou test or cervical screening (a procedure in which cells are scraped from the cervix and placed on the microscope to detect cell changes indicating the presence of cancer). Also, confirmation of the diagnosis of cervix cancer or pre-cancer requires a biopsy of the cervix. Further, diagnostic and treatment procedures are carried out of the biopsy confirms severe cervical intraepithelial neoplasia.

Most cases of cervical cancer occurring in Africa are detected very late mainly due to poor access to screening facilities and lack of awareness of the importance of cervical cancer screening (Chukwukere, 2012). Since no HPV vaccine provides complete protection against all of the HPV types that can cause cancer of the cervix, it cannot prevent all cases of cervical cancer. This is why it is very important that women continue to have cervical cancer screening even after they have been vaccinated. Most invasive cervical cancer is found in women who have not had regular screening. The age at which to start screening ranges between 20-30 years of age and depends on the burden of the disease in the population and available resources (Moyer, 2012).

1.1 Statement of the problem

Throughout the world cervical cancer is both the fourth most common cause of cancer and the fourth most common cause of death from cancer

in women. Approximately 70% of cervical cancer occur in developing countries. In low-income countries, it is the most common cause of cancer deaths. Research findings have proven that if women have access to just one screening in their lifetime, it could reduce their risk of cervical cancer by one third. Neglect of cervical cancer screening can lead to financial burdens and psychological trauma suffered by most women (and the entire family) when they eventually develop cervical cancer. In Abua central in Abua/Odual Local Government Area of Rivers State, most women are not aware of cervical cancer screening and therefore do not practice it. It is based on this fact that the researcher has been prompted to carry out a study on the awareness and practice of cervical cancer screening among women in Abua central.

1.2 Objectives of the study

The purpose of this study is to determine the awareness and practice of cervical screening among women in Abua central. In specific terms, the researcher intends to study the following objectives:

- To assess the awareness level of women of Abua central on cervical cancer screening.
- To assess the practice of cervical cancer screening among women of Abua central.
- To explore the opinions of women of Abua central on cervical cancer screening.

1.3 Significance of the study

The result of this study will be of immense benefit to women. It will expose the women to the awareness and practice of cervical cancer screening and early detection of cervical cancer. The study will help the public health team to organize or develop programmes that will educate women on cervical cancer and also make available screening services and human papillomavirus vaccination affordable and accessible to women of Abua central.

1.4 Research questions

- Are the women of Abua Central aware of cervical cancer screening?
- Do the women of Abua Central practice cervical cancer screening?
- What are the opinions of women in Abua central on cervical cancer screening?

1.5 Research hypothesis

There will be no significant relationship between the awareness level and practice of cervical cancer screening among women of Abua central.

1.6 Scope of the study

This study focused on women in Abua Central. It will cover awareness and practice of cervical cancer screening.

1.7 Operational definition of terms

- Awareness: To know, to be familiar with the information, facts. It also means having a clear understanding of cervical cancer screening.
- Practice of cervical screening: This is the habitual or repeated carrying out of activities involved in cervical screening such as Pap smear test, vagina and pelvic examination.
- Cervical cancer: Is the malignant growth in the cervix, uncontrolled growth of abnormal cells in the cervix.
- Cervical screening:. Is testing for the presence or absence of cancerous cells in the cervix.
- Opinion: Is a personal view or idea about something.

2. Literature Review

2.1 Anatomy and physiology of the cervix

According to the Canadian Cancer Society (2012), the cervix is the narrow, lowest portion of the main body of the uterus (womb). The cervix connects the main body of the uterus to the vagina. The cervix is a part of the female reproductive system.

According to Wikipedia, the female reproductive system consist of an internal organ (including the vagina, uterus, ovaries and fallopian tubes) and the external genital organ (the parts that make up the vulva). All the internal organs of the reproductive system are located in the pelvis which is the lower part of the abdomen between the hip bone.

Structure: According to Wikipedia, the cervix is generally about 2 cm (inch) long. It is made up mostly of connective tissue and muscle. It is divided into 2 main parts.

The Endocervix: It is the inner part of the cervix lining. The canal leads into the uterus. It is the passageway between the external OS and the uterus cavity. It varies widely in length, it is flattened anterior to posterior, the endocervical canal measures 7.8mm.

The ectocervical canal terminates at the internal OS which is the opening of the cervix inside the uterine cavity, cells that line the endocervical canal are glandular cells that produce mucus. They are called columnar cells because they are tall and shaped like columnar. **Ectocervical canal:** It is the outer and lower rounded tip like part of the cervix protruding into the vagina. It is also a portion of the cervix projecting into the vaginal and it's also called "protrovaginalis' on average, the ectocervix is 3cm long and 2.5cm thick. It has a convex elliptical surface and is divided into anterior and posterior lips and also has an opening called the external OS. The cells that line the ectocervix and vagina are flat and scaly arid are called squamous cells. The columnar cells join the squamous cells in an area of the cervix called the squaneous columnar junction. This is also called the transformation zone. It is in this transformation zone that precancerous changes occur and most cervical cancers start.

Wagner and Kelvin (2007) explained that the epithelium of the cervix varies. The ectocervical OS is composed of non-keratinised stratified squamous epithelium, while the endocervix is composed of simple columnar epithelium, the area- adjacent to the border of the endocervix and ectocervix is known as the transformation zone. The transformation undergoes metaplastic numerous times during puberty. Menstruation and post-menopause. These changes that occur during these periods are said to be normal and physiological. However, metaplastic increases the risk of cancer in the transformation zone which is the most common area for cervical cancer to occur.

Functions of the Cervix: Saunders (said that during menstruation the cervix stretches open slightly to allow the endometrium to be shed, the cervix convulses and the external OS dilates to draw semen in the vagina into the uterus. During childbirth, due to contraction, the cervix dilates up to 10cm in diameter to allow the child to pass through.

According to Lewis (2012), the cervix however allows sperm to enter the uterus also allows menses to be expelled.

The columnar epithelium under normal influences provides elasticity at labour for the cervix to stretch to allow for the passage of festus during the birth processes.

Blood supply to the Cervix: Arterial blood is being supplied to the cervix by the vagina and uterine arteries. Venous drainage is by internal iliac lymph nodes and para-aortic lymph node.

2.2 Cervical cancer

According to Dolinsky and Christopher (2006), cervical cancer is an abnormal uncontrolled growth of cells inside the cervix. Cervical cancer is also defined as a malignant neoplasm of cells of the cervix (Kuma *et al.*, 2007). Cancer of the cervix occurs when cells of the cervix change in a way that leads to abnormal growth and invasion of tissues or organs of the body.

Burke *et al*. (2010) opined that cervical cancer is related to infection of the cervix with human papillomavirus.

According to Wikipedia, cervical cancer is a malignant neoplasm arising from cells originating in the cervix uteri. Stanley (2014) cancer of the cervix is the second most common cancer in women worldwide and is (a leading cause of cancer-related death in women in underdeveloped countries, worldwide approximately 500,000 cases of cervical cancer are diagnosed each year. In the United State, routine screening has decreased

the incidence of cervical cancer. Approximately 12,000 cases are diagnosed and 4000 deaths occur each year.

Invasive cervical cancer is more common in women middle age and older and in women of poor socioeconomic status, who are less likely to receive regular screening and early treatment in the United State, there is also a high rate of incidence among Africa - America, Hispanic and Native American women.

Aetiology to cervical cancer/Risk Factors: According to Walsh and Crumbie (2007) carcinoma of the cervix is a common malignancy of women. The women who smoke have a history of infection with certain strains of Human Papillomavirus (HPV), or had an early sex life with several partners is more apparent to develop the disease.
According to cancer research United Kingdom (2014). The risk factors for cervical cancer are:

- Human Papillomavirus (HPV) infection
- Sexually transmitted infections
- Smoking
- A weakened immune system
- Sexual lifestyle
- The contraceptive pills
- Circumcision
- Pregnancy
- Genetic ethic group and family link chemicals at work
- Social class
- A drug called diethylstilboestrol

2.3 Types of Cervical Cancer
According to health plus 24, there are two main types of cervical cancer squamous cell carcinoma: This is the cancer of the squamous cells of the cervix. The majority of cervical cancer known are squamous cell carcinomas. These conditions originate at the exocervix and the endocervix.

Adenocarcinoma: Although it occurs infrequently, the incidence of adenocarcinoma has increased. The site from adenocarcinoma is the mucus-producing gland cell of the endocervix.

Adenosquamous Carcinoma or mixed Carcinoma: This is a rare type of carcinoma which has characteristics of both squamous cell carcinoma and adenocarcinomas.

Pathology of Cervical Cancer: Cancer of the cervix typically originates from a dysphasia or premalignant lesion previously present at the active squamocolumnar junction.

2.4 Clinical Manifestation of Cervical Cancer
According to Arnold (2007), early cervical cancer rarely produces symptoms, but if symptoms are present, they may go unnoticed such as, watery vaginal discharge noticed after sexual intercourse. However, in advanced stages, signs and symptoms include increase vaginal discharge dark in colour stained and foul smell.

- Irregular bleeding
- Dysuria
- Pains
- Anaemia
- Emaciation
- Oedema of the extremities
- Bleeding after sexual intercourse
- Rectal bleeding.

2.5 Diagnostic Investigation
Brunner and Suddarth's (2010) explained that the following investigations to be carried out to confirm cervical cancer are: careful health history talking which includes information relating to patients, psychological, social lifestyle, past and present medical history, sexual history should be obtained to know the risk factors of cervical cancer the patient or client is exposed to.

Physical examination such as vaginal and pelvic examination should be done with the aim of detecting the abnormal appearance of the cervix, vagina and cervical mucus. Papanicolau test also called pap test or cervical smear, this is done to detect abnormal cell changes indicating the presence of cervical cancer, it is one of the best methods of early detection of cervical cancer and it is based on abnormal findings on the cervical smear that further investigations are carried out such as colposcopy, loop electrocautery excision procedure (LEEP), x-ray, computed tomography ultrasonography.

Treatment of Cervical Cancer: Burke *et al.* (2010), explained that when the tumor is limited to cervical tissues (not invasive), it may be excised by laser, heated or coiled probes, or cauterization elimination removal of the cone-shaped wedge of cervical tissue, may be done of the lesion extends into the endocervical canal.

Radioactive implants of needle, tube or seeds into the uterine cavity (brachytherapy) are used to treat locally invasive tumors. For invasive lesions, hysterectomy or radical hysterectomy (removal of the uterus fallopian tubes, lymph nodes and ovaries) is performed.

A pelvic exoneration (removal of all pelvic contents), including the bowel, vagina, and bladder may be done for locally invasive cancer. A colostomy is created for bowel elimination. Radiation therapy also is used to treat invasive cervical cancer. External radiation beam therapy may be used before surgery to decrease the size of the tumor, chemotherapy may be used when surgery or radiation therapy cannot be used or if cancer has metastasized.

American society of clinical oncology (2012) explained that when making treatment plan decisions, patients are also encouraged to consider clinical trial as an option, a clinical trial is a research study to test a new treatment to evaluate whether it is safe, effective and possibly better than the standard treatment.

In June 2006, the United State of America Food and Drug Administration approved the use of a combination of two chemotherapy drugs (Hycanitrim and Cisplastin) with side effects as neutropenia (decrease in the number of neutrophils).

- Anaemia.
- Thrombocytopenia.

2.6 Nursing Management
Most treatments of cervical cancer in early stages such as loop, electrocautery excision procedures are usually performed in the gynecologist office and take only a few minutes (Brunner and Saddarth, 2010).

However, Famakinwa (2002) and Arnold (2004) talked about the following nursing management of cervical cancer in stages where surgery is considered.

2.6.1 Pre-Operative Nursing Management
According to Famakinwa (2002), pre-operative nursing management includes:

- The patient should be admitted into a surgical ward close to a patient that is recovering from the same condition.
- Observation of patient vital signs (temperature, pulse, respiration and blood pressure) should be done to form baseline data.
- Explain surgical procedure to the patient is simple terms without panic to allay her tears and anxiety.
- Give patient consent form to sign to permit the surgeon for the surgery.
- Encourage bed rest to promote physical and mental rest and reduce fatigue.
- Physical care which includes oral toilet, bathing should be carried outs to maintain personal hygiene.
- Give a balanced diet especially a diet high in protein and vitamins for tissue repair and boosting immune systems increase fluid intake to prevent dehydration.

- A night to the operation patient should be placed on mil per oral.
- The patient should be shaved from the abdomen to the pubic region including the vulva and the thighs.
- Dentures and jewelries should be removed and kept safe.
- Administer prescribed pre-operative drugs.

2.6.2 Post-Operative Nursing Management

- Patient is received from the recovery room into a post-operative bed and put in a recovery position.
- Vital signs (temperature, pulse, respiration and blood pressure) should be observed half-hourly until the patient is stable and monitor intravenous infusion.
- Observed the operation site for signs of complication such as bleeding, abdominal distension, severe pain, wheezing and other breathing difficulties.
- Note the amount and characteristics of drainage in Situ.
- Strict intake and output should be maintained to prevent cardiac overload.
- Nutrition: Intravenous fluid is administered for the first 24 hours on return of bowels sound, oral fluid is given then profess to regular nutritious diet as tolerated.
- Administer prescribed analgesics to relieve pain and help relax the patient.
- Physical care such as oral toilet bed bath, and serving of bedpan and treatment of pressure some and improve personal hygiene.
- Exercise: Encourage deep breathing and coughing exercise. Advice patient to avoid led exercise and other body movement that could dislodge radioactive sources off the place.
- Adequate wound care should be carried out under aseptic technique to prevent infection of operation site.
- Psychotherapy: Listen to patient's fears and concerns and offer reassurance when appropriate.
- Divesional therapy in for o interesting novels relaxing moves can be also be provided.
- In the case of combined surgery and radiotherapy, check to see whether the radioactive source is to be inserted in the operating room (preloaded) or at bedside (after leaded if source is pre-loaded, the patient returns to her room, hot and safety precaution such as soon as radioactive source is in place and also inform patient that she will require to private room.

2.6.3 Advice on Discharge

On discharge, patients and significant others should be made to understand any medication and side effects.

- Reassure the patient that cervical cancer treatment should not alter her lifestyle or prohibit sexual intimacy.
- Tell patients all post-procedure complications are should report to the hospital if any is noticed.
- Ensure that patient understands the need for pap smears.
- Explain the importance of complying with follow up visits to the gynecologists and oncologists, stress the value of these visits in detecting disease progression or reoccurrence.

2.6.4 Prognosis

Most early detected cancer is cured. If cancer was removed, then it cannot come back. If it reoccurs, that means that the cancer cell had already spread before the time of removal and it took a couple of years to grow larger enough to be detected. If cervical cancer is likely to reoccur, about 85% will reoccur within the first 2 years after treatment, if there has been o reoccurrence by five years then the cancer is unlikely to reoccur and is considered cured.

The 5 years survival rate steadily drops as cancer spreads to other areas (Watson, 2007).

2.7 Prevention of Cervical Cancer

National Institute of Cancer (2010) explained that the prevention of cervical cancer is the action taken to lower the risk of getting cervical cancer and also to detect and treat early abnormal cervical cancer changes that should result to cervical cancer. These actions are as follows: the use of a condom by sexually active women as this will protect against the contractions of' Human papillomavirus and genital warts, Human immunodeficiency virus (HIV) and Chlamydia which are associated with greater risk of developing cervical cancer. Condoms may also be useful in treating potentially precancerous changes in the cervix as exposure to prostaliglandin in semen may fuel the growth of cervical cancer.

Education of young girls on early sex, protected sex to prevent contraction of Human papillomavirus prevent early and too many pregnancies. Women with too many sexual partners should be advised to limit their number of sexual partners.

Women who smoke should be advised to quit smoking, women who do not smoke should avoid being second-hand smokers. The intake of food rich in vegetables and fruits which are rich in vitamin A, C, E, folic acid and carotenoids has been shown to be associated with decreased risk of various types of cancers (Egbuna *et al*., 2019; Egbuna and Tupas, 2020; Olatunde *et al*., 2020; Egbuna and Hassan, 2021).

Currently, human papillomavirus (HPV) vaccines Gardasil and Cervarix are used to prevent human papillomavirus types that cause cervical cancer, the vaccine is being used for girls and women of age 9 - 26 years because the vaccine has been shown to be effective of given before infection occurs (National Institute of Cancer, 2010).

The secondary prevention is about creating more awareness of the Human papillomavirus and its link to cervical cancer. Pap smear is also another secondary prevention method. It is the commonest and most effective test done to detect Human papillomavirus infection and early precancerous changes, it is typically recommended starting 3 years or more after first intercourse. Recommendation on how often a pap smear should be done varies from one year to every 5 years in absence of abnormal results well-screened women can stop screening about age 60 - 70.

2.8 Complications of Cervical Cancer

Early treatment of cervical cancer rarely brings about complications. However, Uddin (2006) stated that complications that may result are some cancers that did not respond to treatment, infertility may also result, surgery and radiation can cause problems with sexual, bowel and bladder function. Others includes:

- Immunosuppression
- Neutrophils (it is a decrease in the number of neutrophils)
- Liver and kidney damage
- Thrombocytopenia
- Menstrual abnormalities in about 30% of women over to years.
- Rarely secondary cancer such as leukemia (Egbuna *et al*., 2021).

2.9 Awareness level and means of creating awareness on cervical cancer screening

In a study carried out by Ayinde (2004) at the University of Ibadan on awareness of cervical cancer, Pap smear and its utilization. 421 undergraduates, finding revealed that 7-0% were aware of cervical cancer while only 33.5% were aware of Pap smear. Awareness was found to be more among medical students and married ones, on the other hand, only 8.3% of them had ever done Pap smear test so awareness was very low.

Hogue (2010), carried out a descriptive cross-sectional study in Mangositu University of Technology to assess the awareness about cervical cancer and preventive behaviour among first-year female students. The result of the study showed that 25.32%, 26% know about HPV and 31% had heard about Pap smear test and among them, only 33% know that Pap smear is used for detection of cervical cancer.

Also, in a study carried out to determine the level of awareness and uptake of cervical screening in Owerri, South-Eastern part of Nigeria. The level of awareness and uptake of cervical screening was 52.8% while 7.1% had ever done the test. The major sources of information about cervical smears were hospital/health facilities (31.3%) given for not doing the test were lack of awareness (46.1%). The most common reason given for not doing the test were lack of awareness (46.1%) no need for it 12.5% and fear of a bad result 11.6%.

The level of awareness of cervical screening is low and worse still, a national cervical smear screening policy is advocated but in the interim,

greater public education and the greater use of opportunistic screening by physicians should be vigorously pursued (Ezem, 2007).

2.10 Practices of cervical cancer screening

According to the 2010 European guideline the age at which to start screening ranges between 20 - 30 years of age but preferentially not before age 25 or 30 years and depends on the burden of the disease in the population and the available resources (Arbyn and Anftila, 2010)

In United State, it is recommended that screening begins at age 21, regardless of the age at which a woman began having sex or other risk factors (CDC, 2014).

Also a practice Bulletin number 131 (Nov 2012). The Pap test should be done every, three years between the ages of 21 and 65 in women over the age of 65. Screening may be discontinued if there were no abnormal screening results within the previous 10 years. HPV vaccination status does not change the screening rate. Screening can occur every 5 years between ages 30-65 when a combination of cervical cytology screening and HPV testing is used and this is preferred. However, it is accepted to screen this age group with a Pap smear alone every 3 years.

Liquid-based cytology is another potential screening method. Although it was probably intended to improve on the accuracy of the Pap test. Its main advantage has been to reduce the number of inadequate smears from around 90% to around 1% this reduces the need to recall women for a further smear test (Karjae & Cheimow, 2013).

2.11 Theoretical Framework

The theoretical framework for this study is the Health Belief Model. The health belief model is a psychological health behaviour change model, developed to explain and predict health-related behaviours, particularly in regard to the uptake of health services. The health belief model was developed in the 1950s by social psychologists at the United States of America Public Health Service and remains one of the most well, known and widely used theories in health behaviour research. The Health Belief Model was searched. The Health Belief Model was developed by Social psychologist Irwin M. Rosenstock, Godfrey M. Hochbaum, S. Stephen Kegeles and Howard Leven. It is used to explain why individual would or would not use preventive and screening measures for early detection of cancer.

2.12 Core Assumptions of the Health Belief Model

The health belief model is based on the understanding that a person is likely to take a health related' action of the person:

- Feels that a negative health condition can be avoided.
- Has a positive expectation that by taking a recommended action, he or she will avoid a negative health condition.
- Believes that he or she can successfully take a recommended health action.

The health belief model is spelt out in terms of perceived, susceptibility, perceived severity, perceived benefits and perceived barriers. These concepts of readiness to act and readiness can stimulate overt behaviour.

- ✓ **Perceived susceptibility:** An individual's assessment of the risk of getting the disease or condition.
- ✓ **Perceived Severity:** An individual's assessment of the seriousness of the condition and potential sequences.
- ✓ **Perceived benefit:** An individual's assessment of positive consequences of adopting the behaviour.
- ✓ **Perceived Barrier:** An individual's assessment of the influence that facilitates or discourages the adoption of the promoted behaviour (Rozier & Erbs, 2008).

2.13 Application of the Theory to the Study

A woman who has the perception that she may be at risk of contracting Human papillomavirus or has a family history of cervical cancer will like to comply with the prevention measures against cervical cancer and also participate in cervical cancer screening programs.

Secondly, a woman who knows the danger of cervical cancer which could lead to death will like to practice cancer screening programmes.

However, knowing the benefit associated with complying with cervical cancer preventive measures will motivate the women to always practice preventive measures of cervical cancer.

Finally, the perception of barriers that hinder the women from preventing the risk factors which may include low income and lack of awareness, and their effective removal enables the woman to practice the preventive measures of cervical cancer and participate in cervical cancer screening programs.

2.14 Summary of Literature Review

The review of related literature showed that lack of awareness is the major factor that has affected the acceptance and practice of cervical cancer.

Literature also revealed that nearly all cases of cervical cancer are associated with Human papillomavirus (HPV) infection, which is transmitted during sexual activity. Therefore, cervical cancer is seen more frequently in women with sexual activity at an early age and with multiple partners.

Based on the related literature reviewed screening through regular examination and cytologic test (Papanicolaou (PAP) smear) with the treatment of precancerous abnormalities decreases the incidence and mortality of cervical cancer. Screening is not beneficial in detecting invasive cancer in women younger than 25 years because of the low prevalence of invasive disease and the harm out weight the benefits. Screening is not beneficial women older than 60 years.

Methodology

3.1 Research design

This research is a descriptive survey study in which the researcher will collect data from women in Abua central of Abua/Odual Local Government Area to assess their awareness level and practice of cervical cancer screening.

3.2 Setting

This study was carried out in Abua central of Abua/Odual Local Government Area, Rivers State. Abua central is the headquarter of the Abua/Odual Local Government Area. It is composed of Eleven Communities which are Okana, Oghora, Ogbema, Emilaghan, Omelema, Odaga, Omokuwa, Otari, Omaraka, Omelem and Arukwo. For the purpose of this research, the researcher will study these selected communities - Omelema, Odaga and Omukuwa. These communities were selected using a simple random technique.

3.3 Target population

The target population of this study includes women of childbearing age (30 - 60 years) irrespective of their educational background and occupation. The target population consisted of two hundred (200) women.

3.4 Sample and sampling technique

A sample of 50 (fifty) women was selected from two hundred (200) women in Omelema, Odaga and Omokuwa communities of Abua central in Abua/Odual Local Government Area of Rivers State for the study. The purposeful sampling technique was used for this study where the researcher picks women as respondents from the three selected communities. The sample size is determined by using the Yaro Yamen formula.

3.5 Instrument for data collection

The instrument for data collection is a well-structured questionnaire developed by the researcher. It is consisting of two (2) sections: A and B. Section A is designed to elicit personal data from respondents while section B is designed to provide adequate information related to the study which include:

- Are the women of Abua central aware of cervical cancer screening?
- Do the women of Abua central practice cervical cancer screening?
- What is the opinion of women in Abua central on cervical cancer screening?

The questionnaire is a design of four Likert scale of agreed, strongly agreed, disagreed and strongly disagreed was used.

3.6 Validity/reliability of the instrument

The questionnaire was developed and submitted to the researcher's supervisor who read and make all necessary corrections relating to face and context validity. The correction was implemented as necessary.

The reliability of the instrument was determined using the test-retest method. Five (5) questionnaire was administered first to other women who are not the respondents for the study but have the same characteristics as the respondents. They were retrieved a few minutes after completion. This helped to determine the reliability of the questionnaire.

3.7 Method of data collection

The questionnaires were administered to the respondents by direct delivery method (face to face) and collected from them after filling at the same time.

3.8 Method of data analysis

The data were analyzed using percentages, tables, pie charts and bar charts while the hypothesis was tested using the chi-square statistical tool.

3.9 Ethical consideration

The researcher obtained an introduction letter from the school authority to the caretaker committee Chairman of Abua/Odual Local Government Area who assisted the researcher to gain access to the area to be studied. Also, informed consent was obtained from respondents before the administration of the questionnaire.

Results

A total number of 50 questionnaires were administered and 50 were retrieved respectively. The results obtained were presented below:

4.1 Section A: Demographical data of respondents

4.1.1 Age distribution of respondents

From Table 1, the age distribution of respondents are in (3) classes. The table shows that 25 (50%) respondents are between the age of 30 - 40 years, 20 (40%) are between the age of 40 - 50 years and 5 (10%) are between the age of 50 - 60 years (Fig. 1).

Table 1: Age of respondents

Age (Years)	Frequency	Percentage (%)
30-40	25	50%
40-50	20	40%
50-60	5	10%
Total	**50**	**100%**

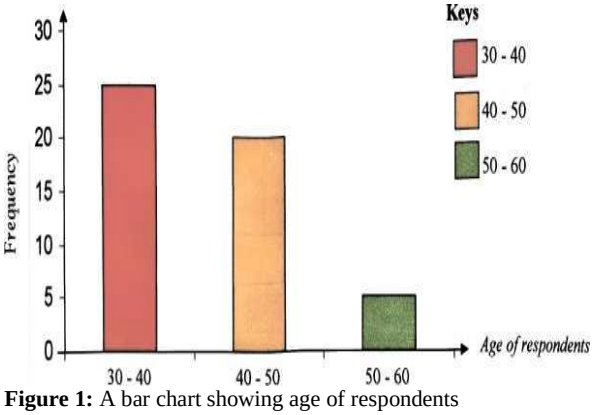

Figure 1: A bar chart showing age of respondents

4.1.2 Marital Status of respondents

Table 2 shows that 14 (28%) are single, 30 (60%) women are married and 6 (12%) are widows while non-divorced.

Table 2: Marital status of respondents

Marital Status	Frequency	Percentage (%)
Single	14	28%
Married	30	60%
Divorced	-	-
Widow	6	12%
Total	**50**	**100%**

4.1.3 Level of education of respondents

Table 3 shows that respondents who have just primary education are 2 (4%) secondary 18 (36%), tertiary level of education are 30 (60%) (Fig. 2).

Table 3: Level of education

Level of education	Frequency	Percentage (%)
Primary	2	4%
Secondary	18	36%
Tertiary	30	60%
Total	**50**	**100%**

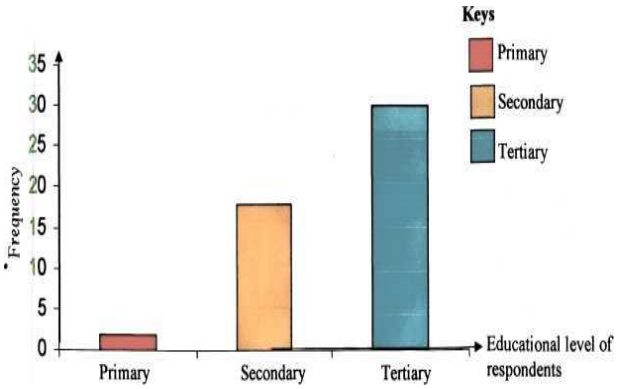

Figure 2: A bar chart showing level of education.

4.1.4 Occupation status of respondents

Table 4 shows that 5 (10%) of the respondents are self-employed, 20 (40%) are housewives, 10 (20%) are civil servants and 15 (30%) are students.

Table 4: Occupation status

Occupation	Frequency	Percentage (%)
Self-employed	5	10%
Housewives	20	40%
Civil servant	10	20%
Student	15	30%
Total	**50**	**100%**

4.2 Section B: Research Questions

The results obtained were presented in Tables 5-7.

4.2.1 Research Question 1: Are the women of Abua Central aware of cervical cancer screening?

Table 5 shows that 30 (60%) respondents strongly agreed that they have heard about cervical cancer before, 10 (20%) agreed, 5 (10%) strongly disagreed while 5 (10%) disagreed.

30 (60%) of the respondents strongly agreed that they have heard about pap smear test, 10 (20%) agreed, 5 (10%) strongly disagreed and 5 (10%) disagreed.

20 (40) strongly agreed that they heard about cervical cancer screening through hospital/health facility, radio/television, newspaper, 45 (50%) agreed, 5 (10%) strongly disagreed while non disagreed.

20 (40%) of the women strongly agreed that cervical cancer screening can detect cervical cancer, 25 (50%) agreed, 5 (10%) strongly disagreed while 5 (10%) disagreed.

30 (60%) of the respondents strongly agreed that cervical cancer screening is done between 30 - 60 years, 20 (40%) agreed, non strongly disagreed or disagreed.30 (60%) strongly agreed that cervical cancer screening is done every 3 years, 20 (40%) agreed, non strongly disagreed or disagreed.

4.2.2 Research question 2: Do the women of Abua central practice cervical cancer screening?

Table 6 indicates that'2 (4%) of the respondents strongly agreed that they have done pap smear test before, 11 (22%) agreed, 23 (46%) strongly disagreed while 14'(28%) disagreed.

30 (60%) strongly disagreed that they have not done cervical cancer screening more than once, 20 (40%) disagreed while non strongly agreed or agreed.

20 (40%) of the respondents agreed that every woman of child bearing age should undergo cervical cancer screening, 10 (20%) respondents strongly disagreed, 20 (40%) disagreed while non strongly agreed.

5 (10%) of the respondents strongly agreed that cervical cancer screening was done with thorough vaginal examination, 30 (60%) agreed, 10 (20%) strongly disagreed and 5 (10%) disagreed.

Also 30 (60%) strongly disagreed that routine medical check up is done during the screening,-20 (40%) disagreed, non strongly agreed or agreed.

4.2.3 Research Question 3: What are the opinion of women in Abua Central on cervical cancer screening?

Table 7 indicates that 30 (60%) of the respondent strongly agreed that cervical cancer test is neglected because of fear, 20 (40%) agreed, non strongly agreed or disagreed.

Non of the respondent strongly agreed or agreed that cervical cancer screening is against their religious belief 40 (80%) strongly disagreed while 10 (20%) disagreed.

40 (80%) of the respondents strongly disagreed that cervical cancer screening is against their culture, 10 (20%) disagreed while non strongly agreed or disagreed.

40 (80%) of the respondent also strongly disagreed that cervical cancer screening does not have any health benefit, 10 (20%) disagreed non strongly agreed or agreed.

Also 10 (20%) of the women strongly agreed that cervical cancer screening is not available in a close by hospital, 40 agreed, non strongly disagreed or disagreed.

15 (20%) strongly agreed that cervical cancer screening is a painful procedure, 30 (60%) agreed, 5 (10%) disagreed non strongly disagreed.

4.3 Hypothesis

There will be no significant relationship between awareness of cervical cancer screening and practice of cervical cancer screening.

Hypothesis Testing: The hypothesis was tested using the chi-square tool as presented in equations and Table 8.

$$X^2 = \frac{\Sigma(o-\Sigma f)^2}{\Sigma f}$$

Where,

of = Observed frequency

Σf = Expected frequency

Σ = Summation

Table 8: Relationship between awareness of cervical cancer screening and practice of cervical cancer screening.

	Awareness	**Practice**	**Total**
Strongly agreed	30 a	2b	32
Agreed	10 c	11 d	21
Strongly disagreed	5 e	23 f	28
Disagreed	53	14 h	19
Total	**50**	**50**	**100**

Computing the expected frequencies

$$\Sigma f = \frac{\text{Row total x Column total}}{\text{Grand total}}$$

Cell a $\frac{32 \times 50}{100} = 16$

Cell b $\frac{32 \times 50}{100} = 16$

Cell c $\frac{21 \times 50}{100} = 10.5$

Cell d $\frac{21 \times 50}{100} = 10.5$

Cell e $\frac{28 \times 50}{100} = 14$

Cell f $\frac{28 \times 50}{100} = 14$

Cell g $\frac{19 \times 50}{100} = 9.5$

Cell h $\frac{19 \times 50}{100} = 9.5$

Table 5: Research Question 1: Are the women of Abua Central aware of cervical cancer screening?

S/N		SA		A		SD		D	
		F	%	**F**	%	**F**	%	**F**	%
1.	Have you heard of cervical cancer before?	30	6%	10	20%	5	10%	5	10%
2.	Have you heard of pap smear test before	30	60%	10	20%	5	10%	5	10%
3.	If yes how did you hear about it? In hospital/health facility, radio/television and newspaper	20	40%	25	50%	5	10%		
4.	Cervical cancer screening could detect cervical lesion or cancer	20	40%	20	40%	5	10%	5	10%
5.	Cervical cancer screening is done between 30 to 65 years	30	60%	20	40%	-	-	-	-
6.	Cervical screening test is done every 3 years	30	60%	20	40%	-	-	-	-

Table 6: **Research question 2:** Do the women of Abua central practice cervical cancer screening?

S/N		SA		A		SD		D	
		F	%	**F**	%	**F**	%	**F**	%
1.	Have you done pap smear test (cervical screening text before).	2	4%	11	22%	23	46%	14	28%.
2.	If yes have you done more than once.	-	-		-	30	60%	20	40%
3	Every woman of child bearing age should undergo cervical cancer screening.		-	20	40%	10	10%	20	40%
4.	Cervical cancer screening was done with thorough vaginal examination.	5	10%	30	60%	10	20%	5	10%
5.	Routine medical checkup is done during the screening.	-	-	-	-	30	60%	20 -	40%

Table 7: **Research Question 3:** What are the opinion of women in Abua Central on cervical cancer screening?

S/N		SA		A		SD		D	
		F	%	**F**	%	**F**	%	**F**	%
1.	Cervical cancer screening test is neglected because of fear	30	60%	20	40%	-	-	-	-
2.	Cervical cancer screening is against my religious belief.	-	-	-	-	40	80%	10	20%
3.	Cervical cancer screening is against my culture	-	-	-	-	40	80%	10	20%
4.	Cervical cancer screening does not have any health benefit	-	-	-	-	40	80%	10	20%
5.	Cervical cancer screening is not available in a close by hospital	10	20%	40	80%	-	-	-	-
6.	Cervical cancer screening is a painful procedure	15	30%	30	60%	-	-	5	10%

$$\text{Chi-square } X^2 = \sum \frac{(o - \Sigma)^2}{\Sigma}$$

Cell a $\frac{(30 - 16)^2}{16} = 12.3$

Cell b $\frac{(20 - 16)^2}{16} = 12.3$

Cell c $\frac{(10 - 10.5)^2}{10.5} = 0.02$

Cell d $\frac{(11 - 10.5)^2}{10.5} = 0.02$

Cell e $\frac{(5 - 14)^2}{14} = 5.8$

Cell f $\frac{(23 - 14)^2}{14} = 5.8$

Cell g $\frac{(5 - 9.5)}{9.5} = 2.1$

Cell h $\frac{(14 - 9.5)^2}{9.5} = 2.1$

Therefore X^2 cal = cell
= 12.3 +12.3 + 0.02 +0.02 + 5.8+ 5.8 + 2.1 + 2.1
= X^2 cal = 40.44.
Degree of freedom df = (c - 1) + (r - 1)
Df = Degree of freedom
C = Number of column
R = Number of rows.
∴ df = (c – l) (r – 1)
4 – 1 (3 – 1)
(3) (2) = 6

Checking for the critical value of chi-square in the table at 6 degree of freedom at 0.05 level of significant, the value is 12.592.
Since the X^2 cal = 40.44 is greater than the critical value, the null hypothesis is rejected.

This means that there is a relationship between the awareness of cervical cancer screening and practice of cervical cancer screening

Discussion

The study target population was 200 and the sampling method adopted was purposeful Sampling technique. Fifty (50) out of the 200 population size was selected and 50 was analysed. The respondent were women of Abua Central in Abua Local Government Area of Rivers State, Nigeria.
The demographic data showed that the age group 30 - 40 year had the highest number of respondents while respondents between 50 - 60 years had the lowest number.

As regards to marital status the highest number of respondents were married and the lowest were widows.
As regards to educational background, most of the respondents has tertiary education which enables them to read and write, this shows that almost all the respondents are educated which makes information gotten from the respondents reliable.

In the case of occupation, the highest number of respondents are housewives. Furthermore, in the case of religion, all the respondents are Christian.

Research question 1: **Are the women of Abua central aware of cervical cancer screening?**

The result in Table 5 shows that;
30 (60%) respondents are strongly agreed that they have heard about cervical cancer before, 10 (20%) agreed, 5 (10%) strongly disagreed while 5 (10%) disagreed.

30 (60%) of the respondents strongly agreed that they have heard about the Pap smear test, 10 (20% j agreed, 5 (10%) strongly disagreed and 5 (10%) disagreed.

20 (40) strongly agreed that they heard about cervical cancer screening through hospital/health facility, radio/television, newspaper, 45 (5 0%) agreed, 5 (10%) strongly disagreed while non disagreed.

20 (40%) of the women strongly agreed that cervical cancer screening can detect cervical cancer, 25 (50%) agreed, 5 (10%) strongly disagreed while 5 (10%) disagreed.

30 (60%) of the respondents strongly agreed that cervical cancer screening is done between 30-60 years, 20 (40%) agreed, non strongly disagreed or disagreed.

30 (60%) strongly agreed that cervical cancer screening is done every 3 years, 20 (40%) agreed, non strongly disagreed or disagreed.

Research question 2: **Do the women of Abua central practice cervical cancer screening?**

Table 6 results indicate that;
2 (4%) of the respondents strongly agreed that they have done pap smear test before, 11 (22%) agreed, 23 (46%) strongly disagreed while 14 (28%) disagreed.

30 (60%) strongly disagreed that they have not done cervical cancer screening more than once, 20 (40%) disagreed while non strongly agreed or agreed.

20 (40%) of the respondents agreed that every woman of child bearing age should undergo cervical cancer screening, 10 (20%) respondents strongly disagreed, 20 (40%) disagreed while non strongly agreed.

5 (10%) of the respondents strongly agreed that cervical cancer screening was done with thorough vaginal examination, 30 (60%) agreed, 10 (20%) strongly disagreed and 5 (10%) disagreed.

Also 30 (60%) strongly disagreed that routine medical check up is done during the screening, 20 (40%) disagreed, non strongly agreed or agreed.

Research question 3: **What are the opinions of women in Abua central on cervical cancer screening?**

The result in Table 7 shows that; 30 (60%) of the respondent strongly agreed that cervical cancer test is neglected because of fear, 20 (40%) agreed, non strongly agreed or disagreed.

Non of the respondent strongly agreed or agreed that cervical cancer screening is against their religious belief 40 (80%) strongly disagreed while 10 (20%) disagreed.

40 (80%) of the respondents strongly disagreed that cervical cancer screening is against their culture, 10 (20%) disagreed while non strongly agreed or disagreed.

40 (80%) of the respondent also strongly disagreed that cervical cancer screening does not have any health benefit, 10 (20%) disagreed non strongly agreed or agreed.

Also 10 (20%) of the women strongly agreed that cervical cancer screening is not available in a close by hospital, 40 agreed, non strongly disagreed or disagreed.

15 (20%) strongly agreed that cervical cancer screening is a painful procedure, 30 (60%) agreed, 5 (10%) disagreed non strongly disagreed.
This result revealed why they do not practice Pap smear, test which is in line with the health belief model theory from (Rosenstock, 1966) which states that perceived barriers could prevent an individual from practicing cervical cancer screening.

Hypothesis
The null hypothesis was rejected. The hypothesis now states that there is a significant relationship between the awareness and practices of cervical cancer screening.

6. Conclusion

This study was designed to know the awareness and practice of cervical cancer screening in Abua central. It was found that the majority of the women were aware of cervical cancer screening. Nevertheless, most of them do not participate in cervical cancer screening programmes which may influence the number of cervical cancer cases in the nearest future.

7. Recommendations

This study will be incomplete without recommending ways to increase the practice level of cervical cancer screening among the women of Abua central. Hence the following are the researcher's recommendations.

- Health education on the importance of cervical cancer screening.

Government should provide cervical cancer unit in hospital close to them.

References

Ayinde, W. (2004). *A research study on awareness of cervical cancer, pap smear and its utilization.* University of Ibadan, Ibadan PP.104- 109. Retrieved on March 16th 2015. From www.cervicalcancerscreening/papsmear/researchstudy

Burke, S., Moun, C. & Eby, J. K. (2010). *National Comprehensive Cancer Network Prevention and Treatment of Cancer Related Infections.* Volume 1. Retrieved on March 15th 2015 from www.nccn.org professional/physician.gls/PDF/Infections.

Canadian soccer society (2013). *Medicare and Medicaid prognosis; hospital conditions and participation: Female sexual function. A clinical guide.* Retrieved March 20th 2015 from http://www.acess.ks/topics/cervicalcancer/en/

Chukwukere, S. C. (2014). *Integrative oncology principles and practice: understanding and managing oncology emergencies in developing countries.* Onitsha. Africa. FEP Publication.

Dohisky, S.I., & Christopher J. (2006). *Nursing implications of surgical treatment core cu.*

Egbuna, C. (2020). Biomarkers for screening of premalignant lesions and therapeutic surveillance. In: Drug Development for Cancer and Diabetes. Saravanan. K., Egbuna, C., Averal, H.I., Soundarapandian, K., Siddhayan, E. and Behadur, B. (Eds). Apple Academic Press/Taylor & Francis. p. 3-17.

Egbuna, C. and Hassan, S. (2021). Dietary Phytochemicals - A Source of Novel Bioactive Compounds for the Treatment of Obesity, Cancer and Diabetes. 1st edn. Springer Nature, Cham, Switzerland.

Egbuna, C. and Tupas, G.D. (Eds.) (2020). Functional Foods and Nutraceuticals - Bioactive Components, Formulations and Innovations. 1st edn. Springer Nature, Cham, Switzerland, 646 pages. ISBN: 978-3-030-42318-6.

Egbuna, C., Kumar, S., Ezzat, S.M., Ifemeje, J.C. and Saravanan, K. (Eds.) (2019). Phytochemicals as Lead Compounds for New Drug Discovery. 1st edn. Elsevier, Cambridge, USA, 378 pages, ISBN: 9780128178911).

Egbuna, C., Patrick-Iwuanyanwu, K.C., Onyeike, E.N., Khan, J. & Alshehri, B. (2021) FMS-like tyrosine kinase-3 (FLT3) inhibitors with better binding affinity and ADMET properties than sorafenib and gilteritinib against acute myeloid leukemia: in silico studies, Journal of Biomolecular Structure and Dynamics, DOI: 10.1080/07391102.2021.1969286

Ezem, B. U. (2007). *Contemporary Health Matter.* Owerri Nigeria: Cel Bez printing and publishing company.

Hogue, S. (2010). *A research only on awareness of cervical cancer and practice behaviour for first year female students. University of Mangositu.* PP. 113 - 117. Retrieved on March 16 2015 from www.cervicalcancerprevention (research study).

Karjae, N. & Cheirmon, D. (2013). *Knowledge and practice about cervical cancer and pap smear testing among patients at Kenyatta National Hospital.* Nairobi, International Journal on Gynaecological Cancer, 136, 827, 833.

Kayo^ R, Akande, P & Osagbemin, E. A., (2008). *Putting evidence into practice: prevention of infection.* Clinical journal of Oncology Nursing: 10(6), 739-750.

Kozier, A. & Erbs, S. (2008). *Pharmacologic principle of cancer prevention.*

Kuma, E.A., Adam, S.K., Adler, R & Storth, C. (2007). *National Comprehensive Cancer Network (NCCN). Clinical practice guidelines in Oncology, Cervical Cancer, Volume 2.* Retrieved on March 16th 2015 from www.neee.org/professional/physiciangls.

Kumas, E (2007). *Epidemiology of cancer in the United States. Seminars on Oncology Nursing, 21 (4), 236 - 242.*

Lewis, D, Kiang, T.D., & Kennedy, B.T., (2012). *A Gyton and Hull textbook of medical physiology.* New York: WB Saunders Company.

Moyer, P.S., (2012). *A clinical guide to the causes, diagnosis and treatment of cancer.* New York. Plenum Publishing Copany.

Olatunde A., Tijjani H., Ishola A.A., Egbuna C., Hassan S., Akram M. (2020). Carotenoids as Functional Bioactive Compounds. In: Egbuna C., Dable Tupas G. (eds) Functional Foods and Nutraceuticals. Springer, Cham. https://doi.org/10.1007/978-3-030-42319-3_20

Saunder, K. (2010). *Anatomy and physiology applied to obstetric and Gynecological Nursing.* London: ELBS Publishers.

Stanley, A. (2014). *Clinical application of pathophysiology of cervical cancer: an evidence based approach.* (3rd Ed), Mosby, St Louis

Tatum, W.O., Husan, A.M., & Sweredloff, R.S. (2008). *Female sexual function and its disorder; physiology, pathophysiology, clinical investigation and treatment.* United State of America; Demos Medical Publishing.

Uddin, S. (2006). *Medical oncology, surgical and radiation therapy in Advanced cervical cancer:* London. Church Hill Livingstone.

Wagner, A. & Kelvin, (2007). *Anatomy and physiology of gynecology.* London Bochua Faber and Faber Press.

Walsh, H.N. & Crumbie, K. (2007). Pathophysiology concepts of altered Health states. (8th ed). Philadelphia: Lippincott, Williams and Wilkins.

• *Thank you for publishing with us.*