

Evaluation of the Influence of Supportive Education on the Religious Beliefs and Practices of Cervical Cancer Patients in Managing the Disease at Tertiary Health Institutions in Ebonyi State, Nigeria

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Abstract

This study investigated how 60 cervical cancer patients in a tertiary care facility in Ebonyi State, Nigeria. How to use Cervical Cancer Support Education (CCSE) to manage their care. Using a quasi-experimental design, 60 participants were divided into an intervention group from two health institutions and a control group from the National Obstetric Fistula Centre. The research used a quasi-experimental design and collected data over a 13-month period using a questionnaire developed by the researchers. The focus was to assess whether CCSE could improve the self-management practices of patients in the intervention group. The results revealed significant improvements in self-care management in the intervention group compared to the control group. This improvement is due to the CCSE program, which provides students with the knowledge and skills needed to manage their symptoms. The study concluded that CCSE is effective in enhancing health care management in patients with cervical cancer. It also recommends integrating CCSE into routine oncology care to improve patient outcomes. The study also highlights the need for capacity-building initiatives aimed at physicians and nurses. To ensure that CCSE is delivered effectively. This will help improve long-term patient care. The study concluded that CCSE effectively enhanced healthcare management among cervical cancer patients and recommended its integration into oncology care. Additionally, building the capacity of physicians and nurses to deliver CCSE was emphasized.

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Received Date: December 20, 2024

Accepted Date: December 23, 2025

Published Date: January 27, 2025

Citation: Augusta N. Emeh, Ejovi Akpojaro, Christiana I. Elusoji, Ngozi R. Osunde, Eweka Abieyuwa, Roseline U. Agogo, Mary Munge, Emina Anwuli, Mary A. Iniomor, Emmanuela C. Anyanwu, Clementina N. Eze, Eugene O. Ohams. Evaluation of the Influence of Supportive Education on the Religious Beliefs and Practices of Cervical Cancer Patients in Managing the Disease at Tertiary Health Institutions in Ebonyi State, Nigeria. International Journal of Tropical Medicines. 2025; 2(1): 24–40p.

Keywords: Cancer, self-care management, Cervical Cancer, Oncology, capacity-building

INTRODUCTION

A malignant tumor that originates from the cervix, the opening from the vagina into the uterus, is known as cervical cancer. This is a cancerous growth of the cervix uteri, typically composed of squamous cells [1]. Cells in the cervix or lower part of the uterus are often the starting point for cervical cancer. It is the most common type of penile cancer worldwide. and is the second most common cancer

in women. Secondly, breast cancer, Squamous cell carcinoma, which accounts for 90% of cases and adenocarcinoma are the two main types [2]. Radiation, chemotherapy, and surgery are possible forms of treatment. In the US, 68% of cases survive, but results rely on early identification and treatment [3].

CONCEPT OF SUPPORTIVE EDUCATION FOR CERVICAL CANCER

A planned strategy to improve the quality of life for cancer patients and their families, especially following treatment, is supportive education. It covers the difficulties that every woman faces, such as the cancer's stage, the removal of organs and tissues, and the kind of treatment. It also deals with long-term adverse effects [4].

By raising awareness of cervical cancer screening and removing obstacles, a successful educational intervention can lower the incidence and mortality rates of illness. Patients receive financial, physical, mental, spiritual, practical, and emotional support through therapy and classes [4]. Supportive education tackles concern like anxiety, depression, body image, relationship management, and returning to work in addition to assisting patients in creating individualized care plans for their quality of life after treatment. Clinical nurses, social workers, registered dietitians, health librarians, occupational therapists, medical assistants, and genetic counselors are among the professions who offer services [5]. These programs deal with a range of issues, including depression, anxiety about a second malignancy, lymphedema, sexuality issues, infertility, self-esteem, and body image disruption [5].

Due to physical changes brought on by cancer treatments, such as scars, hair loss, weight fluctuations, sexual dysfunction, and ostomy, individuals with cervical cancer may feel disturbances with their sense of self-worth and body image. These modifications may be brief, extended, or irreversible [6]. Many women with cancer are nonetheless able to have fulfilling sexual lives and healthy relationships despite these obstacles. Sex might be uncomfortable or challenging, though, if side effects include vaginal dryness, narrowing, and menopause brought on by the medication. Some women could also feel less interested in having sex, which could disappoint their partners. It could be essential to receive supportive education and therapy in order to manage these emotions and the impact of cancer treatments on sexuality [6].

After receiving cancer treatment, fertility problems might occur, particularly in women who have had hysterectomy. Those who still want children may be able to maintain their fertility with early cervical cancer treatments. Swelling caused by lymph fluid buildup is called lymphedema. It can be treated in a number of ways, including by exercising, using compression stockings, elevating the leg, getting frequent physiotherapy, or consulting a doctor [7].

Urine and feces can exit an internal cavity by an ostomy, which joins it to an abdominal orifice. Individuals who have had both their bladder and rectum removed have two ostomies. Pelvic exenteration patients may also have had their rectum removed. Although many women with cervical cancer worry about a recurrence, health care practitioners educate care for these ostomies [8].

Patients with cervical cancer should develop coping mechanisms and seek out mental health specialists, such as social workers, counselors, or members of their healthcare team in order to maintain a good quality of life following diagnosis [9]. Although they are rare, second malignancies can develop following radiation therapy and chemotherapy, depending on the kind and quantity of treatment. A healthy lifestyle, regular screenings, and early reporting can reduce the chance of developing recurrent malignancies. However, some women may suffer from physical symptoms of anxiety and sadness in addition to not receiving enough support from close family members. It is advised to refer women seeking support to mental health specialists [10].

CERVICAL CANCER PREDISPOSING FACTORS

The Human Papilloma Virus (HPV), a microbe that can induce latent infections in a variety of species and tissues, is the main cause of cervical cancer. It is spread from person to person by vaginal touch

and, if left untreated, can eventually lead to cervical cancer. Detections of more than 90 different HPV types [11]. Both active and passive smoking increase the risk of cervical cancer. Current and former smokers have a two to three times higher likelihood of developing invasive cancer compared to passive smokers. Additionally, long-term use of oral contraceptives and heavy smoking are associated with a heightened risk of cervical cancer. Oral contraceptive users for five to nine years are three times more likely to get invasive cancer, whereas users for ten years or more are four times more likely. According to a research, women who used birth control pills for more than five years had a twofold increased risk of cervical cancer; however, the risk returned to normal ten years after the pills were stopped [12].

Cervical cancer predominantly affects women, with several risk factors contributing to its development. Many full-term pregnancies, multiple sexual partners, HIV-related immunosuppression, chlamydia infection, insufficient fruit and vegetable intake, obesity, a family history of cervical cancer, and metabolic disorders (DM) are a few of these [13].

Pregnant women who have had numerous pregnancies are more likely to acquire cervical cancer because of immune system weakness, hormonal changes during pregnancy, and unprotected coitus. HIV also impairs immunity, which raises the possibility of contracting HPV. Studies indicate that women who have had or are currently experiencing chlamydia infections are more susceptible to pelvic inflammation and infertility as a result of the illness [14].

The risk of cervical cancer can also be raised by consuming insufficient amounts of fruits and vegetables. Adenocarcinoma of the cervix is more common in overweight women, and it can result in higher mortality rates from hypertension, coronary artery disease, and diabetes mellitus [15]. Poverty is another risk factor since many low-income women do not have access to quality healthcare, which makes it difficult for them to receive cervical precancerous screenings and treatment. Having a mother or sister with a history of cervical cancer increases the risk of developing the disease in some families. Additionally, metabolic disorders, like diabetes, can increase the risk of cervical cancer [15].

CERVICAL CANCER STAGES

Cervical cancer is classified according to its size, invasion depth, and dissemination. The International Federation of Gynecology and Obstetrics (FIGO) stages cervical cancer based on clinical evaluations, including palpation, inspection, colposcopy, endocervical curettage, hysteroscopy, cystoscopy, proctoscopy, intravenous urography, X-rays of the lungs and skeleton, and cervical conization. This aids the cancer care team in suggesting possible courses of action [16].

Their identified stages of cervical cancer are:

- *Stage 1A*: Cancer is confined to the cervix.
- *Stage IB1*: Diameter of cancer < 4 cm.
- *Stage B2*: Diameter of cancer > 4 cm.
- *Stage IIA*: Cancer beyond cervix extending to the upper one third (1/3) of the vagina.
- *Stage IIB*: Cancer beyond the cervix extending to the parametrium.
- *Stage IIIA*: Cancer beyond the cervix extending to the distal portion of the vagina.
- *Stage IIIB*: Cancer beyond the cervix extending to the pelvic side wall.
- *Stage IVA/IVB*: Cancer metastasis has spread to bladder/rectum and can involve distant organs (in stage IVB) [16].

DIAGNOSIS OF CERVICAL CANCER

Parry (2017) outlined tests for the diagnosis of cervical cancer, such as tissue histology, computed tomography scan (CTScan), intravenous pyelogram (IVP), and chest X-ray radiation (CXR). Additional investigations consist of cervical and vaginal examination tests, Speculum vaginal and rectal examination tests, position emission tomography (PET) scans, X-ray or bone scans, cone biopsy, endo-

cervical curettage or biopsy, colposcopy/cervical biopsy, loop electrical excision procedure (LEEP), LLETZ, HIV sero-test, and fasting blood sugar (FBS) [17].

Dada (2017) introduced visual inspection with acetic acid (VIA) as a screening test for identifying acetowhite areas that need further follow-up. VIA is an alternative to pap smear but more accurate with immediate results (VIA-positive, VIA-negative, and suspicious of cancer). VIA uses a specialized light and low power magnification, like optical scope, while VILI is painted the cervix with lugol's iodine solution and examined after VIA. VILI results are reported as VILI – positive, VILI – negative, and suspicious for cancer [18].

Papanicolaou test (pap test or pap smear) is a secondary prevention method used to detect diseases of the uterine cervix and endometrium of cervical cancer. It is usually done 3–5 years' interval to check the cervix for abnormal changes under a microscope that if not found and treated can cause cervical cancer. Other specific investigations for cervical cancer include HPV tests, positron emission tomography (PET), X-ray or bone scans, speculum vaginal and rectal examination tests, cystoscopy, proctoscopy, loop electrical excision procedure (LEEP), cone biopsy, endo-cervical curettage or biopsy, colposcopy/cervical biopsy, HIV sero-test, and FBS [19].

Palliative Care for Cervical Cancer Patients in a Late Stage

Women with late-stage cervical cancer can get palliative care, which aims to enhance their quality of life and relieve symptoms. It should begin early in treatment and evolve over time. This includes pain management and psychotherapy. Medicine can be expensive Especially in places with little capital. Because it is comprehensive, palliative care can be started sooner in the course of a disease. Supportive care minimizes the side effects of treatment and enables patients and their families to live as fully as possible by assisting them in coping with diagnosis, treatment, continued illness, death, and grief [20].

CERVICAL CANCER PREVENTION

Many developed nations have comprehensive screening programs in place to help prevent and treat cervical cancer. Both primary and secondary preventative measures are necessary, such as male circumcision, condom use, and the 1.m HPV immunization [21]. These vaccines safeguard girls and young women from HPV types that are responsible for most cervical cancer cases. To lower the risk of cervical cancer, avoid contact with HPV, be monogamous, and avoid vaginal, oral, or anal sex. Quit smoking, avoid prolonged use of oral contraceptives, avoid grand multiparity, and use condoms correctly and every time during vaginal, anal, or oral sex. Condom use protects against HPV infection, HIV, STIs, genital warts, Chlamydia, and treats potential pre-cancerous changes in the cervix. Using spermicidal gel during sexual intercourse may also lower the risk of cervical cancer. Overall, a combination of prevention, quitting smoking, avoiding prolonged use of oral contraceptives, and using condoms can help prevent cervical cancer [22].

The risk of cervical cancer is significantly reduced by adhering to safe sex, consuming adequate vitamins and minerals, and avoiding the marriage of a cancerous patient's daughter into another family. Detecting and treating infections early can enhance women's immunity and prevent further infections. Additionally, it is important to discourage the marriage of a daughter of a cervical cancerous patient into another family with a cancerous mother or sister, as this increases the chances of developing the disease [22].

Secondary prevention measures involve screening, which detects undiagnosed diseases in individuals who show no signs or symptoms. Tests, like the Pap smear or Papanicolaou test, are used to identify high-grade cervical disease. HPV, a key factor in cervical cancer, is the most significant risk factor. Liquid-based cytology involves sampling the ectocervix and endocervical canal simultaneously. Visual inspection of the cervix with acetic acid (VIA) is another method for identifying areas that need further follow-up [22].

STANDARD OF CARE FOR CERVICAL CANCER PATIENTS

Standard of care (SOC) refers to the best treatments available for cervical cancer patients, which is achieved through collaboration between various health professionals and a multidisciplinary team. The care plan may involve treatment for symptoms, side effects, and other essential aspects of cancer care. Cervical cancer is often treatable, with radiation alone or surgery followed by radiation or radiation and chemotherapy given together (concurrent chemo-radiation). The treatment is determined by the cancer's type, stage, potential side effects, the patient's preferences, and their overall health [23].

Procedures for cervical cancer that have not spread beyond the cervix include conization, LEEP, hysterectomy, bilateral salpingo-oophorectomy, radical trachelectomy, exenteration, cryotherapy, radiation therapy, and radiation therapy. Radiation therapy (RT) can be administered alone, before surgery, or as an alternative to surgery to reduce the tumor size. Weekly low-dose chemotherapy and radiation are often used in the early stages of cervical cancer. Chemotherapy is the use of drugs to stop cancer cells from growing, dividing, and reproducing. Radiotherapy is used as the main treatment if the cancer is large or has spread after surgery usually with chemotherapy (chemoradiotherapy) [24].

Recurrent or metastatic disease can be treated with platinum-based chemotherapy combined with targeted therapy-bevacizumab (Avastin). In case of advanced cancer that is incurable, treatment only limits the cancer and its symptoms and helps the patient live longer. The palliative care team manages patients' symptoms, makes them feel more comfortable, and provides support groups [24].

In more advanced cases, the standard treatment involves combining radiation with chemotherapy. For patients with widespread disease, chemotherapy or radiation helps alleviate symptoms. Recurrent cervical cancer or cancer that has spread to other parts of the body during or after treatment Treat with immune checkpoint inhibitors. pembrolizumab (Keytruda) [25].

RELIGIOUS PRACTICES

Religious practices entail one's religious belief and his/her behavior. Religious beliefs deal with one's perception of the presence of God in one's life or perceiving a personal relationship with God whereas one's behavior deals with church service attendance, involvement in other church activities [26].

One's belief can be centered on culture or misconceptions, like cervical cancer, is caused by gods or offence committed to the gods. In this regard, treatment is geared towards pleasing the gods or making sacrifices to appease the gods. So, are such questions asked?

- What gives you solace in your disease?
- Does your belief in God help you cope with the disease?
- Does your attendance at church activities help you cope with your illness?

APPLICATION OF DOROTHEA OREM'S THEORY TO THIS STUDY

Nurses provide human service to patients based on their condition. They perform total nursing care, partially compensatory, or support the patient in self-care. Supportive education is provided when the patient lacks knowledge about self-care management, such as understanding new drug information. This education helps the patient learn from the information and can be filled by another healthcare provider. Nurses share functions with other healthcare providers to improve the quality of nursing [27].

Emeh, A. N. Conceptual model for study, R, relationship; <, deficit relationship, current or projected. Adopted from nursing theorists and their work [28].

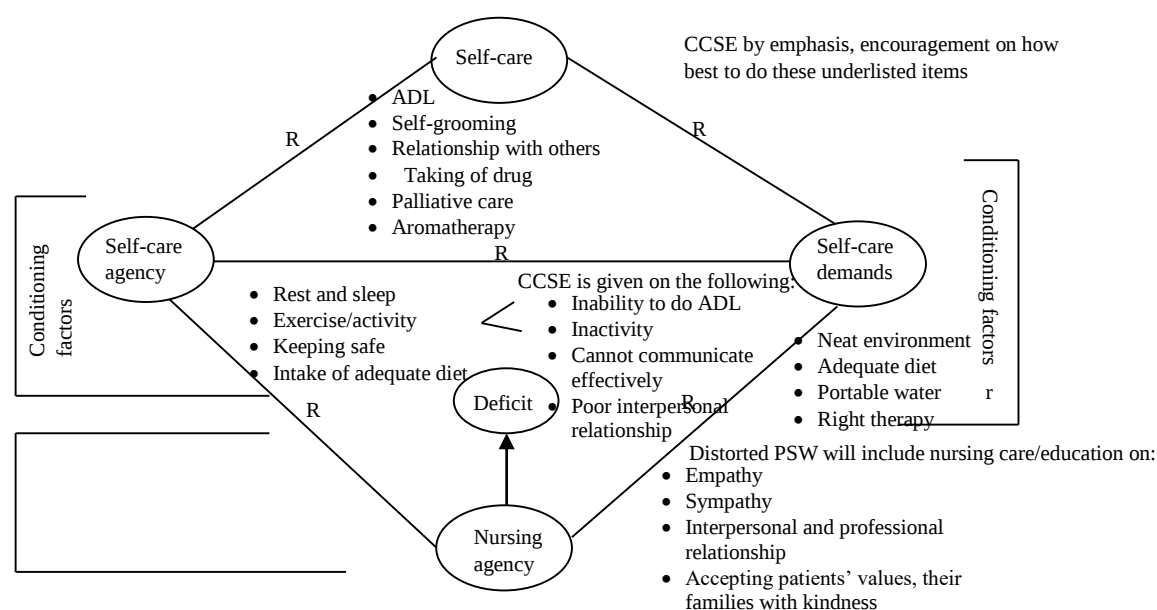


Figure X. xxxxx xxxxx xxxxx.

Explanation of the Model

In a self-care state, cervical cancer patients can perform daily activities, self-grooming, and palliative care. They need conducive factors like rest, sleep, exercise, safety, and an adequate diet. Nursing care should be empathic, professional, and accept patients' values and families. If self-care deficits occur, nurses should assist patients in performing daily activities and provide compensatory care, such as bed baths. They should also assist patients in coping with their condition, such as providing oral care tools and providing education on managing their condition [29].

METHODOLOGY

Design

This study used a quasi-experimental design to assess how supportive education for cervical cancer affects the mental health of patients in tertiary care facilities in Ebonyi State. Pre-existing cohorts were compared using an unmatched cohort design. and the intervention began using a time series approach, collecting data over 13 months, in addition to 30 NOFIC cervical cancer patients who served as a control group. The study included 30 cervical cancer patients hospitalized for at least seven days. and is receiving treatment at AE-futha [30].

Area of Study

The study was carried out at the National Obstetric Fistula Centre (NOFIC), Abakaliki, and the Alex Ekwueme Federal University Teaching Hospital, Abakaliki (AE-FUTHA). The tertiary institution AE-FUTHA was founded on October 1, 1996, and is situated in Abakaliki, the capital of Ebonyi State. Originally established as a medical facility by the British colonial government in the 1930s, it became a general hospital providing secondary health care services in 1999. AE-Bhutha is the main hospital for treating cervical cancer patients in the state and serves as a referral center among other facilities. Approximately 20–25 cervical cancer patients are treated each year. NOFIC was established in 2008 by the then Governor of the State, Martins Nwanchor Elechi. It aims to reduce illness and death of mothers and children. There are various procedures, such as cryotherapy cancer screening. Prolapse repair and obstetric fistula repair. Anal-vaginal repair Obstetrics and gynecology family planning cancer screening Child/Newborn Care and cutting muscle tissue. They are all other services. Added since NOFIC's inception, both clinics are essential to Abakaliki's healthcare system.

Population of the Study

Compared to the national rate in the same year. The prevalence of cervical cancer in Ebonyi State in 2021 was recorded at 513. Out of 60 patients who participated, 30 were from AE-Phutha and 30 from NOFIC.

Table 1. Population of study.

Months	Year	AE-FUTHA	NOFIC
October	2018	–	2
November	2018	5	3
December	2018	1	3
January	2019	4	–
February	2019	–	1
March	2019	1	2
April	2019	1	2
May	2019	2	5
June	2019	3	2
July	2019	5	–
August	2019	2	3
September	2019	1	4
October	2019	5	3
Total		30	30
Grand total		60	

Note: AE-FUTHA = 30 cases, NOFIC = 30 cases, Total = 60 patients.

Source: Record Office/Cervical Cancer unit for both facilities, 2019.

Sample

The sample from 513 subjects of cervical cancer in Ebonyi State in 2021 (prevalence, according to premium times Nigeria, 2021) was calculated using Power Point (PA) analysis:

$$PA = \frac{Z^2 \times P(1 - P)}{e^2} \div \frac{1 + (Z^2 \times P)(1 - P)}{e^2 N}$$

where

- N = Population size = 513.
- e = Margin of error = 0.05.
- P = Standard of deviation = (0.5).
- Σ = Z Score = (1.96) [31].

Sixty clinically diagnosed cervical cancer patients from two medical facilities, AE-Futha and Nofic, participated in the study. Patients were recruited weekly from the women's/gynecology/oncology unit. Due to the small number of participants. The study, therefore, included a total of 60 cervical cancer patients. A quasi-experimental method was used to ensure a comprehensive study, with AE-FUTHA patients serving as the intervention group and NOFIC patients as the control group, no sampling was used.

Sampling Technique

This study used purposive sampling to select patients with cervical cancer. Although random sampling is used to facilitate the data collection process, but purposive sampling is also used to achieve stated objectives.

Instruments for Data Collection

The Brazilian Quality of Life – Cervical Cancer Instrument (BQOL – CC), created by Purnama Sari in 2021 and Wolf in 2022, served as the model for the questionnaire used in this study. The purpose of this questionnaire was to collect information on the participants' risk-benefit profiles (RBP), self-care management techniques, and demographic and treatment profiles. The BQOL-CC instrument for self-care management practices was part of the questionnaire, which was written in plain English and divided into sections A, B, D, and C [32].

Additionally, psychosocial well-being (PSW) was assessed using a 29-item questionnaire with a mean score of 2.5 at decision points ranging from good to poor in terms of RBP, quality of life (QOL) and self-care management (SCM).

Development of Cervical Cancer Supportive Education (CCSE) Package

The researcher developed the CCSE package based on the research results. Questionnaire information and a detailed evaluation of the literature. It is designed to help cervical cancer patients build a support system. Manage your own care Improve quality of life build trust and collect information about postoperative care Interactive group approach. Psycho-educational programs and longer sessions are available [33].

Validity of the Instrument

With precision cross-sections. Measurement experts and oncologists conduct tests, such as word search to determine appropriateness, clarity, and relevance, and more using an updated 4-point Likert scale. This has been researched using modern equipment.

Reliability of the Instrument

Reliability was tested through a test-retest method with 20 cervical cancer patients, where the instrument was administered twice, with a separate interval between administrations. The Spearman correlation coefficient of 0.94 indicated strong reliability, confirming the instrument's consistency for data collection [34].

Data Collection Procedure

The researcher received ethics approval from the Research Ethics Committee of AE-Phutha and Nofik Hospital, in addition to Ebonyi State University. CCSE and pre-test questionnaires were provided to the participants to improve the post-diagnosis quality of life (PSW) before giving a written agreement. Participants in the intervention and control groups were given an explanation of the three phases of the study. The questionnaire collected clinical socio-demographic information, and the BQOL-CC section provided additional information.

Step 1: Pre-intervention

- *Intervention Group:* The researchers visited each of 30 cervical cancer patients from AE-Futha, explained the research process, and administered questionnaires before screening. The purpose of the initial test is to assess risk-benefit analysis, quality of life, and self-management techniques. A local interpreter was used for participants who were illiterate, and contact details were gathered for follow-up.
- *Control Group:* Thirty patients from NOFIC were also visited, with the researcher explaining the study procedure and administering the pre-test questionnaire. The pre-test focused on assessing

self-care management, quality of life, and patients' ability to handle the challenges of cervical cancer.

Step 2: Intervention Phase

- *Intervention Group:* The 30 patients at AE-FUTHA received the CCSE intervention, which was delivered in a well-ventilated gynecological ward two weeks after the pre-test. The intervention covered self-care management, quality of life, and risk-benefit profile. Participants received snacks and were tested after the intervention.
- *Control Group:* The control group did not receive the CCSE intervention but continued with their standard cervical cancer care during the intervention period.

Step 3: Post-intervention Evaluation

- *Intervention Group:* After 30 minutes, a post-test questionnaire was interpreted and collected from 30 AE-FUTHA patients.
- *Control Group:* To assess changes in risk-benefit profile, quality of life, and self-care management. The same pre-experiment questionnaire was given to a NOFIC control group, who were contacted after the experiment and received educational resources to assist. taking care of them

Ethical Considerations

Ethical approval was obtained from the research ethics committees of AE-Phutha, Nofik and Ebonyi State University. Participant confidentiality was ensured by avoiding the collection of personal identifying information on questionnaires. Only the researchers and statisticians had access to the data. Following the data collection, the control group received CCSE training.

Data Analysis

IBM SPSS software was used to code and analyze the data. Responses regarding self-care management techniques, quality of life, and religious beliefs were examined using demographic data. The intervention and control groups were compared using Student's t test. and assessed changes in self-care management, quality of life, and religious attitudes five months later using a post-t

RESULTS

The results of the study involving 60 female cervical cancer patients in NOFIC and AE-FUTHA are presented and interpreted in this section. The study achieved a 100% response rate and used both descriptive and inferential statistics to examine the data. According to the goals of the study Data are presented in tables that include frequencies, percentages, means, and standard deviations.

Demographic and Treatment Profile of CCPs

Table 2. Socio-demographic and treatment profile of the cervical cancer patients.

Personal Characteristics	Intervention Group (n = 30)	Control Group (n = 30)	Total (N = 60)	Chi Square	P-Value
<i>Age (yrs)</i>					
25–34	7 (23.3)	5 (16.7)	12 (20.0)	0.765	0.682
35–54	13 (43.3)	12 (40.0)	25 (41.7)		
>54	10 (33.3)	13 (43.3)	23 (38.3)		
Mean age	45.57 (SD = 9.48)	47.83 (SD = 10.91)	46.25 (SD = 9.93)		
<i>Marital Status</i>					
Single	2 (6.7)	0 (0.0)	2 (3.3)	12.798	0.012
Married	16 (53.3)	10 (33.3)	26 (43.3)		
Widow	7 (23.3)	9 (30.0)	16 (26.7)		
Separated	4 (13.3)	1 (3.3)	5 (8.3)		
Divorced	1 (3.3)	10 (33.3)	11 (18.3)		

<i>Occupation</i>					
Trader	9 (31.0)	14 (46.7)	23 (39.0)	2.785	0.248
Business	10 (34.5)	11 (36.7)	21 (35.6)		
Retiree	10 (34.5)	5 (16.7)	15 (25.4)		
<i>Highest Educational Level</i>					
No Formal education	10 (33.3)	9 (30.0)	19 (31.7)	0.144	0.986
Primary education	5 (16.7)	6 (20.0)	11 (18.3)		
Secondary education	7 (23.3)	7 (23.3)	14 (23.3)		
Tertiary education	8 (26.7)	8 (26.7)	16 (26.7)		
<i>Parity</i>					
None	H	7 (23.3)	18 (30.0)	1.333	0.514
1–4	11 (36.7)	13 (43.3)	23 (38.3)		
Above 4	9 (30.0)	10 (33.3)	19 (31.7)		
<i>Professional Inclinations</i>					
Medical	8 (26.7)	12 (40.0)	20 (33.3)	1.200	0.273
Non-medical	22 (73.3)	18 (60.0)	40 (66.7)		
<i>Religion</i>					
Christianity	12 (40.0)	17 (56.7)	29 (48.3)	2.291	0.514
Islam	3 (10.0)	3 (10.0)	6 (10.0)		
Traditional religion	12 (40.0)	9 (30.0)	21 (35.0)		
Arteists	3 (10.0)	1 (3.3)	4 (6.7)		
<i>Previously received Cancer treatment</i>					
Yes	18 (60.0)	16 (53.3)	34 (56.7)	0.271	0.602
No	12 (40.0)	14 (46.7)	26 (43.3)		
<i>Previously received Cancer treatment</i>					
Surgery	10 (55.6)	6 (37.5)	16 (47.1)	1.163	0.559
Adjunct treatment	6 (33.3)	7 (43.8)	13 (38.2)		
Co-morbidities	2 (11.1)	3 (18.8)	5 (14.7)		

This study examined the medical history and sociodemographic characteristics of cervical cancer patients. Most of the 25 people in the intervention group (59.5%) and 8 people (44.4%) in the control group were between 35 and 54 years old, most were merchants, married, had no formal education, had 1–4 children, and had a preference for Non-medical occupation: 22 patients (52.4%) and 11 patients (61.1%) had received treatment before. And most of them are Christians. The control and intervention groups did not differ significantly in sociodemographic characteristics. This indicates that the intervention group was not affected by any confounding effects.

Table 3. Religious beliefs/practices (RBP) of patients between intervention and control groups prior to intervention at AE-FUTHA and NOFIC.

Responses to RBP	Group (n = 30/30)	Poor (%)	Fair (%)	Mod (%)	Good (%)	Mean ± Std. Dev	T	P- Value
Responses to RBP Religious Belief (e.g., Presence of God or								

Personal Relationship with God).								
Believing in God will help me cope with the illness.	Intervention	8 (26.7)	13 (43.3)	8 (26.7)	1 (3.3)	2.07 ± 0.83	– 2.846	0.006
	Control	3 (10.0)	10 (33.3)	9 (30.0)	8 (26.7)	2.73 ± 0.98		
A close relationship with God will lessen my disease burden.	Intervention	9 (30.0)	13 (43.3)	7 (23.3)	1 (3.3)	2.00 ± 0.83	– 1.779	0.081
	Control	4 (13.3)	12 (40.0)	13 (43.3)	1 (3.3)	2.37 ± 0.77		
Assurance of God's presence will help in quick recovery.	Intervention	4 (13.3)	21 (70.0)	4 (13.3)	1 (3.3)	2.07 ± 0.64	– 1.144	0.257
	Control	6 (20.0)	12 (40.0)	9 (30.0)	3 (10.0)	2.30 ± 0.92		
Meditation will help me cope with the disease.	Intervention	10 (33.3)	8 (26.7)	12 (40.0)	0 (0.0)	2.07 ± 0.87	– 1.086	0.282
	Control	4 (13.3)	15 (50.0)	9 (30.0)	2 (6.7)	2.30 ± 0.79		
<i>Mean R.B.</i>	<i>Intervention</i>					2.05 ± 0.51	– 2.382	0.021
	<i>Control</i>					2.43 ± 0.70		
<i>Behavioural attendance in spiritual/church services.</i>								
Attending spiritual/church activities will help me cope with the illness.	Intervention	9 (30.0)	18 (60.0)	3 (10.0)	0 (0.0)	1.80 ± 0.61	– 1.680	0.098
	Control	7 (23.3)	15 (50.0)	5 (16.7)	3 (10.0)	2.13 ± 0.90		
Participating in church/spiritual activities gives me relief.	Intervention	7 (23.3)	18 (60.0)	2 (6.7)	3 (10.0)	2.03 ± 0.85	– 1.800	0.077
	Control	4 (13.3)	15 (50.0)	4 (13.3)	7 (23.3)	2.47 ± 1.01		
Listening to spiritual talks uplifts my soul and gives me relief	Intervention	10 (33.3)	15 (50.0)	4 (13.3)	1 (3.3)	1.87 ± 0.78	– 1.013	0.315
	Control	10 (33.3)	10 (33.3)	7 (23.3)	3 (10.0)	2.10 ± 1.00		
Singing or listening to religious music relieves my pain.	Intervention	10 (33.3)	12 (40.0)	7 (23.3)	1 (3.3)	1.97 ± 0.85	– 0.898	0.373
	Control	7 (23.3)	13 (43.3)	8 (26.7)	2 (6.7)	2.17 ± 0.87		
Praying or reading my religious books daily makes me happy/gives relief.	Intervention	9 (30.0)	16 (53.3)	5 (16.7)	0 (0.0)	1.87 ± 0.68	– 1.462	0.149
	Control	6 (20.0)	14 (46.7)	10 (33.3)	0 (0.0)	2.13 ± 0.73		
Seeing the priest/pastor/Imams makes me happy and gives me relief.	Intervention	13 (43.3)	9 (30.0)	8 (26.7)	0 (0.0)	1.83 ± 0.83	– 1.690	0.096
	Control	8 (26.7)	8 (26.7)	14 (46.7)	0 (0.0)	2.20 ± 0.85		
<i>Mean of Behavioural Attendance</i>	<i>Intervention</i>					1.89 ± 0.54	– 1.911	0.061
	<i>Control</i>					2.20 ± 0.69		
<i>Mean RBP</i>	<i>Intervention</i>					1.97 ± 0.46	– 2.459	0.017

	Control					2.31 ± 0.60		
Global Mean	Intervention					1.86 ± 0.30	– 0.779	0.439
	Control					1.93 ± 0.37		

Note: Group; Mod = Moderate; Std. Dev = Standard Deviation; * = Statistically significant item.

Religious beliefs and practices (RBP) of cervical cancer patients in the control and intervention groups before receiving the supportive education are shown above in Table 3. The results are presented with weights and frequencies. (percentage) of responses from the intervention and control groups. The table indicates that the weighted average scores of the control and intervention groups in all areas measuring religious beliefs and behavior were less than 2.5, which is the average requirement. Before the administration of supportive education There were no clear differences between the individual domains of the two groups. Overall, the means of the intervention group (1.86 ± 0.30) and control group (1.93 ± 0.37) were not significantly different ($t = -0.779$). , $P = 0.439 > 0.05$) showed that cervical cancer patients in the intervention group had an increased heart rate. As a result of achieving CCSE, we are seeing positive changes.

Table 4. Comparison of the effect of supportive education on the religious beliefs/practices of cervical cancer patients on the disease management between intervention and control groups after the intervention at AE-FUTHA and NOFIC.

Responses to RBP	Group (n = 30/30)	Poor (%)	Fair (%)	Mod (%)	Good (%)	Mean ± Std. Dev	t	P-Value
Responses to RBP Religious Belief (e.g., Presence of God or Personal Relationship with God).								
Believing in God will help me cope with the illness.	Intervention	2 (6.7)	3 (10.0)	19 (63.3)	6 (20.0)	2.97 ± 0.77	0.573	0.569
	Control	3 (10.0)	9 (30.0)	8 (26.7)	10 (33.3)	2.83 ± 1.02		
A close relationship with God will lessen my disease burden.	Intervention	0 (0.0)	7 (23.3)	16 (53.3)	7 (23.3)	3.00 ± 0.70	4.597	0.000
	Control	9 (30.0)	11 (36.7)	9 (30.0)	1 (3.3)	2.07 ± 0.87		
Assurance of God's presence will help in quick recovery.	Intervention	1 (3.3)	6 (20.0)	17 (56.7)	6 (20.0)	2.93 ± 0.74	3.294	0.002
	Control	4 (13.3)	14 (46.7)	11 (36.7)	1 (3.3)	2.30 ± 0.75		
Meditation will help me cope with the disease.	Intervention	0 (0.0)	8 (26.7)	15 (50.0)	7 (23.3)	2.97 ± 0.72	5.792	0.000
	Control	6 (20.0)	19 (63.3)	5 (16.7)	0 (0.0)	1.97 ± 0.62		
Mean R.B.	Intervention					2.97 ± 0.59	4.413	0.000
	Control					2.29 ± 0.59		
Behavioral attendance in spiritual/ church services.								
Attending spiritual/church	Intervention	0 (0.0)	4 (13.3)	13 (43.3)	13 (43.3)	3.30 ± 0.70	7.417	0.000

activities will help me cope with the illness.	Control	9 (30.0)	16 (53.3)	4 (13.3)	1 (3.3)	1.90 ± 0.76		
Participating in church/spiritual activities gives me relief.	Intervention	0 (0.0)	8 (26.7)	12 (40.0)	10 (33.3)	3.07 ± 0.79	3.061	0.003
	Control	1 (3.3)	20 (66.7)	4 (13.3)	5 (16.7)	2.43 ± 0.82		
Listening to spiritual talks uplifts my soul and gives me relief	Intervention	1 (3.3)	4 (13.3)	18 (60.0)	7 (23.3)	3.03 ± 0.72	6.149	0.000
	Control	11 (36.7)	14 (46.7)	4 (13.3)	1 (3.3)	1.83 ± 0.79		
Singing or listening to religious music relieves my pain.	Intervention	1 (3.3)	5 (16.7)	16 (53.3)	8 (26.7)	3.03 ± 0.77	5.220	0.000
	Control	7 (23.3)	15 (50.0)	8 (26.7)	0 (0.0)	2.03 ± 0.72		
Praying or reading my religious books daily makes me happy/gives relief.	Intervention	0 (0.0)	8 (26.7)	18 (60.0)	4 (13.3)	2.87 ± 0.63	4.600	0.000
	Control	5 (16.7)	17 (56.7)	8 (26.7)	0 (0.0)	2.10 ± 0.66		
Seeing the priest/pastor makes me happy and gives me relief.	Intervention	4 (13.3)	14 (46.7)	10 (33.3)	2 (6.7)	2.33 ± 0.80	0.466	0.643
	Control	8 (26.7)	7 (23.3)	15 (50.0)	0 (0.0)	2.23 ± 0.86		
Mean of Behavioral Attendance	Intervention					2.94 ± 0.55	6.634	0.000
	Control					2.09 ± 0.44		
Mean RBP	Intervention					2.95 ± 0.54	5.884	0.000
	Control					2.19 ± 0.46		
Global Mean	Intervention					3.08 ± 0.43	10.512	0.000
	Control					2.08 ± 0.29		

Note: Group; Mod = Moderate; Std. Dev = Standard Deviation; * = Statistically significant item.

Table 4 shows the post-test response result of the intervention and control participants on their religious beliefs/practices (among cervical cancer patients). After cervical cancer supportive education was administered, a significant shift in the weighted mean responses were observed in the intervention group in some of the religious beliefs/practice domains ($P < 0.05$). The domains that were significantly included are:

- “A close relationship with God will lessen my disease burden” ($t = 4.597$, $P = 0.000 < 0.05$),
- “Meditation will help me cope with the disease” ($t = 5.792$, $P = 0.000 < 0.05$),
- “Attending spiritual/church activities will help me cope with the illness” ($t = 7.417$, $P = 0.000 < 0.05$),
- “Listening to spiritual talks uplifts my soul and gives me relief” ($t = 6.149$, $P = 0.000 < 0.05$),
- “Singing or listening to religious music relieves my pain” ($t = 5.220$, $P = 0.000 < 0.05$),
- “Praying or reading my religious books daily makes me happy/gives relief” ($t = 4.600$, $P = 0.000 < 0.05$). This shows that supportive education encouraged the intervention group to have a positive drift in some of their religious beliefs/practices.

Hypothesis 3: There will be no significant difference on the religious beliefs/practices of cervical cancer patients exposed to CCSE and those patients who were not exposed to CCSE.

- *Statistics Test:* t-Test.

- α value = 0.05.

Table 5. Comparison on the religious beliefs/practices of cervical cancer patients exposed to CCSE against those who were not exposed to CCSE.

Group	Mean	Std. Dev.	Mean Diff	T	P-Value
Intervention	2.94	0.62	0.741	4.562	0.000
Control	2.20	0.47			

The result from Table 5 shows the comparison on the religious beliefs/practices of cervical cancer patients exposed to CCSE against those who were not exposed to CCSE ($t = 4.562$; $P = 0.000 < 0.05$) hence, reject the null hypothesis.

CONCLUSIONS

The researchers concluded that respondents' answers regarding the religious beliefs and practices of cervical cancer patients were significantly improved by exposure to CCSE, thus rejecting the null hypothesis.

DISCUSSION

The study found that most participants in both the control and intervention groups were between the ages of 35 and 54 and approaching menopause. This aligns with previous research on the mental health of women who have survived cervical cancer. The respondents' age range, from 21 to 65, also corresponded with other studies on socio-demographic characteristics and attachment style. With an average age of 57.5 years, the cervical cancer patients' age distribution was like that of patients in Kenya. This age range could reflect more informed environments, as no statistically significant difference was found between the two groups before the intervention.

Effect of Cervical Cancer Supportive Education on Religious Beliefs/Practices (RBP) After Intervention

The study showed a notable change in the proportion ranks of the intervention group in certain RBP domains after the intervention, suggesting that cervical cancer supportive education (CCSE) led to a positive shift in these areas. This finding is in line with earlier research by Eileen et al. (2015) and Wasie and Konjit (2016), which examined how spirituality and modesty influenced the acceptance of cervical cancer self-sampling screening in Southwestern Nigeria. The findings also supported a qualitative study by Wasie and Konjit (2016), which found that women with cervical cancer in Ethiopia faced physical, psychological, and financial difficulties, which affected their families. These women adopted coping strategies, including attending religious services and seeking family support. Despite differing research methods and contexts, the study found that participants in six of ten RBP domains used religious practices to cope with the challenges of cervical cancer, showing that many patients, including those with cervical cancer, rely on religious services to manage psychological difficulties.

Hypothesis: There Will Be No Significant Difference in Religious Beliefs/Practices (RBP) Between Cervical Cancer Patients Exposed to CCSE and Those Not Exposed

The study revealed that exposure to cervical cancer supportive education significantly increased cervical cancer patients' knowledge of risk factors. This finding aligns with earlier research suggesting that individuals dealing with physical, psychological, and financial challenges often turn to religious services and family support as coping mechanisms. The authors recommend that cultural and religious beliefs be considered when designing health interventions, such as screening, prevention, and treatment. Research has shown that religious beliefs can serve as a psychological coping tool, and health education can help shape patients' understanding of cervical cancer and screening. This emphasizes how crucial it is to incorporate cultural and religious values into health interventions.

CONCLUSIONS

The aim of this study was to examine the impact of supportive education on the self-care management (SCM) of cervical cancer patients. The outcomes demonstrated a noteworthy distinction in post-intervention self-care management between the intervention and control groups ($P = 0.05$). This study provides valuable insights for oncology health professionals.

Recommendation

This study recommends oncology nurses and physicians to provide wholesome services and integrate Comprehensive Care Support (CCSE) into daily care for cervical cancer patients. Public awareness on the PSW of these patients is also suggested to distinguish them. The model of care should be extended to other healthcare professionals, and an in-depth understanding of women's experiences with cervical cancer is recommended to reduce their burden.

Acknowledgments

The authors appreciate Dr. C.G. Ugochukwu for her supervisory role.

Competing Interests

The authors declare that they do not have any conflicts of interest.

Ethics Approval and Consent to Participate

Ethical clearance for this study was obtained from the Research and Ethics Committee of Ebonyi State University informed consent was obtained and confidentiality ensured (EBSU/DRIC/UREC/Vol./06/011).

Funding

The authors did not receive any external source of funding for this study

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