

Exploring the Barriers to Breast and Cervical Cancer Screening in Nigeria: A Narrative Review

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Abstract

Breast and cervical cancers are the most common causes of female cancer-related mortality in Nigeria. Early detection and treatment significantly decreases cancer mortality rates. Various factors influence uptake of cancer screening. Cancer awareness, availability of screening, and treatment facilities alone have not been completely successful in improving cancer health behaviour. This review aims to identify and summarise the barriers to breast and cervical cancer screening uptake in Nigeria. Various databases such as PubMed, Psych Info, Google Scholar and EMBASE were extensively searched for existing literature on factors influencing breast and cervical cancer screening in Nigeria. Studies retrieved explored the major socioeconomic factors affecting women's knowledge, perception, and attitude. Embarrassment, low perception of cancer risk, and physician gender preference are some of the most common factors that discouraged women from cancer screening. Lack of spouse permission and support; belief that cancer is a death wish, and societal discrimination are the common sociocultural barriers to screening. These factors vary across different regions in Nigeria. Therefore, policy makers should make deliberate effort to develop cancer management strategies that are tailored to the sociocultural and religious needs in a target population. This approach is anticipated to improve uptake and ensure sustainability of cancer management. (*Afr J Reprod Health* 2016; 20[4]: 89-98).

Keywords: Cancer screening, Sociocultural, Socioeconomic, Nigeria

Résumé

Les cancers du sein et du col de l'utérus sont les causes les plus fréquentes de mortalité liée au cancer au Nigeria. Le dépistage précoce et le traitement diminuent considérablement les taux de mortalité par le cancer. Les facteurs divers influencent l'adoption du dépistage du cancer. La sensibilisation au cancer, la disponibilité du dépistage et les établissements de traitement à eux seuls n'ont pas été complètement efficaces pour améliorer les comportements liés à la santé du cancer. Ce compte rendu vise à identifier et à résumer les obstacles au dépistage du cancer du sein et du cancer du col de l'utérus au Nigeria. Les différentes bases de données telles que PubMed, Psych Info, Google Scholar et Embase ont été largement recherchées pour identifier la documentation existante sur les facteurs qui influent sur le dépistage du cancer du sein et du col de l'utérus au Nigeria. Les études réalisées explorent les principaux facteurs socioéconomiques qui influent sur les connaissances, la perception et l'attitude des

femmes. L'embarras, la faible perception du risque de cancer et la préférence de sexe du médecin sont parmi les facteurs les plus courants qui ont découragé les femmes de passer le dépistage du cancer. Le manque de permission et de soutien du conjoint; la conviction que le cancer est un souhait de mort, et la discrimination sociétale sont les obstacles socioculturels communs au dépistage. Ces facteurs varient d'une région à l'autre au Nigeria. Par conséquent, les décideurs devraient faire des efforts délibérés pour élaborer des stratégies de gestion du cancer qui sont adaptés aux besoins socioculturels et religieux dans une population cible. Cette approche devrait améliorer l'adoption et assurer la durabilité de la gestion du cancer. (*Afr J Reprod Health* 2016; 20[4]: 89-98).

Mots-clés: dépistage du cancer, socioculturel, socio-économique, Nigeria

Introduction

Cancer is an under-emphasised issue in Africa, partly due to the overwhelming burden of communicable diseases and lack of basic infrastructure for diagnosis, prevention and treatment¹. The World Health Organisation (WHO) estimates that cancer kills more people than tuberculosis, malaria, and HIV/AIDS (Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome) combined. Over 60% of cancer cases occur in the low and middle income countries, mostly in Africa, Asia, Central and South America. These regions account for approximately 70% of the total cancer deaths. In Nigeria, an estimated 10,000 women develop cancer, and about 8,000 die every year. In addition to limited resources, the disproportionate distribution of burden between developing and developed regions has contributed to poor cancer control in the developing regions, which are burdened by other health issues like malaria and HIV/AIDS. Additionally, the WHO reported that about 30% of cancer deaths can be prevented by adhering to the preventive screening measures, and minimising exposure to the modifiable risk factors. However, despite high cancer morbidity and mortality rates, uptake of preventive options remains consistently poor, particularly in the developing countries⁶. This might be because of the various demographic, socioeconomic, and psychosocial factors, which affects health and healthcare seeking behaviours⁷. Inadequate health services, cost of services, distance to health centres, lack of awareness, sociocultural beliefs, and practices such as use of herbal remedies, are also barriers to screening in the developing countries^{8,9}. This review is timely and relevant, as no literature found synthesised research findings on the barriers influencing breast and cervical cancer screening uptake in all parts of Nigeria.

Aim

The aim of this review was to identify and summarise literature on the barriers to breast and cervical cancer screening uptake in Nigeria. Topics reviewed included: overview of the burden of breast and cervical cancer in Nigeria, screening services available in Nigeria, and factors influencing uptake of these services in Nigeria.

Methods

To achieve the aim of this review, relevant search terms were used to identify peer reviewed articles in databases such as PubMed; EMBASE with Medline; Cochrane Database of Systematic Reviews and Controlled Trials Register; Psych INFO; Web of Science; Google Scholar; and Cumulative Index to Nursing and Allied Health Literature (CINAHL). Additional papers were retrieved by hand searching bibliographies of selected articles for any articles missed by the initial search. Grey literature and other relevant sources of information were also hand searched. These included conference abstracts, WHO reports, national and international websites. Papers on male breast cancers were excluded, and searches were limited to articles published in English language from 2000 to present.

Search terms included but were not limited to a combination of these terms: 'breast', 'cervical', 'cervix', 'cancer screening', 'cancer prevention', 'awareness', 'campaigns', 'behaviour', 'knowledge', 'practice', 'uptake', 'cultural beliefs', 'socioeconomic status', 'access 'barriers', 'Nigeria', 'sub-Saharan Africa'.

Inclusion criteria

Articles were included if they (1) explored women's knowledge of breast and cervical cancer, and screening, (2) explored women's attitude and perception towards screening techniques, (3) described factors influencing uptake of breast and cervical cancer screening in women, (4) employed qualitative, quantitative, or mixed methods, and (5) included participants 18 years and older.

Studies carried out in Nigeria and other African countries that investigated changes in women's cancer knowledge, attitude, perceptions, and screening uptake were also included. These were put in context of other African (Ethiopia and Ghana) and Western countries (United Kingdom (UK) and the United States of America (USA)) that have successfully established national cancer screening programmes.

Outcome measures: Screening uptake was the primary outcome measured in the studies included, although majority also measured changes in cancer knowledge, attitude, and perception.

Exclusion criteria

This review excluded studies that were not published in English Language. Studies on clinical cases of breast/cervical cancer; and male breast cancer were excluded. Those that only reported baseline findings were also excluded. Others that reported changes among African/minority ethnic groups but did not specify findings in Nigerian women were excluded from this review.

Data extraction

Following initial search, titles and abstracts of articles retrieved were reviewed according to the eligibility criteria. Findings from studies worldwide regarding knowledge, attitude and barriers to breast and cervical cancer were described and summarised, with emphasis given to those carried out in Nigeria.

Results

Literature selected consisted of papers that discussed up-to-date epidemiology on breast and cervical cancer: burden, risk factors, and methods of early detection; cancer management in Nigeria; level of cancer knowledge and screening uptake; and barriers influencing cancer screening uptake in Nigeria. A narrative review of these results is presented in the subsequent sections of this article.

Discussion

Burden of breast and cervical cancers

Breast cancer is the most common cancer in women, accounting for 16% of all female cancers¹⁰. It is the most common cause of cancer death in women in developing regions, and the second in developed regions, after lung cancer. Worldwide, 1.67 million new cases were diagnosed in 2012, and about 522,000 died from the disease. In sub-Saharan Africa, it accounts for 1 in 4 diagnosed cancers and 1 in 5 cancer deaths among women. An estimated 102,079 new cancer cases were reported in Nigeria in 2012 (see Figure 1 below). Most recent data reported breast cancer incidence of about 54.3 per 100 000 in Nigeria, which is higher than the expected 38.7 per 100 000 GLOBOCAN estimate⁴. GLOBOCAN is a comprehensive cancer surveillance database managed by the International Association of Cancer Registries (IARC), whose aim is to calculate incidence and cancer mortality worldwide and prevalence from major type of cancers for 184 countries of the world. **Figure 1** below shows cancer cases in Nigeria in 2012.

On the other hand, cervical cancer is the fourth most common cancer in women, accounting for about 7.5% of all female cancer death. Globally, an estimated 528,000 new cases occurred, with 266,000 deaths in 2012. It is the leading cause of cancer death in developing countries, accounting for 12% of all female cancers, third most common in sub-Saharan Africa and the second most common in Nigeria. Developed nations have well established national cancer registries which present annual incidence, prevalence, and mortality rates. While most developing nations lack such registries, as such suffer under-reporting of cancer statistics, thus reports are usually regional estimates of the actual figures⁴. Therefore, up-to-date national cancer statistics from developing countries are necessary for accurate representation of cancer burden in the regions.

Breast cancer risk factors

Like many cancers, the aetiology of breast cancer is unknown; however several factors were highlighted in the literature as its risk factors. These include age, gender, ethnicity, family history, early menarche,

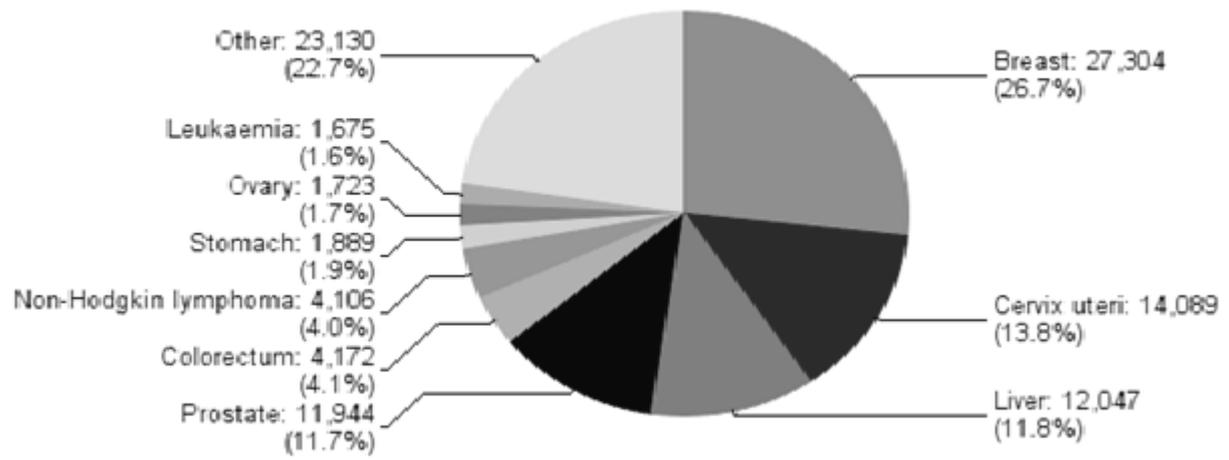
late menopause, nulliparity, older age at first childbirth, use of oral contraceptives, obesity, alcohol and tobacco consumption, lack of physical activity, high body mass index (BMI), and exposure to certain chemicals and radiation,¹⁴⁻¹⁵. Research showed that breast cancer predominantly affect women aged twenty-five and above, with less than 1% cases found in men. About 10 in 100,000 new cases are recorded in women below twenty-five years and this increase up to 100 times by the age of forty-five years¹⁰. Additionally, in a review, Caucasian white women appeared to have a higher risk for breast cancer, followed by African-American women, Hispanic women, with the lowest rates in Asian women. Evidence confirmed that taller height is associated with increased risk of breast cancer especially among postmenopausal women. In Africa, women with higher social class in terms of income, housing and education have increased risk of breast cancer. This may be associated with their diet, low parity, and lack of breastfeeding, as seen in developed countries.

Furthermore, exposure to pesticide agents such as dichlorodiphenyltrichloroethane (DDT) and dichlorodiphenyldichloroethylene (DDE), cadmium and prolonged exposure to traffic emissions at the time of menarche, in premenopausal women significantly increase the risk of breast cancer. In contrast, factors such as breast feeding, high parity, and early age at first child birth were found to reduce the risk of breast cancer.

Cervical cancer risk factors

The aetiology of cervical cancer is unknown; however various modifiable and non-modifiable factors have been attributed to it. The modifiable factors include smoking, obesity, unhealthy diet, and exposure to infectious agents such as human papilloma virus (HPV), *Helicobacter pylori* and Hepatitis virus. Non-modifiable factors are the biological characteristics, which include age, gender, hereditary factors and ethnicity. *Other African Journal of Reproductive Health December 2016; 20 (4): 92*

Figure 1: Estimated Number of Cancer Cases in Nigeria in 2012 (102, 079)¹¹



predisposing factors include multiple sex partners, long use of oral contraceptives and immunosuppressants, high parity and low socioeconomic status. Additionally, all sexually active women are at risk of cervical cancer.

A combination of various biological, behavioural, and sociocultural factors and practices contribute in the development of cervical cancer, with HPV as a necessary cause. These include early commencement of sexual activities, multiple sex partners as seen in polygamous marriages, high parity, poverty, smoking and use of hormonal contraceptives. Alcohol consumption, poor genital hygiene and sexually transmitted infections (STIs), particularly HIV and Chlamydia trachomatis also increase the risk of cervical cancer.

Literature identified provided valuable findings on breast and cervical cancers predisposing factors. Most of the biological, socioeconomic and environmental factors were discussed appropriately. However, only a few studies acknowledged the differences in predisposing factors between developed and developing countries. Therefore, research is needed on specific aetiologies of cancers in developing countries such as Nigeria, which has diverse cultures and practices, which probably influence cancer pathogenesis. The findings could be used to improve the effectiveness of prevention and treatment methods applied in the populations studied.

Cancer prevention and detection

Early cancer detection and prevention are important in improving prognosis and survival rates through timely treatment. Prevention is classified into primary, secondary, and tertiary prevention. Primary prevention involves health promotion and risk reduction campaigns, designed to modify health behaviours such as smoking, diet, exercise, and alcohol consumption. Secondary prevention refers to procedures designed for early detection of disease at asymptomatic stages, to slow or halt disease progression. Pap smears, faecal occult blood testing and mammography are forms of secondary prevention. Tertiary prevention is the treatment of patients with disease symptoms. Examples include chemotherapy, radiotherapy, and mastectomy for breast cancer patients. This review focused on secondary prevention of breast and cervical cancer through screening. These are discussed below.

A. Breast cancer prevention and detection

Breast cancer can be cured completely when detected at early stages 0 and I, with 5% survival rate. The techniques used for breast cancer screening are clinical breast examination (CBE), breast self-examination (BSE), magnetic resonance imaging (MRI) and mammography, all of which differ in sensitivity and specificity. CBE involves physical examination of breast and regional lymphatic areas performed every six months by experienced physicians or nurses, to check for abnormalities in the breast tissue. BSE is an inexpensive technique carried out by women, which involves the examination of their breasts for any abnormalities. Screening with mammography uses low dose X-rays to detect breast cancer before it is palpable and diagnosed clinically.

B. Cervical cancer prevention and detection

Cervical cancer can be prevented with the HPV vaccine, cytological test, and visual inspection with acetic acid (VIA), visual inspection with Lugol's iodine (VILI), cervicography and speculoscopy. The vaccines used for prevention of HPV infection and cervical cancer are produced through combination of genetic material from more than one origin. They are non-infectious as they contain dead and deactivated deoxyribonucleic acid (DNA) products. HPV subtypes 16 and 18 are the main target of these vaccines. Cytological tests involve the Papanicolaou smear test to detect any abnormalities in the cervical tissue, and treat unusual lesions to prevent them in progressing to invasive cancer⁸. Alternatives to Pap smear test are visual inspection with acetic acid (VIA), visual inspection with Lugol's iodine (VILI), cervicography and speculoscopy are used for screening cervical cancer in low resource settings. VIA and VILI involve the inspection of the cervix without magnification, after staining with dilute acetic acid or Lugol's iodine respectively. Abnormal cervical tissue turns white with VIA and yellow with VILI.

These screening services require fewer resources and are easy to carry out within a single hospital visit, making them good alternatives to Pap smear test, especially in rural and other poor resource regions. In addition, HPV DNA testing is a cost-effective primary prevention measure, although it is not feasible in Nigeria presently for economic reasons. Based on the literature, it is evident that cancer detection and prevention are not new concepts, particularly in the developed middle and high income countries. Although these are available in some low income countries, the cost and lack of acceptability has made it nearly impossible to fully implement these programmes into existing healthcare systems.

Cancer screening in Nigeria

In Nigeria and most sub-Saharan African countries such as Uganda, Tanzania and Ghana, national cancer surveillance programme(s) have not been established, and screening is only offered through opportunistic means, or on patients' or health workers' recommendation. Most Non-Governmental Organisations (NGOs) offer periodic screening services free of charge. Notwithstanding, screening programmes are very difficult to develop and manage, and require so many resources to maintain. Thus, low resource countries usually cannot afford to establish these without the help of international organisations. However, in regions where screening services are provided by NGOs and tertiary hospitals, most women are unaware of the availability, or do not get screened due to cost, distance to facilities, gender of health workers, and lack of recommendation.

Effect of cancer knowledge on screening uptake

Despite an increase in the cancer awareness, and availability of screening services in some parts of the country; yet breast and cervical cancers screening are not being accepted and practiced as required. A study in Northern part of the country reported that although women had adequate knowledge of breast cancer and its risk factors, very few screened consistently. Similar pattern was found in nurses from the South-West, who had adequate knowledge of cancer and screening, but neither practiced nor recommended the same to their patients.

Additionally, Azubuike and Okwuokei reported good knowledge of breast cancer symptoms among women in Southern Nigeria. However, very poor uptake of screening was found among the group. Furthermore, similar patterns were reported from studies in other sub-Saharan African countries. For example in Tanzania, women had adequate knowledge but were hindered from practicing preventive methods due to poor perceptions, and beliefs in breast cancer myths like: 'breast cancer is contagious'. Unlike breast cancer, cervical cancer knowledge across Nigeria appeared to be very low; and this is accompanied by poor screening uptake. Surveys of market women in Zaria, Northern Nigeria, and slum dwellers in Lagos both reported very low knowledge and practice of Pap screening, although the services are available. Similarly, poor knowledge, perception and screening uptake were observed in Ogun, South-western Nigeria.

Furthermore, research from Ghana and Congo reported similar patterns of poor knowledge and uptake of cervical cancer screening, where women with cancer were better informed

than those without. These findings suggest the influence of factors other than cancer knowledge. On the other hand, low level of education may be a reason for low uptake, since knowledge and practice appear to be significantly influenced by women's level of education. However, others observed that although knowledge is related to cancer screening, it did not predict uptake. Overall, women have adequate knowledge of breast cancer, its symptoms and preventive methods. This is largely due to the numerous campaigns and awareness organised across the country. However, knowledge and uptake of cervical cancer screening remain low across the country. Based on these findings, it is evident that uptake of screening should not be assessed solely based on the nature and availability of health services, knowledge and practice. Rather, the role of sociodemographic and sociocultural factors should also be explored.

Health Seeking Behaviours

Health-seeking behaviour or illness behaviour is defined as the manner in which individuals monitor their bodies, define and interpret their symptoms, take remedial action, and utilize other sources of help, as well as engage with formal healthcare system. On the other hand, healthcare seeking behaviour involves the decision to utilise a particular medical pathway, from home care to traditional healers to unorthodox hospitals. Several demographic, sociocultural, and economic factors influence health behaviours. In most sub-Saharan Africa, these include the political environment, economic situation, availability and affordability of services, societal norms, cultural beliefs and values. These are summarised in **Table 1**.

Table 1: Factors Influencing Cancer Health and Healthcare Seeking Behaviour found to significantly affect cancer health behaviours.

Personal	Sociocultural	Economic
1. Personal history	1. Social amplification of risk	1. High cost of medical care
2. Age	2. Use of alternative treatment: prayer and herbal remedy	2. High cost of travel fare
3. Education level	3. Social support	3. Access to healthcare
4. Marital status	4. Desire to comply with norms	4. Income status
5. Optimism bias	5. Religious beliefs	5. Obligations at home/work
6. Fear of examination		
7. Denial/anxiety		

Personal factors

Demographic characteristics such as age, level of education, religion, marital status, income, were found to significantly affect cancer health behaviours. Age has been a significant factor in many health-related aspects. Women aged 30-59 were more likely to have knowledge of cancers, and willing to attend screening services, compared to older ones. This may be resulting from the misconception older women have that they are protected by their age. Similarly, a research in Ogun state South-western Nigeria reported that women that are younger and have high level of education had better attitude towards cervical cancer screening. Therefore, age may not have independent influence on cancer screening. Level of education has a significant influence on health awareness such as knowledge of anti-retroviral therapy, chemotherapy, Pap smear test and breast cancer screening⁸. Findings from Lagos and developing regions confirmed that people with high levels of education are more informed on health issues; whereas poor health knowledge was common in those with only primary or no formal education.

Marital statuses of women likely influence their cancer screening behaviours". A systematic review discovered conflicting results on the influence of marriage in delay of breast cancer presentation; in comparison to widowed and divorced women. Furthermore, studies from Congo and Ghana reported significant difference in health behaviours between women with different marital status. Thus the influence of marital status on cancer health behaviours

should not be generalised across the country, due to the heterogeneity of societies, cultures, and economies.

Furthermore, good knowledge of health conditions does not always result in good health practices. High level of awareness in medical students, health workers, and physicians, was associated with poor health behaviours. Thus, this confirms that interplay of other complex factors influences health behaviours. Lack of personal history of cancer and adequate information on the benefits and risks associated with health seeking, were significantly associated with attitude towards health seeking behaviours. A study in Ethiopia reported that women, particularly those in the rural areas have the perception that only literate access the screening services while the uneducated believe that 'what I do not know cannot harm me'.

A review on perspective on how and why women make cancer screening decision categorised decision principles into four groups namely: optimism bias, emotions, framing and prospect theory. Generally, people underestimate their risk of having a condition, and assume others are more likely to be affected. This is called 'optimism bias'. In this context, women do not consider themselves at risk of cancer due to their lack of family history, age, ethnicity, and socioeconomic status. Emotions like the fear of cancer and its detection techniques influence health behaviours. Some women acknowledged the importance of cancer screening, but are hindered by fear and discomfort screening techniques. On the other hand, the fear of cancer motivated others to undergo breast and cervical cancer screenings. This might be a resulting effect of cancer information framing, and perceived benefits of screening. Framing plays a very important role in decision making depending on whether information is directed towards fear or the benefits of a particular action. In this context, it involves how the information about breast and cervical cancer is presented to the target population. Prospect theory assumes that potential losses are weighed more heavily than gains. People are more afraid to incur a loss than they are enthusiastic to obtain an equal gain, and thus generally choose the risk reducing option to avoid any losses. Additionally, negative attitudes such as anxiety, hopelessness, and denial toward cancer significantly decreased the rate of ever having Pap smears among women regardless of educational status.

Sociocultural factors

Every society has certain norms which may not approve some health behaviours and thus individuals comply (voluntarily or involuntarily), to avoid stigmatisation, alienation by peers, family and society. Factors such as fear, stigma and embarrassment, belief that cancer is God's Will, availability of traditional medicine; and permission from spouse and family,

considerably influence the acceptability of cancer screening. Approval and support from family are important to women. Many linked their poor health behaviours to fear of accusations of unfaithfulness and abandonment by partners; with evidence proving that this pattern is not different between Western and African women. Furthermore, it is a common practice in Africa, that people only visit hospitals when they have disease symptoms; regular general screening or healthcare check-ups are very uncommon. Religious beliefs and cultural norms were also found to significantly affect the practice of cancer screening in developing countries. In many cultures and religions particularly Islam and Christianity, a woman's body is considered as sacred, and thus should not be seen or touched by other people other than her spouse.

Others consider it a taboo for a woman to examine herself such as in BSE. Such practices and beliefs are also prevalent in women of African origin that are living in Western world, irrespective of their level of formal education. Additionally, a common cultural myth shared by women in Northeast and Southern Nigeria is that breast cancer is acquired spiritually as a form of punishment from god, thus can only be treated with prayers. As a result, women with symptoms of cancer do not go to hospitals, but rely on traditional and spiritual healers for remedy. Modern medicine is sought after repeated failed traditional attempts. Social amplification of risk significantly influences health behaviours. The media for example, is a major factor that shapes understandings of diseases in the general public. Media coverage of celebrity diagnosis of breast cancer in young women may have led to the realisation of age as a risk factor. In Nigeria, most women mentioned their families and friends as their sources of cancer knowledge, with few from health workers. The quality of such information may be diminished with cultural misconceptions, which contributes to poor health behaviours in these women. Therefore, it is important to ensure that accurate cancer knowledge is provided on the media, and during campaigns and outreach programmes.

Economic factors

Poverty and lack of resources are major problems in Nigeria. These have massively affected the levels of education, rural residency, and health status in the country. Additionally, this has affected the availability, accessibility, and affordability of cancers screening. The impact of these factors demonstrates the role of the environment in shaping decision and behaviours in individuals and communities. The cost of screening has a major influence on the uptake rates. In many developing countries including Nigeria, national screening schemes have not been established. Usually, screening services are offered in health facilities situated in the urban regions. Therefore, women in the rural areas do not get this

opportunity due to various economic factors such as distance to healthcare facilities, poor transportation systems and cost of screening services. In addition, lack of time due to busy schedules, fear of the unknown, ignorance, cultural and religious beliefs and lack of health insurance are common factors that determine health seeking. Most women in Nigeria and other developing countries are housewives or farmers with 3-4 children to take care of, thus have little or no free time for medical check-ups.

Recommendations and Conclusion

Prevention is the hallmark in decreasing the morbidity and mortality rates of reproductive cancers. However, despite the advancement and availability of healthcare services, Nigeria is burdened with increasing burden of communicable and non-communicable diseases. Various sociodemographic and sociocultural factors hinders the uptake of breast and cervical cancer screening in Nigeria. These differ across societies, culture, and economies. Thus, there is need to further research factors influencing knowledge, attitude, and perception in the country's heterogeneous regions. In addition to public campaigns and awareness, faith-based and women organisations, should be utilised to educate the general public about cancer and clear any misconceptions. Similarly, persons of influence in communities, such as community advocates, religious leaders, traditional healers, and health professionals should be involved in planning and implementing cancer management programmes.

Conclusion

Overall, this review covered various factors influencing cancer health behaviours, there by acting as barriers to the uptake of screening. Factors specific to Nigeria were studied in detail, although most emphasis were given to social and cultural factors. Sociodemographic and sociocultural factors across the country hinders acceptance and practice of cancer screening. Overall, availability, accessibility, affordability, and acceptability of screening services remain the major barrier towards decreasing cancer morbidity and mortality in Nigeria. There was limited research on individuals' perceived power, control beliefs, and health goals regarding breast and cervical health behaviours in Nigeria. Therefore, this review is anticipated to be a foundation to more in-depth exploration on these concepts. The findings could be applied in developing multicultural and multi-religious approaches to cancer management in Nigeria. Assumptions on the homogeneity of populations in research

and intervention planning should be reserved, as so many variations exist even within country.

Contribution of Authors

AMD and CP conceived and designed the study. AMD searched for literature, and analysed the data. AMD prepared the manuscript, while PS and CP revised and critically reviewed it. All authors mentioned in the article approved the final version to be published.

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