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The Sociocultural Influences on Breast Cancer Screening among Rural African Women in South Africa

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Abstract: Breast cancer remains one of the most deadly non-communicable diseases in the world. The incidence of breast cancer in South Africa is increasing, with rural African women presenting with advanced stages of the disease. In this study, we aim to explore sociocultural factors influencing breast cancer screening practices among rural African women. A qualitative exploratory study was conducted using semi-structured interviews with 22 rural African women selected by purposive sampling. Thematic analysis was used to analyze the data. In this study, four sociocultural factors were identified as influencing breast cancer screening practices among rural African women. These factors included psychological factors, habits, beliefs, and healthcare perception. Women in rural African communities have deep-rooted traditional beliefs and practices regarding breast cancer. Consequently, this influences women's preventative health behaviours regarding breast cancer screening. To increase the number of women participating in breast cancer screenings, it is vital to develop culturally sensitive health education programs. Engaging community healers will also help to increase the number of women participating in breast cancer screening.

Keywords: breast cancer; culture; belief; rural; South Africa

1. Introduction

There is a tremendous burden associated with breast cancer. Breast cancer is not only the most commonly diagnosed cancer worldwide, but it is also the leading cause of cancer death in over 100 countries [1]. In South Africa, breast cancer accounts for 20.8% of all female cancers, with an age-standardized annual incidence rate of 18 per 100,000 African women [2]. Furthermore, breast cancer affects women of all races in South Africa, with a lifetime risk of 1 in 25, though African women generally present at an advanced stage of the disease [3,4]. There has been an increase in breast cancer mortality rates in sub-Saharan Africa (SSA) due to limited access to early detection and treatment options, as well as late-stage diagnosis [1]. Several researchers predict that by the year 2030, more than 70% of the world's cancer burden will be in low-middle-income countries (LMICs) like South Africa and the prevalence of breast cancer will double in these countries by 2050 [5,6]. As part of cancer prevention and control, the World Health Organization (WHO) recommends screening and early detection as the two most important components for countries with a high prevalence and mortality rate of breast cancer [7].

There have been numerous studies conducted globally emphasizing the importance of early detection methods to improve women's treatment options, resulting in a higher probability of survival **[8–10]**. Early detection of breast cancer is achieved through breast self-examination (BSE) and mammography. It has been observed, however, that these screening methods are not widely practiced **[11–13]**. Mammography is inaccessible to millions of women living in developing countries, including South Africa, as it is technologically and financially difficult to implement and maintain [11,14,15]. While BSE is safe, readily accessible, and highly recommended for women in low-resource

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settings, however its uptake among rural African women is poor. From a global perspective, a lack of knowledge, a lack of awareness, cultural influences, and socioeconomic factors have all contributed to the low uptake of breast cancer screening. However, much uncertainty still exists from a South African perspective, due to the deep-rooted cultural beliefs and attitudes among Africans.

Women's knowledge of breast cancer screening varies across nations probably due to their cultural beliefs and socio-economic level [16]. Current literature indicates that approximately 27 million people in South Africa, especially Africans, depend on traditional medicine for primary healthcare needs [17,18]. Traditional healing practices form part of South African culture and spiritual life [18]. Cultural beliefs influence how individuals interact with the world and behave under certain circumstances. This may be seen as a combination of religious beliefs, socially accepted norms, and traditions. Research has shown that personal philosophies are directly influenced by cultural values and belief systems, which are often reflected in their health-seeking behaviour [19]. There is a growing body of research that suggests cultural barriers influence breast cancer screening and overall healthcare [16,20]. Due to the scarcity of research, this paper explores the sociocultural factors influencing breast cancer screening from a rural South African perspective, where most African women present with advanced stages of breast cancer. Furthermore, this publication provides valuable information that can be used to develop culturally and socially appropriate breast cancer prevention programs and campaigns among rural African women.

2. Theoretical framework

This study utilized the Care-Seeking Behaviour (CSB) Theory as a theoretical framework. The CSB Theory includes a wider range of constructs than any other health behaviour theory, allowing for further research. This theory was originally developed to explain and predict preventative health behaviours [21]. Furthermore, the CSB Theory posits that an individual's potential to engage in health behaviours is influenced by multiple factors, including psycho-social, clinical, socio-demographic, and facilitating factors [22]. Several psycho-social constructs such as affect, belief, norm, and habit, together with clinical and sociodemographic factors indirectly influence care-seeking behaviour [23]. In this paper, psycho-social constructs, namely affect, belief, habit, and norm, are explored to identify socio-cultural factors influencing breast cancer screening among rural African women.

Affect: refers to a feeling of anxiety that may result from embarrassment or a diagnosis and these affectual concerns may lead to individuals refraining from performing preventative health behaviours [24,25].

Belief: reflects the overall value or importance of CSB [22]. According to Lawal et al. [23], the majority of studies indicate that women's beliefs are heavily influenced by cultural factors.

Habit: refers to the way one acts when one is experiencing symptoms (for instance, whether or not one seeks medical attention promptly) [24].

Norm: consists of the perception of morally acceptable behaviour towards seeking health care [22]. The CSB Theory asserts that norms include social norms, which reflect the beliefs of others regarding seeking health care; personal norms, which represent one's views about seeking medical attention; and interpersonal norms which reflect an agreement between individuals to seek medical attention [24].

The researcher identified four prominent themes through the application of these constructs of the CSB Theory during the analysis of the data, namely preventative healthcare habits, breast cancer beliefs, healthcare perception, and psychological influences. In the results section of this paper, findings related to these themes will be presented.

3. Materials and Methods

3.1. Study Design and Setting

This paper is the result of a larger qualitative study that explored factors that influence BSE practice among rural African women in the KwaZulu-Natal (KZN) province of South Africa. In the iLembe District of the KZN province, four municipal clinics served as research sites. This district has

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a 52% female population and a 48% male population [26]. iLembe District Municipality consists of four local municipalities: Mandeni, KwaDukuza, Ndwedwe, and Maphumulo. Since iLembe is predominantly a rural District Municipality, it was selected as the setting for this study. Moreover, half of the population is female, and many clinics are readily accessible where study participants can be identified. Consequently, one clinic was chosen in each of the four municipalities of the iLembe district to serve as a study site. The clinics were selected because they are the closest primary healthcare facility to the majority of the rural women attending.

3.2. Study Participants and Sample

A purposive sampling method was used to recruit 22 participants for this study. A criterion stipulated that participants must be African women residing in the rural iLembe District of KZN province and at least 20 years of age. As a result, the researcher was able to select participants who were available within the set timeframe and could offer pertinent information related to the research question. Women who did not consent to the study and who were acutely ill during the visit were excluded from the study. The number of participants was largely determined by the data saturation principle where no new themes emerged.

3.3. Data Collection

The data for this study was collected from four municipal clinics located in the iLembe district at Maphumulo, Ndwedwe, Mandeni, and KwaDukuza. To gain a deeper understanding of the sociocultural factors influencing breast cancer screening, a semi-structured, one-on-one interview approach was employed. The use of a standardized interview guide assured consistency, stability, and repeatability of participants' perspectives. This ensured the credibility of the interviews. Triangulation was achieved by conducting interviews at four municipal clinics. Once data saturation had been reached, the interviewing process was terminated. The saturation of data occurs when no new information is provided by the interviewees.

3.4. Data Analysis

Transcripts of the interviews were transcribed verbatim by the researcher, with participant names replaced with codes to ensure confidentiality. Thematic analysis was selected as the method of data analysis. During thematic analysis, patterns (themes) were identified, analyzed, and reported within the data [27]. The purpose of this was to provide an in-depth overview and description of the data comprehensively and interpret various aspects of the research topic. As suggested by Lincoln and Guba, this study was evaluated according to four criteria for establishing the trustworthiness of qualitative research: credibility, dependability, confirmability, and transferability. A high level of credibility was achieved as a result of extensive engagement with participants as well as space triangulation; in this case, data were collected from rural African women in four clinics located in four different municipalities within the iLembe District in KZN. Dependability was achieved by thoroughly explaining the research methodology and the path to the conclusion. A record of raw data collected during each interview was kept for future reference to ensure reliability. An audit trail detailing data collection, analysis, and interpretation was used to establish confirmability. The transferability of this study was achieved by providing detailed descriptions of the research setting and methods, thus confirming the authenticity and validity of the study. This allowed for future research to be based on the findings.

3.5. Ethics

Ethical clearance was obtained from the Institutional Research Ethics Committee (IREC 157/22) at the Durban University of Technology for this study. The gatekeeper's permission was obtained from the KZN Department of Health (DoH) and the iLembe District Manager. A consent form was signed by all participants to participate in this study and to permit the researcher to record the interviews. All responses were kept anonymous and confidential. During the interview, participants'

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names were not used, but a number was assigned to each based on their order of interview. P1 was the first person interviewed, followed by P2 up to P22. Data were stored electronically and password-protected.

4. Results

4.1. Socio-Demographic Characteristics

Table 1 presents the demographic characteristics of the participants. Participants ranged in age from 20 to 65 years old, with the majority possessing a high school education. It is widely recognized that extreme poverty severely constrains the level of education in many African countries, which has grave implications for the provision of quality education. As a result, rural areas in South Africa are perceived as under-resourced and marginalized. Therefore, only a small percentage of participants had tertiary education. Additionally, the same number of participants were employed and unemployed, with an average of two children per woman. The majority of participants were unmarried.

Table 1. Characteristics of study participants.

Participants	Age	Level of education	Marital status	Employment status	Number of children	Municipal residence
P1	31-40	H/S	M	FT	None	Ndwedwe
P2	20-30	H/S	S	U/E	1	Ndwedwe
P3	20-30	H/S	S	U/E	3	Ndwedwe
P4	31-40	H/S	S	U/E	3	Ndwedwe
P5	20-30	T/E	S	PT	None	Ndwedwe
P6	31-40	T/E	M	FT	More than 3	Ndwedwe
P7	20-30	H/S	S	U/E	None	Ndwedwe
P8	20-30	T/E	S	FT	1	KwaDukuza
P9	41-50	T/E	W	FT	3	KwaDukuza
P10	31-40	H/S	S	PT	More than 3	KwaDukuza
P11	31-40	H/S	S	FT	1	KwaDukuza
P12	41-50	H/S	S	U/E	None	KwaDukuza
P13	51-65	T/E	S	FT	2	KwaDukuza
P14	41-50	H/S	M	FT	2	Maphumulo
P15	20-30	T/E	S	FT	2	Maphumulo
P16	31-40	H/S	S	PT	2	Maphumulo
P17	20-30	H/S	S	FT	None	Maphumulo
P18	41-50	H/S	S	PT	2	Mandeni
P19	41-50	H/S	M	U/E	More than 3	Mandeni
P20	41-50	H/S	S	U/E	1	Mandeni
P21	31-40	H/S	S	FT	2	Mandeni
P22	20-30	H/S	S	FT	2	Mandeni

*Key: P = Participant, H/S = High School, T/E = Tertiary Education, S = Single, M = Married, W = Widowed, FT = Full-time Employed, PT = Part-time Employed, U/E = Unemployed.

4.1. Psychological Influences

The CSB Theory identifies psychological influences as a theme under the construct of "affect". Breast cancer screening among African women in rural areas is influenced by four factors: fear,

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cultural stigmatization, social support, and attitude. When it comes to breast cancer and discovering a lump in the breast, most women express fear.

"I will be heartbroken. As you can see my breast is small, imagine if I can find the lump. I will be scared." (P8).

"…. cancer is something that you should be afraid of. It's not just a disease, it's very dangerous." (P18).

The fear of breast cancer is often attributed to the belief that the disease is incurable and fatal.

"This illness is like we scared to have it because we think that it's not curable, and you're going to die." (P3).

Additionally, participants frequently referenced the concept of stigmatisation in their responses to the interview questions. According to several participants, African women diagnosed with breast cancer are heavily stigmatised by other Africans. It is therefore less likely that women will engage in breast cancer screening or discuss it with others. The following excerpt illustrates some of the reported stigmatization:

"They will mistreat her. They will see her as a different person like she's not qualified to be a woman." (P2).

"*When I say community I mean women. Ladies! She will be such a shame. To males, no one will ever want to marry her and with her family, she'll be a disgrace."* (P10).

Interestingly, some participants said women with breast cancer or breast cancer symptoms are stigmatized and compared to HIV-positive individuals.

"*When you start losing weight and you look sickly, they go around talking about you, that you've contracted AIDS."* (P13).

Consequently, this leads to the factor of social support. It was agreed by participants that African women's preventative health behaviours are greatly affected by the social support they receive from their families, friends, and communities. The likelihood of women being able to communicate their breast-related concerns is higher when they have a good support network. A positive response was noted by some participants when asked about how easy it is to discuss breast problems with family and friends:

"It's easy to talk to them, they understanding." (P4).

Additionally, the majority of participants expressed a favorable attitude regarding their willingness to practice BSE and to participate in breast cancer programs in their respective communities.

"I want to learn more. I want to know more." (P3).

"*Yes, I will go because I will learn more and I will understand more about breast cancer."* (P11).

4.2. Preventative healthcare habits

It cannot be overstated how important it is to understand women's healthcare habits, particularly when one is experiencing a medical condition. To gain a better understanding of women's preventative healthcare behaviour regarding breast cancer screening, we sought to understand habits. The one-on-one interviews conducted with African women revealed that they have three distinct healthcare habits, namely seeking healthcare services, self-treatment options, and traditional practices. Several participants reported that they would consult a healthcare facility if they had a breast-related problem or any other health-related problem, indicating their confidence in the healthcare system.

"Obviously I will go to the clinic to seek medical help." (P6).

There were, however, several participants who indicated that they would not visit a health facility and would rather practice self-treatment options. Self-treatment options for medical symptoms included non-prescription pain medications found in their local shops, as well as turmeric roots and ginger.

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"I will just make what the people tell me I must make and drink, like ginger, fresh turmeric roots." (P12).

"If it's something painful, I get some painkillers and use them and see if the pain goes away." (P20).

Other participants indicated that they would engage in traditional practices based on their religious beliefs. The traditional prayed herbs sought from traditional healers in their communities were consumed in this manner. Furthermore, participants reported that they may need to participate in slaughter ceremonies of animals and pray to their ancestors, as prescribed by traditional healers.

"I use traditional herbs." (P2).

"If you get sick, they will consult your late grandfathers….. Maybe they will say, maybe we have to slaughter a cow. (P3).

4.3. Breast cancer beliefs

Participants' beliefs regarding breast cancer emerged as a dominant theme during the interview process. Two distinct factors were identified under this theme, namely healthcare beliefs and traditional beliefs. Several participants indicated that they would consult a health facility if they were experiencing breast-related problems or if they had any other medical concerns. It was determined that these participants had demonstrated an understanding of the concept of breast cancer and BSE earlier in the interview process. As a result, they held strong healthcare beliefs.

"Breast cancer is where you have carcinogens or cancer in your breast or where you have a tumour in your breast." (P13).

"Healthcare provider first. Because they're able to run the test, more tests to see what's wrong with you." (P18).

Additionally, there were a substantial number of participants who held strong religious or traditional beliefs regarding breast cancer. Participants reported several traditional interpretations of breast cancer. Among these beliefs were those that believed breast cancer was the result of witchcraft, punishment, or sin.

"Mostly, they think of witchcraft. They think maybe you are cursed, maybe something you've done, something in the past that you are not supposed to do now and God is punishing you, things like that." (P20).

Some women, however, believed that breast cancer signified the 'cutting' of a woman's breast.

"Cut your breast completely." (P20).

4.4. Healthcare perception

Healthcare perception was the last theme identified as influencing breast cancer screening. The theme sheds light on individuals' morally righteous beliefs regarding health behaviour in terms of seeking health care, as well as their willingness to act on those beliefs. There were three factors found to influence health care perception, namely personal norms, social norms, and interpersonal norms. Personal norms explored participants' perceptions of seeking medical care and how they understand and perceive BSE. In this study, it was revealed that a few participants were confident in practicing BSE. However, other participants were unsure of how to perform this screening procedure correctly. In addition, some participants indicated that they had sought out information about breast health concerns through the use of mass media, such as Google.

"I don't know if I'm doing it the correct way. That's the problem." (P5).

"I Google and search, and they asked what kind of bra I am wearing. So, I wrote, I wear a bra with the underwire and they say you must stop wearing and try to wear the one that is comfortable with no wire. So, I went for those bras and the pain stops." (P3).

Social norms reflect society's perception of preventative healthcare and breast cancer screening. It was found that a lack of awareness and knowledge of breast cancer screening was prevalent among family, friends, and the community as a whole.

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"They know nothing about it." (P1).

In addition, it was found that traditional beliefs play a significant role in how society interprets breast cancer.

"They only believe in traditional things. So, it's not easy to talk to them. And some will just treat you like you're cursed or something." (P2).

All participants agreed, however, that raising awareness of breast cancer screening among family, friends, and communities would encourage more women to undergo screenings.

"They will understand if there could be someone to explain to them what is breast cancer." (P3).

Observations of interpersonal norms revealed the understanding between individuals regarding the necessity of seeking medical attention. The participants reported that women who were encouraged to practice breast cancer screening were more likely to do so.

"If we have someone who know about it, like for instance, I know about the examination. So, if I teach my family obviously they will practice it." (P1).

5. Discussion

Globally, the low uptake of breast cancer screening is attributed to several factors, including a lack of knowledge about cancer prevention, and widespread misconceptions regarding cancer and its treatment, which contribute to the delayed presentation of the disease **[28–30]**. However, there was considerable uncertainty from a South African perspective due to deep-rooted cultural beliefs and social influences. In South Africa, it is estimated that about 80% of the population has access to traditional medicine, predominantly in rural areas. It is sometimes the only option available [31]. Generally, African traditional treatment is a combination of information, expertise, and practices based on principles of thought, opinion, views, and values. Indigenous Africans employ it to preserve health and identify or treat physical and emotional well-being. In communities, traditional healers provide socially acceptable healthcare services because they are of the same culture and are usually sought first for illness and cultural health issues [31]. The role traditional healers play in breast cancer screening and awareness remains unexplored in the literature.

It has been demonstrated in this study that sociocultural influences through traditional beliefs, perceptions, and practices have a significant impact on breast cancer screening. A common interpretation of breast cancer is that it represents witchcraft, sin, and punishment. It is commonly treated by sacrificing animals, consuming herbs, and praying to the ancestors. According to studies conducted in other African countries, many women prefer herbal medicine and traditional practices to established screening and treatment methods [32]. One study reported that only 29% of women who recognized breast cancer signs and symptoms sought medical attention, whereas 46% opted for traditional treatment [33]. It was noted in this study that although there were participants with strong traditional beliefs, habits, and perceptions, there were also participants with stronger healthcare beliefs and perceptions who sought medical assistance. It has been found in a previous study that women with preventative habits are 4.8 times more likely to adhere to screening recommendations, such as mammograms than women without such habits [34]. As a result, women who practice preventative habits are twice as likely to undergo screenings for breast cancer. However, several other studies suggest that women who are knowledgeable about breast cancer awareness may not practice breast cancer screening because of social factors that may influence their health-seeking behaviour [35,36]. Thus, it was important to understand how rural Africans view breast cancer at a personal and community level.

In rural communities, for example, negative experiences can be passed around through word-of-mouth, causing individuals to be reluctant to seek medical attention and mistrust Western medicine [22], leading to decreased access to healthcare. Women with strong social norms regarding breast cancer have twice the rates of screening as women with weaker social norms [34]. In terms of screening involvement and presentation, women's attitudes were influenced by their source of information. The more knowledgeable society is about breast cancer, the more likely they are to encourage individuals to seek medical attention [33]. In the current study, some participants

expressed concern that they might feel 'less of a woman' if their breast was removed, and they feared a positive diagnosis. A woman's breasts are a symbol of her womanhood; they also constitute a social definition of her femininity. Losing a breast would imply that these women are less than women and that their femininity has been diminished. Furthermore, some participants reported that African communities encourage discrimination at times, particularly when a woman is suffering from breast cancer. Thus, many women refrain from practicing BSE for fear of discovering a breast lump and being socially rejected by their family, friends, and the community in general.

Traditionally, African women need the permission of their spouses before receiving medical care at a hospital or attending a health education forum [33]. Often, women put their health at the bottom of the priority list when balancing family responsibilities and health. This presents a significant barrier to detecting and diagnosing breast cancer at an early stage. In such circumstances, women may have difficulty practicing BSE and presenting early to health facilities when symptoms are observed [33]. As a result, social support from family, friends, and the community plays an important role in the knowledge and awareness of breast cancer screenings.

5. Conclusions

According to the current study, rural African women's sociocultural factors influence breast cancer screening practices. How women and communities view breast cancer and their willingness to participate in breast cancer screening is heavily influenced by traditional beliefs and practices. To improve the detection of breast cancer in rural African communities, there is a need for enhanced community engagement and breast health education. There is no doubt that rural community's lack of breast cancer awareness contributes to late breast cancer diagnosis. Despite acknowledging the role of traditional healers in breast cancer treatment, the present study did not examine their role in breast cancer screening. As a result, future research should examine the role of traditional healers in the screening and prevention of breast cancer in rural communities in South Africa. Additionally, breast cancer campaigns must be culturally sensitive, involving key stakeholders, like traditional healers, tribal leaders, school educators, and local health facilities, who are trusted by members of the community.

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Conflicts of Interest: The authors declare no conflict of interest.

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