



## Remote Prayer and Breast Cancer Diagnosis: A Mixed-Methods Study of Spiritual and Religious Influences

Tinuoye Jamiu Uthman, <sup>1</sup>, Opeyemi Oyewunmi Ekundayo <sup>1</sup> &, Paul O. Awoniyi <sup>2</sup>

<sup>1</sup>*Department of Psychology Obafemi Awolowo University*

<sup>2</sup>*Centre for Gender and Social Policy Studies Obafemi Awolowo University, Ile-Ife, Nigeria*

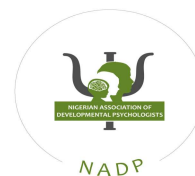
### Abstract

The purpose of this study was to examine the perception and attitude toward remote prayer and how varying levels of spirituality and religiosity influence breast cancer diagnosis and treatment among women at Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria. Anchored in the socio-spiritual context of a deeply religious society, the study adopted an explanatory sequential mixed methods design. The research population comprised 187 breast cancer patients, from which 139 were sampled using the Taro Yamane formula. Of these, 128 valid responses were analyzed, selected purposively due to the sensitivity of the study. Data were collected using standardized instruments: Delaney's Spirituality Scale ( $\alpha = .89$ ), Idehen's Religious Orientation Test ( $\alpha = .87$ ), a structured survey on perception and attitude toward remote prayer ( $\alpha = .81$ ), and a Key Informant Interview Guide for the qualitative phase. Quantitative results showed that 60.94% of the women had a positive perception of remote prayer, while 58.59% expressed a positive attitude. The prevalence of remote prayer before or during treatment was high (83.59%). Linear regression revealed a significant negative impact of remote prayer on treatment outcomes ( $\beta = -0.50, p < .05$ ), accounting for 21% of the variance. ANOVA showed significant differences in engagement with remote prayer across four emergent categories of spirituality and religiosity ( $F(3,124) = 5.14, p = 0.002$ ), with Category C (high spirituality, deep religiosity) reporting the highest constructive use. Qualitative findings supported these results, indicating that women in Category C used prayer alongside clinical care, while those in Categories A and B often relied solely on prayer, leading to delayed diagnosis and lower treatment compliance. In conclusion, the study highlights that spirituality and religiosity significantly shape women's perception and engagement with remote prayer in cancer care. Remote prayer, when paired with personal spirituality and informed decision-making, served as an emotional anchor. However, excessive reliance on it, especially in the absence of inner spiritual conviction or medical knowledge, was linked to delayed medical engagement. These findings underscore the need for integrative care models that balance faith-based practices with biomedical guidance, ensuring timely and effective breast cancer treatment outcomes.

Keywords: *Perception, Attitude towards Remote Prayer, Breast Cancer Diagnosis, Spirituality, Religiosity.*

### Introduction

Breast cancer remains one of the most prevalent and deadliest cancers among women globally, with significant implications for public health. According to the World Health Organization (WHO, 2024), breast cancer accounted for 685,000



deaths globally in 2020, making it the most common cancer among women and the leading cause of cancer death. In Nigeria, the situation is equally alarming. The Global Cancer Observatory (GLOBOCAN, 2021) reported that breast cancer represents approximately 22.7% of all new cancer cases and 16.4% of cancer-related deaths in the country. Despite medical advancements in early diagnosis and treatment, survival rates remain disturbingly low in sub-Saharan Africa, largely due to late presentation, poor access to treatment, and the intertwining influence of socio-cultural beliefs and practices.

In Nigeria, where religion and spirituality deeply permeate every facet of life, health-seeking behaviours are often shaped by faith-based interpretations. Illustratively, the Pew Research Center (2020) reports that over 97% of Nigerians identify with a religion, with prayer both individual and communal being a central coping mechanism in illness. Within this context, remote prayer, defined as intercessory prayers offered without the physical presence of the patient, has become an increasingly utilized spiritual practice, especially in response to chronic illnesses such as breast cancer. Yet, there is limited empirical understanding of how such practices influence patient decision-making, particularly in terms of diagnosis, treatment adherence, and psychological outcomes.

This study is situated at the intersection of health, faith, and survival. It seeks to explore the perception and attitude towards remote prayer among breast cancer patients at Obafemi Awolowo University Teaching Hospital in Ile-Ife, Nigeria, and how such beliefs potentially shape responses to diagnosis and treatment options. The goal is not merely to document spiritual tendencies but to critically engage with how they intersect with medical decisions in a society where spiritual explanations often coexist with biomedical knowledge. By viewing these issues through a developmental lens, the study hopes to shed light on how past generational beliefs and practices especially those around spiritual intervention continue to influence contemporary health behaviours. This approach is particularly vital given the cyclic and often hereditary nature of breast cancer, where patterns of response, avoidance, or delay are sometimes passed down, consciously or unconsciously.

Understanding these perceptions is crucial not only for improving patient outcomes but also for informing culturally sensitive health interventions. As Nigeria continues to grapple with a high burden of non-communicable diseases, integrating religious realities with biomedical approaches offers a promising pathway toward holistic cancer care. By examining the impact of remote prayer on breast cancer diagnosis and treatment, this study offers an opportunity to learn from survivors, honour the

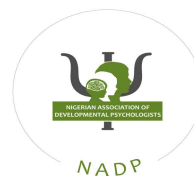
memory of those who have passed, and shape future health strategies rooted in both cultural relevance and scientific insight.

### Literature Review

The persistent prevalence and delayed management of breast cancer in Nigeria, especially in faith-anchored communities like Ile-Ife, demands renewed scholarly attention to the intersecting roles of spirituality, health-seeking behaviours, and medical intervention. Recurring themes across existing literature and lived experiences suggest that patients' attitudes and perceptions toward breast cancer care are often profoundly shaped by their religious beliefs and spiritual practices. Despite decades of advocacy for early detection and treatment, women continue to present at advanced stages of breast cancer, a pattern closely linked to the prioritization of prayer—particularly remote prayer over clinical diagnosis. A recent *Punch* article by Ojuroungbe, (2024a) indicated that Nigeria dumps hospital healing for healing water and soaps. Likewise, Ojuroungbe, (2024b) article documented how numerous Nigerian women delay medical consultation in favour of faith-based healing, resulting in poorer prognosis and limited treatment options. This recurring trend, amplified by religious institutions and media narratives, justifies the present study's focus on perception and attitude toward remote prayer and its influence on breast cancer diagnosis and treatment in a highly spiritual setting like Obafemi Awolowo University Teaching Hospital, Ile-Ife.

Empirical research supports the centrality of spirituality in patients' health decisions. Ogunkorode et al. (2021), in a qualitative study of 30 women with advanced breast cancer in Southwestern Nigeria, found that many delayed hospital visits, initially seeking divine intervention as their primary course of action. Similarly, Orticelli (2022) revealed that women survivors incorporated prayer and spirituality into their healing journeys, confirming that faith is not merely a coping mechanism but a functional decision-making framework. These findings are not isolated. Smith (2021) demonstrated that women with a family history of breast cancer in Ohio perceived spiritual beliefs as both motivators and barriers to screening. While the benefits of this worldview may include psychological comfort and resilience, they also pose critical challenges for early medical intervention and holistic treatment strategies.

One methodological concern emerging from past studies is the overwhelming use of qualitative narratives, which while rich in depth, often lack the measurable clarity required to inform large-scale interventions. Kelly et al. (2022), in their umbrella review of 41 studies, identified vast inconsistencies in how religion and spirituality were conceptualized and measured across cancer care literature. This diversity



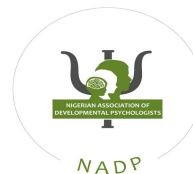
undermines the comparability and transferability of results. A compelling way forward is to adopt a quantitative approach to explore qualitative phenomena using structured tools to assess and quantify patients' perceptions, spiritual health locus of control, and corresponding medical behaviours. Azhar et al. (2022), for example, used multivariable logistic regression to demonstrate the significant influence of perceived discrimination and spiritual beliefs on cancer screening behaviours among Muslim American women. Their study showed the possibility and necessity of applying statistical methods to spiritual and perceptual domains.

This study therefore proposes a quantitative approach, not to reduce the complexity of spiritual experience, but to make it empirically tractable. Quantifying perceptions around remote prayer and medical diagnosis allows for greater clarity in identifying population-level trends, intervention gaps, and possible avenues for integration between spiritual and biomedical care. As Arellano (2024) argues in her study of Indigenous Rarámuri women, incorporating spirituality into healthcare design is not about replacing medical science with religion, but about understanding how belief systems frame illness and treatment. In Nigeria, where religious leaders often hold more sway than physicians, failing to empirically investigate the perception of remote prayer within breast cancer care risks perpetuating cycles of delayed diagnosis and fatalistic health attitudes. Given the generational continuity and cyclic nature of breast cancer in families and communities, a developmental lens is crucial. It allows us to interrogate not only present behaviours but the intergenerational beliefs that sustain them. Understanding how mothers, daughters, and grandmothers interact with breast cancer—spiritually and medically—could unearth systemic patterns that inform culturally-sensitive interventions and survivorship education.

Ultimately, this study is not a critique of spirituality, but a call to better understand its influence in contexts where prayer, particularly remote intercession, becomes a first rather than supplementary response to illness. By grounding this inquiry in quantitative methodology, the study offers a framework for transforming spiritual insights into actionable healthcare strategies where faith and medicine co-exist, not compete. The goal is to contribute to a new generation of breast cancer research that recognizes spiritual realities while firmly anchoring survival in early detection, evidence-based care, and psychosocial support.

### Procedure

The procedure for this study was designed to capture and quantify the spiritual and religious orientations of women diagnosed with breast cancer at Obafemi Awolowo University Teaching Hospital, Ile-Ife, in a way that aligns with emerging themes in



both empirical literature and lived experiences. Participants were administered a structured questionnaire that measured spirituality using a validated spirituality scale, with items assessing frequency of spiritual practices, perceived connection to the divine, use of prayer for healing, and personal beliefs in spiritual causality of illness. Responses were scored, and the mean score across the entire sample was computed. Participants whose individual spirituality scores exceeded the sample mean were categorized as having high spirituality, while those whose scores fell below the mean were categorized as having low spirituality. This mean-based categorization method allowed for a relative understanding of where individuals fall within the broader distribution of spirituality within the study population.

Religiosity was separately measured using items that assessed religious practices, such as attendance at religious services, reliance on religious leaders for healing guidance, and adherence to religious prescriptions in health decisions. Based on qualitative indicators derived from previous studies, religiosity was further classified as deep or superficial. Deep religiosity was characterized by a consistent integration of religious doctrines into health choices, a reliance on remote prayer for healing, and the influence of faith leaders in delaying or guiding medical decisions. Superficial religiosity was defined by participation in religious practices that were more habitual or cultural, with less direct impact on health-seeking behaviour. This yielded four distinct profiles: low spirituality and deep religiosity, low spirituality and superficial religiosity, high spirituality and deep religiosity, and high spirituality and superficial religiosity.

This classification was not arbitrary but deeply grounded in the literature and lived experience narratives. For instance, Orticelli (2022) noted that while all participants in her study employed prayer, their motivations and depth of engagement varied significantly some using it as an emotional anchor while others relied on it exclusively for healing. Similarly, Ogunkorode et al. (2021) found that high optimism based on prayer did not always correspond to meaningful spiritual reflection or informed medical action, suggesting variability in how spirituality and religiosity intersect in cancer care. The need to separate and cross-categorize these constructs is further justified by Kelly et al. (2022), who pointed out that many studies conflate spirituality and religiosity, leading to ambiguous conclusions about their roles in patient outcomes. Table 1 present the categorization of study respondents below:

Spirituality Level	Religiosity Level	Category Label	Description
Low Spirituality	Deep Religiosity	Category A: Low Spirituality & Deep	Individuals with minimal internal spiritual depth but

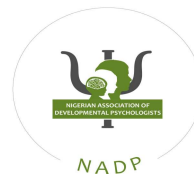
		Religiosity	strong adherence to religious doctrine and rituals.
Low Spirituality	Superficial Religiosity	Category B: Low Spirituality & Superficial Religiosity	Individuals with weak spiritual engagement and low religious practice; beliefs may be cultural or nominal.
High Spirituality	Deep Religiosity	Category C: High Spirituality & Deep Religiosity	Individuals with strong inner spiritual life and consistent, meaningful religious practice.
High Spirituality	Superficial Religiosity	Category D: High Spirituality & Superficial Religiosity	Individuals with deep personal spirituality but less structured or habitual religious practice.

Therefore, the rationale behind this categorization was to reflect the nuanced realities of how spiritual and religious dimensions affect medical decision-making, especially in highly religious societies like Nigeria where these constructs are deeply embedded in cultural health narratives. By identifying participants' placement within the four emergent categories, the study aimed to reveal how different combinations of spirituality and religiosity influence perceptions of remote prayer and corresponding actions toward breast cancer diagnosis and treatment. This approach acknowledges that not all spiritual or religious expressions lead to the same behavioural outcomes, and it allows for more targeted understanding of how belief systems shape health trajectories.

#### Purpose of the Study

The overall objective of the present study is to examine the level of perception, attitude of remote prayer, spirituality and religiosity and how it impacts breast cancer diagnosis and treatment among women diagnosed with breast cancer in Obafemi Awolowo University Teaching Hospital, Ile-Ife, Nigeria. the following are specific objectives of the study:

- i. to determine the level of perception and attitude of towards remote praying.
- ii. to examine prevalence of remote praying among women diagnosed with breast cancer.
- iii. to examine the impact of remote prayer on breast cancer diagnosis and treatment.
- iv. to determine the difference in remote prayer among the categories label A-D



- v. To determine how lived spiritual and religious experiences affect decision-making regarding timely diagnosis, medical compliance, and the use of formal healthcare services among women in category label (A-D).

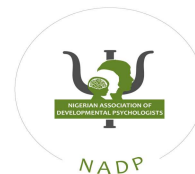
### Research Design

The present study adopts an explanatory sequential mixed methods design, beginning with a quantitative phase followed by a qualitative phase to deepen understanding of the findings. In the quantitative phase, structured questionnaires are used to assess the level of spirituality, religiosity and remote prayers among women diagnosed with breast cancer at Obafemi Awolowo University Teaching Hospital. Based on computed mean scores, participants are categorized into four distinct groups: high spirituality & deep religiosity, high spirituality & superficial religiosity, low spirituality & deep religiosity, and low spirituality & superficial religiosity. Their attitudes and perceptions toward remote prayer as a complementary practice in breast cancer diagnosis and treatment are then measured across these groups.

In the qualitative phase, in-depth interviews are conducted with selected participants from each category to explore their lived experiences, decision-making patterns, and how their beliefs influenced health-seeking behaviours and treatment choices. This design is justified by three key reasons: First, the recurring nature of reliance on spiritual interventions in breast cancer care evident in literature such as Orticelli (2022), Smith (2021), and Ogunkorode et al. (2021) demands a layered analysis that captures not just numerical patterns but also personal and contextual meanings behind those patterns. Second, literature has consistently noted methodological gaps, such as overreliance on qualitative data or anecdotal evidence without establishing measurable relationships (Kelly et al., 2022). By using a quantitative approach first, the study offers an empirical foundation before exploring the deeper interpretive dimensions qualitatively. Third, the practical urgency of the topic is evident in contemporary Nigerian news reports (Ojuroungbe, 2024a & b) that document rising cases of spiritual alternatives to medical care despite rising breast cancer mortality. Hence, a mixed design allows the study to generate both statistically valid insights and rich narrative accounts, producing findings that can inform policy, healthcare engagement, and culturally grounded interventions.

### Study Population

The study population comprises women diagnosed with breast cancer who are receiving treatment or follow-up care at Obafemi Awolowo University Teaching



Hospital Complex (OAUTHC), Ile-Ife, Osun State, Nigeria. This tertiary health institution is one of the leading teaching hospitals in Nigeria, serving as a referral center for patients across southwestern Nigeria and beyond. The population includes both newly diagnosed patients and long-term survivors who are actively engaged in either clinical or supportive care. As of 2025, the oncology department at OAUTHC reported a total of approximately 187 female breast cancer patients on its registry undergoing different stages of care, ranging from diagnosis, chemotherapy, radiotherapy, to post-treatment surveillance (this was achieved through preliminary visitation). These women vary in age, religious affiliations, educational backgrounds, and stages of illness. This diverse demographic context makes them suitable for exploring the intersections between spirituality, religiosity, and medical decision-making regarding the use of remote prayer and complementary practices in breast cancer care.

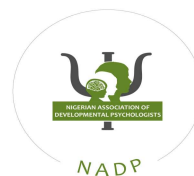
#### Sample and Sampling Procedure

The Taro Yamane sample size formula was adopted to determine the appropriate sample size for this study due to the manageable and finite nature of the target population. A total of approximately one hundred and thirty-nine (139) was the sample size arrived at with ten percent attrition rate. Considering the relatively small size and sensitivity of the research focus, a purposive sampling technique was used to select participants. This non-probability approach allowed the researcher to intentionally recruit participants who were not only accessible but also met specific inclusion criteria, such as current registration with the oncology unit, ability to give informed consent, and willingness to discuss personal religious and spiritual experiences. The use of purposive sampling was essential in ensuring that the study captured rich, relevant, and ethically sound data.

#### Participants Socio-Demographics

A total of one hundred and twenty-eight (128) participated in the present study, making the response rate to be 92.09 percent. The age bracket of the study participants were 34 to 59 years with the mean age being 43.56 and standard deviation of 3.43. Most of the participants (70%) were married with 5% being single and 25% being divorced. Furthermore, 36.4% of the study participants' socioeconomic status was high, as against 43.9% with moderate socioeconomic status, while 19.7% had low socioeconomic status.

#### Research Instruments



The research instruments entail two standardized psychological scales, a survey questionnaire on remote prayer and Key Informant Interview (KII) guide. The two psychological scales are Delaney, (2005) Spirituality Scale (Ss-12), Idehen, (2001) Religious Orientation Test. The survey questionnaires entail socio-demographic characteristics and if they do participate in remote prayer while undergoing treatment or diagnosis. Lastly the KII guide provides structure on conducting and collecting non-numerical data associated with qualitative aspects of the analysis.

Regarding psychometric properties of the research instrument, Edwards (2012) reported a Cronbach Alpha of .94 for Delaney, (2005) Spirituality Scale (Ss-12) while Ekundayo, et al., (2023) reported .88 Cronbach Alpha for Idehen (2001) Religious Orientation Test. Furthermore, the present study obtained .89, .87, .81 Cronbach Alpha for Delaney, (2005) Spirituality Scale (Ss-12) Idehen (2001) Religious Orientation Test, and survey questionnaire on perception and attitude towards remote prayers respectively. KII guide and survey questionnaire were also subjected to test-retest where same questions were asked to a person at an interval of two weeks and responses were cross-checked and had high similarity in response. The goal is to establish the reliability of the instruments. Validity of the scales were not established considering the studies like Idehen (2001); Edwards (2012); Delaney, (2005) and Ekundayo et al., (2023) had already established their validity.

#### Data Collection Procedure

The data collection procedure for the present study involved several key phases designed to ensure the accuracy, sensitivity, and ethical integrity of responses from women diagnosed with breast cancer at Obafemi Awolowo University Teaching Hospital Complex (OAUTHC), Ile-Ife. The process began with formal approval from the hospital's ethical review board, followed by engagement with the oncology unit to access the patient registry and identify eligible participants.

After obtaining informed consent, data collection was conducted using a structured questionnaire that included sections on socio-demographic characteristics, spirituality and religiosity levels, and perceptions and attitudes toward remote prayer in relation to breast cancer diagnosis and treatment. The instruments used to measure spirituality and religiosity were adapted from validated scales but contextualized for the local population and translated where necessary. Spirituality scores were later categorized based on mean scores into high or low levels, while religiosity was classified as deep or superficial based on self-reported frequency of religious practices and personal religious conviction.

The questionnaires were administered in person by trained research assistants familiar with psychosocial oncology, who were also sensitized to handle emotional or sensitive disclosures with empathy and confidentiality. The administration was done in quiet spaces within the hospital to maintain privacy and ensure participants felt safe and unpressured. In cases where respondents required assistance, the research assistants read and interpreted the questions while ensuring that the participants' autonomy and voluntariness were preserved. However, non-numerical data was also collected through Key Informant Interview Guide with eight women who were diagnosed or treated for breast cancer. Their consent was seek inclusive approval to record audio voice of the sessions. Data collection spanned six weeks to accommodate clinic schedules and ensure a high response rate. All completed instruments were coded, anonymized, and stored securely for analysis, preserving the confidentiality and dignity of each participant throughout the process.

## Results

### *Level of Perception and Attitude towards Remote Prayer*

This section of the analysis presents overall level of participants perception and attitude towards remote prayer. Using the mean score from the survey questionnaire on perception and attitude of respondents on remote prayer was revealed on table 2 below:

Table 2: *Level of Perception and Attitude towards Remote Prayer among Respondents (N=128)*

Variables	Categories	Frequency	Percentage
Perception	Positive	78	60.94
	Negative	50	39.06
	Total	128	100.00
Attitude	Positive	75	58.59
	Negative	53	41.41
	Total	128	100.00

Table 2 presents the distribution of respondents based on their level of perception and attitude towards remote prayer. Out of the 128 respondents, 78 (60.94%) exhibited a positive perception of remote prayer in the context of breast cancer diagnosis and treatment, while 50 (39.06%) had a negative perception. In terms of attitude, 75 respondents (58.59%) demonstrated a positive attitude, whereas 53 (41.41%) held a negative attitude. These findings suggest that a majority of the participants both perceive and respond favorably to remote prayer, indicating its

perceived relevance and acceptance as a supportive spiritual practice among women undergoing breast cancer care.

#### Prevalence of Remote Prayer

This aspect of the analysis indicated prevailing levels in which respondents engage in remote prayers. Table 3 presents the outcome of the analysis:

*Table 3: Prevalence of Remote Prayer*

Statement	Response Categories	Frequency	Percentage
Was remote prayer organized before and during treatment of breast cancer?	Yes	107	83.59
	No	21	16.41
	Total	128	100.0

Table 3 shows the prevalence of remote prayer among respondents. A significant majority of participants, 107 out of 128 (83.59%), reported that remote prayer was organized before and during their breast cancer treatment, while only 21 (16.41%) indicated that it was not. This suggests that remote prayer is a common and widely practiced spiritual support mechanism among women undergoing breast cancer care, reflecting its embeddedness in the cultural and religious coping strategies of the population.

#### Impact of Remote Prayer on Breast Cancer Diagnosis and Treatment

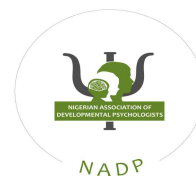
This section made use of simple linear regression to determine the impact of remote prayer on breast cancer diagnosis and treatment. Table four present the outcome of the analysis:

Table 4: Impact of remote prayer on breast cancer diagnosis and treatment

Variable	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>P</i>
(Constant)	19.00	1.30		14.40	.00
Remote prayer	-.50	.04	-.46	10.40	.00

( $R^2 = .21$  F (1,127) =107.71,  $p < .05$ )

Table 4 reveals the statistical impact of remote prayer on breast cancer diagnosis and treatment. The regression analysis shows that remote prayer significantly predicts outcomes in the diagnosis and treatment process with a negative beta coefficient ( $\beta = -0.50$ ), standard error of 0.04, and a standardized beta ( $\beta$ ) of -0.46. The result is



statistically significant ( $t = 10.40, p < .05$ ), indicating that higher reliance on remote prayer is associated with delays or negative outcomes in the medical handling of breast cancer. The model explains 21% of the variance in the outcome ( $R^2 = .21$ ), and the overall model fit is statistically significant ( $F(1,127) = 107.71, p < .05$ ), suggesting that while remote prayer plays a meaningful role in patients' belief systems, it may inversely affect timely clinical engagement.

### Profiling of Respondents

This section aimed at identifying and categorizing respondent into four labels as against the present study procedure. This start with identification of the level of spirituality and religiosity before cross tabulating as well as identifying individuals within each categories with the goal of collecting lived experience.

Table 5: Level of Spirituality and Religiosity

Variables	Categories	Frequency	Percentage
Spirituality	Low	56	43.75
	High	72	56.25
	Total	128	100.0
Religiosity	Deep	70	54.69
	Superficial	58	45.31
	Total	128	100.0

Table 5 presents the distribution of respondents based on their levels of spirituality and religiosity. Out of 128 participants, 72 (56.25%) were identified as having a high level of spirituality, while 56 (43.75%) had a low level. In terms of religiosity, 70 respondents (54.69%) exhibited deep religiosity, whereas 58 (45.31%) were categorized as having superficial religiosity. These findings suggest that the majority of women diagnosed with breast cancer in the study population exhibit strong spiritual orientation and deep religious commitment, which may influence their health-seeking behavior and openness to practices such as remote prayer in managing their condition.

Table 6: Categorising Respondents

Category Label	Frequency	Percentage
Category A: Low Spirituality & Deep Religiosity	30	23.44
Category B: Low Spirituality & Superficial Religiosity	26	20.31
Category C: High Spirituality & Deep Religiosity	42	32.81
Category D: High Spirituality & Superficial Religiosity	30	23.44
Total	128	100.00

Table 6 shows how respondents were distributed across four distinct categories combining levels of spirituality and religiosity. A significant proportion of participants (32.81%) fell under Category C, which includes individuals with high spirituality and deep religiosity. These respondents likely reflect a strong integration of faith into their lived experience, often reporting emotional strength, meaning-making, and optimism in their cancer journey. Category A (23.44%) consists of those with low spirituality but deep religiosity, suggesting a more ritual-based or external religious practice without strong inner spiritual connection; such individuals may have leaned heavily on formal religious structures or figures but struggled with personal spiritual conviction. Category D (23.44%), representing high spirituality and superficial religiosity, describes those who found personal, perhaps non-institutional, spiritual meaning in their illness experience, valuing connection with the divine outside of traditional religious frameworks. Category B (20.31%), comprising those with low spirituality and superficial religiosity, likely had minimal religious or spiritual coping mechanisms, possibly relying more on biomedical interventions or experiencing more emotional and existential struggles. The goal here is to have two respondents in each category so as to capture diverse lived realities that shape how women diagnosed with breast cancer perceive and engage with remote prayer and treatment options.

*Table 7: One Way ANOVA showing Difference in the Categorisation*

Source of Variation	Sum of Squares (SS)	df	Mean Square (MS)	F	p-value
Between Groups	18.21	3	6.07	5.14	0.002
Within Groups	147.78	124	1.19		
Total	165.99	127			

The one-way ANOVA result shows a statistically significant difference in the experience and engagement with remote prayer across the four spirituality-religiosity categories ( $F(3,124) = 5.14, p = 0.002$ ). This implies that individuals' combined levels of spirituality and religiosity influence how they perceive and utilize remote prayer in the context of breast cancer diagnosis and treatment.

*Table 8: Post Hoc Comparison (Tukey HSD) of Remote Prayer Engagement Across Spirituality-Religiosity Categories*

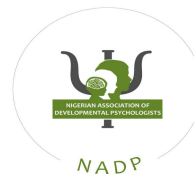
Group Comparison	Mean Difference	Std. Error	p-value	95% CI (Lower - Upper)
A: Low Spirituality & Deep Religiosity vs B	0.45	0.28	0.42	-0.28 - 1.18
A: Low Spirituality & Deep Religiosity vs C	-1.12*	0.27	0.001	-1.85 - -0.39

A: Low Spirituality & Deep Religiosity vs D	-0.78*	0.28	0.031	-1.52 – -0.04
B: Low Spirituality & Superficial Religiosity vs C	-1.57*	0.29	0.000	-2.35 – -0.79
B: Low Spirituality & Superficial Religiosity vs D	-1.23*	0.30	0.007	-2.05 – -0.41
C: High Spirituality & Deep Religiosity vs D	0.34	0.26	0.57	-0.37 – 1.06

The post hoc analysis reveals significant differences in remote prayer engagement among the four spirituality–religiosity categories. Specifically, women in Category C (High Spirituality & Deep Religiosity) reported significantly higher engagement with remote prayer compared to those in Categories A (Low Spirituality & Deep Religiosity) and B (Low Spirituality & Superficial Religiosity). Similarly, Category D (High Spirituality & Superficial Religiosity) also showed significantly higher engagement than Category B. These findings suggest that spirituality, more than religiosity alone, plays a key role in motivating remote prayer during cancer treatment, showing the importance of integrating spiritual support into care for women with strong spiritual orientations

*Lived experience for Respondents in Category A*

Women in Category A, defined by low spirituality and deep religiosity, often navigate their health decisions through strong adherence to religious doctrines, rituals, or religious leaders, even when their inner spiritual conviction may not be deeply internalized. Their lived experiences reveal how external religious commitments can delay timely medical intervention. One respondent shared, “I didn’t go to the hospital immediately because my pastor said it was a spiritual attack, and I needed deliverance sessions first.” This illustrates a dependency on religious authority that can override early medical consultation. Another woman explained, “I believed in prayers more than anything. Even though I was scared, I kept thinking if I just kept fasting and attending night vigils, the lump would disappear.” Despite holding a low personal sense of spiritual reflection or inner connection, these women often follow religious routines rigidly. A second participant also noted, “When the prophet prayed for me, he said it wasn’t ordinary, and I must not trust doctors too much. That made me delay treatment until it became serious.” These patterns contribute to reduced medical compliance and an over-reliance on religious alternatives to healthcare. These narratives indicate how lived religious practices, in the absence of strong spiritual discernment, can negatively affect critical health decisions and delay effective breast cancer diagnosis and treatment.



---

*Lived experience for Respondents in Category B*

Women in Category B, characterized by low spirituality and superficial religiosity, often face breast cancer with minimal internal spiritual grounding and a weak attachment to organized religious practices. Their health decisions tend to be shaped more by fear, misinformation, and social influences than by structured belief systems. One participant explained, "I kept ignoring the signs because I didn't really think it was serious, and I wasn't the prayer type or someone who believed strongly in anything spiritual." This lack of both spiritual and religious engagement contributed to delays in seeking diagnosis. Another noted, "I don't go to church regularly, and when I found the lump, I didn't tell anyone or go to the hospital for months. I just hoped it would go away on its own." These lived experiences reveal a form of passive disengagement that affects timely health-seeking behavior and compliance with medical advice, rooted not in deliberate resistance but in absence of support structures and conviction.

*Lived experience for Respondents in Category C*

Women in Category C, marked by high spirituality and deep religiosity, often demonstrate proactive health-seeking behavior strongly influenced by both personal spiritual conviction and structured religious engagement. Their decisions are usually prayerfully considered yet balanced with trust in medical intervention. One participant shared, "The moment I felt the lump, I prayed and asked for divine guidance, but I didn't waste time; I went to the hospital that same week because I believe God also works through doctors." Another explained, "My pastor always encourages us to check ourselves and go for screening. I fasted and prayed, but I also followed my doctor's instructions fully because I saw it as part of obedience and faith." Their lived experiences reflect an integrated approach where faith does not hinder, but rather reinforces, timely diagnosis and medical compliance.

*Lived experience for Respondents in Category D*

Women in Category D, identified by high spirituality and superficial religiosity, often rely on internal spiritual convictions rather than structured religious doctrines to guide their health decisions. Their approach to breast cancer care tends to be introspective, driven by personal beliefs rather than communal or institutional religious influence. One participant stated, "I don't go to church much, but I meditate and talk to God. When I noticed something strange, I felt strongly within me that I should seek help immediately, and I did." Another expressed, "I'm very spiritual in my own way. I didn't need a pastor to tell me what to do. I prayed about it and felt



peace going to the hospital.” These accounts show that while organized religion may be less influential, personal spirituality empowers them to make timely and informed medical decisions.

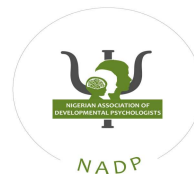
#### *Point of Similarity and Divergent among Categories Label*

All four categories share the recognition of a divine presence or religious framework in navigating breast cancer, indicating that regardless of the level of spirituality or religiosity, faith-based elements remain embedded in their coping systems. This commonality reflects Nigeria’s deeply religious culture where both institutional religion and personal spirituality are invoked during health crises. However, major differences lie in how this faith translates into healthcare decision-making. Women in Category C (high spirituality and deep religiosity) combine strong personal faith with active religious commitment, leading to greater openness to remote prayer and a willingness to integrate it with medical care. Category D (high spirituality and superficial religiosity) also shows engagement in remote prayer but tends to personalize the spiritual experience, showing moderate medical compliance with less emphasis on religious institutions.

In contrast, Categories A and B, both characterized by low spirituality, differ in their depth of religious commitment. Category A (low spirituality and deep religiosity) relies heavily on religious rituals without personal spiritual conviction, often delaying formal medical intervention while seeking divine solutions. Category B (low spirituality and superficial religiosity) demonstrates the lowest engagement with remote prayer and formal healthcare, often showing apathy or skepticism due to lack of deep belief or spiritual motivation. These differences reveal how the depth and type of faith expression shape health-seeking behaviors across the categorization.

#### *Point of Convergent and Divergent between Quantitative and Qualitative Findings*

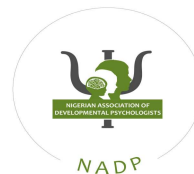
The point of convergence between the quantitative and qualitative findings in the study lies in their shared conclusion that spirituality and religiosity significantly influence how women diagnosed with breast cancer engage with remote prayer and make decisions regarding healthcare. Quantitative results showed statistically significant differences in remote prayer engagement across the four categories of spirituality and religiosity, particularly highlighting the high engagement among women in Category C (high spirituality and deep religiosity). This was strongly confirmed in the qualitative findings where women in this category described balancing prayer with medical compliance, emphasizing that faith reinforced their treatment decisions rather than delaying them.



However, the findings diverge in the depth of explanation. While the quantitative data established broad patterns and statistical significance such as the negative impact of excessive reliance on remote prayer on timely diagnosis and treatment. The qualitative data illuminated the *how* and *why* behind these patterns. For example, the regression analysis showed that increased reliance on remote prayer was associated with poorer medical outcomes, but it was the qualitative excerpts that explained this delay in care through narratives of dependence on spiritual authorities or internal spiritual hesitation. Women in Category A and B described relying on religious leaders, neglecting hospital care, or passively waiting for divine intervention details not captured in numeric trends. Together, the convergence reinforces the validity of the findings, while the divergence enriches the interpretation by uncovering lived experiences, emotional reasoning, and sociocultural contexts that quantitative tools alone cannot fully grasp. The integration of both perspectives therefore provides a more holistic understanding of the impact of spirituality and religiosity on breast cancer treatment behaviour.

#### Discussion and Conclusion

The study aimed to examine the perception and attitude towards remote prayer and its impact on breast cancer diagnosis and treatment among women receiving care at Obafemi Awolowo University Teaching Hospital, Ile-Ife. Specifically, the study sought to assess how different levels of spirituality and religiosity shape women's reliance on remote prayer, medical compliance, and health-seeking behaviours. The first objective of the study which was to determine the level of perception and attitude towards remote prayer. The quantitative findings revealed that 60.94% of the participants had a positive perception of remote prayer, while 58.59% demonstrated a positive attitude toward it. This indicates a generally favourable disposition towards remote prayer among women diagnosed with breast cancer. The qualitative findings complemented this, especially among women in Category C (high spirituality and deep religiosity), who emphasized that prayer provided psychological comfort and strengthened their resolve to undergo treatment. One participant noted that prayer did not substitute for medical attention but empowered her emotionally to seek care early. These findings align with Orticelli (2022), who described prayer as a functional decision-making framework for breast cancer survivors, and with Ogunkorode et al. (2021), who highlighted how faith practices shape coping responses. The implication is that positive perception and attitude toward remote prayer can support emotional stability, but must be carefully integrated with biomedical care to avoid overdependence.



The second objective of the study which was to examine the prevalence of remote prayer among women diagnosed with breast cancer. Quantitatively, 83.59% of participants confirmed they engaged in remote prayer before or during treatment, indicating it is a highly prevalent coping mechanism. This prevalence reflects the embeddedness of faith-based healing practices in Nigeria's health culture, corroborated by qualitative accounts. Women from all four categories engaged in remote prayer to varying degrees, with motivations shaped by the depth of their spirituality or religiosity. This finding supports Ojurongbe (2024a), who reported that many Nigerians prioritize faith-based solutions, including miracle water and soaps, over clinical care. The implication is that while remote prayer is culturally normative, its widespread adoption calls for healthcare practitioners to recognize and work with patients' spiritual frameworks in treatment planning.

The third objective of the study which was to also examine the impact of remote prayer on breast cancer diagnosis and treatment. The result showed that increased reliance on remote prayer had a statistically significant negative effect on diagnosis and treatment outcomes ( $\beta = -0.50$ ,  $p < .05$ ), explaining 21% of the variance. This suggests that while remote prayer is emotionally beneficial, excessive dependence may delay timely clinical intervention. Qualitative findings particularly among women in Categories A and B confirmed this. Respondents reported postponing hospital visits due to faith in spiritual solutions or passive disengagement. For example, one woman shared, "I was attending deliverance sessions instead of going for check-ups." This mirrors findings from Smith (2021), who found that strong religious beliefs can act as both motivators and barriers to screening. The implication here is the urgent need for balance between spiritual support and timely medical engagement to avoid negative treatment outcomes.

The fourth objective of the study which was to determine the difference in remote prayer among the categorisation labels A–D

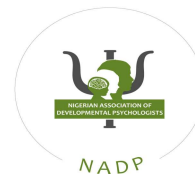
The results revealed significant differences across the four spirituality-religiosity categories ( $F(3,124) = 5.14$ ,  $p = 0.002$ ). Post hoc analysis showed that Category C (high spirituality and deep religiosity) reported significantly higher remote prayer engagement compared to Categories A and B. Category D also showed higher engagement than Category B. This underscores the finding that spirituality, more than religiosity alone, predicts higher—but more constructive—use of remote prayer. In contrast, low spirituality combined with either deep or superficial religiosity was associated with poorer medical compliance. This aligns with Kelly et al. (2022), who argued that conflating spirituality and religiosity can obscure their distinct impacts on health decisions. The implication is that both the depth and type of faith matter;



high spirituality may enhance medical engagement, while uncritical religiosity can lead to avoidance or delay.

The last objective of the study which was to determine how lived spiritual and religious experiences affect decision-making regarding timely diagnosis, medical compliance, and the use of formal healthcare services. Qualitative findings from the eight key informants, two from each category, provided rich insights into how lived experiences influenced health behaviour. Category A respondents delayed diagnosis due to dependence on spiritual authorities, often at the cost of worsening health. One participant explained, “My prophet told me not to go to the hospital yet—it was spiritual warfare.” Category B respondents were largely disengaged both spiritually and religiously, leading to passive health behaviour and delayed action. Category C respondents integrated prayer and medical compliance. A participant stated, “I prayed and went to the hospital the same week. Faith gave me strength to face treatment.” Category D respondents leaned on personal spirituality to make timely health decisions without needing external religious validation. These patterns mirror findings by Arellano (2024), who observed similar coping strategies among Indigenous women balancing spiritual belief and medical compliance. The implication is that understanding the interplay between lived faith experiences and treatment behaviour is essential for developing responsive, patient-centered care models. The study found that while remote prayer is widely practiced and often positively perceived, its impact on breast cancer treatment is mixed and highly dependent on the interplay between spirituality and religiosity. Where spiritual insight is strong and paired with rational health engagement, remote prayer becomes supportive. Where religiosity dominates without personal spiritual depth, it may delay or replace medical care. These findings reinforce the need for culturally sensitive healthcare that respects spiritual frameworks while encouraging early detection and biomedical treatment adherence.

The findings of this study paint a vivid picture of how deeply faith shape the lived realities of women facing breast cancer in Nigeria, particularly within a setting like Obafemi Awolowo University Teaching Hospital. This is not just a discussion about religion or belief; it’s a practical reflection on how spiritual frameworks actively shape what women *do* or *don’t do* when confronted with a life-threatening illness. One striking reality is that remote prayer is not just a spiritual activity but a widespread coping tool. Over 83% of respondents admitted to engaging in remote prayer during their illness. That’s not surprising in a society where churches and mosques are often more accessible than diagnostic centres. In some communities, it’s easier to find a deliverance session than a mammogram machine. But this



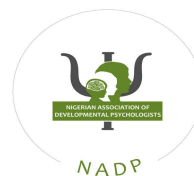
convenience comes with a consequence. The study's data reveals that the more some women relied solely on remote prayer, the more likely they were to delay diagnosis and treatment, essentially swapping hospital visits for holy water, and chemotherapy for prophecy as indicated by Ojuroungbe, (2024a).

The difference in outcomes becomes even clearer when you look at the four categories of women. Those in Category C with high spirituality and deep religiosity showed that prayer does not have to be an alternative to medicine. For them, prayer was fuel, not a substitute. They prayed, fasted, and still kept their medical appointments. They saw doctors and prophets as allies, not enemies. This indicated that's this kind of spiritual balance that can save lives. In contrast with Category A, where religiosity is deep but spirituality is shallow. These women clung tightly to religious rules but lacked the inner spiritual clarity to make proactive decisions. One participant delayed hospital visits because her pastor insisted it was a spiritual battle, not a medical condition. These women are not resistant to care because they lack faith, it's because their faith is tethered more to human authority than to divine wisdom or inner guidance.

### Conclusion

The findings of this study reveal that spirituality and religiosity play a profound role in shaping how women diagnosed with breast cancer perceive and engage with remote prayer, and how these beliefs ultimately influence their decisions around diagnosis and treatment. While a majority of the respondents had positive perceptions and attitudes towards remote prayer, its influence varied significantly across spiritual-religious profiles. Women with high spirituality and deep religiosity were more likely to integrate prayer with timely medical care, while those with low spirituality, particularly when paired with deep or superficial religiosity, were more prone to delays in seeking formal treatment. The prevalence of remote prayer as a common practice underscores the need for healthcare systems to approach cancer care through a culturally grounded lens that respects and works with patients' spiritual orientations. The study concludes that prayer, when used as emotional support and not a substitute for medical intervention, can enhance treatment experiences. However, uncritical dependence on spiritual practices in isolation from medical care presents a serious risk to early detection and survival outcomes. Addressing this requires coordinated efforts between healthcare professionals, religious leaders, and public health educators to bridge faith and medicine in the context of breast cancer care.

### Recommendation



The findings offer a practical wake-up call for interventions in Nigeria since it cannot be ignored especially the spiritual landscape. Doctors and nurses must be equipped not only with medical tools but also with cultural fluency. Faith leaders, too, must be included in cancer awareness campaigns not as replacements for oncologists but as partners in early detection. Imagine the power of a sermon that tells women to check their breasts and pray afterward not the other way around.

This study also calls for more than statistics. It demands empathy. It reminds us that when a woman chooses prayer over medicine, she is not being irrational, she is acting within the logic of her lived reality. The solution is not to strip away her faith but to build a healthcare model that can hold both scripture and science in the same hand. In real terms, this means training health workers to ask, “Have you prayed about this?” not to challenge it, but to use it as a bridge to say, “Now let’s also see what the doctor says.” It means giving room for chaplains and spiritual counselors to work alongside oncologists, not behind them. In the end, this study does not pit faith against medicine. It highlights how when faith is rooted in deep spirituality and balanced with medical insight, it becomes a source of strength. But when religion is isolated from critical thinking, it can lead to fatal delays. The practical path forward is clear: honor belief, build trust, and bring healthcare closer to the emotional and spiritual heart of the people it serves.

Based on the results of this study, it is recommended that healthcare providers at Obafemi Awolowo University Teaching Hospital and similar institutions integrate spiritual counseling into oncology care, acknowledging the importance of remote prayer and faith practices among patients. There should be a collaborative framework where spiritual leaders are sensitized and trained to support early diagnosis and treatment adherence rather than unknowingly encouraging delay through exclusive reliance on spiritual intervention. Cancer awareness campaigns should be designed to resonate with culturally embedded religious values, using faith-based language that encourages women to combine prayer with medical consultation. Hospitals should also consider the inclusion of faith-friendly spaces or chaplaincy support to bridge the gap between belief and biomedical care. Public health policymakers should develop community-based education programs that address misconceptions about cancer while also respecting spiritual worldviews, targeting both high and low spirituality/religiosity groups. Additionally, future research and health interventions must prioritize understanding the nuanced spiritual profiles of patients, especially those in low-spirituality or superficially religious categories, who are more likely to exhibit delay or disengagement from formal healthcare services.



## References

- Arellano, C. (2024). *Spiritual/Religious Beliefs Among Indigenous Rarámuri Women With Cancer: Qualitative Study* (Doctoral dissertation, The Chicago School of Professional Psychology).
- Azhar, S., Wyatt, L. C., Jokhakar, V., Patel, S., Raveis, V. H., Kwon, S. C., & Islam, N. S. (2022). Associations between spiritual health locus of control, perceived discrimination and breast and cervical cancer screening for muslim american women in New York city. *Clinical breast cancer, 22*(4), e586-e596.
- Edwards, S. D. (2012). Standardization of a spirituality scale with a South African sample. *Journal of Psychology in Africa, 22*(4), 649-653.
- Ekundayo, O. O., Uthman, T. J., & Oke, J. O., (2023). Religiosity as a predictor of Redeemer University Undergraduates' sexual behaviour: Does age, gender and family type have roles to play? *African Review of Migration and Environment*. Vol. 7:322-339
- Global Cancer Observatory (GLOBOCAN). (2021). *Nigeria cancer fact sheet*. Retrieved from <https://gco.iarc.fr>
- Kelly, E. P., Paredes, A. Z., Tsilimigras, D. I., Hyer, J. M., & Pawlik, T. M. (2022). The role of religion and spirituality in cancer care: An umbrella review of the literature. *Surgical Oncology, 42*, 101389.
- Ogunkorode, A., Holtslander, L., Ferguson, L., Maree, J. E., Anonson, J., & Ramsden, V. R. (2021). Seeking divine intervention to manage the advanced stages of breast cancer in Southwestern Nigeria. *Cancer Nursing, 44*(3), E163-E169.
- Ojuroungbe, S. (2024a, September 15). *Miracle competes with medicine as Nigerians dump hospitals for healing water, soap*. *Punch*. [facebook.com+10punchng.com+10punchng.com+10](https://www.facebook.com/10punchng.com+10punchng.com+10)
- Ojuroungbe, S. (2024b, October 2). *Breast cancer: Expert advocates health policy reform*. *Punch*. [punchng.com+3](https://www.punchng.com+3)
- Orticelli, B. (2022). Integrating prayer and faith in complementary alternative medicine into treating breast cancer: Lived experiences.



- 
- Pew Research Center. (2020). *Religion in Africa*. Retrieved from <https://www.pewresearch.org/religion/2020/04/27/religion-in-africa/>
- Smith, V. (2021). *Perceptions and Spiritual Beliefs about Cancer Screening in Women with a Family History of Breast Cancer* (Doctoral dissertation, Walden University).
- World Health Organization. (2024). *Breast cancer*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>