

**SPIRITUALITY AND RELIGIOSITY IN ONCOLOGY: A SOCIAL STUDY OF PATIENTS' NEEDS**

**Chidiebere Agbakwuru<sup>1</sup>, Mutiu Jimoh<sup>2</sup>, Noah Olumide<sup>3</sup>, Anthonia Sowunmi<sup>1</sup>, Wilfred Nwachukwu<sup>4</sup>**

- 1- Medserve- LUTH Cancer Centre, Lagos state
- 2- Radiation Oncology Department, University College Hospital, Ibadan, Oyo state
- 3- Medicine and Surgery Department, University of Lagos, Lagos state
- 4- Archdiocese of Owerri, Imo state

**Corresponding Author:** Chidiebere Agbakwuru, Medserve- LUTH Cancer Centre, Lagos state, [cagbakwuru@nlcc.ng](mailto:cagbakwuru@nlcc.ng)

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**ABSTRACT**

**Background:** Cancer diagnosis and treatment impose significant psychological and existential burdens, particularly in high-religiosity settings like Nigeria, where spirituality and religion often serve as key coping resources. This study examined spiritual well-being (SWB) and its associations with perceived relational and existential outcomes among oncology patients using a validated tool in a Nigerian tertiary cancer centre.

**Methods:** A descriptive cross-sectional study was conducted at the Medserve-Lagos University Teaching Hospital (LUTH) Cancer Centre (MLCC) from January to April 2023. A convenience sample of 304 adult patients with histologically/radiologically confirmed cancer, receiving active treatment, and able to consent, completed the interviewer-administered EORTC QLQ-SWB32 questionnaire. The tool assesses SWB across subscales: Relationships with Others (RO), Relationships with Self (RS), Relationships with Someone or Something Greater (RSG), Existential Issues (EX), Relationship with God (RG), and a global SWB item. Descriptive statistics summarised subscale scores (transformed 0–100 scale, higher = better functioning). Independent samples t-tests compared subscale means between believers and non-believers (significance at  $p < 0.05$ ). Data were analysed using IBM SPSS version 27.

**Results:** Participants were predominantly believers (98.8% reported belief in God or something greater). Mean subscale scores were highest for RG ( $90.87 \pm 17.86$ ) and RSG ( $85.51 \pm 13.77$ ), and lowest for RS ( $61.03 \pm 18.79$ ). Global SWB averaged  $79.79 \pm 19.55$ , with 78.1% rating it as good or very good. Believers scored significantly higher than non-believers on RSG (85.8 vs. 57.0,  $p=0.001$ ), RG (90.9 vs. 68.8,  $p=0.002$ ), and global SWB (80.3 vs. 39.3,  $p<0.001$ ). No significant differences emerged for RO, RS, or EX subscales.

**Conclusion:** In this Nigerian oncology sample with near-universal religiosity, spiritual well-being was generally high, particularly in relational and transcendent domains. Believers reported superior global SWB and connections to something greater, suggesting spirituality supports existential coping and perceived quality of life markers. These findings underscore the need for routine spiritual needs assessment and integration of spiritual care in holistic oncology services in high-religiosity African contexts. Further longitudinal and multivariable studies are warranted to clarify causal pathways.

**Keywords:** Spirituality, Religiosity, Spiritual well-being, Oncology, Cancer patients, EORTC QLQ-SWB32, Nigeria, Quality of life

## INTRODUCTION

Longing for sustainability becomes tangible and necessary in conditions where the end of life seems inevitable. Cancer is a life-changing disease that affects millions of people around the world and is considered one of the leading causes of death worldwide.<sup>1</sup> In African culture, cancer is frequently viewed as a death sentence. As a result, accepting a cancer diagnosis and educating patients and their families about the disease, its side effects, and the range of available treatments typically cause psychological hardship for both parties.<sup>2</sup> The impact of cancer is overwhelming and often leaves the patient relying on complementary medicine in addition to conventional treatment due to uncertainty about the state of life.<sup>3</sup> Complementary and alternative medicine includes therapy such as acupuncture, biofeedback, hypnosis, or the use of botanicals to involve themselves in the process of therapy, a form of spirituality.<sup>4</sup> In recent years, there has been a growing recognition of the role of spirituality and religion in oncology care.<sup>5</sup> Spiritual care is an essential component of holistic oncology care,<sup>6</sup> which focuses on treating the whole person and not just the physical disease.<sup>7</sup>

Spirituality is the search for meaning, purpose, and transcendence.<sup>8</sup> It is a personal and subjective experience that involves a person's beliefs, values, and worldview.<sup>9</sup> Religion, on the other hand, is a formalised system of beliefs and practices that are shared by a group of people.<sup>10</sup> It is crucial not to conflate both, as there are various vistas of outcomes that manifest as they interact along different lines and at different levels.

They bear several similarities and converge very frequently in their concepts and ethical foundations. While they are not the same, they often intersect and influence each other, giving a semblance of interchangeability of meaning.<sup>11</sup>

The role of spirituality and religion in oncology care has been the subject of much research in recent years.<sup>12</sup> Most of the evidence related to spiritual needs has been yielded by studies conducted among individuals whose lives are imminently threatened by pain, suffering, and death, and this example includes patients living with cancer or those receiving palliative care for other terminal conditions.<sup>13</sup> Studies have shown that spiritual and religious beliefs have a significant impact on a person's experience of cancer, their coping strategies, and their overall well-being.

Furthermore, spiritual care has been shown to improve patient outcomes, including reduced symptoms of depression, anxiety, and pain and improved quality of life.<sup>14</sup> When it comes to providing spiritual care to the desires of patients with cancer, the healthcare system often falls inadequate. A higher chance of despair and a decreased sense of purpose, tranquillity, and dignity may result from unsatisfied spiritual demands and spiritual well-being.<sup>15</sup> This study, therefore, aims to explore the relationship between the utility of spiritual practices and patients' wellbeing, coping abilities, outlook (hope), tendency to compliance to therapy, and global perception of health.

## MATERIALS AND METHODS

### Study design and setting

A descriptive cross-sectional study was conducted among a total of 304 patients living with cancer attending the Medserve-Lagos University Teaching Hospital Cancer Centre (MLCC).

LUTH is an 800-bed tertiary teaching and referral hospital in Lagos, Nigeria. Through a public-private partnership model, LUTH, in partnership with the NSIA Healthcare Development and Investment Company, opened the NLCC, an advanced cancer treatment centre that has synchronised cancer treatment services in LUTH since 29 May 2019.

### Data Collection

Data collection was interviewer-based using a structured questionnaire with the EORTC-QLQ SWB32 scale (16). The study received ethical approval (ADM/DCST/HREC/APP/5689) from the Ethics Committee on the 28th of April 2023.

### Patients Selection

Patients' selection was done over a 4-month period at all clinics (chemotherapy clinic, radiotherapy side-effects clinic, oncology assessment clinic, psycho-oncology clinic and follow-up clinic) within the listed study institution's cancer centre.

### Inclusion Criteria

Histologically and radiologically diagnosed cancer cases  
Consenting patients  
Completely filled case questionnaires

### Exclusion Criteria

Non-consenting patients  
Patients who haven't received active care at the centre  
Paediatric cases and patients unable to consent  
Altered cognition

### Sampling Methods

To recruit patients for the study, non-probability convenience sampling was used; picking patients who presented across the above-named clinics at the centre, using the exclusion criteria listed above. This allowed for accrual of the stated sample size over a period of ~ 4 months.

### Data Collection Instruments

EORTC-QLQ SWB32 consists of 31 questions that use a four-point Likert scale, ranging from "Not at all (1)—A little (2)—Quite a bit (3)—Very much (4)" and a 7-point global spiritual well-being (G-SWB) scale from 0= "do not know or cannot answer," 1= "very poor," to 7= "excellent." From the primary scales, we calculated scores for the following categories as described previously (16): (1) relationships with others (RO) (six items), (2) relationships with self (RS) (five items), (3) relationships with someone or something greater (RSG) (five items), and (4) existential issues (EX) (six items). SWB32 also includes a single-item scale: item 26 (RG: Relationship with God). Items 22 and 23 identify patients with a belief for whom the single-item scale RG is applicable. The primary validation paper included a fifth category, Change (CH) (four items). These items comprised two for all respondents, and they addressed changes in feelings about life and two for believers only, which addressed changes in beliefs. Such changes could be

either positive or negative. A scale score for just these four items is not meaningful. However, they were retained in the measure because they enabled the collection of clinically important information.

### **Data Analysis**

The data analysis for the study involved both descriptive and inferential statistics. Descriptive statistics were used to summarise the scores on the SWB32 scales. Inferential statistics such as correlation analysis and independent t-testing were used to test the study hypotheses and examine the relationships between variables of interest. Correlation analysis was used to examine the

bivariate relationships between variables, such as the relationship between each subscale of the EORTC SWB32 subscale. A T-test was used to analyse differences between groups. Data analysis was conducted using IBM SPSS version 27. The significance level was set at  $p < 0.05$ . The results of the data analysis are presented in tables, graphs, and figures.

### **RESULTS**

A total of 304 oncology patients completed the EORTC QLQ-SWB32 questionnaire. Descriptive findings are presented below.

**Table 1: Spiritual well-being measured by EORTC QLQ-SWB32 in all participants.**

Statements	Not at all n(%)	A little n(%)	Quite a bit n(%)	Very much n(%)
<b>Relationship with others (RO)</b>				
I have felt able to share thoughts about life with people who are close to me	8(2.6)	41(13.5)	95(31.4)	159(52.5)
I have felt loved by those who are important to me	5(1.7)	26(8.6)	56(18.6)	214(71.1)
I have felt that I have someone to talk to about my feelings	15(5.0)	30(10.0)	86(28.6)	170(56.5)
I have felt able to trust others	35(11.8)	62(20.9)	124(41.8)	76(25.6)
I have felt able to forgive others for things they have done	4(1.3)	41(13.6)	103(34.2)	153(50.8)
I have felt valued as a person	5(1.7)	27(9.0)	72(24.0)	196(65.3)
<b>Relationship with Self (RS)</b>				
I have felt troubled	97(32.0)	84(27.7)	67(22.1)	55(18.2)
I have felt lonely	131(43.4)	82(27.2)	49(16.2)	40(13.2)
I have had worries and/or concerns about the future	48(15.9)	51(16.9)	68(34.8)	144(32.5)
I have wondered whether anything can be done for me	61(20.5)	55(18.5)	92(31.0)	89(30.0)
I have a feeling that it is unfair that I am ill	85(28.6)	65(21.9)	67(22.6)	80(26.9)
<b>Existential issues (EX)</b>				
I have felt able to deal with problems	12(4.0)	60(19.9)	106(35.2)	123(40.9)
I have felt at peace with myself.	11(3.7)	48(15.8)	103(34.2)	139(46.2)
I have been able to find things I enjoy doing.	21(6.9)	59(19.5)	92(30.4)	131(43.2)
I have felt that my life is fulfilling	6(2.0)	33(11.0)	105(34.9)	157(52.2)
I have felt that my life is worthwhile	10(3.3)	33(11.0)	80(26.8)	176(58.9)
I have felt able to plan for the future	35(11.7)	51(17.0)	107(35.7)	107(35.7)
<b>Relationship with someone or something greater (RSG)</b>				
I have had times for quietness, prayer, or meditation.	13(4.3)	29(9.6)	74(24.6)	185(61.5)
I have felt that it is important that other people pray for me	17(5.6)	25(8.2)	66(21.7)	196(64.5)
I feel that I will live on through my words, deeds, and/or influence on other people	18(6.1)	26(8.8)	112(38.1)	138(46.9)
I believe in life after death	28(9.4)	20(6.7)	47(15.8)	202(68.0)

<b>I have spiritual well-being Relationship with God (RG)</b>	11(3.7)	22(7.4)	74(24.9)	190(64.0)
<b>I feel connected to God or to someone or something greater than myself</b>	7(2.4)	23(7.8)	43(14.6)	221(72.7)
<b>I believe in God or someone or something greater than myself</b>	7(2.3)	8(2.6)	25(8.3)	262(86.8)
<b>I have always believed in God or in someone or something greater than myself</b>	5(1.7)	12(4.0)	33(10.9)	253(83.5)
<b>Change (CH)</b>				
<b>My beliefs have changed since have felt less well</b>	189(64.1)	23(7.8)	47(15.9)	36(12.2)
<b>My beliefs have changed in the last few weeks.</b>	184(62.2)	26(8.8)	44(14.9)	42(14.2)
<b>My feelings about life have changed since have felt less well</b>	89(29.6)	61(20.3)	79(26.2)	72(23.9)

**Table 2: Spiritual well-being measured by EORTC QLQ-SWB32 in all participants.**

How will you rate your spiritual well-being?						
Don't know	Very Poor	Poor	Fair	Very fair	Good	Very Good
5 (1.7)	1 (0.3)	14 (4.8)	44 (15.1)	61 (20.9)	70 (24.0)	97 (33.2)

**Table 2** contains a singled-out section of the EORTC SWB32, with a single question for the rating of the overall spiritual well-being. The majority of the participants have good spiritual well-being, with 6.8% having less-than-satisfactory states.

**Table 3: The population of oncology patients who utilize spiritual practices**

Statements	Not at all n(%)	A little n(%)	Quite a bit n(%)	Very much n(%)
<b>I believe in God or something greater than myself</b>	7(2.3)	8(2.6)	25(8.3)	262(86.8)
<b>I have always believed in God or in something greater than myself</b>	5(1.7)	12(4.0)	33(10.9)	253(83.5)

**Table 3** reveals that 98.8% of the participants in this study believe in God or something greater than themselves. This shows a high level of people who believe in religion. This is expected based on statistics on spirituality in the study area, a state in Nigeria; the nation has over 90% of its entire population as believers in a particular religion and less than 10% with no belief in any

religion. Several studies have established the high religiosity among Nigerians, especially among sick Nigerians.<sup>2</sup>

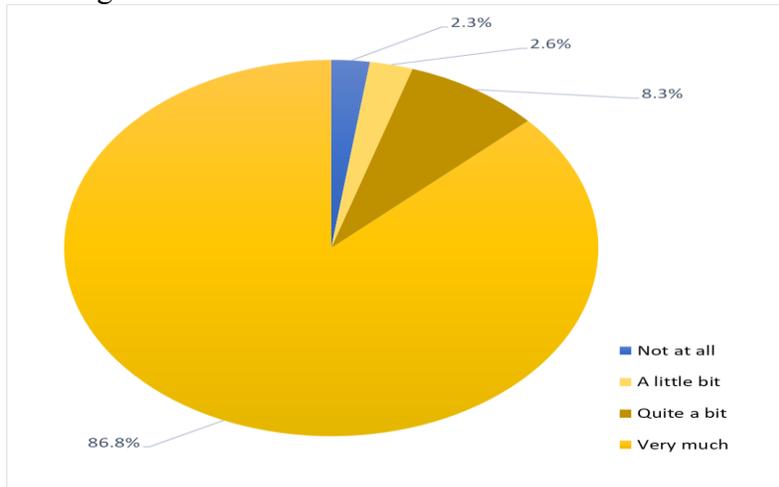


Figure 1: Population of studied oncology patients who believe in spirituality

Table 4: Summary of the mean scores and Cronbach's alpha for each scale in the EORTC QLQ-SWB32.

Statements	Mean	SD	No of items	Cronbach's alpha
Relationship with others	83.59	13.03	6	0.75
Relationship with self	61.03	18.79	5	0.71
Relationship with someone or something greater	85.51	13.77	5	0.63
Existential issues	79.82	13.61	6	0.66
Relationship with God	90.87	17.86	1	1
Global spiritual well-being	79.79	19.55	1	1

Table 4 contains the mean of each subscale in a transformed score of 0-100, with 100 as the most functional section. The participants of the study had their highest level of functioning in their relationship with God, which is 90.87, and the least functional aspect is their relationship with themselves, with the lowest score of 61.03%.

**Table 5: Comparing the outcome of spiritual well-being in a believer and unbeliever**

	Mean		P value
	Believe	Not believe	
Relationship with others	83.5	77.9	0.99
Relationship with self	61.3	53.0	0.319
Relationship with someone or something greater	85.8	57.0	0.001
Existential issues	79.8	85.8	0.41
Relationship with God	90.9	68.8	0.002
Global spiritual well-being	80.3	39.3	0.000

Independent samples t-tests compared subscale means between believers (n ≈ 300) and non-believers (n ≈ 4–6, based on 1.2% non-belief), see Table 5. Believers had significantly higher scores on:

- Relationships with Someone or Something Greater (85.8 vs. 57.0, p = 0.001)
- Relationship with God (90.9 vs. 68.8, p = 0.002)
- Overall Spiritual Well-Being (80.3 vs. 39.3, p < 0.001)

**DISCUSSION**

This cross-sectional study of 304 oncology patients at a Nigerian tertiary cancer centre revealed high levels of spiritual well-being (SWB), consistent with Nigeria's cultural context of widespread religiosity (over 90% of the population identifies with a religion). The near-universal belief in God or something greater (98.8%) aligns with prior Nigerian studies on spirituality in illness<sup>2</sup> and exceeds rates in some Western or diverse populations.

Participants scored highest on transcendent domains (RG: 90.87; RSG: 85.51), reflecting strong connections to God/higher power and practices like prayer/meditation—common coping mechanisms in African settings facing

life-threatening illness. Existential domains (EX: 79.82) and relationships with others (RO: 83.59) were also relatively high, suggesting spirituality supports perceived meaning, peace, and social bonds amid cancer challenges. The lowest score was in Relationships with Self (RS: 61.03), likely driven by illness-related worries, loneliness, and existential distress—echoing global findings where self-relation is vulnerable in advanced disease.<sup>15,17</sup>

Believers showed significantly higher global SWB and transcendent subscales than the small non-believer group, supporting associations between religiosity/spirituality and overall spiritual health. However, no differences emerged in relational (RO/RS) or existential domains, possibly due to small subgroup size limiting power or cultural factors where family/social support remains strong regardless of belief.

These patterns reinforce the role of spirituality in holistic oncology care, particularly in high-religiosity regions where spiritual needs are prevalent and unmet spiritual distress can worsen psychological outcomes.<sup>5,14</sup> The findings add to limited African data using the EORTC QLQ-SWB32,

highlighting potential for routine spiritual screening to improve patient-centred care.

### Limitations

This study has several limitations that should be considered when interpreting the findings. First, the use of non-probability convenience sampling at a single tertiary cancer centre (NSIA-LUTH Cancer Centre) limits generalizability to other Nigerian or African oncology populations, as patients attending specialized clinics may differ in socioeconomic status, disease stage, or engagement with care compared to those in rural or primary settings.

Also, the cross-sectional design prevents establishment of causality or temporal relationships—e.g., whether higher spiritual well-being contributes to better perceived relational/existential outcomes, or if better coping leads to maintained spirituality.

Lastly, the non-believer subgroup was extremely small (approximately 1–2% of the sample,  $n \approx 4-6$ ), resulting in low statistical power for comparative analyses and potentially unstable estimates (e.g., wide confidence intervals for differences in global SWB). This reflects Nigeria's high national religiosity but highlights challenges in studying minority non-religious groups in such contexts.

Finally, potential confounding variables (e.g., age, sex, cancer type/stage, treatment modality, socioeconomic status, or comorbidities) were not collected or adjusted for in analyses, which could influence spiritual well-being scores. Self-report bias and social desirability (common in high-

religiosity cultures) may also have affected responses.

### Recommendations

Based on the high prevalence of spiritual well-being and its associations with perceived relational and existential strengths in this sample, several practical recommendations emerge for oncology care in Nigeria and similar low-resource, high-religiosity settings:

**Routine Spiritual Needs Screening:** Integrate brief spiritual well-being assessments (e.g., using validated tools like the EORTC QLQ-SWB32 or shorter proxies) into standard oncology intake and follow-up protocols at cancer centers. This could identify unmet needs early and guide referrals.

**Multidisciplinary Spiritual Care Integration:** Train oncology nurses, physicians, psychologists, and social workers in basic spiritual care competencies, including respectful inquiry about beliefs, active listening, and collaboration with religious leaders or chaplains. In-service training programs could address both positive (e.g., prayer/meditation for coping) and negative religious coping (e.g., self-blame or exploitation risks).

**Holistic Person-Centered Care Models:** Incorporate spiritual/religious dimensions into holistic oncology pathways, recognizing that in Nigerian contexts, family, community, and faith often intersect with medical treatment. This could include partnerships with local religious organizations for support groups or pastoral visits.

**Further Research:** Conduct larger, multi-center, longitudinal studies to explore causal

pathways between spirituality and outcomes like treatment adherence, symptom management, and survival. Include diverse subgroups (e.g., rural patients, non-believers, different cancer types) and adjust for confounders. Validate or culturally adapt spiritual tools for Nigerian populations to improve reliability.

**Policy and Education:** Advocate for inclusion of spiritual care training in nursing/medical curricula and national cancer control guidelines, emphasizing its role in reducing psychological distress and improving quality of life in resource-limited settings.

## CONCLUSION

Spirituality and religiosity appear central to the lived experience of many Nigerian cancer patients, with high overall spiritual well-being and strong transcendent connections. Higher global SWB among believers suggests spirituality may support coping and existential resilience in oncology settings. These results, alongside the recommended actions above, advocate for integrating spiritual care into routine oncology practice in Nigeria and similar high-religiosity contexts, including screening for spiritual needs and multidisciplinary support. Longitudinal and interventional research is needed to explore mechanisms and outcomes further.

## DECLARATIONS

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### Competing Interests

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### Consent to Participate

Informed consent was obtained from all individual participants included in the study.

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