

The Burden of Sexual Dysfunction and Body Image Concerns in Nigerian Head and Neck Cancer Patients

Oladeji A.A^{1*}, Sarimiye F.O¹, Bayo-Oladeji T.J²

¹Department of Radiation Oncology, College of Medicine, University of Ibadan. Nigeria

²Nursing Unit, Alpha Specia; list Hospital, Ibadan. Nigeria

*Corresponding Author: Oladeji A.A, Department of Radiation Oncology, College of Medicine, University of Ibadan. Nigeria.

Received date: 13 March 2025; Accepted date: 25 March 2025; Published date: 12 July 2025

Citation: Oladeji A.A, Sarimiye F.O (2025) The Burden of Sexual Dysfunction and Body Image Concerns in Nigerian Head and Neck Cancer Patients. J Comm Med and Pub Health Rep 6(06): <https://doi.org/10.38207/JCMPHR/2025/JUL06060146>

Copyright: © 2025 Oladeji A.A. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Background: Head and neck cancers (HNC) are a significant global health burden with profound impacts on patients' physical, emotional, and social well-being. While the physical and nutritional challenges of HNC are well-documented, the impact on sexual health remains understudied, particularly in low- and middle-income countries (LMICs) like Nigeria. This study aimed to explore the prevalence of sexual dysfunction, body image dissatisfaction, and malnutrition, and their impact on quality of life (QoL) in HNC patients at the University College Hospital (UCH), Ibadan, Nigeria.

Methods: A hospital-based cross-sectional study was conducted among 100 histologically confirmed HNC patients. Data were collected using validated tools, including the European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 and QLQ-H&N35 questionnaires. Nutritional status was assessed using body mass index (BMI) and serum albumin levels. Logistic regression was used to identify predictors of poor sexual health outcomes.

Results: The study population was predominantly male (62%), with a median age of 58 years. Most patients were married (72%), and the most common tumor site was the Nasopharynx (41%). Sexual dysfunction was prevalent, with 67% of patients reporting reduced sexual activity and 58% experiencing body image disturbances. Married patients reported higher rates of body image dissatisfaction (62%) and spousal discontent (45%), leading to significantly lower sexual satisfaction scores (mean score: 30.5 ± 7.8 , $p < 0.001$). Malnutrition, prevalent in 45% of patients, was a significant predictor of poor sexual health outcomes (OR = 2.89, 95% CI: 1.4–5.9, $p < 0.05$).

Conclusion: This study underscores the need for holistic, patient-centered care that addresses sexual health, body image concerns, and nutritional status in HNC patients. Integrating psychosocial support and nutritional interventions into routine cancer care may improve QoL and emotional recovery, particularly in resource-limited settings like Nigeria.

Keywords: Head and neck cancer, sexual health, quality of life, sexual dysfunction, body image dissatisfaction, malnutrition, psychosocial well-being, marital status, low-resource settings

Introduction

Head and neck cancers (HNC) represent a significant global health burden, with over 900,000 new cases and 460,000 deaths annually worldwide [1].

These malignancies, which include cancers of the Nasopharynx, oral cavity, pharynx, larynx, and salivary glands [2], are particularly prevalent in low- and middle-income countries (LMICs) due to factors such as tobacco use, alcohol consumption, and limited access to preventive care [3]. In Nigeria, HNC accounts for a substantial proportion of cancer cases, with late-stage diagnosis and limited treatment options contributing to poor outcomes [4]. Beyond the physical challenges, HNC and its treatment often result in disfigurement, functional impairments, and psychological distress, all of which can profoundly affect patients' quality of life (QoL) [5].

While the physical and nutritional challenges of HNC are well-documented, the impact on sexual health remains understudied, particularly in LMICs. Sexual dysfunction and body image

disturbances are common among HNC patients, yet these issues are rarely addressed in routine cancer care, leading to unmet needs and diminished QoL [6]. Sexual health is a critical component of overall well-being, encompassing physical, emotional, and relational aspects. For HNC patients, the visible and functional changes caused by the disease and its treatment can lead to significant body image dissatisfaction, reduced sexual desire, and strained intimate relationships [7].

In LMICs like Nigeria, where access to comprehensive cancer care is limited, these challenges are exacerbated by socioeconomic constraints and cultural stigma [8]. This cultural attitudes toward cancer and sexuality may discourage open discussions about sexual health, leaving patients and their partners to navigate these issues in isolation. Furthermore, the lack of integrated supportive care services in many LMICs means that sexual health concerns are often overlooked despite their profound impact on patients' emotional

recovery and overall QoL [9].

This study aims to explore the prevalence of sexual dysfunction and body image concerns and its impact on QoL in HNC patients at the University College Hospital (UCH), Ibadan, Nigeria. By shedding light on these often-neglected aspects of cancer care, this research seeks to inform holistic interventions that address both physical and emotional well-being. Specifically, the study examines the interplay between malnutrition, body image dissatisfaction, spousal discontent, and sexual health outcomes, with a focus on the role of marital status in shaping these dynamics.

Literature Review

1. Sexual Health in Head and Neck Cancer Patients

Sexual health is a multidimensional construct that includes sexual function, satisfaction, and the ability to maintain intimate relationships [10,11]. For HNC patients, sexual health is often compromised due to the physical and psychological sequelae of the disease and its treatment. Studies have shown that up to 70% of HNC patients experience sexual dysfunction, including reduced libido, erectile dysfunction, and difficulties with intimacy [12]. These issues are particularly pronounced in patients who undergo disfiguring surgeries or radiotherapy, which can lead to visible scarring, xerostomia (dry mouth), and dysphagia (difficulty swallowing).

The psychological impact of HNC on sexual health is equally significant. Body image dissatisfaction, which is common among HNC patients, has been linked to reduced self-esteem, social withdrawal, and impaired sexual functioning [13]. In a study by Henry M et al., a significant percentage of HNC patients reported significant body image concerns, which were associated with lower QoL scores and higher rates of depression [6]. These findings highlight the need for integrated care that addresses both the physical and emotional aspects of sexual health in HNC patients.

2. The Role of Malnutrition in Sexual Dysfunction

Malnutrition is a common complication of HNC, affecting 35% to 50% of patients resulting from reduced food intake, mental stress, tumor-associated metabolic changes, or adverse effects related to cancer treatment [14]. Malnourished HNC patients are at higher risk of poor treatment outcomes, including reduced tolerance to therapy, increased morbidity, and diminished QoL [15].

Malnutrition has also been linked to sexual dysfunction in cancer patients. Nutritional deficiencies can exacerbate fatigue, muscle weakness, and hormonal imbalances [16], all of which can impair sexual function.

3. Cultural and Socioeconomic Factors in LMICs

In LMICs like Nigeria, cultural attitudes toward cancer and sexuality often discourage open discussions about sexual health, leaving patients and their partners to navigate these issues in isolation [17]. Additionally, socioeconomic constraints, such as limited access to healthcare and financial barriers, further exacerbate the challenges faced by HNC patients.

This study aims to explore the prevalence of sexual dysfunction and its impact on QoL in HNC patients at UCH, Ibadan. By shedding light on these often-neglected aspects of cancer care, this research seeks to inform holistic interventions that address both physical and emotional well-being.

Methods

Study Design and Population

A hospital-based cross-sectional study was conducted among 100 histologically confirmed HNC patients undergoing treatment at UCH, Ibadan. Participants were recruited from the oncology clinic over a 12-month period.

Eligibility and Exclusion Criteria

Inclusion Criteria

- Adults (≥ 18 years) with histologically confirmed HNC.
- Patients receiving chemotherapy, radiotherapy, or a combination.

Exclusion Criteria

- Patients with severe cognitive impairment affecting survey responses.
- Individuals with concurrent illnesses significantly affecting sexual health (e.g., end-stage renal disease).

Sample Size Calculation

Using the formula for estimating proportions in a cross-sectional study:

$$n = (Z_{\alpha/2})^2 * p * (1-p) / d^2$$

Where:

- **n**: is the required sample size
- **$Z_{\alpha/2}$** : is the critical value of the standard normal distribution for your desired confidence level (e.g., 1.96 for a 95% confidence level)
- **p**: is the estimated population proportion (the expected prevalence of the characteristic you are studying)
- **(1-p)**: is the complement of the population proportion
- **d**: is the margin of error (the level of precision you want in your estimate)

This yielded a required sample size of 96, which was rounded to 100.

Data Collection

- **QoL Assessment**: QoL was evaluated using the EORTC QLQ-C30 and QLQ-H&N35 questionnaires, which are validated tools for assessing cancer-related QoL.
- **Sexual Health Assessment**: Sexual health was evaluated through specific questions related to sexual function, desire, and intimacy challenges. These questions were adapted from existing sexual health questionnaires and tailored to the local context.
- **Nutritional Assessment**: Nutritional status was assessed using BMI and serum albumin levels. Malnutrition was defined as BMI < 18.5 kg/m² or serum albumin < 3.5 g/dL.

Statistical Analysis

- Descriptive statistics summarized demographic and clinical data.
- Comparative analyses: Sexual health outcomes were compared between malnourished and well-nourished patients using Student's t-

test.

- Regression analysis: Logistic regression assessed predictors of poor sexual health outcomes. A p-value < 0.05 was considered statistically significant.

Results

Table 1: Demographic and Clinical Characteristics

Characteristic	Value
Sex Distribution	
Male	62%
Female	38%
Median Age	58 years (range: 32–75)
Marital Status	
Married	72%
Single	18%
Divorced/Separated	8%
Widowed	2%
Tumor Sites	
Nasopharynx	41%
Sinonasal	28%
Larynx	19%
Oral and Salivary Gland	12%
Treatment Modalities	
Surgery + Radiotherapy/Chemotherapy	23%
Chemoradiotherapy	71%
Chemotherapy Alone	06%

Table 2: Prevalence of Body Image Dissatisfaction and Spousal Discontent by Marital Status

Marital Status	Body Image Dissatisfaction (%)	Spousal Discontent (%)	Mean Sexual Satisfaction Score
Married (n=72)	62	45	30.5 ± 7.8
Single (n=18)	50	N/A	45.2 ± 8.6
Divorced/Separated (n=8)	55	N/A	38.4 ± 7.2
Widowed (n=2)	40	N/A	42.0 ± 6.5

Table 3: Body Image Dissatisfaction and Spousal Discontent by Marital Status

Parameter	Overall	Married	Single	Divorced/ Separated	Widowed
Body Image Dissatisfaction	58%	62%	53%	55%	40%
		Male	Female		
Body Image Dissatisfaction	58%	52%	65%		
Spousal Discontent	45%	48%	35%		

Table 4: Impact on Sexual Satisfaction

Parameter	Mean Score	p-value
Overall		
With Body Image Dissatisfaction & Spousal Discontent	32.5 ± 8.2	<0.001
Without Body Image Dissatisfaction & Spousal Discontent	58.7 ± 10.4	<0.001
Married Patients		
With Body Image Dissatisfaction & Spousal Discontent	30.5 ± 7.8	<0.001
Without Body Image Dissatisfaction & Spousal Discontent	56.7 ± 9.8	<0.001
Single Patients	45.2 ± 8.6	

Table 5: Impact of Malnutrition on Sexual Health

Parameter	Value	p-value
Malnutrition Prevalence (BMI <18.5 kg/m ² or serum albumin <3.5 g/dL)	45%	-
Sexual Functioning		
Malnourished Patients	Greater impairment	<0.05
Well-Nourished Patients	Lesser impairment	-
Predictors of Poor Sexual Health		
Malnutrition (OR)	2.89 (95% CI: 1.4–5.9)	<0.05

1. Demographics:

- The study population was predominantly male (62%), with a median age of 58 years.
- Most patients were married (72%), and the most common tumor site was nasopharynx (41%), while oral and salivary gland tumors were the least common (12%). **(Table 1)**

2. Sexual Dysfunction:

- Prevalence: 67% of patients reported reduced sexual activity, and 58% experienced body image disturbances.
- Gender Differences: Females reported higher body image dissatisfaction (65%) compared to males (52%).
- Marital Status Impact: Married patients had the highest rates of body image dissatisfaction (62%) and spousal discontent (48%). **(Table 2)**

3. Body Image Dissatisfaction:

- Overall, 58% of patients reported dissatisfaction with their body image, with the highest rates among females (65%) and married patients (62%).
- Widowed patients had the lowest rates of body image dissatisfaction (40%). **(Table 2)**

4. Spousal Discontent:

- 45% of married patients reported spousal dissatisfaction, with higher rates among males (48%) than females (35%). **(Table 3)**

5. Sexual Satisfaction:

- Patients with body image dissatisfaction and spousal discontent had significantly lower sexual satisfaction scores (32.5 ± 8.2) compared to those without these concerns (58.7 ± 10.4, $p < 0.001$).

- Married patients with these issues had the lowest sexual satisfaction scores (30.5 ± 7.8), while single patients had intermediate scores (45.2 ± 8.6). **(Table 4)**

6. Impact of Malnutrition:

- Prevalence: 45% of patients were malnourished (BMI <18.5 kg/m² or serum albumin <3.5 g/dL).
- Sexual Functioning: Malnourished patients had significantly greater impairment in sexual functioning compared to well-nourished individuals ($p < 0.05$).
- Predictors of Poor Sexual Health: Malnutrition was a significant predictor of sexual dysfunction (OR = 2.89, 95% CI: 1.4–5.9, $p < 0.05$). **(Table 5)**

Discussion

The findings of this study align with and expand upon existing literature on sexual dysfunction, body image dissatisfaction, and malnutrition in head and neck cancer (HNC) patients. Below, we relate the discussion to previous studies to provide context and reinforce the significance of the findings.

The high prevalence of sexual dysfunction (67%) and body image dissatisfaction (58%) observed in this study is consistent with global findings [12–14]. For instance, a study by Henry.M et al. (2022) reported that 67% of head and neck cancer (HNC) patients experience significant body image concerns [6], which correlate with lower quality of life (QoL) scores and higher rates of depression. Similarly, Katz et al. (2009) found that up to 70% of HNC patients suffer from

sexual dysfunction, including reduced libido and difficulties with intimacy, particularly following disfiguring surgeries or radiotherapy [18]. These studies underscore the universal burden of sexual health issues in HNC patients, regardless of geographic or socioeconomic factors.

The greater prevalence of body image dissatisfaction among females (65%) compared to males (52%) in this study aligns with findings by Fingeret et al. (2013), who noted that women with HNC are more vulnerable to body image concerns due to societal pressures and gender-specific beauty standards [19]. This disparity highlights the need for gender-sensitive interventions to address body image concerns in HNC patients.

The finding that married patients reported higher rates of body image dissatisfaction (62%) and spousal discontent (45%) is supported by Badr et al. (2010), who found that marital relationships significantly influence the psychological and sexual well-being of cancer patients [20]. Spousal discontent particular among male patients (48%) may reflect societal expectations of masculinity.

The significantly lower sexual satisfaction scores among married patients with body image dissatisfaction and spousal discontent (30.5 ± 7.8) are consistent with Meltzer et al. (2010), Who reported that increased body image satisfaction led to higher sexual frequency, thereby enhancing both sexual and marital satisfaction among couples [21]. These findings emphasize the importance of involving partners in the care process and addressing their concerns to improve patient outcomes.

The association between malnutrition and sexual dysfunction (OR = 2.89, 95% CI: 1.4–5.9) in this study aligns with the findings of Arends et al. (2017), who reported that malnourished cancer patients are more likely to experience reduced sexual desire and satisfaction compared to well-nourished patients [22]. Nutritional deficiencies contribute to fatigue, muscle weakness, and hormonal imbalances, all of which impair sexual function.

The prevalence of malnutrition (45%) in this study is comparable to findings by Tsai YT et al. (2020), who reported 30 to 50% of HNC patients experience malnutrition due to reduced food intake, impaired nutrient absorption, and increased metabolic demands [14]. Malnutrition not only compromises treatment outcomes but also significantly affects QoL and sexual health.

The challenges faced by HNC patients in low-resource settings highlight that cultural attitudes toward cancer and sexuality in Nigeria often discourage open discussions about sexual health, leaving patients and their partners to navigate these issues in isolation [17]. This study reinforces the need for culturally sensitive interventions to address these barriers.

Clinical Implications and Future Directions:

The findings of this study support the need for holistic care models that integrate medical, nutritional, and psychosocial support. Messing B et al. (2024) demonstrated that multidisciplinary care teams, including dietitians, psychologists, and social workers, significantly improve QoL and treatment outcomes in HNC patients [23]. This approach is particularly relevant in low-resource settings, where the burden of unmet needs is highest.

The high prevalence of body image dissatisfaction and spousal discontent underscores the importance of psychosocial interventions, such as counseling and support groups. Meltzer et al. (2010) found that couples-based interventions improve emotional well-being and sexual satisfaction in cancer patients [21]. These interventions should be tailored to the cultural context to ensure their effectiveness.

The strong association between malnutrition and sexual dysfunction highlights the need for early nutritional interventions. Paccagnella et al. (2010) emphasized that nutritional support improves treatment tolerance, reduces morbidity, and enhances QoL in cancer patients [24]. Integrating nutritional care into routine cancer management is essential for improving sexual health outcomes.

Conclusion

Sexual health is a critical yet often neglected aspect of quality of life in head and neck cancer (HNC) patients. This study highlights the high prevalence of sexual dysfunction, body image dissatisfaction, and spousal discontent, particularly among married and malnourished Nigerian HNC patients. While the findings align with global trends, they also underscore the unique challenges faced by patients in low-resource settings. Addressing these issues through holistic, patient-centered care is essential for improving emotional recovery and overall well-being. Future research should focus on developing and evaluating culturally sensitive interventions to improve sexual health outcomes and quality of life in this vulnerable population.

Compliance with Ethical Standards

The authors declare that the procedures followed in this research conform to ethical standards. The study was approved by the UI/UCH Ethics Committee.

Acknowledgments

The authors thank the staff and patients of the University College Hospital, Ibadan, for their participation in this study.

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

Funding: This study was self-sponsored.

References

- Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, et al. (2024) Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 74(3): 229-63.
- Cancer.Net. Head and neck cancer: introduction.
- Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, et al. (2018) Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin.* 68(6): 394–424.
- Kanmodi K, Kanmodi P, Ogbeide M, Nwafor J (2021) Head and neck cancer literacy in Nigeria: A systematic review of the literature. *Ann Public Health Issues.* 1: 25-49.
- Reyes IM, Arenilla MJ, Alarcón D, Jaenes JC, Trujillo M (2023) Psychological impact after treatment in patients with head and neck cancer. *Med Oral Patol Oral Cir Bucal.* 28(5): e467-e473.
- Henry M, Albert JG, Frenkiel S, Hier M, Zeitouni A, et al. (2022) Body image concerns in patients with head and neck cancer: A longitudinal study. *Front Psychol.* 13: 816587.
- Rhoten BA, Murphy B, Ridner SH (2013) Body image in patients with head and neck cancer: A review of the literature. *Oral Oncol.* 49(8): 753-60.
- Nwozichi CU, Musah KT, Madu AM, Guino-O TA, Arungwa OT, et al. (2021) Contextualizing the cultural factors associated with cancer care in Nigeria: An ethnonursing study. *J Transcult Nurs.* 32(4): 382-8.
- Mounier-Jack S, Mayhew SH, Mays N (2017) Integrated care: Learning between high-income, and low- and middle-income country health systems. *Health Policy Plan.* 32(suppl_4): iv6–iv12.
- World Health Organization (2006) Defining sexual health: Report of a technical consultation on sexual health 28–31 January 2002, Geneva. Geneva: WHO.
- Van Lunsen RHW, Laan ETM, Steegers EAP, Fauser BC, Hilders CG, et al. (2019) Textbook of obstetrics and gynaecology: A life course approach. Bohn Stafleu van Loghum. 177-94.
- Stone MA, Lissenberg-Witte BI, de Bree R, Hardillo JA, Lamers F, et al. (2023) Changes in sexuality and sexual dysfunction over time in the first two years after treatment of head and neck cancer. *Cancers (Basel).* 15(19): 4755.
- Howren MB, Christensen AJ, Karnell LH, Funk GF (2013) Psychological factors associated with head and neck cancer treatment and survivorship: Evidence and opportunities for behavioral medicine. *J Consult Clin Psychol.* 81(2): 299-317.
- Tsai YT, Lai CH, Huang TH, Hsieh CC, Huang EI, et al. (2020) Association of malnutrition with postoperative complication risk after curative surgery for oral cancer: Observational study. *Medicine (Baltimore).* 99(52): e23860.
- Langius JA, Zandbergen MC, Eerenstein SE, van Tulder MW, Leemans CR, et al. (2013) Effect of nutritional interventions on nutritional status, quality of life, and mortality in patients with head and neck cancer undergoing radio(chemo)therapy: A systematic review. *Clin Nutr.* 32(5): 671-8.
- Kiani AK, Dhuli K, Donato K, Aquilanti B, Velluti V, et al. (2022) Main nutritional deficiencies. *J Prev Med Hyg.* 63(2 Suppl 3): E93-E101.
- Opara HC, Uzoma AN, Umezina CJ, Obiekwu AL, Anetekhai CJ, et al. (2022) Cancer patients' perceived need for information and education on sexuality challenges in a regional oncology center in South-Eastern Nigeria. *Afr J Health Sci.* 35(2): 177-89.
- Arora A, Singh R, Malik K, Kestwal U (2024) Association of sexual performance and intimacy with satisfaction in life in head and neck cancer patients: A review. *Oral Oncol Rep.* 11: 100563.
- Fingeret MC, Teo I, Epner DE (2013) Managing body image difficulties of adult cancer patients: Lessons from available research. *Cancer.* 119(S11): 2177-84.
- Badr H, Carmack CL, Kashy DA, Cristofanilli M, Revenson TA (2010) Dyadic coping in metastatic breast cancer. *Health Psychol.* 29(2): 169-80.
- Meltzer AL, McNulty JK (2010) Body image and marital satisfaction: Evidence for the mediating role of sexual frequency and sexual satisfaction. *J Fam Psychol.* 24(2): 156–64.
- Arends J, Bachmann P, Baracos V, Barthelemy N, Bertz H, et al. (2017) ESPEN guidelines on nutrition in cancer patients. *Clin Nutr.* 36(1): 11-48.
- Messing BP, Ryniak K, Shellenberger J, Hieber B, Ulmer K, et al. (2012) Multidisciplinary care of the head and neck cancer patient. *Perspect Voice Voice Disord.* 22(1): 14-24.
- Paccagnella A, Morello M, Da Mosto MC, Baruffi C, Marcon ML, et al. (2010) Early nutritional intervention improves treatment tolerance and outcomes in head and neck cancer patients undergoing concurrent chemoradiotherapy. *Support Care Cancer.* 18(7): 837-45.