

Impact of Anxiety Disorders among Patients with Chronic Illnesses at the University of Abuja Teaching Hospital, Gwagwalada, Abuja, Nigeria

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ABSTRACT

Background: Anxiety disorders are common among people living with chronic illnesses and are associated with impaired cognitive functioning, social relationships, productivity, and quality of life. Despite their substantial impact on patient well-being and disease management, evidence on the functional and psychosocial burden of anxiety among patients with chronic illnesses in Nigeria remains limited. This study assessed the impact of anxiety on daily functioning and productivity among patients receiving care at the University of Abuja Teaching Hospital (UATH), Gwagwalada.

Methods: A descriptive cross-sectional study was conducted among 206 adult outpatients with chronic medical conditions attending the University of Abuja Teaching Hospital (UATH), Gwagwalada, Nigeria. Participants were selected using a stratified random sampling technique. Data were collected using a structured interviewer-administered questionnaire that captured sociodemographic characteristics and the functional, psychosocial, and productivity-related impact of anxiety. Anxiety symptoms were assessed using the Hospital Anxiety and Depression Scale–Anxiety subscale (HADS-A). Descriptive statistics were used to summarize participants' characteristics and the distribution of anxiety-related cognitive, psychosocial, sleep, and productivity impairments.

Results: More than half of the respondents were aged 36–59 years (53.9%), while 41.7% were aged 18–35 years and only 4.4% were aged 60 years or older. Women constituted the majority of the study population (58.3%), most participants were married (68.4%), and over half (56.3%) reported a monthly income below ₦100,000. Anxiety had substantial effects on participants' cognitive, psychosocial, and functional well-being. Cognitive impairment was common, with 34.5% of respondents often and 13.6% usually experiencing difficulty concentrating or making decisions due to anxiety. Social functioning was also adversely affected, as 23.3% often and 8.7% usually reported difficulty forming or maintaining relationships because of excessive worrying. Sleep disturbance was particularly prominent, with 35.9% often and 20.4% usually experiencing poor sleep quality or insomnia attributable to anxiety. Furthermore, anxiety frequently exacerbated physical symptoms, with 34.5% of respondents reporting this often and 16.0% usually.

The impact of anxiety extended to daily functioning and productivity. More than one-third of participants (36.9%) often, and an additional 13.1% usually, reported reduced productivity at work or school due to excessive worrying. Similarly, 36.9% often and 10.7% usually experienced difficulty completing routine daily tasks, highlighting the considerable functional burden associated with anxiety among patients living with chronic illnesses.

Conclusion: The findings indicate that many patients with chronic illnesses at the University of Abuja Teaching Hospital reported anxiety-related challenges affecting cognitive functioning, sleep quality, interpersonal relationships, productivity, and the ability to perform daily activities. These observations suggest that anxiety may represent an important source of functional and psychosocial burden among this population. Routine screening for anxiety and the integration of mental health assessment and support into chronic disease care may facilitate early identification of affected patients and contribute to improved functioning and overall well-being.

KEYWORDS: Anxiety disorders; Chronic illness; Functional impairment; Psychosocial impact; HADS-A; Nigeria

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INTRODUCTION

Anxiety disorders are among the most prevalent mental health conditions globally and contribute substantially to disability, impaired functioning, and diminished quality of life. In 2019, an estimated 284 million people were living with anxiety disorders, making them one of the leading contributors to global mental health burden.¹ The prevalence is particularly pronounced in low- and middle-income countries (LMICs), where structural barriers to mental health care including limited workforce and fragmented services hinder early detection and treatment.² Chronic illnesses such as hypertension, diabetes mellitus, chronic kidney disease, heart failure, hepatitis B and C, and HIV/AIDS are strongly associated with higher levels of psychological distress, with anxiety consistently identified as a frequent comorbidity.^{3,4}

The relationship between chronic illness and anxiety is complex and mutually reinforcing. Chronic diseases often impose continuous physical symptoms, long-term medication use, lifestyle restrictions, and economic challenges that predispose individuals to anxiety. Conversely, anxiety negatively influences disease management by impairing adherence to medication, reducing clinic attendance, and increasing maladaptive health behaviours. Evidence demonstrates that anxiety worsens glycaemic control among individuals with diabetes, contributes to higher cardiovascular risk, and reduces overall treatment outcomes.^{5,6} If undetected or untreated, anxiety can lead to increased healthcare utilization, extended hospital stays, and lower quality of life among chronically ill patients.⁷ In Nigeria, the rising burden of chronic non-communicable and infectious diseases has been accompanied by increasing psychological morbidity. Despite this, mental health screening is generally not integrated into chronic care pathways, resulting in underdiagnosis of anxiety disorders. Studies across Nigerian tertiary hospitals have documented moderate to high prevalence rates of anxiety among patients with chronic diseases, influenced by socioeconomic challenges, stigma, limited health insurance coverage, and resource constraints in the health system.^{8,9} These contextual pressures may place Nigerian patients at heightened risk for anxiety-related complications.

The University of Abuja Teaching Hospital (UATH), located in Gwagwalada, serves a large and diverse population of patients with chronic diseases. However, there is limited empirical evidence characterizing the burden, correlates, and implications of anxiety disorders among this patient group. Understanding this burden is crucial for strengthening integrated mental health services, improving chronic disease outcomes, and informing evidence-based policy interventions.

This study therefore aims to assess the impact of anxiety disorders among patients with chronic illnesses at UATH. Generating this evidence is important for enhancing comprehensive, patient-centred chronic care in Nigeria.

METHODS AND MATERIALS

Study Setting

The study was carried out at the University of Abuja Teaching Hospital (UATH), a 520-bed tertiary healthcare facility located in Gwagwalada, Federal Capital Territory, Nigeria. UATH provides specialized services to an estimated catchment population of more than 500,000 people and serves as a major referral centre within the region.

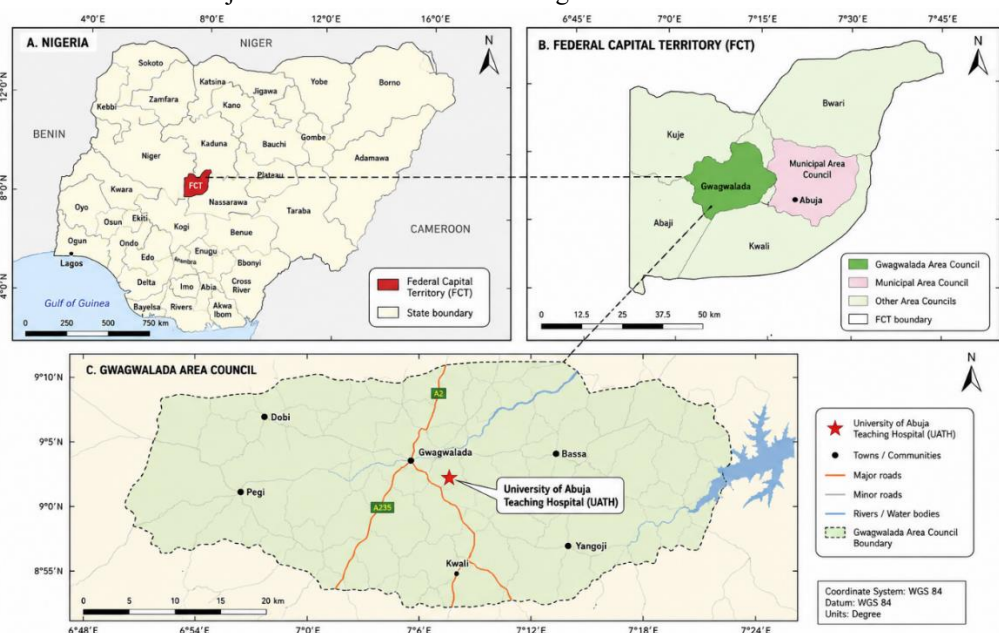


Figure 1. Map of the study area showing the location of the University of Abuja Teaching Hospital (UATH) in Gwagwalada Area Council, Federal Capital Territory (FCT), Nigeria. Panel A shows the location of the FCT within Nigeria; Panel B shows Gwagwalada Area Council within the FCT; and Panel C shows the location of the University of Abuja Teaching Hospital (UATH) where the study was conducted.

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Study Population

The target population consisted of adult outpatients aged 18 years and above who had been diagnosed with chronic medical conditions. Eligible chronic illnesses included hypertension, diabetes mellitus, chronic kidney disease, heart failure, hepatitis B or C virus infection, and HIV/AIDS. Only patients who provided informed consent and were stable enough to participate were included in the study.

Study Design and Sample Size

A descriptive cross-sectional study design was employed. Sample size determination was based on Cochran's formula for estimating proportions, yielding a minimum required sample size of 226 participants.

Sampling Technique

A stratified sampling technique was used to ensure proportionate representation of major chronic disease categories. Patients were first grouped into strata comprising cardiovascular, endocrine, nephrological, neurological, pulmonological, gastroenterological, and infectious diseases. Within each stratum, proportional allocation was applied, followed by simple random sampling to select participants.

DATA COLLECTION INSTRUMENT

Data were collected using a structured, interviewer-administered questionnaire designed to assess the impact of anxiety among patients with chronic medical conditions. The instrument comprised four sections.

The first section collected participants' sociodemographic characteristics, including age, sex, marital status, educational level, and employment status, which were used as background variables. The second section obtained clinical information related to chronic illnesses, such as the type and duration of the condition, to provide contextual understanding of anxiety-related impact.

The third section assessed anxiety symptoms using an adapted version of the Hospital Anxiety and Depression Scale–Anxiety subscale (HADS-A), originally developed by Zigmond and Snaith.¹⁰ Minor contextual modifications were made for clarity. This section was used to determine the presence and severity of anxiety among participants.

The final section, which constituted the primary outcome measure, included structured items assessing the impact of anxiety on participants' daily lives. These items evaluated functional impairment, psychosocial effects, sleep disturbance, and work or productivity limitations attributable to anxiety. The complete questionnaire is provided in Appendix I (Supplementary File).

DATA ANALYSIS

Completed questionnaires were checked for completeness, coded, and entered into IBM SPSS Statistics version 29 for analysis. Data cleaning was performed to ensure accuracy and consistency prior to analysis.

Descriptive statistics were used to analyse and present the data in line with the study objective of assessing the impact of anxiety among patients with chronic medical conditions. Sociodemographic characteristics of respondents—including age group, sex, marital status, and monthly income—were summarized using frequencies and percentages.

Anxiety-related impact variables were analysed descriptively. Responses to items assessing cognitive functioning (difficulty concentrating or making decisions), psychosocial functioning (difficulty forming or maintaining relationships), sleep disturbance (poor sleep quality or insomnia), perceived worsening of physical symptoms, productivity at work or school, and ability to complete daily tasks were summarized using frequencies and percentages across response categories (never, rarely, sometimes, often, usually). Results were presented in tables to illustrate the distribution and magnitude of functional, psychosocial, sleep-related, and productivity-related impacts of anxiety among participants. No inferential statistical tests were performed, as the primary focus of the study was to describe the extent and pattern of anxiety-related impact in the study population.

RESULTS

The sociodemographic characteristics of the 206 participants were middle-aged adults (36–59 years, 53.9%), with 41.7% aged 18–35 years and 4.4% aged 60 years or older. Females made up the majority of the sample (58.3%), while males accounted for 41.7%. Most participants were married (68.4%), 28.2% were single, and 3.4% were separated or divorced. Over half of the respondents (56.3%) reported a monthly income below ₦100,000, 40.3% earned between ₦100,000 and ₦500,000, and only 3.4% earned above ₦500,000.

Table 3.1: Functional and Psychosocial Impact

Variable	Frequency (n)(%)
Difficulty concentrating or making decisions due to anxious thoughts	
Usually	28 (13.6)
Often	71 (34.5)

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Sometimes	24 (11.7)
Rarely	68 (33.0)
Never	15 (7.3)

Difficulty forming or maintaining relationships due to excessive worrying

Usually	18 (8.7)
Often	48 (23.3)
Sometimes	30 (14.6)
Rarely	83 (40.3)
Never	27 (13.1)

Poor sleep quality or insomnia due to anxiety

Usually	42 (20.4)
Often	74 (35.9)
Sometimes	18 (8.7)
Rarely	52 (25.2)
Never	20 (9.7)

Worsened symptoms of illness due to anxiety

Usually	33 (16.0)
Often	71 (34.5)
Sometimes	30 (14.6)
Rarely	56 (27.2)
Never	16 (7.8)

Table 3.1 presents the functional and psychosocial impact of anxiety among respondents. Regarding cognitive functioning, 34.5% of participants often experienced difficulty concentrating or making decisions due to anxious thoughts, while 13.6% usually and 11.7% sometimes reported these difficulties. In contrast, 33.0% rarely and 7.3% never experienced such problems. Concerning social functioning, 23.3% often and 8.7% usually reported difficulty forming or maintaining relationships due to excessive worrying, whereas 14.6% experienced this sometimes, 40.3% rarely, and 13.1% never. Sleep disturbance was also common, with 35.9% often and 20.4% usually reporting poor sleep quality or insomnia attributable to anxiety; 8.7% reported these symptoms sometimes, while 25.2% rarely and 9.7% never experienced them. Similarly, anxiety was perceived to worsen physical symptoms in 34.5% of respondents often, 16.0% usually, and 14.6% sometimes, whereas 27.2% rarely and 7.8% never reported such effects.

Table 2.2: Impact on Productivity and Daily Functioning

Variables	Frequency (n)(%)
Limited productivity at work or school due to excessive worrying	
Usually	27 (13.1)
Often	76 (36.9)
Sometimes	15 (7.3)
Rarely	76 (36.9)
Never	12 (5.8)
Anxiety affecting ability to complete daily tasks	
Usually	22 (10.7)
Often	76 (36.9)
Sometimes	14 (6.8)
Rarely	78 (37.9)
Never	16 (7.8)

Table 2.2 presents the impact of anxiety on respondents' productivity and daily functioning. More than one-third of respondents (36.9%) often reported reduced productivity at work or school due to excessive worrying, while 13.1% usually and 7.3% sometimes experienced this limitation. In contrast, 36.9% rarely and 5.8% never reported reduced productivity. Similarly, anxiety interfered with the ability to complete daily tasks among 36.9% of respondents often, 10.7% usually, and 6.8% sometimes, whereas 37.9% rarely and 7.8% never experienced such difficulties.

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DISCUSSION

The findings of this study demonstrate that anxiety among individuals living with chronic illnesses exerts significant functional, cognitive, and psychosocial consequences that extend beyond emotional distress. Consistent with global evidence, anxiety appears to interfere with executive functioning, disrupt decision-making, and heighten perceptions of physical symptoms. Neurocognitive studies have shown that anxiety reduces attentional control and impairs prefrontal cortex functioning, which may explain the concentration difficulties observed clinically among chronically ill patients.¹¹ These cognitive effects are of particular concern in chronic disease management, as effective self-care requires sustained attention, planning, and adherence to complex regimens. Sleep disturbance observed among anxious patients in this study further reinforces the bidirectional relationship between insomnia and anxiety. Recent reviews confirm that anxiety contributes to hyperarousal-related insomnia, while inadequate sleep leads to daytime cognitive fatigue and worsened worry.¹² This interplay creates a self-reinforcing cycle that complicates long-term disease management.

The association between anxiety and heightened symptom perception aligns with international evidence that anxiety amplifies somatic sensations, increases health-care utilization, and worsens chronic disease outcomes. Studies among individuals with diabetes and hypertension consistently report that anxiety predicts poorer glycaemic and blood pressure control largely through decreased medication adherence and increased bodily vigilance.^{13,14} Similar patterns have been documented regionally across sub-Saharan Africa, where psychosocial factors, financial strain, low social support, stigma are recurrent determinants of psychiatric comorbidity among chronically ill patients. Nigerian studies echo these findings, highlighting high rates of anxiety among patients with diabetes, hypertension, and other chronic conditions, with clear implications for reduced clinical stability and increased symptom burden.^{15,16} These converging data emphasize that anxiety is both common and clinically consequential across chronic disease populations in the West African context.

The observed reductions in productivity and difficulty completing daily tasks correspond with global workplace mental-health literature indicating that anxiety significantly reduces both absenteeism and presenteeism.¹⁷ For chronically ill individuals, many of whom already face socioeconomic vulnerabilities, the added burden of anxiety may exacerbate financial strain, reinforce worry, and further limit engagement with treatment plans. Biological, behavioural, and psychosocial mechanisms jointly contribute to these impairments. Chronic activation of the stress response associated with anxiety disrupts prefrontal cortical regulation and sleep architecture while elevating inflammatory signalling, all of which are linked to subjective cognitive decline and somatic symptom amplification.¹⁸ Behaviourally, anxiety promotes avoidance of clinic visits, reduces adherence, and diminishes motivation for self-management, while psychosocial stressors such as poverty and limited support compound these effects. Together, these mechanisms explain the pattern of multidimensional functional impairment observed in this study.

These findings have clear implications for clinical practice and public health. Routine screening for anxiety using brief validated tools such as the GAD-7 or HADS should be integrated into chronic care clinics, as international and Nigerian evidence demonstrates high rates of undetected anxiety among medically ill patients.

POLICY IMPLICATIONS

The findings of this study underscore the need for mental-health integration into chronic disease management policies at tertiary and secondary healthcare levels in Nigeria. First, routine screening for anxiety using validated tools such as the GAD-7 or HADS should be institutionalized as part of national clinical guidelines for the management of chronic illnesses. Early detection policies would improve timely referral and treatment, thereby reduce functional impairment and enhance long-term disease control. Secondly, national and state health authorities should adopt a task-shifting approach that empowers nurses, community health officers, and primary health-care workers to deliver basic psychosocial interventions, including psychoeducation, brief cognitive-behavioural strategies, and sleep-focused counselling. This is particularly important in resource-limited settings where mental-health specialists are scarce.

Thirdly, chronic disease programs should incorporate socioeconomic supports into routine care such as linkage to social welfare schemes, workplace accommodations, and community support groups given the demonstrated interplay between anxiety, economic strain, and poor treatment adherence. Policymakers should also develop cross-sectoral collaborations between the Ministry of Health, Ministry of Labour, and social protection agencies to support working-age individuals living with chronic conditions. Finally, hospital administrators should prioritize capacity-building for healthcare workers through continuous professional development in mental-health assessment and communication skills. Strengthening health-system responsiveness to comorbid anxiety will not only improve individual patient outcomes but also reduce the broader economic burden associated with reduced productivity and increased healthcare utilization.

STRENGTHS AND LIMITATIONS

This study provides important insights into the functional, psychosocial, and productivity-related impact of anxiety among patients with chronic illnesses in a Nigerian tertiary healthcare setting. However, some limitations should be considered when interpreting

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the findings. First, the cross-sectional design limits causal inference between anxiety and functional or productivity outcomes. Second, anxiety was assessed using an adopted version of the Hospital Anxiety and Depression Scale–Anxiety subscale (HADS-A). Although the HADS-A is a widely validated instrument, minor contextual modifications were made to enhance clarity and suitability for the study population, which may affect direct comparability with studies using the original unmodified scale. Nonetheless, the core structure and intent of the instrument were retained, and the full questionnaire is provided as Appendix I (Supplementary File). Finally, the reliance on self-reported data may introduce reporting or recall bias. Despite these limitations, the findings remain valuable for informing integrated mental health screening within chronic disease care in similar low-resource settings.

FUTURE RESEARCH OUTLOOK

Future research should prioritize longitudinal studies that examine causal pathways between anxiety and chronic disease outcomes, particularly in Nigerian and other low-resource settings where evidence remains limited. Prospective cohort studies would clarify the temporal relationship between anxiety, functional impairment, and clinical markers such as blood pressure control, glycaemic stability, and hospitalization rates. Additionally, intervention trials evaluating scalable psychological therapies such as task-shifted cognitive-behavioural therapy, digital mental-health tools, stress-management modules, and sleep-focused interventions are urgently needed to determine cost-effective strategies that can be integrated into existing chronic care systems.

Mixed-methods research will also be critical in understanding how cultural beliefs, stigma, and health-system barriers influence anxiety recognition and care-seeking behaviours among chronically ill patients. Community-based studies could help uncover differences between hospital-attending populations and those who remain outside the formal healthcare system. Future work should also explore biological and inflammatory markers that may mediate the relationship between anxiety and disease progression, thereby opening pathways for personalized or precision-based interventions.

CONCLUSION

This study highlights that anxiety symptoms are commonly reported among individuals living with chronic illnesses at the University of Abuja Teaching Hospital and are associated with notable challenges in cognitive functioning, sleep quality, symptom perception, interpersonal relationships, and daily productivity. While the findings suggest that anxiety may play an important role in shaping patients' functional and psychosocial experiences, the cross-sectional nature of the study does not permit causal inferences. Nonetheless, the observed patterns underscore the importance of recognizing and routinely screening for anxiety symptoms within chronic disease care settings. Integrating basic mental health assessment and supportive interventions into routine chronic care may help improve patient functioning and overall well-being, particularly in resource-limited settings such as Nigeria.

DECLARATIONS

Ethical Approval and Accordance

Ethical approval for this study was obtained from the University of Abuja Teaching Hospital, Health Research Ethics Committee. (Approval Number: FCT/UATH/HREC/1085). The study was conducted in full accordance with the guidelines, regulations, and ethical standards set forth by the ethics committee.

Consent to Participate

Written informed consent was obtained from all participants before enrolment into the study. Participation was voluntary, and confidentiality was assured.

Consent to Publish

Not applicable: No identifying information or images of individual participants are included in this manuscript.

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Data Availability Statement

The datasets generated and analysed during this study contain sensitive personal information and are therefore not publicly available in order to protect participant confidentiality. However, the identified data may be made available from the corresponding author upon reasonable request and subject to approval by the relevant ethics committee.

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