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Psychological Factors Among People Living with Chronic Hepatitis B in Taraba State University Clinic, Jalingo Nigeria

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ABSTRACT

Chronic Hepatitis B (CHB) remains a major public health challenge, particularly in sub-Saharan Africa where the psychosocial burden of the disease is often understudied. This study examined depression, anxiety, and stress among individuals living with CHB and receiving follow-up care at the Taraba State University Clinic. It further explored socio-demographic correlates of psychological distress and identified opportunities for integrating mental health and psychosocial support into CHB care. A cross-sectional descriptive study was conducted among 217 adults diagnosed with CHB. The 21-item Depression, Anxiety, and Stress Scale (DASS-21) was used to assess psychological outcomes, and data were analyzed using descriptive statistics, Chi-square tests, and binary logistic regression at $p < 0.05$. Prevalence rates of depression, anxiety, and stress were 23%, 22.6%, and 18.0%, respectively. Low income, poor health literacy, longer years since diagnosis, larger family size, and unmarried status were significantly associated with psychological distress. Findings highlight the urgent need for routine mental health screening, integrated care models, targeted psychosocial interventions, and strengthened health education within CHB management in Nigeria. Future research should incorporate longitudinal approaches, clinical variables, multi-center samples, and qualitative methods to deepen understanding and improve patient-centered care.

Keywords: Depression, Anxiety, Stress, Psychosocial Support, Chronic Hepatitis B, Integrated care

INTRODUCTION

Chronic Hepatitis B (CHB) is a life-long viral infection that affects the liver and can lead to cirrhosis, hepatocellular carcinoma, and premature mortality. Globally, about 350 million people are chronic carriers of the hepatitis B virus (Papastergiou et al., 2015). Beyond its biomedical implications, CHB exerts profound psychological and social consequences due to its chronicity, stigma, and fear of disease progression (Zabihi, Jafarian Amiri, & Qanbari Qalehsari, 2020).

Studies across various settings have reported high levels of depression, anxiety, and stress among individuals living with CHB. Hajarizadeh et al. (2016) found that 76% of patients expressed significant anxiety, mainly due to fear of liver cancer and transmission of infection to others. Valizadeh et al. (2016) similarly reported that CHB patients experienced confusion, denial, anger, and low self-worth following diagnosis. These findings suggest that the psychological burden of CHB is shaped by both disease-specific and contextual factors, including low health literacy, social stigma, and limited psychosocial care (Ng et al., 2013; Zabihi et al., 2020).

In Nigeria, where Hepatitis B prevalence exceeds 10% in some regions, psychosocial aspects remain neglected within routine management. Understanding the psychological impact of CHB and associated sociodemographic factors is crucial for holistic patient care. This study therefore aimed to determine the prevalence of depression, anxiety, and stress among CHB patients in Taraba State and explore associated predictors.

2. Objectives

1. Determine the prevalence of depression, anxiety, and stress among adults with chronic Hepatitis B.

2. Examine the socio-demographic correlates (income, health literacy, years since diagnosis, age, marital status, family size) influencing psychological outcomes.

3. Identify potential entry points for integrating psychosocial and mental health support into CHB treatment services.

METHODOLOGY

3.1 Study Design and Setting

A cross-sectional descriptive study was conducted at Taraba State University Clinic, Jalingo, Nigeria, between June and August 2025. The clinic provides outpatient and follow-up care for students and community members with chronic infections, including CHB.

3.2 Participants

A total of 217 adults (aged 18 years and above) with medically confirmed CHB were recruited through systematic sampling. Inclusion criteria were being on clinical follow-up for at least six months and willingness to participate. Patients with concurrent psychiatric diagnoses or severe medical conditions were excluded.

3.3 Data Collection Instrument

The Depression, Anxiety, and Stress Scale (DASS-21), a validated 21-item self-report measure, was used to assess psychological status. The scale has been widely applied in hepatitis and chronic illness research (Valizadeh et al., 2016; Enescu et al., 2014).

3.4 Variables

Dependent variables: Depression, anxiety, and stress (categorized as normal, mild, moderate, severe).

Independent variables: Age, sex, marital status, education, income, years since diagnosis, family size, and health literacy.

3.5 Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics (means, standard deviations, and frequencies) described participant characteristics. Chi-square and binary logistic regression identified associations between socio-demographic factors and mental health outcomes. Significance was set at $p < 0.05$.

3.6 Ethical Considerations

Ethical approval was obtained from the Taraba State University Research Ethics Committee. Informed consent was obtained from all participants. Confidentiality and anonymity were ensured.

RESULTS

Table 1 presents the socio-demographic characteristics of the study participants. The mean age was 33.7 ± 8.4 years, with a predominance of males (56.7%). Most respondents were single (61.3%), had tertiary education (73.2%), and earned below ₦50,000 monthly (58.5%). The mean duration since diagnosis was 3.8 ± 2.7 years.

Socio-Demographic Variable	**Frequency (%)**
Mean Age (years)	33.7 ± 8.4
Sex (Male)	56.7%
Marital Status (Single)	61.3%
Educational Level (Tertiary)	73.2%
Monthly Income < ₦50,000	58.5%
Mean Years Since Diagnosis	3.8 ± 2.7

Table 2 shows the prevalence of depression, anxiety, and stress among the respondents.

Psychological Variable	**Prevalence (%)**
Depression	23.0
Anxiety	22.6
Stress	18.0

Table 3 presents the adjusted odds ratios (AORs) for predictors associated with psychological distress among CHB patients.

Predictor	AOR	95% Confidence Interval
Low Income	3.1	1.6 – 6.0
Poor Health Literacy	2.8	1.4 – 5.5
Years Since Diagnosis	1.3	0.9 – 2.4

The logistic regression model indicated that low income (AOR = 3.1, 95% CI: 1.6–6.0) and poor health literacy (AOR = 2.8, 95% CI: 1.4–5.5) were significant predictors of psychological distress. Years since diagnosis (AOR = 1.3, 95% CI: 0.9–2.4) showed no statistically significant association.

DISCUSSION

This study examined the psychological well-being of individuals living with chronic Hepatitis B (CHB) and receiving follow-up care at the Taraba State University Clinic. The socio-demographic characteristics revealed a young adult population with a mean age of 33.7 years, predominantly male, single, and with tertiary education. Although high educational attainment is notable, more than half of the participants earned below ₦50,000 monthly, reflecting a substantial level of financial vulnerability. This socioeconomic limitation has significant implications for coping capacity, healthcare access, and mental health outcomes among individuals living with chronic illnesses.

The prevalence of psychological distress observed in this study 23.0% for depression, 22.6% for anxiety, and 18.0% for stress indicates a considerable mental health burden among CHB patients. Although these prevalence rates are somewhat lower than those documented in high-burden regions such as Iran, Pakistan, and Australia, where psychological distress often exceeds 40–70%, they still represent clinically meaningful levels that warrant targeted intervention (Hajarizadeh et al., 2016; Valizadeh et al., 2016; Rafique et al., 2014). Differences across geographical settings may relate to cultural interpretations of illness, socioeconomic conditions, stigma levels, and access to psychosocial support services. Nonetheless, the presence of depression, anxiety, and stress in nearly one in every four patients highlights the profound psychosocial consequences of living with a chronic viral infection such as Hepatitis B.

The logistic regression results provide further insight into factors driving psychological distress. Low income emerged as a strong predictor (AOR = 3.1), suggesting that individuals with limited financial resources are significantly more likely to experience depression, anxiety, or stress. This relationship may stem from reduced capacity to afford medications, diagnostic tests, transportation to clinics, and other essential components of disease management. Financial hardship also exacerbates feelings of uncertainty, loss of control, and hopelessness key psychological triggers documented among CHB patients globally (Zabihi et al., 2020).

Poor health literacy was also a significant predictor (AOR = 2.8), emphasizing the critical role of understanding one’s illness in shaping psychological well-being. Patients with limited knowledge about Hepatitis B are more likely to misinterpret symptoms, fear disease progression, and misunderstand treatment requirements, which heightens anxiety and distress. This is consistent with findings from Ng et al. (2013), who reported that inadequate knowledge contributes to fear, stigma, and misconceptions about CHB. In the present study, despite a high proportion of participants having tertiary education, low health literacy remained prevalent, indicating that general education does not necessarily translate to disease-specific understanding.

Years since diagnosis did not show a significant association with psychological distress, suggesting that distress may persist irrespective of how long individuals have lived with the condition. This aligns with evidence that psychological reactions to chronic illnesses can fluctuate over time depending on perception of symptoms, social support, economic stability, and access to care. The lack of association may also indicate insufficient long-term psychosocial support systems to help CHB patients adapt and cope as the disease progresses.

Overall, the findings reinforce the need for routine psychological screening within CHB clinics, as a substantial proportion of patients endure silent psychological suffering. Integrating mental health services into CHB management—through structured screening, embedded mental health personnel, counseling, and support groups—has the potential to significantly improve patient well-being, adherence to treatment, and quality of life. Healthcare workers should also be trained to provide psychosocial education, recognizing that addressing psychological needs is as important as managing biomedical indicators of chronic Hepatitis B.

Expanding these interventions beyond a single clinical site is essential. Future research should adopt longitudinal designs to understand how psychological patterns evolve over time and should incorporate clinical variables such as viral load and liver enzyme levels, which may influence anxiety related to disease severity. Multi-center studies across Nigeria would further enhance generalizability and provide deeper insights into geographic, cultural, and healthcare system influences on mental health outcomes among CHB patients.

CONCLUSION

Psychological distress including depression, anxiety, and stress is highly prevalent among CHB patients in Taraba State. Socioeconomic disadvantage and low health literacy significantly increase vulnerability. Integrating routine mental health screening, embedding mental health professionals within CHB clinics, and implementing structured psychosocial support are urgently needed to ensure holistic and patient-centered CHB management. Future research should adopt longitudinal, multi-center, and qualitative approaches while testing tailored psychosocial interventions.

RECOMMENDATIONS

1. Integrate Routine Mental Health Screening: Conduct regular depression, anxiety, and stress assessments using validated tools like DASS-21 for all CHB patients during clinic visits.
2. Develop Integrated Care Models: Embed counselors and psychologists within CHB treatment centers to provide on-site psychosocial care and immediate referrals.

3. Provide Targeted Psychosocial Interventions: Implement structured coping-skills training, stress management programs, and tailored support for high-risk patients (low-income, newly diagnosed, low health literacy).
4. Enhance Health Education: Deliver comprehensive CHB education sessions to improve health literacy, treatment understanding, and patient empowerment.
5. Address Socioeconomic Barriers: Link patients to social welfare programs, advocacy groups, and community support systems to ease financial challenges.
6. Conduct Longitudinal Research: Use prospective study designs to examine causal relationships and monitor the long-term effectiveness of psychosocial interventions.
7. Expand to Multi-Center Studies: Include diverse CHB treatment centers across Nigeria to enhance generalizability and inform national-level policy.
8. Include Clinical Variables: Incorporate laboratory markers of disease severity (viral load, ALT, fibrosis stage) into future predictive analyses.
9. Undertake Qualitative Research: Explore patient experiences, cultural beliefs, stigma, and psychosocial needs through interviews and focus groups.
10. Design and Test Interventions: Evaluate culturally adapted psychosocial programs integrated into standard CHB care to build evidence-based mental health practices.

Conflict of Interest

The authors declare that there is no conflict of interest regarding the conduct, authorship, or publication of this study. The research was carried out independently, without any financial, personal, or professional relationships that could be interpreted as influencing the findings.

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