

REAL-WORLD OUTCOMES, SAFETY AND DETERMINANTS OF PSYCHOTROPIC MEDICATION USE AMONG PEOPLE LIVING WITH HIV/AIDS IN THE NIGER DELTA, NIGERIA: A CROSS-SECTIONAL ANALYSIS

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ABSTRACT

Background. Antidepressants and antipsychotics can improve outcomes for people living with HIV/AIDS (PLWHA), but real-world evidence on their effectiveness, safety, cost and quality-of-life impact—and on the factors that drive their use—is limited in low- and middle-income countries. **Objective.** To evaluate the perceived outcomes, safety and quality-of-life impact of psychotropic medication among PLWHA in Bayelsa State, Nigeria, and to identify determinants of their use. **Methods.** A cross-sectional study of 336 PLWHA at the Federal Medical Centre, Yenagoa, included 77 psychotropic users analysed in detail. Associations between psychotropic use and outcomes were tested with chi-square; an independent-samples t-test compared the antidepressant (fluoxetine) and antipsychotic (haloperidol-olanzapine) groups; and multiple linear regression assessed the joint contribution of socio-demographic variables. Significance was set at 0.05. **Results.** Most antidepressant users rated their therapy very effective (58.4%), very safe (71.4%) and very positive for quality of life (62.3%); associations with effectiveness, safety, cost and quality of life were all statistically significant ($p < 0.001$). The two drug groups differed significantly on the measured outcome ($t = -6.873$, $p < 0.001$). Socio-demographic variables jointly explained only 6.8% of the variance in psychotropic use and were not significant predictors ($F = 0.543$, $p > 0.05$). **Conclusion.** Psychotropic therapy was associated with favourable self-reported outcomes, and the differences between drug groups reflected distinct clinical indications rather than relative superiority. Socio-demographic factors were weak predictors of use, pointing to clinical need and health-system factors as the principal drivers.

KEYWORDS: HIV/AIDS; antidepressants; antipsychotics; treatment outcomes; quality of life; determinants; Nigeria.

INTRODUCTION

Beyond establishing how often psychotropic medicines are used, clinicians and policymakers need to know whether those medicines work in routine practice, whether patients find them tolerable and affordable, and who actually receives them. Evidence from controlled and observational studies indicates that treating depression in PLWHA improves mood, cognition, ART adherence and quality of life (Prado et al., 2018; Yen et al., 2022; Horberg et al., 2008; Zhang et al., 2018). Yet most of this evidence comes from high-income settings; pragmatic, patient-reported data from sub-Saharan Africa—where treatment is

delivered under very different constraints—remain sparse (Gonzalez et al., 2011; Ibeneme et al., 2022).

Equally, the determinants of psychotropic use are context-dependent. Demographic, clinical, psychosocial and health-system factors have all been implicated, but their relative weight varies across populations (Fasoli et al., 2009; Sulyman et al., 2012; Saasa et al., 2021). Understanding which factors drive use locally is essential for targeting scarce mental-health resources. This study therefore evaluated the perceived outcomes, safety and quality-of-life impact of psychotropic therapy among PLWHA at FMC Yenagoa, compared the antidepressant and antipsychotic

groups, and tested the joint contribution of socio-demographic variables.

Three hypotheses were tested at the 0.05 level: (H1) psychotropic use has a significant positive impact on quality of life, adherence and clinical outcomes; (H2) there is a significant difference in the measured outcome between PLWHA using antidepressants (fluoxetine) and those using antipsychotics (haloperidol-olanzapine); and (H3) socio-demographic variables jointly contribute significantly to psychotropic drug utilization.

MATERIALS AND METHODS

This analysis used data from a facility-based cross-sectional study at the HIV/AIDS clinic of FMC Yenagoa (January–December 2023). The data reported here form part of a larger cross-sectional study on the drug utilization of antidepressant and antipsychotic medications among PLWHA at the Federal Medical Centre, Yenagoa; this paper addresses a distinct set of objectives, and care has been taken to avoid duplication of findings reported elsewhere. Adult PLWHA (≥ 18 years) who had received at least one psychotropic prescription were eligible. A target sample of 381 was derived using the Taro Yamane formula; 336 participated (88.2%), of whom 77 psychotropic users formed the analytical sample. Data were collected with a structured, pre-tested questionnaire and a record-extraction form and analysed in SPSS v27.

Descriptive statistics summarised determinants and outcomes. Inferential testing followed the three hypotheses: chi-square tests examined associations between psychotropic use and perceived effectiveness, safety, monthly cost and quality of life (H1); an independent-samples t-test compared the fluoxetine and haloperidol-olanzapine groups on the measured outcome

(H2); and multiple linear regression assessed the joint contribution of nine socio-demographic variables (age, gender, education, monthly income, marital status, employment, occupation, religion and lifestyle) to psychotropic use (H3). Listwise deletion was applied in the regression. Ethical approval was obtained from the Research Ethics Committee of the Federal Medical Centre, Yenagoa. Written informed consent was obtained from every participant for both the interview and access to their medical records. Participation was voluntary and confidential, and respondents could withdraw at any time without consequence.

RESULTS

Determinants and correlates

Among the 77 psychotropic users, comorbidities were present in 23.4% (hypertension most common at 15.6%). Engagement with care was high: 85.7% attended monthly HIV clinic visits, and satisfaction with care was favourable (44.2% very satisfied; 41.6% somewhat satisfied). Self-rated health was positive—76.7% rated physical health and 84.4% mental health as good or very good—and most had lived with HIV for 1–10 years.

Outcomes, safety and quality-of-life impact

Perceived outcomes were strongly favourable. Most antidepressant users found their medication very effective (58.4%; somewhat effective 27.3%), very safe in terms of side effects and interactions (71.4%; somewhat safe 20.8%) and very positive for quality of life (62.3%; somewhat positive 26.0%), with most spending ₦5,001–₦6,000 monthly (70.1%). Chi-square tests confirmed that the associations between psychotropic use and effectiveness, safety, cost and quality of life were all highly significant ($p < 0.001$), supporting H1 (Table 1).

Table 1. Perceived impact of psychotropic use and chi-square results (antidepressant users).

Outcome	Most frequent rating (%)	χ^2	p
Effectiveness	Very effective (58.4)	—	< 0.001
Safety	Very safe (71.4)	78.350	< 0.001
Quality of life	Very positive (62.3)	338.085	< 0.001
Monthly cost	₦5,001–6,000 (70.1)	191.205	< 0.001

Comparison of drug groups (H2)

An independent-samples t-test compared the antidepressant (fluoxetine; mean 1.01, SD 0.12) and antipsychotic (haloperidol-olanzapine; mean 2.29, SD 0.49) groups on the measured outcome. Because variances were unequal (Levene's $F = 57.789$, $p < 0.001$), the Welch correction was applied, yielding a statistically significant difference ($t = -6.873$, $df = 6.07$, $p < 0.001$; mean difference -1.27). H2 was therefore supported, although the very small antipsychotic group ($n = 8$) warrants caution.

Socio-demographic predictors (H3)

Multiple linear regression with nine socio-demographic predictors explained only 6.8% of the variance in psychotropic use ($R^2 = 0.068$; adjusted $R^2 = 0.057$). The

overall model was not significant ($F = 0.543$, $p > 0.05$) and no individual predictor reached significance; occupation carried the largest standardised coefficient ($\beta = 0.164$), followed by monthly income ($\beta = 0.085$), religion ($\beta = 0.076$) and education ($\beta = 0.015$), with gender contributing least ($\beta = 0.002$). H3 was not supported. A summary of hypothesis testing appears in Table 2.

Table 2. Summary of hypothesis testing.

Hypothesis	Test	Key statistic	Decision
H1 – Outcomes/impact	Chi-square	$p < 0.001$	Supported (reject H_0)
H2 – Drug-group difference	Independent t-test	$t = -6.873, p < 0.001$	Supported (reject H_0)
H3 – Socio-demographic predictors	Multiple regression	$R^2 = 0.068, F = 0.543, p > 0.05$	Not supported (retain H_0)

DISCUSSION

Psychotropic therapy was associated with markedly positive patient-reported outcomes—effectiveness, tolerability and quality-of-life gains—echoing trial and cohort evidence that treating mental disorders benefits PLWHA (Prado et al., 2018; Yen et al., 2022; Horberg et al., 2008; Ibeneme et al., 2022). The statistically significant chi-square associations should be read as evidence of a robust relationship in these data rather than proof of causation, given the cross-sectional design and reliance on self-report, which may inflate favourable ratings.

The significant difference between the fluoxetine and haloperidol-olanzapine groups is best interpreted as a reflection of two clinically distinct populations—depression versus psychosis—rather than the superiority of one drug class over the other; the groups differ in indication, illness severity and baseline functioning (Tandon et al., 2020; Bahta et al., 2021). The very small antipsychotic subgroup further limits inference, as small samples can both exaggerate and obscure true effects (Goodhue et al., 2006; Kantrowitz et al., 2025).

Perhaps the most policy-relevant finding is that socio-demographic variables jointly explained little of the variation in psychotropic use and were not significant predictors. This aligns with the Andersen behavioural model and with evidence that, where access is rationed by a single specialist service, clinical need—rather than demography—drives who receives treatment (Fasoli et al., 2009; Sulyman et al., 2012). It suggests that interventions to widen appropriate use should target clinical detection and health-system capacity rather than demographic targeting.

Strengths and Limitations

Strengths include the use of patient-reported outcomes alongside record data and the explicit testing of pre-specified hypotheses. Limitations include the cross-sectional design (precluding causal inference), reliance on self-report (risking social-desirability and recall bias and the absence of objective measures such as viral load and CD4 count), the small antipsychotic subgroup, and the single-centre setting (Bellomo et al., 2009). Longitudinal, multi-centre studies with validated instruments are needed to confirm these associations.

CONCLUSION

Among PLWHA at FMC Yenagoa, psychotropic therapy was associated with significant, favourable effects on effectiveness, safety, cost and quality of life, while socio-demographic characteristics were weak predictors of use. Clinical need and health-system capacity—not patient

demography—appear to govern access, underscoring the value of strengthening detection and decentralised, integrated mental-health care.

Declarations

Ethics approval and consent. Approved by the FMC Yenagoa Research Ethics Committee; written informed consent obtained from all participants.

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Conflicts of interest. The author(s) declare no competing interests.

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