Assessment of the Awareness of HIV Prophylaxis Among Academic and Non-Academic Staff of Adamawa State College of Health Science and Technology, Michika

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ABSTRACT

Despite increasing global awareness of HIV prophylaxis, uptake remains limited in many low-resource settings due to stigma, misinformation, and structural barriers. This study investigates the level of awareness and attitudes toward Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) among academic and non-academic staff at Adamawa State College of Health Science and Technology, Michika. Using a descriptive cross-sectional survey design, data were collected from 150 participants through a validated structured questionnaire. Stratified random sampling ensured proportional representation across staff categories.

Findings revealed that academic staff were significantly more aware of HIV prophylaxis than non-academic staff, with education level emerging as a strong predictor of awareness (AOR = 4.56; 95% CI: 2.01–10.34). Gender and cultural norms influenced attitudes, with female staff reporting greater stigma-related barriers to accessing information. Logistic regression analysis confirmed that job role and educational attainment were statistically significant determinants of awareness. The study concludes that institutional gaps, educational disparities, and sociocultural factors hinder effective dissemination of HIV prevention strategies. Recommendations include structured health education programs, gender-sensitive interventions, and inclusive communication strategies to improve awareness and uptake among institutional staff.

Keywords: HIV prophylaxis, PEP, PrEP, awareness, tertiary institutions, Nigeria, educational disparity, gender stigma, Health Belief Model, Diffusion of Innovations Theory

INTRODUCTION

Human Immunodeficiency Virus (HIV) remains a significant public health challenge globally, with sub-Saharan Africa bearing a disproportionate burden of the epidemic. Despite advances in prevention and treatment, the uptake of biomedical prevention strategies such as Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) remains limited, particularly in low-resource settings. Globally, awareness of these interventions is increasing, yet stigma, misinformation, and structural barriers continue to hinder their adoption (WHO, 2022).

In Nigeria, where HIV prevalence varies across regions, institutional staff in tertiary health settings represent a critical yet understudied population in HIV prevention efforts. While healthcare workers are often assumed to be well-informed, recent studies suggest that knowledge of PEP and PrEP among this group is inconsistent and often inadequate (Ajayi et al., 2021; Isah et al., 2024). Moreover, non-clinical staff who may also face

occupational exposure or serve as informal health influencers are frequently excluded from awareness campaigns and institutional health programs.

Educational disparities further compound the issue. Many academic staff in Nigerian colleges of health sciences lack postgraduate qualifications, limiting their exposure to contemporary HIV prevention strategies and reducing their capacity to educate others (Adebayo & Ojo, 2019). Non-academic staff, often marginalized in institutional health planning, are even less informed. Institutions such as Adamawa State College of Health Science and Technology, Michika, are strategically positioned to promote HIV awareness, yet the absence of structured health education programs and reliance on informal communication channels undermine their potential impact (Eze & Nwankwo, 2020).

This study investigates the level of awareness and attitudes toward HIV prophylaxis among academic and non-academic staff of Adamawa State College of Health Science and Technology. Guided by the Health Belief Model and Diffusion of Innovations Theory, the research explores how educational background, job role, gender, and cultural norms influence awareness and behavior. By identifying gaps and predictors of HIV prophylaxis knowledge, the study aims to inform targeted interventions that enhance institutional capacity for HIV prevention and contribute to broader public health goals.

LITERATURE REVIEW

Global and Regional Context: Globally, there has been a steady increase in awareness of HIV prophylaxis, particularly in the use of Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP). However, despite this growing awareness, the actual uptake of these preventive measures remains limited. This gap is largely attributed to persistent stigma, widespread misinformation, and inadequate access to prophylactic services, particularly in low-resource settings (WHO, 2022). In sub-Saharan Africa, the situation is further complicated by inconsistencies in knowledge even among healthcare professionals. Studies have shown that awareness and understanding of PEP and PrEP among healthcare workers vary significantly, highlighting a critical gap in both training and policy implementation (Ajayi et al., 2021).

Nigerian Studies: Within the Nigerian context, recent research underscores the limited awareness and application of HIV prophylaxis among healthcare providers. For instance, a study conducted in North-West Nigeria revealed that only 42% of healthcare workers demonstrated adequate knowledge of PEP protocols, with an even smaller proportion showing understanding of PrEP (Isah et al., 2024). Similarly, pharmacists working in Nigerian teaching hospitals exhibited moderate levels of awareness but demonstrated poor practical engagement with HIV prophylaxis measures (Ukoha-Kalu et al., 2024). These findings suggest that while some level of awareness exists, it is not translating into consistent or effective practice. Furthermore, a bibliography compiled by the Nigerian Institute of Medical Research (NIMR) indicates that the majority of HIV-related studies in the country have focused primarily on clinical populations. There remains a significant gap in research concerning institutional staff in tertiary educational settings, who are often overlooked in national HIV prevention strategies.

Educational Disparities: A critical factor contributing to the limited awareness and uptake of HIV prophylaxis in tertiary institutions is the educational disparity among staff. Contrary to common assumptions, many academic staff members in Nigerian colleges of health sciences do not hold postgraduate qualifications. This lack of advanced training restricts their exposure to contemporary HIV prevention strategies and diminishes their capacity to effectively educate students and peers on these issues (Adebayo & Ojo, 2019). The situation is even more pronounced among non-academic staff, who are frequently excluded from institutional health programs and awareness campaigns. As a result, they remain largely uninformed about the availability and importance of PEP and PrEP, further widening the knowledge gap within these institutions.

Institutional Role and Gaps: Tertiary institutions such as the Adamawa State College of Health Science and Technology, Michika, are strategically positioned to play a pivotal role in promoting HIV awareness and prevention. These institutions serve as training grounds for future healthcare professionals and are therefore critical in shaping public health outcomes. However, their potential remains underutilized due to the absence of

structured health education programs. Instead, information dissemination often relies on informal communication channels, which are neither consistent nor comprehensive (Eze & Nwankwo, 2020). This lack of institutional coordination and investment in health education significantly undermines efforts to improve awareness and uptake of HIV prophylaxis among staff and students alike.

CONCEPTUAL FRAMEWORK

This study is anchored in the Health Belief Model (HBM), a psychological framework that explains and predicts health-related behaviors by focusing on individual beliefs and attitudes. The HBM is particularly relevant in assessing awareness and uptake of HIV prophylaxis, specifically Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) among institutional staff in Nigerian colleges of health sciences. The model posits that a person's decision to engage in health-promoting behavior is influenced by several key constructs: perceived susceptibility to a health threat, perceived severity of the consequences, perceived benefits of taking preventive action, and perceived barriers that may hinder such action. Additionally, cues to action, such as institutional campaigns, peer influence, or training programs can trigger behavioral change, while self-efficacy reflects the confidence individuals have in their ability to take appropriate health measures.

In the context of this study, the HBM provides a lens through which to examine how institutional staff perceive their risk of HIV exposure, the seriousness of infection, and the effectiveness of prophylactic measures. It also helps to identify the structural and psychological barriers that may prevent them from accessing or using PEP and PrEP. By applying this model, the research aims to uncover the underlying beliefs that shape awareness and behavior, and to inform targeted interventions that can improve HIV prevention strategies within tertiary health institutions.

THEORETICAL FRAMEWORK

The theoretical foundation of this study is based on Everett Rogers' Diffusion of Innovations Theory, which explores how new ideas, practices, or technologies spread within a social system. This theory is particularly useful for understanding the adoption of HIV prophylaxis protocols in institutional settings, where awareness and behavior are influenced not only by individual knowledge but also by organizational culture, communication channels, and peer dynamics.

According to Rogers, the diffusion process is shaped by several factors: the characteristics of the innovation itself (such as its perceived advantage, compatibility with existing values, complexity, and observability), the nature of the communication channels through which information is shared, the structure of the social system, and the categories of adopters within that system. In this study, PEP and PrEP are viewed as preventive innovations whose adoption depends on how they are perceived by staff, how information about them is disseminated, and how institutional norms either facilitate or hinder their uptake.

By integrating the Diffusion of Innovations Theory, the study seeks to understand the institutional dynamics that affect the spread of HIV prophylaxis awareness. It also aims to identify which groups within the staff population are more likely to adopt these innovations and what strategies can be employed to accelerate their diffusion. Together with the Health Belief Model, this theoretical framework provides a comprehensive basis for analyzing both individual and systemic factors that influence HIV prevention behavior in Nigerian tertiary health institutions.

METHODOLOGY

Study Design: This study employed a descriptive cross-sectional survey design to assess the level of awareness and attitudes toward HIV prophylaxis, specifically Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP) among institutional staff. The cross-sectional approach was chosen to capture a snapshot of current knowledge and perceptions within the study population at a single point in time.

Study Population and Sampling Technique: The target population comprised both academic and non-academic staff of Adamawa State College of Health Science and Technology, Michika. To ensure representativeness across staff categories, a stratified random sampling technique was adopted. The population was first stratified into two distinct groups: academic staff and non-academic staff. From these strata, a total of 150 participants were randomly selected using proportionate allocation, 100 academic staff and 50 non-academic staff reflecting the actual distribution of personnel within the institution. Inclusion criteria required participants to be full-time staff members with at least six months of employment at the institution.

Data Collection Instrument: Data were collected using a structured, self-administered questionnaire developed specifically for this study. The instrument consisted of four sections: (1) demographic information, (2) awareness and knowledge of HIV prophylaxis (PEP and PrEP), (3) sources of information, and (4) attitudes and perceptions toward HIV prevention. To ensure content validity, the questionnaire was reviewed by three public health experts with experience in HIV research. A pilot test was conducted with 15 staff members from a similar institution in the region to assess clarity, reliability, and internal consistency. Based on feedback, minor revisions were made to improve question wording and structure. The reliability of the awareness scale was confirmed with a Cronbach's alpha coefficient of 0.81, indicating good internal consistency.

Data Analysis: Data were coded and entered into IBM SPSS Statistics version 25 for analysis. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic characteristics and awareness levels. To examine associations between categorical variables such as job role, educational attainment, and awareness of HIV prophylaxis, Chi-square tests were employed. A significance level of $p < 0.05$ was used to determine statistical significance.

To further quantify the strength and direction of associations between independent variables (e.g., educational level, job role) and the dependent variable (awareness of HIV prophylaxis), binary logistic regression analysis was conducted. Adjusted odds ratios (AORs) with 95% confidence intervals (CIs) were calculated to identify predictors of high awareness. This multivariate approach allowed for the control of potential confounding variables such as age, gender, and years of service.

Results

Demographic Overview: Of the 150 respondents, 100 were academic staff and 50 were non-academic. The gender distribution was relatively balanced, with 82 males (54.7%) and 68 females (45.3%). Most academic staff held bachelor's degrees, while a significant proportion of non-academic staff had only secondary education or diplomas. The average age of participants was 38.6 years (SD = 7.4), with a median length of service of 9 years.

Awareness of HIV Prophylaxis: Overall, 61.3% of respondents demonstrated adequate awareness of PEP, while only 38.7% were familiar with PrEP. Academic staff were significantly more likely to be aware of both forms of prophylaxis compared to non-academic staff ($\chi^2 = 12.84$, $p < 0.001$). Logistic regression analysis revealed that academic staff had 3.2 times higher odds of being aware of PEP (AOR = 3.21; 95% CI: 1.65–6.23) and 2.7 times higher odds for PrEP awareness (AOR = 2.73; 95% CI: 1.42–5.25) compared to their non-academic counterparts.

Education level was also a strong predictor of awareness. Respondents with postgraduate qualifications were significantly more likely to report adequate knowledge of HIV prophylaxis than those with only secondary education (AOR = 4.56; 95% CI: 2.01–10.34). Awareness was positively associated with access to formal health education programs and exposure to institutional campaigns.

Gender and Cultural Dimensions: Gender analysis revealed that male staff were more likely to report awareness of PEP (67.1%) than female staff (54.4%), though the difference was not statistically significant ($p = 0.08$). However, qualitative responses indicated that female staff often cited cultural stigma and fear of judgment as barriers to seeking information or accessing prophylaxis. In particular, concerns about being perceived as sexually promiscuous were more prevalent among women, reflecting deep-rooted social norms that discourage

open discussion of sexual health.

Cultural factors also influenced awareness across both staff categories. Respondents from conservative ethnic backgrounds were less likely to engage with institutional HIV programs or attend health seminars. Informal communication channels, such as peer discussions and religious gatherings played a larger role in shaping perceptions than formal training, especially among non-academic staff. These findings underscore the need for culturally sensitive and gender-responsive health education strategies.

DISCUSSION

The findings of this study reveal critical gaps in awareness and understanding of HIV prophylaxis among institutional staff at Adamawa State College of Health Science and Technology, Michika. While overall awareness of Post-Exposure Prophylaxis (PEP) was moderate, knowledge of Pre-Exposure Prophylaxis (PrEP) remained notably low. These results align with previous studies in Nigeria and sub-Saharan Africa, which have consistently shown that even healthcare professionals often lack comprehensive knowledge of HIV prevention strategies (Ajayi et al., 2021; Isah et al., 2024).

Education and Job Role as Determinants of Awareness: The logistic regression analysis underscores the strong influence of educational attainment and job role on awareness levels. Academic staff were significantly more likely to be aware of both PEP and PrEP compared to non-academic staff, with adjusted odds ratios of 3.21 and 2.73 respectively. This supports the assertion by Adebayo and Ojo (2019) that limited postgraduate training among academic staff restricts their exposure to advanced HIV prevention strategies. Furthermore, non-academic staff—often excluded from institutional health programs demonstrated the lowest levels of awareness, reinforcing the need for inclusive health education initiatives.

These findings validate the Health Belief Model's emphasis on self-efficacy and cues to action. Academic staff, by virtue of their training and professional networks, are more likely to encounter formal cues such as workshops and seminars. In contrast, non-academic staff rely on informal channels, which are less reliable and often perpetuate misinformation.

Gender and Cultural Influences: Although gender differences in awareness were not statistically significant, qualitative responses suggest that female staff face unique barriers shaped by cultural stigma. Many women expressed reluctance to seek information or access prophylaxis due to fears of being labeled as promiscuous. This reflects broader societal norms in northern Nigeria, where discussions around sexual health are often taboo, particularly for women. Such stigma not only suppresses individual agency but also undermines institutional efforts to promote HIV prevention.

Cultural background also emerged as a subtle but influential factor. Staff from more conservative ethnic groups were less likely to participate in institutional health programs or engage with HIV-related content. This supports the Diffusion of Innovations Theory, which posits that social systems and cultural compatibility significantly affect the adoption of new health behaviors. In this context, the perceived complexity and social sensitivity of HIV prophylaxis may hinder its diffusion among certain groups.

Institutional Gaps and Opportunities: Despite its strategic position as a health training institution, Adamawa State College of Health Science and Technology lacks structured programs to promote HIV awareness among staff. The reliance on informal communication channels limits the reach and effectiveness of health education efforts. This institutional gap presents a missed opportunity to leverage the college's influence in shaping public health attitudes and behaviors.

To address these challenges, institutions must adopt a more inclusive and culturally sensitive approach to health education. This includes integrating HIV prevention into staff development programs, creating safe spaces for dialogue, and partnering with community leaders to reduce stigma. Tailored interventions that consider educational background, job role, gender, and cultural context are essential for improving awareness and uptake

of HIV prophylaxis.

CONCLUSION

This study examined the level of awareness and attitudes toward HIV prophylaxis, specifically PEP and PrEP among academic and non-academic staff at Adamawa State College of Health Science and Technology, Michika. The findings reveal a moderate level of awareness of PEP and a significantly lower understanding of PrEP, with academic staff consistently demonstrating higher awareness than their non-academic counterparts. Educational attainment and job role emerged as strong predictors of HIV prophylaxis awareness, with postgraduate qualifications and academic positions associated with significantly higher odds of knowledge and engagement.

Gender and cultural factors also played a subtle but important role. While statistical differences in awareness between male and female staff were not pronounced, qualitative insights suggest that stigma and cultural norms disproportionately affect women's willingness to seek information or access prophylaxis. Additionally, staff from conservative cultural backgrounds were less likely to participate in institutional health programs, highlighting the need for culturally sensitive interventions.

Despite its strategic role as a health training institution, the college lacks structured and inclusive health education programs targeting staff. This institutional gap limits the diffusion of HIV prevention knowledge and undermines broader public health goals. Addressing these challenges requires a multifaceted approach that considers educational disparities, job roles, gender dynamics, and cultural context.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations are proposed to enhance HIV prophylaxis awareness and uptake among institutional staff:

1. **Develop Structured Health Education Programs**: The institution should implement regular, formalized HIV prevention workshops and seminars for both academic and non-academic staff. These programs should include modules on PEP, PrEP, stigma reduction, and safe practices.
2. **Integrate HIV Awareness into Staff Development**: HIV prophylaxis education should be embedded into staff orientation and professional development curricula, ensuring consistent exposure across all employment levels.
3. **Promote Inclusive Communication Channels**: Institutions should move beyond informal peer-to-peer communication and adopt inclusive strategies such as newsletters, posters, and digital platforms to disseminate accurate information.
4. **Address Gender and Cultural Barriers**: Tailored interventions should be designed to engage female staff and individuals from conservative backgrounds. This may include confidential counselling services, gender-sensitive messaging, and partnerships with community and religious leaders.
5. **Leverage Peer Educators and Champions**: Training selected staff members as peer educators can help normalize conversations around HIV prevention and serve as trusted sources of information within the institution.
6. **Monitor and Evaluate Awareness Programs**: Regular assessments should be conducted to evaluate the effectiveness of awareness initiatives, using indicators such as knowledge retention, attitude shifts, and prophylaxis uptake rates.
7. By implementing these recommendations, Adamawa State College of Health Science and Technology can strengthen its role as a proactive agent in HIV prevention and contribute meaningfully to national and regional public health efforts.

LIMITATIONS

While this study provides valuable insights into HIV prophylaxis awareness among institutional staff, several limitations should be acknowledged. First, the cross-sectional design captures data at a single point in time,

limiting the ability to assess changes in awareness or behavior over time. Longitudinal studies would be better suited to explore trends and the impact of interventions.

Second, the study was conducted within a single institution, Adamawa State College of Health Science and Technology, Michika, which may affect the generalizability of findings. Institutional culture, staffing structure, and regional norms may differ across other colleges and states in Nigeria. Future research should consider multi-site studies to enhance external validity and allow for comparative analysis.

Third, although stratified random sampling was employed, the sample size (n = 150) may not fully capture the diversity of experiences and perspectives within the institution, especially among non-academic staff. Additionally, self-reported data from questionnaires are subject to social desirability bias, particularly on sensitive topics such as HIV and sexual health. Some respondents may have overstated their awareness or withheld information due to stigma or fear of judgment.

Fourth, while logistic regression was used to quantify associations between variables, the study did not include qualitative methods that could have enriched understanding of cultural and gender-based barriers. Future research should incorporate interviews or focus groups to explore nuanced perceptions and lived experiences that quantitative tools may overlook.

Lastly, the study focused primarily on awareness and attitudes, without assessing actual uptake or adherence to PEP and PrEP protocols. Subsequent studies should investigate behavioral outcomes, institutional readiness, and the effectiveness of targeted interventions in improving HIV prophylaxis utilization.

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