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ASSESSMENT OF SOCIAL STIGMA OF HIV VOLUNTARY COUNSELLING AND TESTING (VCT) UTILIZATION AMONG FEDERAL UNIVERSITY STUDENTS IN NORTHERN NIGERIA

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Abstract

This study examined the social stigma of HIV Voluntary Counselling and Testing (VCT) utilisation among federal university students in Northern Nigeria. To achieve this purpose, a descriptive survey research design was used. The population of the study comprised 421,436 federal university students in Northern Nigeria. The sample size of 662 respondents was drawn from the population using a multi-stage sampling procedure, which includes cluster, simple random, proportionate, and convenience sampling. The instrument for data collection was a researcher-structured closed-ended questionnaire which was validated by five (5) experts in experts in the Department of Human Kinetics and Health Education, Department of Psychology and Counselling, and College of Medical Services in Ahmadu Bello University, Zaria. The instrument was pilot-tested using Cronbach's Alpha, and a reliability coefficient of 0.884 was obtained. Descriptive statistics of frequency and percentage were used to describe the demographic characteristics of the respondents. The research questions were answered using mean and standard deviation. Inferential statistics of one-sample t-test and independent sample t-test were used to test the stated hypotheses at a 0.05 level of significance. The result revealed a significant social stigma ($t = 21.247$; $p = 0.000$) regarding HIV VCT utilisation among federal university students in Northern Nigeria, with gender-based differences in social stigma ($t = 17.824$; $p = 0.000$). The study concluded that federal university students in Northern Nigeria face high levels of social stigma regarding HIV VCT utilisation, with female students perceiving greater stigma than their male counterparts. It recommends that government, university authorities, student unions, and NGOs implement comprehensive anti-stigma campaigns and gender-sensitive outreach programs, particularly targeting female students.

Keywords: HIV Voluntary Counselling and Testing (VCT), Social Stigma, Federal University Students, Northern Nigeria, Gender Differences

Introduction

Human Immunodeficiency Virus (HIV) remains a pressing global public health concern, particularly in sub-Saharan Africa, where the burden of the epidemic continues to pose significant challenges. Voluntary Counselling and Testing (VCT) is a crucial entry point for HIV prevention, treatment, and care. It allows individuals to know their HIV status and, if positive, to access antiretroviral therapy (ART) and other supportive services. Despite its importance, the uptake of VCT remains low in many settings, largely due to the pervasive influence of social stigma (World Health Organization [WHO], 2022). Social stigma, which refers to negative societal attitudes and discrimination directed at individuals associated with HIV, has been identified as a key barrier to VCT utilisation, particularly among young populations who are highly vulnerable to HIV infection (Parker & Aggleton, 2020). In conservative contexts such as Northern Nigeria, this stigma is deeply rooted in cultural and religious norms, often associating HIV with moral failure, immorality, and promiscuity, thereby discouraging young people from seeking testing and related services (Shehu et al., 2015; Abdulrahman et al., 2021).

In Nigeria, the HIV epidemic remains a significant concern, with approximately 1.9 million people living with HIV as of 2022, making it the country with the second-highest HIV burden globally (National Agency for the Control of AIDS [NACA], 2023). The prevalence of new infections is particularly high among young people aged 15–24, many of whom are students in tertiary institutions. However, despite the heightened risk, the uptake of HIV testing services such as VCT among university students remains disproportionately low. Social stigma has been repeatedly cited as a primary deterrent preventing students from accessing VCT services (Mbonu et al., 2021). The fear of being labelled as promiscuous or immoral for merely seeking HIV testing results in widespread avoidance of VCT centres, especially among students in Northern Nigeria, where conservative values dominate societal perceptions of sexuality and health behaviours (Kalichman & Simbayi, 2020). This stigma is not only internalised but also externally reinforced through community norms, peer pressure, and even institutional practices, making the university environment a complex setting for HIV testing uptake.

The stigma surrounding HIV and its testing services in Nigeria is exacerbated by misinformation, cultural taboos, and religious interpretations that associate the disease with divine punishment or character flaws. Among federal universities in Northern Nigeria, this stigma significantly undermines public health efforts to encourage HIV testing among students (Onyemachi et al., 2021). Students who might otherwise be willing to get tested often hesitate for fear of being seen by peers at VCT centres, leading to assumptions about their sexual activity or health status. This climate of fear and judgment discourages open discourse about HIV and its prevention, making it difficult to challenge stereotypes and normalise testing behaviour. As a

result, many students avoid VCT entirely, missing crucial opportunities for early diagnosis, treatment, and prevention of further transmission (Fauk et al., 2022). The implication is a persistent underutilization of VCT services, contributing to continued HIV transmission among young people within higher education institutions.

Several studies have highlighted that social stigma not only affects the decision to undergo VCT but also influences disclosure, linkage to care, and adherence to treatment among those who test positive (Babel et al., 2021). In university environments, students often fear that a positive diagnosis—or even the perception of being tested—could lead to social isolation, discrimination by peers, or reputational damage. This fear is particularly pronounced in Northern Nigeria, where strong community ties and religious teachings amplify the consequences of stigma. Even when universities provide VCT services, the lack of assurance about confidentiality and the potential for stigmatisation within campus settings discourage students from accessing them (Odimegwu et al., 2017). In such a context, understanding the nature and extent of social stigma is imperative for developing interventions aimed at promoting VCT utilisation among students. Without addressing this stigma, efforts to reduce HIV prevalence among youth may continue to fall short.

Moreover, the sociocultural environment in Northern Nigeria creates a uniquely challenging landscape for VCT uptake among university students. Religious leaders and community elders wield significant influence over social behaviours, including attitudes toward HIV testing. In many instances, these influential figures may perpetuate stigmatising narratives, unintentionally reinforcing students' fears of being judged or ostracised (Moyo et al., 2023). Gender norms also intersect with stigma, as female students may face even more severe social backlash for seeking HIV testing due to the dual stigmatisation of being sexually active and potentially infected. Consequently, the burden of stigma is not uniformly distributed and must be examined through the lenses of gender, religion, and cultural identity. Federal universities in Northern Nigeria serve a diverse student body, making them critical spaces for exploring how stigma affects different subgroups and how tailored interventions can mitigate these effects (Rasweswe et al., 2024).

Given the high risk of HIV infection among young people and the significant role social stigma plays in preventing VCT uptake, it is essential to assess and understand the forms, sources, and consequences of stigma in federal universities in Northern Nigeria. Doing so will provide the empirical foundation necessary for designing targeted, culturally sensitive strategies to reduce stigma and improve VCT utilisation. Past research has called for multi-level interventions that not only raise awareness about the benefits of VCT but also challenge stigmatising attitudes and promote social support for those seeking testing (Asrina et al., 2023; Parker & Aggleton, 2020). This study, therefore, seeks to assess the social stigma associated with VCT utilisation among students in federal universities in Northern Nigeria, intending to identify barriers, explore students' perceptions, and propose evidence-based recommendations to enhance HIV testing uptake in this crucial demographic.

Purpose of the Study

The main purpose of this study is to assess the social stigma of HIV Voluntary Counselling and Testing (VCT) utilisation among federal university students in Northern Nigeria. Specifically, this study intends to:

1. Assess the social stigmas of VCT utilisation among federal university students in Northern Nigeria.
2. Examine whether federal university students in Northern Nigeria differ in social stigma of HIV VCT utilisation based on gender.

Research Questions

1. What are the social stigmas of VCT utilisation among federal university students in Northern Nigeria?
2. Is there a difference in the social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender?

Hypotheses

1. There is no significant social stigma of HIV VCT utilisation among federal university students in Northern Nigeria.
2. There is no significant difference in the social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender.

Methodology

This study adopted a descriptive survey research design. The descriptive survey design was considered appropriate because it allows the researcher to collect data from a representative sample to generalise to a larger population. According to Osuala (2000), descriptive survey design is useful when a group of individuals or items is studied through data collected from a sample that reflects the characteristics of the entire population. Similarly, Shaughnessy et al. (2011) emphasised that survey research is suitable for analysing the current status of variables in a population.

The study population comprised 421,436 students enrolled in federal universities located in Northern Nigeria during the 2023/2024 academic session. A sample size of 662 students was determined using the Research Advisor (2006) formula, which specifies an adequate sample for a population of this size at a 99% confidence level and a 5% margin of error. The sampling procedure followed a multi-stage technique. First, the states in Northern Nigeria were grouped into the three geopolitical zones—North East, North Central, and North West—using cluster sampling. In each zone, two federal universities were randomly selected using simple random sampling by balloting. In the third stage, the actual universities for sampling within each cluster were again selected randomly. Thereafter, proportionate sampling was employed to determine the number of

students selected from each university based on its population size, thereby ensuring fair representation. Finally, convenience sampling was used to recruit students on their respective campuses for the administration of the questionnaire.

The instrument used for data collection was a researcher-developed questionnaire titled Assessment of Social Stigma of HIV VCT Utilisation among Federal University students in Northern Nigeria Questionnaire (ASSHVUFUSNNQ). The instrument comprised two sections: Section A collected demographic data (age, level, gender, and marital status), while Section B contained 10 items designed to assess perceptions and experiences related to social stigma in the context of HIV VCT service utilisation. Responses were rated using a four-point modified Likert scale (Always = 4, Often = 3, Rarely = 2, Never = 1), with a benchmark mean score of 2.50 used to interpret results—mean scores of 2.50 and above indicated agreement or a positive response, while scores below 2.50 indicated disagreement or a negative response. The face and content validity of the instrument were evaluated by five experts from relevant departments at Ahmadu Bello University, Zaria. Their recommendations led to appropriate revisions and enhancements to ensure the instrument effectively measured the intended variables. A pilot study was conducted using 50 students from the University of Abuja (which was not included in the main study sample) to test the reliability of the instrument. The data from the pilot test were analysed using the split-half method and Cronbach's Alpha reliability test, which yielded a coefficient of 0.884, indicating high internal consistency and suitability for the main study.

For data collection, an introductory letter was obtained from the Head of Department, Human Kinetics and Health Education, Ahmadu Bello University, and presented to the management of the selected universities to secure their cooperation. Ethical clearance was granted by the Health Research and Ethics Committee of the university. Informed consent was obtained from each participant before the administration of the instrument. To facilitate data collection, six trained research assistants with relevant backgrounds in health and familiarity with the university environment were employed. These assistants received detailed instructions on the purpose of the study and the proper administration of the questionnaire, including how to clarify any unclear items in a language understandable to the respondents. Data collection was carried out over four weeks. Data were analysed using both descriptive and inferential statistical methods. Frequencies and percentages were used to summarise demographic characteristics, while means and standard deviations were used to answer research questions. Hypotheses were tested using one-sample t-tests and independent sample t-tests at a 0.05 level of significance using SPSS version 30.

Results

Data collected on demographic characteristics of the respondents were tabulated using frequencies and percentages as indicated in Table 1

Table 1: Demographic Characteristics of the Respondents (N = 662)

Variables	Options	Frequency	Percentage (%)
Age Range in Years	Below 20	103	15.6
	20 – 25	293	44.3
	26 – 30	179	27.0
	Above 30	87	13.1
Level	Undergraduate	571	86.3
	Postgraduate	91	13.7
Gender	Male	379	57.3
	Female	283	42.7
Marital Status	Single	395	59.7
	Married	196	29.6
	Widow	26	3.9
	Divorce	45	6.8

Table 1 shows the demographic characteristics of the respondents. In terms of age distribution, the largest proportion of respondents (44.3%) falls within the 20–25-year age range, followed by 27.0% who are between 26–30 years. A smaller percentage (15.6%) is below 20 years, while only 13.1% is above 30 years. With regard to educational level, the majority of the respondents (86.3%) are undergraduates, while the remaining 13.7% are pursuing postgraduate studies. The gender distribution shows that males constitute the majority at 57.3%, compared to females who represent 42.7% of the total respondents. Marital status data indicate that the majority of the respondents (59.7%) are single, which aligns with the age distribution and student status. About 29.6% of the respondents are married, while 3.9% are widowed, and 6.8% are divorced.

Research Question One: What are the social stigmas of VCT utilisation among federal university students in Northern Nigeria?

Table 2: Mean Scores of Responses on Social Stigmas of HIV VCT Utilisation among Federal University Students in Northern Nigeria

S/N	Item	Mean	Std Dev
1.	People usually seem afraid of someone once they learn the person has HIV.	3.61	0.72
2.	People tend to stop calling or associating with someone after finding out they have HIV.	3.53	0.76
3.	Some people avoid physical contact with someone who is known to have HIV.	3.25	0.72
4.	It is generally considered a mistake to tell others that one has HIV.	3.23	0.74
5.	Individuals living with HIV often reduce social interactions because of how people react.	3.37	0.68
6.	People living with HIV tend to lose friends after disclosing their status.	3.49	0.94
7.	People physically distance themselves from someone once they know that person has HIV.	3.29	0.75
8.	People with HIV are often emotionally hurt by how others react to their status.	3.04	0.80
9.	Many people don't want someone with HIV around their children.	3.20	0.81
10.	Some people believe that individuals who have HIV deserve it because of their lifestyle.	3.09	0.69
	Aggregate	**3.31**	

(Decision Mean – 2.50)

Table 2 revealed the mean scores of responses on the social stigmas of HIV VCT utilisation among federal university students in Northern Nigeria. The highest mean score (3.61) was recorded for the item stating that "people usually seem afraid of someone once they learn the person has HIV," suggesting that fear-based reactions are common. This is closely followed by the belief that "people tend to stop calling or associating with someone after finding out they have HIV" (3.53) and "people living with HIV tend to lose friends after disclosing their status" (3.49). These responses highlight a general pattern of social rejection and isolation experienced by individuals living with HIV.

Other notable stigmas include the belief that individuals with HIV are avoided physically (3.25), socially distanced (3.29), or emotionally hurt by others' reactions (3.04). The respondents also agreed that disclosing one's HIV status is often seen as a mistake (3.23) and that people with HIV may choose to withdraw from social interaction due to anticipated stigma (3.37). Furthermore, stigma extends to protective behaviour, as some respondents affirmed that people don't want individuals with HIV around their children (3.20) and that some believe HIV is deserved due to lifestyle choices (3.09). The aggregate mean score across all 10 items is 3.31, which is above the decision mean of 2.50. This affirmed that federal university students in Northern Nigeria have a high level of perceived stigma associated with HIV and VCT utilisation among university students.

Research Question Two: Is there a difference in the social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender?

Table 3: Mean and Standard Deviation of the difference in Social Stigma of HIV VCT Utilisation among Federal University Students in Northern Nigeria based on Gender

Item	N	Mean	Std. Dev.	Mean Difference
Male	379	3.15	0.50	
				0.22
Female	283	3.37	0.49	

Table 3 revealed the result of the difference in social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender. The female had a higher mean score of 3.37 than the male, who had a mean score of 3.15, with a mean difference of 0.22. This implies that there is a difference in the social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender.

Hypothesis One: There is no significant social stigma of HIV VCT utilisation among federal university students in Northern Nigeria.

Table 4: One-Sample t-test Analysis of Social Stigma of HIV VCT Utilisation among Federal University Students in Northern Nigeria

Variable	N	Mean	Std. Dev.	df	t-value	p-value
Social Stigma	662	3.31	0.78	661	21.247	0.000
Test Mean	662	2.50	0.00			

Calculated p < 0.05, calculated t-value > 1.972 at df 661

The result of the one-sample t-test statistics in Table 4 revealed that there is a significant social stigma of HIV VCT utilisation among federal university students in Northern Nigeria because the calculated p-value of 0.000 is less than the 0.05 level of significance and the calculated t-value of 21.247 is higher than the 1.972 critical t-value at 661 degrees of freedom (df). Therefore, the null hypothesis, which stated that there is no significant social stigma of HIV VCT utilisation among federal university students in Northern Nigeria, was rejected. This means that federal university students in Northern Nigeria have a high level of perceived stigma associated with HIV and VCT utilisation among university students.

Hypothesis Two: There is no significant difference in the social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender.

Table 5: Independent t-test Statistics on Difference in Social Stigma of HIV VCT Utilization among Federal University Students in Northern Nigeria based on Gender

Item	N	Mean	Std. Dev.	Mean Difference	df	t-value	p
Male	379	3.05	0.57				
				0.32	660	17.824	0.000
Female	283	3.37	0.53				

t (662) = 17.824, p-value < 0.05, df = 660

Table 5 presents the results of an independent t-test conducted to examine whether there is a significant difference in the social stigma associated with HIV VCT utilisation among federal university students in Northern Nigeria based on gender. From the table, the mean score for male students (N = 379) on social stigma related to HIV VCT utilisation is 3.05, while the mean score for female students (N = 283) is higher at 3.37. The mean difference between the two groups is 0.32, indicating that female students perceive or report a higher level of social stigma associated with HIV VCT utilisation compared to their male counterparts. The t-test result shows a t-value of 17.824 with degrees of freedom (df) = 660, and a p-value of 0.000. Since the p-value is less than 0.05 level of significance, the result is statistically significant. This means that the observed difference in mean scores is not due to chance. Therefore, the null hypothesis that states "there is no significant difference in social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender" is rejected. The finding affirmed that gender plays a significant role in how students perceive social stigma regarding HIV VCT, with female students reporting significantly higher levels of stigma than male students.

Discussion of Findings

Hypothesis one revealed that there is a significant social stigma of HIV VCT utilisation among federal university students in Northern Nigeria (t = 21.247; p = 0.000). This implies that federal university students in Northern Nigeria experience high levels of social stigma related to HIV VCT utilisation. This finding aligns with Donkor (2012), who conducted a similar study among university students in Ghana and found that a significant majority (81%) of the respondents had experienced social stigma related to VCT. This strongly validates the presence of stigma in higher institutions, supporting the notion that stigma is a significant barrier to VCT uptake among youths in African contexts.

Likewise, Alemayehu (2018) discovered that in Tigray, Ethiopia, students were sensitive to social stigma associated with VCT, which discouraged their willingness to be tested. This finding aligns with the gendered experience of stigma, thereby validating concerns around social perceptions and reinforcing that stigma significantly impacts VCT utilisation. Ikechebelu et al. (2016) also provide strong support for this finding. Their research among undergraduates in Southeast Nigeria showed that although awareness was moderately high, utilisation of VCT services remained low due to stigma, fear of a positive result, and uncertainty about confidentiality. This aligns with the current finding and indicates a consensus among researchers regarding the detrimental role of social stigma on HIV testing behaviours.

Additionally, Reynell (2012) emphasised that social stigma and poor access to information limit the uptake of VCT in Nigeria, concluding that education and counselling are vital in combating stigma. This further corroborates the result by highlighting the consistent negative effect stigma has on student attitudes towards VCT. Similarly, Vuyelwa et al. (2012) noted that a significant percentage of South African students harboured negative perceptions and stigmatising attitudes toward people living with HIV and toward the use of VCT, despite high knowledge levels. This reflects a conformity to this study, where knowledge alone does not eliminate stigma and its impact on testing behaviours. The repeated emergence of stigma as a major deterrent in VCT utilisation among students demonstrates the need for sustained stigma-reduction strategies through education, peer counselling, and policy advocacy.

Hypothesis two revealed that there is a significant difference in social stigma of HIV VCT utilisation among federal university students in Northern Nigeria based on gender (t = 17.824; p = 0.000). Female students in federal universities in Northern Nigeria perceive higher levels of social stigma related to HIV VCT use than male students. This finding is strongly in agreement with Alemayehu (2018), who conducted a study in Tigray, Northern Ethiopia, and found that female respondents were more concerned about social stigma and were less willing to undergo VCT for HIV compared to males. This aligns with the current finding by reinforcing that females often face heightened fears of discrimination and social consequences, which hinders their participation in HIV testing programs.

Similarly, Reynell (2012) found a significant difference in social stigma based on gender, age, and religion in a study among Nigerian youths. He emphasised that gender plays a key role in how individuals perceive and respond to the stigma associated with HIV testing. This validates the observed pattern in the current study, underscoring a gender-based disparity in stigma perception. Donkor (2012) also reported that while a majority of university students in Ghana had positive attitudes towards VCT, many still stigmatised those who used VCT services, with a perception that such individuals were promiscuous. While this study did not isolate gender differences, the stigma highlighted is often more severely internalised by females, particularly in culturally conservative contexts like Northern Nigeria, which supports the present finding.

Moreover, the study by Abebe and Mitikie (2019) found that high perceived susceptibility and barriers, including social stigma, were negatively associated with willingness to undergo VCT. Although this study was based in Ethiopia and involved secondary school students, it further corroborates the idea that social stigma remains a substantial barrier, especially among populations with heightened social expectations regarding sexual purity—expectations more strongly imposed on females.

These studies consistently highlight gender as a critical factor influencing attitudes toward VCT, with females more likely to experience and internalise stigma, thus affirming the consensus in the literature.

Conclusions

Based on the findings of the study, the following conclusions were made:

1. Federal university students in Northern Nigeria experience high levels of social stigma related to HIV VCT utilisation.
2. Female students in federal universities in Northern Nigeria perceive higher levels of social stigma related to HIV VCT use than male students.

Recommendations

Based on the conclusion, the study recommended the following:

1. The Nigerian government and university management should implement comprehensive anti-stigma campaigns and peer education programmes across campuses.
2. Student unions and NGOs should develop targeted stigma-reduction strategies focusing on female students through gender-sensitive outreach.

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