Socio-Demographic Characteristics, Knowledge of HIV/AIDS, HCT Centres and Willingness to use Toll-Free Telephone Lines on HIV/AIDS Counselling Services in Nigeria

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Abstract

Background: Accessing high quality, confidential HIV/AIDS counselling services is of great concern to stakeholders in Nigeria. Toll-free telephone HIV/AIDS counselling was introduced in Nigeria through a collaboration between the National Agency for the Control of AIDS (NACA) and Airtel (a leading telecommunications company). This study examines socio-demographic factors, knowledge of HIV/AIDS and HIV Counselling & Testing (HCT) centres as correlates of willingness to use toll-free telephone HIV/AIDS counselling in Nigeria.

Methods: Data from a sample of 1,867 Nigerians (938 males, 929 females) aged 15-64 were analysed with chi-square to examine the relationships between geographical zone, gender, age-group, access to telephone, knowledge of HIV/AIDS and HCT centres; and willingness to use toll-free HIV/AIDS counselling.

Results: Results showed gender as well as age-group differences in willingness to use toll-free lines. Access to telephone was significantly correlated to willingness to use toll-free lines. Finally, the findings showed that knowledge of HIV/AIDS and HCT centre was significantly associated with willingness to use toll-free lines independently. Also, most respondents were willing to use telephone services on HIV/AIDS counselling.

Conclusion: This study highlights the need to encourage Nigerians to use toll-free lines on HIV/AIDS counselling irrespective of their gender and age-group. Access to telephones as well as increase in knowledge of HIV/AIDS and HCT centres are important in increasing the willingness to use the toll-free lines effectively.

Key words: HIV/AIDS counselling, HIV/AIDS knowledge, HCT centres and Willingness to use toll-free lines.

Background

Despite of spirited efforts at national and global levels to curb its spread, the HIV/AIDS epidemic has continued to ravage the Nigerian nation with attendant negative implications on the health and welfare of the citizenry. It has been affirmed that "Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in sub-Saharan Africa" (NACA, 2017). According to the National Bureau of Statistics (NBS) and United Nations Children's Fund (UNICEF) (2017) "HIV testing rates are low in Nigeria: only 15.1% of people between the ages of 15-49 had tested in the last 12 months and knew their results." This underscores the need for strategies and programmes aimed at increasing access to high-quality confidential HIV/AIDS counselling, which is a precursor to testing.

It is in this regard that the National Agency for the Control of AIDS (NACA) collaborated with Airtel Nigeria to provide toll-free HIV/AIDS counselling and referral services to Nigerians. Airtel Nigeria donated four toll-free lines and undertook to bear the cost of all calls made by individuals utilising these free counselling/referral services. The lines were configured to enable people to call in from any number within the Airtel network and receive free counselling and referrals on HIV/AIDS. NACA deployed these lines to four Non-Governmental Organisations (NGOs) working in Lagos, Calabar, Abuja, and Kano, respectively. The study examines factors associated with the willingness of Nigerians to use these toll-free telephone lines.

Statement of the problem

Despite the progress that has been recorded in combating the HIV epidemic in Nigeria, most people, including the highly vulnerable, are still reluctant to willingly seek information about the disease from hospitals, health centres, NGOs, and other organisations. Perhaps, this is attributed to the stigma associated with seeking such information or being seen in the hospital environment where HIV/AIDS-related issues are treated (Odimegwu et al., 2018). It, therefore, became

imperative to put in place an effective strategy through which the general public can access good quality HIV/AIDS counselling services without compromising their desire for anonymity. It was in recognition of this fact that NACA facilitated a public-private initiative with the telephone network, Airtel, to provide toll-free telephone counselling services on HIV/AIDS in Nigeria. This also provided an opportunity to understand likely factors that associate with the willingness to use toll-free lines for HIV/AIDS counselling among Nigerians.

The stigma and the secrecy associated with HIV/AIDS have implications for Nigerians as it hinders the communication of information on the causes, symptoms, prevention, and treatment. According to Nnko et al. (2019), access to HIV counselling and testing, factors such as individual awareness of the availability of services, confidentiality, as well as fear of HIV stigma and discrimination act as major barriers to willingness to access HCT services. It has also been found that peoples' attitude towards attending HIV hospital clinic season has been frustrated by stigma (Li et al., 2017). Similarly Alem et al. (2022) found out that 'both individual and community-level variables were significantly associated with Voluntary Counselling and Testing (VCT) uptake among women.'

Those who are reluctant or unwilling to visit HCT centres because of the fear of stigma and/or discrimination are obviously unable to get good quality information and counselling services provided by these centres, which is needed to reduce the prevalence rate of HIV infection in Nigeria. Therefore, the introduction of toll-free telephones lines will at least reduce the fear of being stigmatised and increase the secrecy when calling for help on HIV and AIDS-related issues or being counselled through the free call (Dileka et al., 2019). This is in line with UNAIDS' (2002) position that a shift from the clinic-based approach to a more media approach will increase access to good quality confidential information on HIV/AIDS and increase visits to HCT centres. Hence,

Dandachi et al. (2019) noted that the operation of the telephone services is part of efforts to provide succour for persons infected and affected by the disease. The purpose of the telephone services is for the general public to avail themselves of the opportunity of accessing high-quality confidential counselling services. Also, the concept of toll-free telephone services is geared towards leveraging resources and getting the organised private sector to use their core competencies in the fight against HIV/AIDS in Nigeria.

A significant concern now is to investigate various factors that associate with the willingness to use the toll-free lines on HIV/AIDS counselling in Nigeria. Socio-demographic factors that are likely to relate with Nigerians' willingness to the toll-free line on HIV/AIDS counselling are people's geographical zone, gender, age group, access to phone and call centre states.

Literature Review

Conceptual Framework

Counselling and testing are important in the HIV prevention-treatment-care continuum. The use of toll-free telephone lines for HIV counselling and referral services fills a gap, particularly for individuals who crave for anonymity and confidentiality. However, there are factors which could enhance or inhibit the willingness of individuals to use these services.

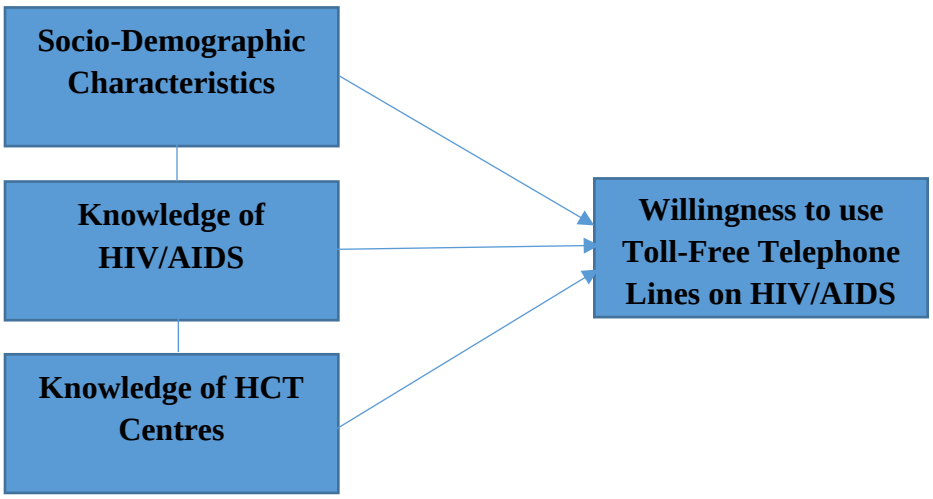

Figure 1: Factors associated with Willingness to use Toll-Free Telephone Lines on HIV/AIDS

In this study, it is proposed that Socio-Demographic Characteristics, Knowledge of HIV/AIDS and Knowledge of HCT Centres would impact on the extent to which Nigerians are willing to use toll-free telephone lines on HIV/AIDS.

Empirical Review of Literature

HIV and AIDS knowledge has been consistently reported in the literature to be important for preventive behaviour in our society (Farotimi et al., 2015), and this can be related to people's willingness to use toll-free lines on HIV/AIDS counselling services in Nigeria (Sutton et al., 2009). Yanget al., (2006) found that willingness to disclose HIV status was negatively associated with misconceptions about HIV transmission and stigma. In other words, people who are more willing to disclose their HIV status are poor in their knowledge of HIV and AIDS. It may be attributed to an assertion in this study that there may be an association between HIV/AIDS knowledge and willingness to adopt any form of HIV/AIDS preventive or treatment measure such as toll-free telephone counselling.

Voluntary testing and counselling are a gateway to prevention and treatment, an essential tool in the control of the HIV/AIDS epidemic (UNHCR, 2014). HIV testing and counselling are direct, personalised, and person-centred interventions, tailored to prevent transmission and obtain a referral to additional medical care, preventive, psychosocial, and other needed services to remain healthy (Kiplagat & Huschke, 2018). Counselling was designed to help persons interpret the meaning of negative or positive antibody results, to initiate and sustain behavioural changes that reduce the risk of becoming infected, and to assist HIV-positive individuals in avoiding infecting others (Bukenya et al., 2020). HCT is also a critical component of preventive strategies to reduce transmission of HIV/AIDS from mother to child (Byamugisha et al., 2010; Kwena et al., 2021).

Given this, knowledge of any HCT centre may associate with the willingness to go for HIV/AIDS counselling among different categories of people in Nigeria.

Ikechebelu et al. (2006) reported that most participants did not know where to access HCT services and knowledge of what HCT entails was also low. However, many respondents (74.2%) were willing to go for voluntary counselling and testing. It was concluded that there is a need to step up efforts to increase the peoples' awareness of HCT, deepen their knowledge and create the right attitude towards HCT through the mass media and religious bodies. Another study reported willingness to seek HIV counselling and testing among pregnant women. The study found that the majority of the women expressed acceptance to be tested (Adeneye et al., 2007). Their willingness for counselling and testing (CT) was positively associated with education. Moreover, more of those with self-perceived risk expressed readiness to test for HIV. Participants that are willing to be tested had a higher knowledge score on how HIV spreads than those who are not willing to be tested.

Gender refers to the widely shared expectations and norms within a society about appropriate male and female behaviour, characteristics, and roles. It is a social and cultural construct that differentiates women from men and defines how women and men interact with each other (Marcos-Marcos et al., 2019). There could be a gender difference in willingness to use toll-free lines on HIV/AIDS counselling. In a study, Alemayehu (2010) reported that females were more knowledgeable and willing to HCT for HIV than males; and concluded that both sexes be empowered to accept HIV/AIDS counselling at all levels of health care.

Another variable likely to be associated with willingness to use toll-free lines is the respondents' age group. Studies have shown that age is related to voluntary counselling and testing. For example, Worthington and Meyers (2003) and Van Dyk and Van Dyk (2003) found that young

people are generally not motivated to attend voluntary counselling services due to a range of barriers such as availability of services, worries about confidentiality, inaccurate risk perceptions, fear of being stigmatised and perception of the consequence of living with HIV. Radez et al. (2021) conducted a systematic review of quantitative and qualitative studies reporting barriers and facilitators to children and adolescents seeking and accessing professional help for mental health problems. They identified four main barrier/facilitator themes: 1. barriers related to young people's individual factors, such as limited mental health knowledge and broader perceptions of help-seeking; 2. barriers related to social factors, such as perceived social stigma and embarrassment; 3. young people's perceptions of the therapeutic relationship with professionals - including perceived confidentiality and the ability to trust an unknown person; and 4. systemic and structural barriers and facilitators, such as financial costs associated with mental health services, logistical barriers, and the availability of professional help.

The geographical zone can be responsible for the possibility of a person engaging in any form of HIV and AIDS treatment programmes, perhaps depending on whether people in the areas perceive their risk to be low or high. The possibility of using toll-free lines on HIV/AIDS counselling can be easily linked to whether the individuals have access to telephone or not. Availability of call centres in some states may make it easier for people to use toll-free lines on HIV/AIDS counselling services. The toll-free lines were deployed to four locations in Nigeria (i.e., Lagos, Calabar, Kano & Abuja); and the presence of this may be related to people's willingness to make use of the lines compared to states without these call centres.

Methods

Sampling Techniques

The study obtained data from a sample of respondents from 12 states of the federation (including the FCT) using a multistage probability sampling technique. Two states were randomly selected in each of the six geopolitical zones, i.e., South East, South West, South-South, North East, North West & North Central using a simple balloting technique. The four states in which the toll-free centres are located (Kano, FCT-Abuja, Cross River and Lagos) were purposively selected while one other state from the zone was randomly selected to complete the target number for the zone. Thus, the 12 states selected for the survey were: FCT-Abuja and Nasarawa (North Central), Adamawa and Gombe (North East), Kano and Kaduna (North West), Abia and Enugu (South East), Cross River and Delta (South-South) and Lagos and Ondo for (South West) respectively. By arranging all the localities (cities, towns and villages) in the selected states by their geographic location and using their population as their weight (i.e., measure of their size),

six cluster areas were selected as the sites for the survey. Seventy-two cluster sites were

used for the survey nationwide spread across urban and rural areas. A questionnaire was designed to assess socio-demographic characteristics and willingness to use toll-free lines by the general population. The questionnaire was administered to the respondents who participated in the study.

Sample Size and sample selection

Seventy-two cluster sites were selected for the survey; from these, 78 households in each cluster site were identified and listed. Members of the households were also identified and listed serially within each cluster. Using a two-stage systematic sampling procedure, 13 eligible males (age 15 to 64) were selected from the household members' list in each cluster. The household from which the 13 males were selected was then removed from the cluster frame after which 13 eligible females (age 15 to 49) were selected from the remaining households list for the cluster. This procedure ensured the spread of final eligible persons selected for the interview and reduced the probability of selecting more than one person per household. In all 1,872 persons of reproductive

age were approached for interview in the selected clusters nationwide. A total of 1,867 (938 males and 929 females) accepted to be interviewed while five persons refused to participate in the interview. Nine hundred and five (48.5%) of the respondents were singles, 46.4% were married, 0.7% were separated, 1.6% were divorced, and 2.8% were widowed. Analysis of the distribution of respondents' religion showed that 59.7% of them were Christians, 39.6% were Muslims, 0.3% of respondents were Traditionalists, and 0.4% indicated no religion.

Data Collection Procedure

The respondents who accepted to participate in the survey were approached in their households for the interview. The researcher adopted the use of oral informed consent, and the questionnaire was administered. To ensure sensitivity to cultural values, male interviewers were used to interviewing male respondents while female interviewers interviewed for female respondents. A team of five, comprising of one supervisor and four interviewers, was formed in each state. The supervisors from the 12 states were trained centrally on survey methodology and administration of the questionnaire. The supervisors trained interviewers in their respective states. All duly completed questionnaires from each state were collated and analysed with SPSS (version 15 software).

Dependent Variable

Willingness to use the toll-free line on HIV/AIDS counselling was examined as the dependent variable in the study. The variable was a dichotomous one derived from the question, "Now that you are aware of the toll-free lines, will you be willing to use the lines?" Responses were coded as "Yes" or "No"; those who did not indicate any response were excluded from the analyses.

Independent Variables

HIV/AIDS knowledge and Knowledge of the HCT centre were the main independent variables in the study. HIV/AIDS knowledge was assessed with the question, "Have you ever heard of the HIV (the virus that causes AIDS) or AIDS?" Responses were coded as "Yes" or "No". Knowledge of HCT centre was measured with the question "Do you know any voluntary counselling and testing centre for HIV/AIDS?" Responses were coded as "Yes" or "No".

Socio-demographic factors in the study were geographical zone (north or south), sex (male or female), age at last birth (age in completed year, don't know), marital status (single, married, separated, divorced, widowed), religion (Christianity, Islam, Traditionalist, no religion), ethnic group (Hausa, Yoruba, Igbo, others), access to a telephone ("Yes" or "No").

Results

Descriptive Findings

Descriptive findings show that most of the respondents (97%) had heard of HIV (the virus that causes AIDS) and AIDS. On the average, 50.5% of the respondents know counselling and testing centres for HIV/AIDS in their areas. However, only 28.0% of the participants had been counselled on HIV/AIDS before. Meanwhile, most of the participants (83.6%) were willing to be counselled about the virus that causes AIDS. Similarly, a great number of the participants (85.0%) were willing to be tested to find out if they have the virus that causes AIDS or not. A major concern is that even though a large number of respondents (84%) have access to telephones, a negligible number of them (2.9%) were aware of the existence of toll-free lines on HIV/AIDS counselling in Nigeria. However, most of them (87.7%) are willing to use toll-free lines on HIV/AIDS counselling now that they are aware.

TABLE 1: FREQUENCY DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF RESPONDENTS

Background Characteristics	Frequency	Percentage %
Gender:		
Male	938	50.2
Female	929	49.8
Marital Status:		
Single	905	48.5
Married/Cohabiting	867	46.4
Separated	13	0.7
Divorced	30	1.6
Widowed	52	2.8
Religion:		
Christian (Catholic)	265	14.2
Christian (Others)	849	45.5
Islam	739	39.6
Traditionalists	7	0.3
No Religion	7	0.4
Zone:		
North	914	49.0
South	953	51.0
Age Category:		
Youth	861	46.1
Adult	1,006	53.9
Education:		
None	78	4.2
Quranic Only	147	7.9
Primary	342	18.3
Secondary	917	49.1
Higher Education	383	20.5
Access to Telephone:		
Yes	1,570	84.1
No	297	15.9
Knowledge of HIV/AIDS:		
Yes	1,809	96.9
No	58	3.1
***Knowledge of HCT*:**		
Yes	943	50.5
No	924	49.5
Call Centre:		
With	607	32.5
Without	1,260	67.5

Table 1 show the demographic information of the respondents. 50.2% of them were males and 49.8% were females. 48.5% were singles, 46.4% were married or cohabiting, 2.8% were widowed, 1.6% were divorced and only 0.7% were separated. For religion, 45.5% constitutes Christian participants belonging to other denominations while 39.6% were Muslims and 14.2% were Catholics with 0.3% and 0.4% traditionalists and without religion respectively. 51.0% were from the southern part of the country while 49.0% from the Northern part with 53.9% being adults and

46.1% youths. For educational qualification, 49.1% had secondary school education followed by 20.5% of those with higher education and 18.3% with primary school education, 7.9% with quranic education and 4.2% with no formal education.

For access to telephone, majority, 84.1% have access to telephone while only 15.9% had no access. 96.9% have knowledge of HIV/AIDS and 3.1% had no knowledge of HIV/AIDS. 50.5% of the respondents have knowledge of HCT while 49.5% had no knowledge of HCT. Finally, 67.5% of the participants are without call centres in their states while only 32.5% have call centres in their states.

Table 2: Cross Tabulation Showing Relationships between Socio-demographic Factors, Knowledge of HIV/AIDS and HCT centre, and Willingness to use Toll-free Lines on HIV/AIDS Counselling

		Willingness to use Toll-free Lines					
Zone		***Yes (N/%)***	***No (N/%)***	***Total***	***X^2***	***df***	***P***
	North	767(42.3%)	121(6.7%)	888(49%)	2.80	1	>.05
	South	822(45.3%)	102(5.6%)	924(51%)			
Gender							
	Male	833(46%)	76(4.2%)	909(50.2%)	26.31	1	<.01
	Female	756(41.7%)	147(8.1%)	903(49.8)			
Age-group							
	Youth	754(41.6%)	82(4.5%)	836(46.1%)	8.97	1	<.01
	Adult	835(46.1%)	141(7.8%)	976 (53.9%)			
Access to Phone	Yes	1,363(75.2%)	160(8.8%)	1523(84.1%)	28.70	1	<.01
	No	226(12.5%)	63(3.5%)	289(15.9%)			
Call Centre State	With	519(28.6%)	69(3.8%)	588(32.5%)	0.26	1	>.05
	Without	1,070(59.1%)	154(8.5%)	1224(67.5%)			
Knowledge of HIV/AIDS	Yes	1551(85.6%)	205(11.3%)	1756(96.9%)	21.06	1	<.01
	No	38(2.4%)	18(8.1%)	56(3.1%)			
Knowledge Of HCT Centre	Yes	806(45.9%)	81(4.6%)	887(50.5%)	11.23	1	<.01
	No	745(42.4%)	124(7.1%)	869(49.5%)			

Chi-square was computed to determine association between factors and willingness to use toll-free lines on HIV/AIDS counselling. In terms of geographical zone and willingness to use toll-

free lines on HIV/AIDS counselling, Table 2 shows that, 49% of the respondents were from the northern Nigeria out of which 42.3% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. Also, 51% were from the southern parts of Nigeria out of which 45.47% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. However, the Chi-square statistics shows that there was no significant relationship between zone of respondents and their willingness to use toll-free telephones services on HIV/AIDS counselling ($X^2(1) = 2.80$; $P>.05$).

In gender and willingness to use toll-free lines, the result shows that 50.2% of the respondents were male and 46% of them would be willing to use toll-free telephones services on HIV/AIDS counselling now that they are aware. Also, 49.8% were females and 41.7% of them stated that they would be willing to use toll-free-telephones services on HIV/AIDS counselling now that they are aware. However, the Chi-square statistics shows that there was significant relationship between gender of respondents and their willingness to use toll-free telephones services on HIV/AIDS counselling ($X^2(1) = 26.31$; $P <.01$).

The results further show that, 46.1% of the respondents were youths out of which 41.6% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. Also, 53.9% were adults out of which 46.1% stated that they would be willing to use toll-free telephones services on HIV/AIDS counselling now that they are aware. However, the Chi-square statistics shows that there was significant relationship between age-group and willingness to use toll-free telephones services on HIV/AIDS counselling (X^2 (1) = 8.97; $P<.01$).

In terms of access, the result shows that 84.1% of the respondents had access to telephone, out of which 75.2% stated that they would be willing to use toll-free telephones services on HIV/AIDS counselling now that they are aware. Also, 15.9% did not have access to telephone; however, most

of them (12.5%) stated that they would be willing to use toll-free telephones services on HIV/AIDS counselling now that they are aware. The Chi-square statistics shows that there was significant relationship between access to telephone and willingness to use toll-free telephones services on HIV/AIDS counselling in Nigeria ($X^2(1) = 28.70$; $P<.01$).

Furthermore, the result shows that 32.5% of the respondents were from states with call centre out of which 28.6% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. Also, 67.5% were from the states without call centre out of which 59.1% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. However, the Chi-square statistics shows that there was no significant relationship between call centre states and willingness to use toll-free telephones services on HIV/AIDS counselling (X^2 (1) = 0.26; $P>.05$).

Concerning knowledge, the result shows that 96.9% of the respondents had knowledge of HIV and AIDS out of which 85.6% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. Also, 3.1% were did not have knowledge of HIV and AIDS out of which 2.4% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. The Chi-square statistics shows that there was significant relationship between knowledge of HIV/AIDS and willingness to use toll-free telephones services on HIV/AIDS counselling ($X^2(1) = 21.06$; $P<.01$).

Furthermore, the result shows that 50.5% of the respondents had knowledge of HCT centre out of which 45.9% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. Also, 49.5% did not know any HCT centre out of which 42.4% stated that they would be willing to use toll-free telephone services on HIV/AIDS counselling now that they are aware. The result of Chi-square statistics shows that

there was significant relationship between knowledge of HCT centre and willingness to use toll-free telephones services on HIV/AIDS counselling in Nigeria (X^2 (1) = 11.23; P<.01).

Finally, logistic regression analysis of factors associated with willingness to use toll-free lines on HIV/AIDS counselling services was computed for the respondents. The results of the analysis showed that willingness to use toll-free lines on HIV/AIDS counselling had a significant relation with being male (odds ratio [OR] = 0.50 (95% confidence interval [CI] = 0.36 - 0.68), being adults (OR = 0.57 (95% CI = 0.42 - 0.78), having access to telephone (OR = 0.48 (95% CI = 0.33 - 0.69) and having knowledge of HCT centre (OR =0.60 (95% CI = 0.44 - 0.84). The result has generally showed that those who were more willingly to use toll-free lines on HIV/AIDS counselling services were male respondents, adults, those who do not have access to telephones and those who do not have the knowledge of HCT centres in their areas (see Table 3).

Table 3. Binary Logistic Regression Model: Factors Independently Associated with Willingness to use toll-free lines on HIV/AIDS Counselling Services

Variables	OR	95%CI
Sex	0.50	0.36-0.68
Age-group	0.57	0.42-0.78
Access to Telephone	0.48	0.33-0.69
Knowledge of HCT Centre	0.60	0.44-0.84

DISCUSSION

This study examined the relationships between socio-demographic factors, knowledge of HIV/AIDS and HCT centres, and willingness to use toll-free lines on HIV/AIDS counselling services in Nigeria. Specifically, the study attempted to examine geographical zone, gender, age-group, access to telephones, and call centre states as socio-demographic factors, along with knowledge in HIV/AIDS and HCT centre as correlates of willingness to use toll-free lines. HIV/AIDS knowledge from the literature significantly determines people's willingness to go for voluntary counselling and testing on HIV and AIDS (Darteh et al., 2021). Generally, 96.9% of the

respondents knew about HIV and AIDS. In line with past studies (including Dandachi et al., 2019; Dileka et al., 2019; and UNAIDS, 2002), the present study has also been able to find out that knowledge of HIV and AIDS is associated with willingness to use toll-free lines on HIV/AIDS counselling services. In other words, most respondents (85.6%) who had heard of HIV (the virus that causes AIDS) and AIDS were more willing to use the toll-free lines for HIV/AIDS counselling services. However, (2.4%) of the respondents that had not heard about HIV and AIDS were willing to use the toll-free lines now that they are aware. It means that people who had heard about HIV were more willing to use the toll-free lines than those who had not heard about it; however, most respondents are willing to use the toll-free lines. It is, however, important to note that knowledge of HIV and AIDS is vital to enhance willingness to use the toll-free telephone facility on HIV/AIDS counselling services in Nigeria.

Knowledge of the HCT centre was another independent variable examined in the study to be associated with willingness to use toll-free lines on HIV/AIDS counselling services. The findings of this study are consistent with previous studies that have shown that knowledge of HCT centres could make an individual desire to know more about HIV and AIDS-related issues (Giguère et al., 2021; Ikechebelu et al., 2006; Indravudh et al., 2021; Kwapong et al., 2014; Odimegwu et al., 2019). The study showed that an average (50.5%) of respondents knew voluntary counselling and testing centres, and almost all of them (45.9%) were willing to use the toll-free lines. It means that despite people's knowledge of HCT centres, they find it difficult to visit the centres; perhaps, the centres are located far from their places of abode or the fear or stigma of being seen in the HCT centre. There is no doubt that the introduction of the toll-free lines will overcome these excuses, and that is why most of the respondents who knew HCT centres are more willing to use the lines. From another perspective, we may attribute the responses of those who are not willing to use the toll-free lines to their lack of knowledge on the location of any HCT centre. Irrespective of

knowledge of HCT centres or otherwise, respondents indicated a willingness to use the toll-free lines for counselling and information about HIV. This finding implies that many people who will be using the toll-free services will do so not because they do not know any counselling centres, they remain anonymous. There is, therefore, the need to strengthen mechanisms for securing the identities of callers in toll-free telephone services.

Socio-demographic factors of the respondents appeared to have significant relationships between gender, age group and access to a telephone, and willingness to use toll-free lines on HIV/AIDS counselling services. Geographical zone and call centre states were not found to have any association with people's willingness to use the toll-free lines. However, Ransom et al. (2008) found that HIV-infected persons in rural areas reportedly showed evidence of clinically meaningful reductions in depressive symptoms and overall levels of psychiatric distress after participating in telephone-delivered interpersonal counselling and therapy intervention, compared with those in the urban area. However, gender difference was found in the willingness to use toll-free lines among respondents. Nine hundred and nine (50.2%) of the respondents were males and 833 of them were willing to use the toll-free lines which is a bit higher than female respondents (756) who were willing to use the lines. This finding could be reflective of gender and sexual inequality and cultural norms that create gender disparities and roles (Gupta, 2000). The current finding, though, is not supported by Alemayehu (2010) who reported that females were more knowledgeable and willing to HCT for HIV than males. However, since there is just a difference in willingness to use the toll-free lines between males and females both sexes should be encouraged toward using the lines.

In terms of the age group and willingness to use the toll-free lines, the study found that more youths were willing to use the lines than adults based on the number of respondents. Indeed, 41.6% of the

youths out of 46.1% were willing to use the toll-free lines, while out of 53.9% of the adults, 46.1% of willing to use the lines. Though the margin in the comparison is minimal, this is, nevertheless, an indication that youths are beginning to accept the reality that they are a high-risk group to HIV infection as commonly reported in the literature, so there is a need for them to continue to get quality information on the disease for a better preventive approach toward reducing the prevalence in the country. The finding, however, is not consistent with Worthington and Meyers (2003), who had reported that young people were not generally not motivated to attend voluntary counselling and testing services on HIV/AIDS due to some reasons. Furthermore, even though young people expressed their willingness to use these toll-free telephone counselling lines, it is yet to be seen if this will be translated into action, given a finding by Ajayi et al. (2020) that less than a quarter of adolescents and young adults (23.7%) had ever tested for HIV, and an even lower proportion (12.4%) tested in the year preceding the survey.

It is right to ordinarily reason that willingness to use the lines should be dependent on access to a telephone by respondents because all is about using a phone to make calls. Respondents with access to a telephone are more likely to use the lines than respondents who do not have access. It was the finding where most respondents (75.2%) out 84.1% who had access to a telephone were willing to use the toll-free lines, while 12.5% out of 15.9% respondents without telephone access were ready to use the line. Although there was some difference in the proportion of those willing to use the toll-free lines among those who had and did not have access, given the marginal difference, there are sufficient grounds to believe that access to the telephone was not a significant determinant of willingness to use the toll-free lines.

Conclusions

The study indicates that the majority of the respondents were willing to use toll-free lines on HIV/AIDS counselling in Nigeria. Also, most of the respondents had heard about HIV and AIDS, which considerably associates with their willingness to use the toll-free lines for HIV services. Similarly, knowledge of the HCT centre strongly correlated with Nigerians' readiness to use the toll-free lines. However, among the socio-demographic factors considered as correlates to the willingness to use toll-free lines, only gender, age group, and access to telephones were found correlated to the dependent variable. Geographical zone and call centre state did not show any significant association with people's willingness to use the toll-free lines. It means that these factors were not decisive in the level of usage of the toll-free lines.

Implications for practice & recommendations

From the findings, Nigerians are willing to use toll-free lines on HIV/AIDS counselling. They need to be well encouraged to do so irrespective of their gender, geographical zone, age group, or an available call centre in their states. Irrespective of knowledge of HCT centres or otherwise, respondents indicated willingness to use the toll-free lines for counselling and information about HIV. The implication of this finding is that quite a number of people who will be using the toll-free services will do so not because they do not know any counselling centres but rather so that they remain anonymous. There is therefore the need to strengthen mechanisms for securing the identities of callers in the toll-free telephone services. Specifically, continuous awareness and sensitisation on the toll-free lines is recommended to increase people's knowledge of the service. Furthermore, more call centres should be established across states of the country beyond the present four states available. An alternative could be to significantly scale up the number of accessible lines in each centre. It will enable the toll-free call centres to be able to cope with the increased number of calls that are likely to be generated when more people become knowledgeable

about the facility. It would also make for the provision of smoother services from an operational standpoint.

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