

Perceived Hindrances and Factors Influencing Acceptability of HIV/AIDS Counseling and Testing among Commercial Drivers in Ile-Ife

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Abstract

Background: HIV/AIDS Counseling and Testing (HCT) is an effective tool in HIV prevention and control. However, perceived hindrances may limit the utilization of HIV Counseling and Testing (HCT) services, particularly among high-risk groups. Therefore, this study assessed perceived hindrances and factors influencing the acceptability of (HCT) among commercial drivers. **Methods:** This was a cross-sectional survey of commercial drivers in Ife Central Local Government Area. Data were analyzed using Statistical Package for Social Sciences for Windows version 20. The dependent variable for the multiple regressions was commercial drivers willingness to uptake free HCT services in their motor parks, while independent variables were their age, marital status, and the level of education. **Results:** Three-hundred commercial drivers were surveyed. 76 (25.3%) of respondents had previously undergone HIV test. 184 (61.3%) of the 300 respondents were willing to uptake HCT services. Perceived possible hindrances to HCT uptake were fear of a positive HCT test by 259 (86.3%), stigmatization by 260 (86.7%), lack of in-depth knowledge about HCT 258 (86.0%), and confidentiality concerns by 267 (89.0%) while 151 (50.3%) perceived poor access to HIV testing services as a hindrance. Multivariate analysis revealed that drivers aged 30–39 years were twice more likely to accept HCT service compared to their 20–29-year-old colleagues. Car drivers were twice more likely to accept HCT compared to bus drivers, whereas drivers with secondary education were four times less likely to accept HCT compared with their colleagues with tertiary education. **Conclusion:** This study revealed that a high proportion of drivers was willing to uptake HCT services. The introduction of free HCT education and services at motor parks would, therefore, enhance HCT uptake.

Key words: Commercial drivers, HCT, HIV counseling and testing

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INTRODUCTION

Since the first case of HIV/AIDS was diagnosed in Nigeria in 1986, the number of people currently living with HIV has increased to about 3.23 million people.¹ This ranks Nigeria second only to South Africa as having the largest population of people living with HIV in Africa.

Though the HIV pandemic appears to be receding, control strategies that are required to further reduce the burden of the disease must target the prevention of new infections. The Government of Nigeria has put up policies emphasizing universal access to HIV Counseling and Testing (HCT) services as a major thrust in the national response to the

epidemic with the ultimate goal of halting the spread and possibly reversing the spread of HIV.² The Nigerian national strategic plan (2010–2015) also reiterates the commitment of the government to provide equitable and sustainable universal access to HCT services. HCT is a service that affords individuals and couples the opportunity of counseling with a view to making informed decisions about knowing their HIV status and it has been recognized as a veritable platform for linking sexual and reproductive health services and HIV/AIDS-related program.¹ In addition, it is cost effective and serves as a critical entry point to comprehensive HIV/AIDS

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care services since the background knowledge of citizens' HIV status has major implications for prevention, care and support.^{3,4} Despite these advantages, most patients with HIV infection globally, and particularly in resource-poor settings such as Nigeria, are unaware of their HIV status.^{5,6} This has some grave health consequences as it engenders high transmission of the infection as many patients are likely to receive their HIV diagnosis at a late clinical stage due to missed opportunities for counseling and testing early in the course of the disease.^{7,8} Though there are on-going efforts to scale up access to HCT services nationwide, only few Nigerians had ever utilized HCT services, while only about a quarter of Nigerians aged 15–64 years know their HIV status in 2012.⁹ More needs to be done to ensure that all Nigerians know their HIV status.

In Nigeria, about 80% of new HIV infections are transmitted through unprotected heterosexual activities, 10% through blood transfusion while another 10% of HIV infections is transmitted through mother-to-child transmission and other HIV risk behaviors, such as circumcisions, incision of tribal marks, and sharing of sharps.⁵ It has been documented that high-risk groups such as commercial drivers account for a significant proportion of new infections. Efforts at reducing new infections must, therefore, target high-risk groups and their partners who account for 40% of new infections, whereas they constitute only 3.4% of the total population.¹⁰ Such groups include female sex workers, men who have sex with men, injecting drug users, transport workers (TW), members of the Nigerian Armed Forces, and members of the Nigerian Police.¹⁰

TW are particularly at high-risk of acquiring and transmitting HIV because of their job-related mobility, which may be associated with increased patronage of commercial and casual sex workers, as well as inconsistent condom use during unsafe sex.¹¹ Commercial drivers who constitute a major sub-population of TW have been reported to have HIV sero-prevalence rates that are higher than that of the average population with levels ranging between 2.4% and 8%.^{10,12,13} This makes commercial drivers suitable for HIV control programs such as HCT services.

As giant strides are being made in the current national drive to improve universal access to HCT services for all Nigerians and particularly high-risk groups, an important factor that may affect the effectiveness of HCT programs is the level of service uptake. Perceived hindrances may limit the utilization of HCT services, thereby reducing its effectiveness. In the present study, the authors, therefore, assessed the acceptability of HCT and perceived factors that may hinder HCT service uptake among commercial drivers. It was believed that insights from the results of the study would inform appropriate interventions aimed at reducing HIV burden within this high-risk group.

METHODS

This cross-sectional study was conducted among inter- and intra-state commercial car and bus drivers in Ife Central

Local Government Area (LGA) in Osun State, South Western Nigeria. The local government is administratively made up of ten wards. Ile-Ife is a semi-urban town with a population of approximately 167,000 people.¹⁴ The inhabitants are largely of Yoruba ethnic group.

Sample size determination

The sample size of respondents for the survey was determined using the computer program for epidemiologists (PEPI), version 3.01, employing the formula for estimating sample size for single proportions as described by Armitage and Berry and cited in Abramson and Gahlinger.¹⁵ The prevalence of 88.4% was used as reported from a study on willingness to uptake HCT services¹⁶ among intercity commercial drivers in Lagos, employing a precision margin of 5%.

Employing a standard normal deviate of 1.96 at 95% confidence level and a maximal allowable difference from the true proportion of 5% (0.05), a minimum sample size of 158 was derived. The sample size was increased to 300, to allow for 10–20% attrition and to improve the validity of data.

A multistage sampling technique was used in the present study. The first stage employed stratified sampling technique. The motor parks were grouped into two; namely the intra- and inter-state parks (five motor parks per group). From each cluster, three parks were selected by balloting (second sampling stage). The third stage also employed stratified sampling technique where drivers at each motor park were grouped into two; namely bus and car drivers. At each motor park 50 questionnaires were administered, 25 to commercial bus drivers and 25 to commercial car drivers. Serial recruitment was done until a complete sample size of 300 was attained.

Data collection

Data were collected using an earlier pretested interviewer-administered semi-structured questionnaire. Data collected were aggregated under the following sections; sociodemographic characteristics of respondents (age, religion, marital status, and the level of education); willingness to uptake HCT services if made available at motor parks; perception about HCT, perceived hindrances to HCT (lack awareness about HCT services, poor access to HCT services, fear of being HIV positive as well as stigmatization), and perceived consequences of HIV test results.

Data analysis

Data were analyzed using Statistical Package for Social Sciences (SPSS) (SPSS Inc., Chicago, IL, USA) for Windows, version 20. Frequencies, proportions, and percentages were estimated for discrete variables. Chi-square tests were used to assess associations between willingness to uptake HCT and other variables such as age, educational status, job description as well as a transport route. Binary logistic regression with odds ratio (OR) alongside the 95% of confidence intervals (CIs) was used to ascertain the association between respondents' characteristics (age, educational status, job description as

well as transport route) and their willingness to uptake HCT services. Statistical significance was set at an alpha level of 0.05.

Ethical consideration

Ethical approval was obtained from the Research and Ethics Committee of the Institute of Public Health, Obafemi Awolowo University, Ile-Ife. Informed consent was obtained from all respondents after seeking the approval of the Local Branch Chairmen of the National Union of Road TW at each motor park.

RESULTS

Three hundred commercial drivers were surveyed. Sociodemographic characteristics of respondents are presented in Table I. Of the 300 respondents, 176 (58.6%) were aged < 40 years while 159 (53%) had at least secondary education. 145 (48.6%) of the drivers were Muslims while 214 (71.3%) were married. All respondents were males. There were no female commercial drivers in Ile-Ife.

Table II shows respondents' awareness about HIV and their attitude toward HCT. The table shows that 203 (67.7%) of commercial drivers were aware of at least one HCT service center in the LGA, only 76 (25.3%) of them, however, had HIV test done. 172 (90.7%) of the respondents agreed that unprotected sexual intercourse is a route of HIV transmission; and 259 (86.3%) of them believed that unscreened blood transfusion is a route of HIV transmission. 148 (82.7%) of respondents agreed that HCT is important in the early diagnosis of HIV disease. 158 (86.0%) of respondents were of the opinion that it is important to go for HCT, though only 184 (61.3%) expressed their willingness to uptake free HCT

Table I: Sociodemographic characteristics of respondents, Ile-Ife

Characteristics	Frequency (n=300) (%)
Age in years	
20-29	61 (20.3)
30-39	115 (38.3)
40-49	97 (32.3)
50-59	22 (7.3)
60 and above	5 (1.8)
Religion	
Christianity	140 (46.7)
Islam	145 (48.3)
Traditional	15 (5.0)
Level of education	
No formal education	23 (7.7)
Primary	96 (32.0)
Secondary	159 (53.0)
Tertiary	22 (7.3)
Marital status of respondents	
Married	214 (71.3)
Single	73 (24.3)
Divorced	8 (2.7)
Separated	5 (1.7)

services if made available free in their motor parks. A total of 130 (43.3%) were willing to bring their family members for free HCT services, 114 (38.0%) of them were willing to undergo HCT every 3 months.

Perceived hindrances to HCT uptake among commercial drivers are presented in Table III. It reveals that 259 (86.3%) of respondents reported the fear of positive HIV test result as a perceived hindrance to HCT uptake. Other hindrances perceived by the respondents were lack of knowledge about HCT in 258 (86.0%), fear of stigmatization in 260 (86.7%), and disclosure and confidentiality concerns in 267 (89.0%). 151 (50.3%) opined that poor access to HCT services might hinder HCT uptake.

Table IV shows the distribution of perceived consequences of HCT among respondents. The perceived consequences of a positive HIV test results included depression in 251 (83.7%) and suicidal ideations in 224 (74.7%). However, 239 (79.7%) of the respondents perceived that a positive HIV test result would encourage positive living with HIV. On the flip side, opinions expressed by respondents on a negative HIV result

Table II: Respondents' awareness about HIV and their attitude toward HCT, Ile-Ife

Characteristics	Frequency (n=300) (%)
Aware of HCT services in the LGA	
Yes	203 (67.7)
No	97 (32.3)
Ever had HIV screening	
Yes	76 (25.3)
No	224 (74.7)
Unprotected sexual intercourse is a route of HIV transmission	
Agree	272 (90.7)
Disagree	28 (9.3)
Unscreened blood transfusion is a route of HIV transmission	
Agree	259 (86.3)
Disagree	41 (13.7)
HCT helps in early diagnosis of HIV disease	
Agree	248 (82.7)
Disagree	52 (17.3)
HCT service is important	
Agree	252 (84.0)
Disagree	48 (16.0)
Willing to uptake free HCT services in motor park	
Yes	184 (61.3)
No	116 (38.7)
Willing to bring family members for HCT	
Yes	130 (43.3)
No	170 (56.7)
Willing to undergo HCT every 3 months	
Yes	114 (38.0)
No	186 (62.0)

HCT: HIV Counseling and Testing, LGA: Local government area

were the promotion of improved HIV prevention behavior in 251 (83.7%), enhanced confidence in life in 248 (82.7%), and assurance of better future plans in 255 (85.0%).

The associations between selected variables and willingness to uptake HCT presented in Table V. More drivers aged between 30 and 39 years were willing to uptake HCT services compared to drivers aged 20–29 years ($P = 0.004$) and more commercial car drivers were willing to uptake voluntary counseling and testing services compared to commercial bus drivers. However, the association among education ($P = 0.007$), drivers

transportation route ($P = 0.006$), and willingness to uptake HCT services was not statistically significant. A higher proportion of drivers plying intrastate route were more likely to be willing to uptake HCT services compared to 56.0% of drivers on the interstate route, while 86.4% of the drivers with tertiary education compared with (%) their less educated colleagues were willing to uptake HCT services.

Factors influencing willingness to uptake HCT services among respondents using the binary logistic regression

Table III: Perceived hindrances to HCT uptake among commercial drivers in Ile-Ife

Characteristics	Frequency (%)
Fear of positive HIV test result	
Agree	259 (86.3)
Disagree	41 (13.7)
Lack of knowledge about HCT	
Agree	258 (86.0)
Disagree	42 (14.0)
Fear of stigmatization	
Agree	260 (86.7)
Disagree	40 (13.3)
Poor access to HCT services	
Agree	151 (50.3)
Disagree	149 (49.7)
Disclosure and confidentiality concerns	
Agree	267 (89.0)
Disagree	33 (11.0)
HCT: HIV Counseling and Testing	

Table IV: Perceived consequences of HCT among respondents, Ile-Ife

Characteristics	Frequency (%)
Perceived consequences of a positive HIV test result	
Depression	
Agree	251 (83.7)
Disagree	49 (16.3)
Suicidal Ideation	
Agree	224 (74.7)
Disagree	76 (25.3)
Encourage positive living if infected	
Agree	239 (79.7)
Disagree	61 (20.3)
Perceived consequences of a negative HIV test result	
Promotes HIV preventive behavior	
Agree	251 (83.7)
Disagree	49 (16.3)
Enhanced confidence in life	
Agree	248 (82.7)
Disagree	52 (17.3)
Enhanced better future plans	
Agree	255 (85)
Disagree	45 (15)
HCT: HIV Counseling and Testing	

Table V: Relationship between selected variables and willingness to uptake HCT, Ile-Ife

Variables	Willing to uptake HCT services <i>n</i> (%)		Statistical comparison
	Yes, <i>n</i> =184	No, <i>n</i> =116	
Age in years			
20-29	30 (49.2)	31 (50.8)	$\chi^2=15.29$ df=4 $P=0.004$
30-39	83 (72.2)	32 (27.8)	
40-49	60 (61.9)	37 (38.1)	
50-59	8 (36.4)	14 (63.6)	
≥ 60	3 (60.0)	2 (40.0)	
Level of education			
No formal education	14 (60.9)	9 (39.1)	$\chi^2=6.99$ df=3 $P=0.072$
Primary	60 (62.5)	36 (37.5)	
Secondary	91 (57.2)	68 (42.8)	
Tertiary	19 (86.4)	3 (13.6)	
Transport route			$\chi^2=3.59$ df=1 $P=0.058$
Interstate	84 (56.0)	66 (44.0)	
Intrastate	100 (66.7)	50 (33.3)	
Respondents' job description			$\chi^2=8.09$ df=1 $P=0.004$
Commercial bus driver	80 (53.3)	70 (46.7)	
Commercial car driver	104 (69.3)	46 (30.7)	

HCT: HIV Counseling and Testing

Table VI: Factors influencing willingness to uptake HCT among commercial drivers Ile-Ife

Variables	OR	95.0% CI	<i>P</i>
Age in years			
20-29	1.00	Reference	
30-39	2.21	1.12-4.35	0.022
40-49	1.54	0.78-3.02	0.213
50-59	0.42	0.15-1.23	0.114
≥ 60	0.79	0.11-5.50	0.817
Respondents' job description			
Commercial bus driver	1.00	Reference	
Commercial car driver	2.18	1.30-3.65	0.003
Level of education			
Tertiary	1.00	Reference	
No formal education	0.25	0.05-1.18	0.080
Primary	0.29	0.08-1.11	0.071
Secondary	0.21	0.06-0.78	0.019
Transport route			
Interstate	1.00	Reference	
Intrastate	1.54	0.93-2.55	0.09

HCT: HIV Counseling and Testing, CI: Confidence interval, OR: Odds ratio

analysis are presented in Table VI. Commercial drivers aged between 30 and 39 years were more likely to be willing to uptake HCT services compared with their younger colleagues (OR = 2.21; CI = 1.12–4.35; $P = 0.022$). Similarly, commercial car drivers, compared with commercial bus drivers were more likely to be willing to uptake HCT services if made available in motor parks (OR = 2.18; CI = 1.30–3.65; $P = 0.003$). Moreover, drivers with secondary education, compared with drivers with tertiary education were less likely to be willing to uptake HCT services (OR = 0.22; 95% CI = 0.06–0.78; $P = 0.019$).

DISCUSSION

The prevalence of HIV/AIDS Counseling and Testing (HCT) uptake was 25.4% among commercial drivers surveyed. This figure was similar to the national average rate of 25% as reported in the 2012 National HIV and AIDS and Reproductive Health Survey (NARHS) but, lower than the 35% of a nationally representative sample of TW who were reported to have ever had HIV testing in the 2010 National Integrated Biological and Behavioral Surveillance Survey¹⁰ and 43.1% reported in a study conducted among truck drivers in Enugu.¹⁷ The low prevalence of HCT uptake among commercial drivers in the present study may be due to the general apathy of Nigerians toward screening programs as shown in other screening programs such as cancer screening.¹⁸

The majority of respondents were aware of some of the major routes of transmission of HIV and had a good attitude toward HIV testing. This finding was in agreement with the findings in other studies that assessed the awareness of the routes of HIV transmission among commercial drivers.^{11,19} This may be as a result of the widespread dissemination of HIV awareness and prevention messages by different government agencies within the town.

About three-fifth of commercial drivers were willing to uptake HCT if made available at their motor parks, this proportion is lower than 77% of the general population who were willing to be tested for HIV in the 2012 NARHS and 88.4% reported among intercity drivers in Lagos.¹⁶ However, the proportion of our respondents who were willing to uptake HCT services was slightly higher than the 54.8% of truck drivers in Enugu who were willing to be tested for HIV.¹⁷ Self-perceived risks of acquiring HIV was a factor that could influence willingness to test, the higher the level of perceived risk, the less likely the willingness to test for HIV and this may explain why a lesser proportion of our respondents were willing to test as against the general population.^{19–24} Furthermore, our survey respondents comprised inter- and intra-state drivers, whereas intercity drivers were studied in Lagos.

Very high proportion of the commercial drivers believed that the fear of unknown, stigmatization, lack of in-depth knowledge about HCT, and confidentiality concerns were possible hindrances to HCT uptake. This was similar to other documented findings on perceived hindrances to HCT among

men and young people.^{25,26} However, only about half of them felt poor access may be a hindering factor. This may be due to the fact that commercial drivers are mobile and can easily access HCT centers, not minding the distance, more so, HCT services are free at most sites in the LGA.

Significantly, higher proportion of the respondents aged between 30 and 39 years compared to their younger colleagues was willing to uptake HCT services. This finding was similar to results from a study among men in South-Western Uganda.²⁶ Likewise, more commercial car drivers compared to bus drivers were willing to be counseled and tested for HIV. This may be due to the fact that commercial car drivers may perceive themselves as having less risk of acquiring HIV.¹²

Findings on binary logistic regression showed that age was a determinant of willingness to uptake HCT services as drivers aged between 30 and 39 years were twice more likely to be willing to be tested for HIV versus commercial drivers aged 20–29 years. A possible explanation for this is that younger drivers might perceive themselves to be of higher risk and thus prefer to maintain a state of denial as regards knowing their HIV status.

Furthermore, respondents with secondary education were four times less willing to uptake HCT services compared with their colleagues with tertiary education, this may be explained by the fact that higher educational status is usually associated with higher HIV-related knowledge which may inform attitude to HIV preventive behaviors, whereas the lower the levels of former education completed, the more likely the chances of indulging in high-risk sexual behaviors.¹²

Furthermore, commercial car drivers were twice more likely to accept HCT compared with commercial bus drivers. A possible reason may be that car drivers tend to be younger and better educated with lower level of perceived risks of acquiring HIV than commercial bus drivers. More so, the commercial buses tend to be less road-worthy, overloaded, and slower on the road and ply longer routes than commercial cars thus obliging commercial bus drivers to sleep at their travel destinations; a factor which facilitates transactional sex and risky sexual behavior.

Limitation

Findings in this cross-sectional study conducted in Ife Central LGA, such as the previous similar studies may not represent the perceptions of all commercial drivers nation-wide. Information bias from respondents may not be totally excluded as willingness to uptake HCT could not be validated since HCT was not actually provided.

CONCLUSION

The present study revealed that a very high proportion of commercial drivers was willing to uptake free HCT services if provided at the motor parks. The factors associated with willingness to uptake HCT services were older age, a higher level of education, and types of vehicle used for commercial

transport. There is an urgent need to make free HCT services available at motor parks either on outreach basis or at designated sites close to motor parks. There is also the need to provide health education on HIV among this high-risk group with messages tailored to addressing perceived hindrances to HCT services.

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Conflicts of interest

There are no conflicts of interest.

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