***Original Research Article***

**Willingness of voluntary counseling and testing among long distance truck drivers; a window of opportunity in control ofRetroviral disease**




## ABSTRACT

**Objective:** To evaluate the factors influencing practice of voluntary counseling and testing among long distance truck drivers as it affect the spread of retroviral disease.

***Design:*** This was a quantitative cross-sectional study conducted in the major bus terminals in Enugu State, Nigeria. Aquestionnaire based tool was used to collect data from population of adults' bus drivers.

**Setting:**It was conducted at the 3 main motor parks in Enugu metropolis from January 2019 – March 2020.

***Participants*:**500 long distance truck drivers aged 19-65 years

**Intervention:**Knowledge and practices of the participants were assessed using a semi-structured interview guide**.** They were interviewed on various aspects of HIV/AIDS.

***Main Outcome Measures*:** Knowledge and practices.On Knowledge and practice performance scale rating; < 50% is poor, 50 -75% is fair, and > 75% as good

***Results:*** Among the five hundred (500) long distance truck drivers (LDTD) studied 68.0% showed a fair knowledge of HIV/AIDS. The prevalent high risk behavior was multiple sexual partners (73.2%). The practice of voluntary counseling and testing was poor, as (17.0%) had practiced it; however their risk perception was high at (76.0%). Fortunately there was also high willingness to screen 302 (60.4%) and was significantly higher in those with tertiary level of education (100%) and the married participants (75.8 %) ($\chi^2$=174.4, $p < 0.01$).

***Conclusion:***There was a high risk perception in this study population with a high willingness to be tested. We hereby recommend regular screening service at the motor packs of truck drivers in Enugu State


**Key words:** HIV testing, willingness, Truck drivers, Enugu

## INTRODUCTION

Human Immune Deficiency Virus (HIV) infection and Acquired Immune Deficiency Syndrome (AIDS) has become pandemic and one of the challenges facing African countries.[1-3] It started in Nigeria in the 1980s[4] and now a generalized epidemic, with prevalence above 1%. Enugu State in which the study was carried has a HIV prevalence of 5.5%.[4] Certain occupations have been associated with an increased risk of acquiring HIV/AIDS and long distance truck drivers (LDTD) is one of such.[5, 6]Away for a prolonged period from the comfort of their wives, families and social environments; they engage in risky sexual behavior, as regular sex with both female and male commercial sex workers (CSWs), including multiple sex partners and drug abuse. [5, 6] Studies had shown that they are most vulnerable to HIV/AIDS and constitute a risk for HIV transmission. [6, 7]

A study carried out by the USAIDS[7] indicates that HIV infection prevalence stands at 1-2% among female sex workers and long distance truck drivers. The prevalence was found to be 10% among injecting drugs users and this practice of injecting drugs was also high among long distance truck drivers. [7]

A behavioral surveillance survey conducted in Nigeria in 2014 [8] reported that only 13% had ever been tested for HIV. Some studies have also being done on attitude and practice of HIV Counseling and Testing (HCT) among LDTD in our environment [10 -12] however their willingness to screen was not reported.

HIV Counseling and Testing (HCT) is one of the most important tools for prevention.[13-15] It is a process by which an individual undergoes counseling to enable him/her makes an informed decision about being tested for HIV. It is entirely voluntary or provider- initiated and confidential. [16, 17]However, in many countries, less than 50% of the vulnerable group patronize

these services. Reasons are, fear of a possible positive result with its associated stigma and discrimination and ignorance of the existence of HCT service.[18-20]

Therefore this study aims to evaluate the practice of voluntary counseling and willingness to screen for HIV infection among LDTD. This will help gain insight into their lifestyle that may be related to spread of the disease and how to mitigate it.

**Materials and Methods**

This was a descriptive cross –sectional study of long distance truck drivers, conducted from January 2019 – March 2020 at the three main parks namely, HolyGhost luxury Bus Park, 9th Mile Corner and Ogbete main market park. These are very busy truck terminals. These are well known for transportation business and a link to other neighboring towns in Enugu State. Good networks of roads connect important centers of trade and industry in the State and are link between the South-East geo-political zone and the middle-belt and beyond.

There was consecutive recruitment of LDTD, who gave their consent. The objectives of the study were explained to them and confidentiality assured by non - inclusion of self-identification in questionnaire. Documentation was made of their socio-demographic characteristics and their Knowledge of HIV/AIDS, Attitude to risky sexual behavior and practice of HCT. Ethical clearance was given by the UNTH Ethical Committee with number NHREC/05/01/2019 – FWA00002458 – 1RB00002323.

Four assistants were recruited and trained on methods of data administration and collection. The questionnaire was checked and sorted out manually by the author and the data obtained analyzed using SPSS statistical software package Version 25.0. The analysis consisted of tabulations and Chi-square test to examine relationships. Statistical significance was considered present when p

value was less than 0.05. Confidence Interval was 95%. On attitude and practice level, < 50% was rated as poor, 50 -75% as fair, and >75% as good.

**RESULTS**

A total of five hundred (500) LDTD respondents were recruited for the study. They were all males. Table 1 show that most of the respondents 163 (32.6%) were within the age group 30-39 years. All of them were males. With mean age of respondents = 38.3 ± 8.6 years. Most of the respondents, two hundred and forty seven 247 (49.4%) had Secondary level of Education. Majority of them were married 288 (57.6%).

Table 2 showed that they have a generally good knowledge of prevention of HIV infection. However, there were significant poor response to delaying the onset of sexual intercourse and avoiding sex with CSWs as preventive measures. ($\chi^2$=22.2, $p < 0.01$; $\chi^2$=12.5, $p < 0.01$) respectively.

On their attitude to HCT in relation to educational status, table 3 shows that those with tertiary education showed a significant good attitude to HCT than the others. ($\chi^2$= 29.8, $p < 0.01$).

Table 4 showed that theprevalence of high risk behavior was high, with multiple sexual partners constituting 366 (73.2%), followed by sex with sex workers 258 (64.0%) and non-use of condom (54.3%).

Table 5 showed that out of the 500 LDTD that were studied, only 89 (17.0%) had practiced the HCT while 411 (83.0%) of them have not. Age groups <20 and ≥60 years constituted the highest unscreened group and those with primary level of education constitute the highest with 171 (87.2%) and these was statistically significant.

Practice of HCT was highest in respondents with the tertiary educational level with all in its level 11(100.0%) having practiced it. This difference was significant ($\chi^2$= 54.2, p < 0.01, df = 3).

The married were more likely to practice HCT (24.7%) than the other marital status, however this was not statistically significant ($\chi^2$= 28.2, p < 0.10, df = 7). as shown in table 5.

Figure 1 showed that the willingness to screen was significantly higher in respondents with tertiary level of education (100.0%) and least in those with no formal education 8.9%, ($\chi$2=10.6, p < 0.01)



**Table 1: Socio - demographic characteristics of Nigerian long distance drivers**

| Socio - demographic characteristics | Frequency (n=500) | Percent (%) |
|---|---|---|
| **Mean age** = 38.3 ± 8.6 years | | |
| **Age group (years)** | | |
| <20 | 3 | 0.6 |
| 20-29 | 137 | 27.4 |
| 30-39 | 163 | 32.6 |
| 40-49 | 143 | 28.6 |
| 50-59 | 42 | 8.4 |
| ≥60 | 12 | 2.4 |
| **Educational status** | | |
| No formal Education | 46 | 9.2 |
| Primary | 196 | 39.2 |
| Secondary | 247 | 49.4 |
| Tertiary | 11 | 2.2 |

| | | | |
|---|---|---|---|
| **Marital Status** | | | |
| | Single | 147 | 29.4 |
| | Married | 288 | 57.6 |
| | Divorced | 30 | 6.0 |
| | Separated | 35 | 7.0 |

**Table 2: Knowledge of prevention of HIV/AIDS in relation to educational status**

| **Correct prevention means** | **No formal Education n = 46(%)** | **Primary n = 196 (%)** | **Secondary n = 247 (%)** | **Tertiary n = 11 (%)** | **$\chi^2$** | **P-Value** |
|---|---|---|---|---|---|---|
| Staying with one faithful uninfected partner | 45 (97.0) | 192(97.0) | 245 (99.0) | 10 (98.0) | 1.60 | 0.10 |
| Using condoms every time | 45 (97.0) | 186(94.0) | 231(93.0) | 11 (100.0) | 2.20 | 0.50 |
| Abstaining from sex | 32 (69.0) | 141(71.0) | 174 (70.0) | 8 (72.0) | 0.20 | 0.90 |
| Delaying the onset of sexual intercourse | 9 (18.0) | 27(13.0) | 32 (12.0) | 7 (63.0) | 22.2 | 0.01* |
| Avoiding sex with CSWs | 2 (4.3) | 12 (6.1) | 9 (3.6) | 3 (27.0) | 12.5 | 0.01* |
| Reducing number of sexual partners | 1 (2.1) | 11 (5.6) | 20 (8.0) | 0 (0.0) | 3.5 | 0.30 |
| Avoiding sex with people who have multiple sexual partners | 8 (17.0) | 24 (12.0) | 42 (17) | 1 (9.0) | 2.5 | 0.50 |
| Avoid sharing of sharp objects like needles and razors | 18 (39.0) | 58 (29.0) | 86 (34.0) | 1 (9.0) | 5.0 | 0.10 |
| **Incorrect** | | | | | | |

| **prevention means** | | | | | | |
|---|---|---|---|---|---|---|
| Praying to God | 18 (39.0) | 61 (31.0) | 80 (32.0) | 3 (27.0) | 1.2 | 0.70 |
| Going for checkups | 35 (76.0) | 136(69.0) | 192 (77.0) | 8 (72.0) | 4.1 | 0.30 |
| Using antibiotics | 32 (69.0) | 138(70.0) | 185 (74.0) | 3 (27.0) | 3.2 | 0.30 |
| Seeking protection from a traditional healer | 18 (39.0) | 42(17.0) | 24 (12.0) | 1 (9.0) | 2.3 | 0.50 |

*Statistically significant

The respondents showed a generally good knowledge of prevention of HIV/AIDS. However, there were a poor significant differences in the response to delaying the onset of sexual intercourse and avoiding sex with CSWs as preventive measures. ($\chi^2$=22.2, p < 0.01; $\chi^2$=12.5, p < 0.01) respectively.

**Table 3: Attitude of Nigerian long distance drivers to HCT by Educational Status**

| **Attitude ---Positive** | **Educational status No formal Education n = 46(%)** | **Primary n=196 (%)** | **Secondary n=247 (%)** | **Tertiary n=11 (%)** | **$\chi^2$** | **P-Value** |
|---|---|---|---|---|---|---|
| It is good for HIV prevention. | 36 (78.3) | 145 (74.0) | 196 (79.4) | 9 (81.8) | 1.9 | 0.60 |
| It should remain entirely voluntary and confidential. | 38 (82.6) | 153 (78.1) | 202 (81.8) | 10 (90.9) | 1.9 | 0.60 |
| It should be widely available | 25 (54.3) | 111 (56.6) | 142 (57.5) | 10 (90.9) | 5.3 | 0.12 |

| | | | | | | |
|---|---|---|---|---|---|---|
| It should be compulsory for everybody. | 1 (2.2) | 4 (2.0) | 4 (1.6) | 3 (27.3) | 29.8 | **0.01** |
| **Attitude ---Negative** | | | | | | |
| It is a breach on ones freedom | 8 (17.4) | 21 (12.8) | 21 (9.7) | 0 (0.0) | 4.7 | 0.20 |
| It does not lead to prevention of HIV/AIDS | 8 (17.4) | 25 (2.8) | 24 (9.7) | 0 (0.0) | 4.1 | 0.30 |

**Table 4: Prevalence of high risk behavior among Nigerian long distance drivers**

| High risk behavior # | **Freq n=398** | **% Percent** |
|---|---|---|
| Multiple sex partner | 366 | 73.2 |
| Sex with sex workers | 258 | 64.0 |
| Do not use condoms | 216 | 54.3 |
| Share sharp objects/unsterile needle | 21 | 5.3 |
| Had unsafe blood transfusion | 3 | 1.6 |

# = Multiple response

**Table 5: Demographic Characteristics of respondents in relation to practice of HCT**

| **Demographic variables** | **Practice of HCT** | | | |
|---|---|---|---|---|
| | **Yes n (%) 89 (17.0%)** | **No n (%) 411 (83.0%)** | $\chi^2$ | **p-value** |
| **Age group (years)** | | | | |
| <20 | 0 (0.0) | 3 (100.0) | | |
| 20-29 | 7 (5.1) | 130 (94.9) | | |
| 30-39 | 44 (27.0) | 119 (73.0) | | |

| | | | | |
|---|---|---|---|---|
| 40-49 | 23 (16.1) | 120 (83.9) | 37.2 (5) | **0.02** |
| 50-59 | 15 (35.7) | 27 (64.3) | | |
| ≥60 | 0 (0.0) | 12 (100.0) | | |
| **Educational status** | | | | |
| No formal Education | 8 (17.4) | 38 (82.6) | | |
| Primary | 25 (12.8) | 171 (87.2) | 54.2 (3) | **0.01** |
| Secondary | 45 (18.2) | 203 (81.8) | | |
| Tertiary | 11 (100.0) | 0 (0.0) | | |
| **Martial Status** | | | | |
| Single | 6 (4.1) | 141(95.9) | | |
| Married | 71 (24.7) | 217 (75.3) | | |
| Divorced | 6 (4.1) | 25 (83.3) | 28.2 (7) | 0.10 |
| Separated | 7 (20.0) | 28 (80.3) | | |



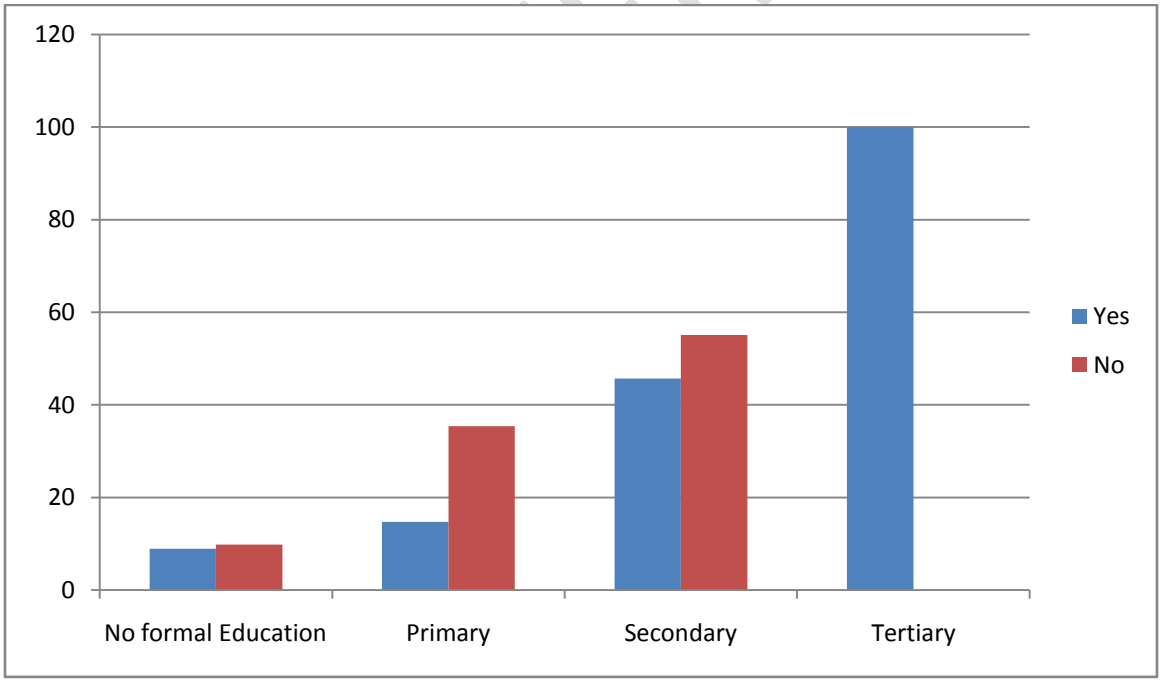


**Figure 1: Willingness to screen for HIV infection among respondents**

The willingness to screen was significantly higher in respondents with tertiary level of education (100.0%) and least in those with no formal education 8.9%, ($\chi 2=10.6$, $p < 0.01$)

**DISCUSSION**

The main findings of the study were a generally fairly good knowledge of prevention of HIV/AIDS among LDTD, ranging from (69% - 100%) across the educational levels. However, this does not translate to good prevention methods. It is interesting to note that sex with sex workers and not being faithful to one's partner had a significantly poor response (2.1% - 27%). This pattern is similar to other studies in the developing countries. [21-23] In one of these studies[23] carried out in 17 countries of Africa, it showed that more than half of young people did not know how to protect themselves from HIV. **A**bstinence, **B**eing faithful to one's partner and the use of **C**ondom; this basic (**ABC**) of HIV prevention is not generally known and accepted. [22, 23]

The most prevalent high risk behavior found in this study was having multiple sexual partners 73.2%, followed by sex with sex workers 64%. This is similar to findings from other studies in developing countries.[24, 25] Patronage of commercial sex workers; viewed as an occupational hazard amongst LDTDs may be due to their prolonged absence from their spouses, and hence this predisposition.[25]

Due to this, long distance drivers are links in spreading sexually transmitted infections including HIV in a short period of time. [25]

The findings of Wilson et al,[23] was quite disturbing. It showed some LDTDs are not only sexually very active on the road, they could not imagine going more than a few day without sex

with whomsoever. They regularly taunt and belittle drivers who do not behave like them. This may lead to a culture of acceptance of these high risk behaviors by the vulnerable ones who could not stand this 'ridicule' for being virtuous. [23]

The practice of use of condom during casual sex was found to be low among them with only 45.7% practicing it. However this finding was somewhat better than studies done in India (11.0 %) [26] Burkina Faso (18.0%)[27]and Enugu (37.4%) [17] in Nigeria. The differences in practice may be explained by the timing of the studies, as this was done in the early years of the infection. Also, there may be some secular changes in the practice of condom use, as a result of current increasing awareness. [23, 25]

There was a generally good attitude to HCT in the range of (54.5% - 88.6%) across the group in this index study. However this does not translate to good practice of HCT. Out of the 500 LDTDS that were studied, only 17.0% had practiced HCT. This did not agree with previous studies[17, 28] which showed both negative attitude and practice of HCT. These changes may be due toincreasing awareness as already observed. Again, in developed countries with higher literacy level and resources, the uptake of HCT is very high.[29]

The role of the church in the uptake of HCT was striking and commendable.[21, 18] Its request for HIV screening test before conducting marriage among its members took the lead as the reason for screening. This is to curb the spread of the disease among intending couples and their unborn children.However it is just the tip of the iceberg as the majority of the respondents were unscreened [21]

In our work, age groups 20-29 and 40-49 years constituted the highest unscreened group with (94.9%) and (83.9%) respectively. These findings were consistent with other findings, [17, 21, 28] where most of the people infected with the HIV were young people within the productive,

socially active and reproductive age groups.This is the prime age and therefore has serious socio-economic and public health implications. [21, 28]

The reasons given by Nigerian long distance drivers for this poor practice of HCT were lack of knowledge of where to go for HCT in about half of them (51%). Studies done in some Africans countries [19, 20] showed that HCT services were not widely available, especially outside the main or urban centers. This was also shown by this index study, where all the 89 respondents who had HCT obtained this service at urban centers. In most health institutions in Nigeria, HIV testing is limited to diagnostic purposes and not available to people in the general population interested in knowing their sero-status.[15, 23] This has a serious public health implication in the efforts to stem the HIV pandemic. A HIV positive person with unknown sero – status is a great danger to the public. [15, 23] Our study also shown that fear and anxiety accounted for 37% why LDTDs do not practice of HCT. This is similar to findings from other studies. [18 - 20] It is a fact that people living with HIV/AIDS has been stigmatized and discriminated against. These negative effects discourages effective prevention by dissuading persons from coming freely for testing.[30, 31] These negative attitudes towards people living with HIV/AIDS (PLWHA) are strongly linked to the general low level of knowledge about the disease and in particular, to the causes of HIV and its mode of transmission. In some societies, AIDS is associated with groups whose social and sexual behavior does not meet with public approval.[30, 31] The other factors contributing to HIV/AIDS related stigma are; the fact that HIV/AIDS is a life threatening disease which people are afraid to contract.

Although this index study noted a higher perception of risk for HIV infection, it also fortunately, showed a high willingness to screen in about 68.0%. This finding is somewhat better in terms of willingness to screen in a study by Wilson, et al. [23] In their 1995 and 1997 surveys, they found

that 37.9 and 39.1 per cent of the drivers, respectively, considered themselves at risk of contracting HIV; only 30% of them were willing to screen for HIV. This poor willingness to screen in their study may due to earlier date of study. This was when little was known about the disease and the driver's perception of individual risk of contracting the disease was poor. Presently, although treatment modalities are improving, there is yet no cure for the infection, or vaccine against its transmission. The only feasible option is to change the people sexual behavior and attitude and encourage uptake of HCT services, as this is the entry point of other preventive and curative packages in the fight against HIV/AIDS. [4, 11]

**Conclusion**

The way forward is to embark on behavioural change communication (BCC) via the following:

- Informationdissemination about the transmission of HIV and the prevention methods of ABC needs to be targeted at truck stops, toll plazas, and border posts and at the work places of truck drivers.
- Misconceptions about the unproven and unscientific means of transmission and negative attitudes should be dissuaded through adequate information by means of public awareness campaign.
- There is need for a proper coordination between the individual, health care providers, the mass media, the non-governmental organizations and the government as policy formulators; in conjunction with various truck park representatives who should be given a short term but well packaged training in HCT adapted for use among their colleagues.

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