

KNOWLEDGE, PREVENTION AND TREATMENT MEASURES USED REGARDING HIV/AIDS AND SEXUALLY TRANSMITTED INFECTIONS AMONG MEMBERS OF THE NATIONAL UNION OF ROAD TRANSPORT WORKERS IN MUSHIN, LAGOS STATE.

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Abstract

Background: An estimated three hundred and sixty million new cases of treatable STIs occur annually worldwide, and majority of these infections occur in sub-Saharan Africa. HIV/AIDS and other STIs impact the quality of life of infected individuals, also contributing to the overall poor health statistics of developing countries. This study assessed the knowledge, preventive and treatment measures adopted by members of the National Union of Road Transport Workers (commercial bus drivers division) in Mushin local government, Lagos state as regards HIV/AIDS and other STIs.

Methodology: This was a descriptive cross-sectional study. An interviewer-administered semi-structured questionnaire was used. Through random sampling method, one of the three NURTW divisions in Mushin LGA was selected; all the garages in the selected unit were used. Sample size of 225 was used, and all the registered drivers available during the period of data collection were interviewed. Data was analysed using Epi info version 7.1. Association between variables was demonstrated using chi square at $p < 0.05$.

Results: The mean age was 34.89 ± 10.88 . Almost all respondents had heard of HIV/AIDS and STI, and this information was obtained mainly through the media. The commonest STI known were gonorrhoea 98.7%, syphilis 72.29% and genital warts 42.42%. For symptoms of STIs, 72.73% knew about genital itching, 88.45% genital discharge, 69.26% genital sores, 90.91% pain during urination. Concerning transmission of HIV and other STI, most knew that HIV and STIs were preventable, 7.87% knew about abstinence, 5.24% faithfulness to a partner and 77.90% consistent condom use. Majority of the respondents knew that STIs could be cured with antibiotics (65.00%). Less than half had good knowledge regarding transmission and prevention of HIV/AIDS and STI. The higher the level of education of the driver the more knowledge they possess ($p = 0.036$).

About 63.14% of the respondents used condom among which only 9.40% used it consistently. Only 36.86% of the respondents had been screened for HIV, among this group 60.92% got tested in a government facility and only 43.68% had the test with their main sexual partner.

About 25.48% of the respondents had treated an STI in the past. Pain during urination was the most common symptom (52.49%), among this group, 22.39% went to a health facility as their first action, more of the respondents (40.30%) were treated by traditional healers and 37.31% chemist. Respondents who used inappropriate STI treatment measure were more likely to have used condom at last sex ($p = 0.040$).

Conclusion: The participants exhibited poor knowledge regarding HIV/AIDS and STI, likewise inadequate preventive measures and inappropriate treatment practices were utilized. Educators, STI counsellors as well as HCT services should be available within garages. Peer educators should be trained among NURTW members.

Keywords: HIV/AIDS, STIs, Knowledge, Prevention, NURTW.

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INTRODUCTION

On a daily basis, more than a million sexually transmitted infections (STIs) are acquired¹. Each year, about 357 million new infections with one of

four major STI-causing bacteria occur (chlamydia, gonorrhoea, syphilis and trichomoniasis)¹. Furthermore, new genital infections with herpes is estimated to occur in more than 500 million

individuals; about 290 million women have a human papilloma virus infection yearly¹. Majority of these STIs occur either without or having mild symptoms, which may not be attributable to an STI. STIs have also been established to increase the risk of acquisition of Human immunodeficiency virus (HIV)¹.

HIV is a major global public health issue, has claimed over 35 million lives till date. As of the end of 2015, approximately 36.7 million people were living with HIV and 2.1 million people got infected that year globally². Sub-Saharan Africa has the most affectation with HIV, about 25.6 million people were living with HIV in 2015². The region also accounts for two-thirds of total number of new HIV infections globally².

The first reported case of AIDS in Nigeria was in the year 1986 and surveys have shown an increment in prevalence from 1.2% in 1991 to 5.8%, there was a decline to 4.4% in 2005 prevalence moved up again to 4.6% in 2008 and stabilizing at about 4% till date³. As of 2013, about 3.2 million individuals were estimated to be living with HIV; 220,394 new HIV infections were projected to have occurred that year, and as of 2013, only a total of 1,476,741 people were on antiretroviral drugs³.

Major drivers for the epidemic of HIV in Nigeria Highlighted were low personal risk perception, transactional and inter-generational sex, ineffective treatment services for STIs, poor access to healthcare services, entrenched gender inequalities, poverty and persistence of stigma and discrimination. Most at risk populations identified were female sex workers (brothel based and non-brothel based), men who have sex with men and transport workers³.

STIs are spread majorly by sexual contact, including vaginal, anal and oral sex. Some others can also be spread through non-sexual media such as via transfusions of blood and blood-products. A large number of STIs –encompassing chlamydia, gonorrhoea, hepatitis B, HIV and syphilis can be transmitted from mother to child during pregnancy

and delivery. HIV can also be transmitted via exchange of other body fluids asides blood; breast milk, semen and vaginal secretions^{1,2}.

The 2013 Nigeria Demographic and Health Survey (NDHS) showed that knowledge of HIV prevention among men in the general population has remained unchanged: in 2008 an estimated sixty eight percent knew that limiting number of sexual partners and condom use prevents STI including HIV, the recent survey recorded seventy percent⁴.

Road transport workers due to the nature of their work have to stay long hours away from their family especially long truck drivers and tend to satisfy their sexual needs by engaging commercial sex workers and also perpetuate in casual relations with female hawkers in bus stops and parks; this puts them at high risk of transmission of HIV and STIs. Then they go home to infect their wives or regular girlfriends through unprotected sex⁵.

A cross-sectional quantitative interviewer-based study carried out among 451 male truckers and their assistants in the south-west geopolitical zone of Nigeria (Lagos, Oyo and Ogun) in 2010 showed that 73.4% thought you could recognize an HIV person by appearance, 55.3% had more than one sexual partner, 76.7% admitted to having sex with someone other than their wives while on trips away from home; prevalence of HIV was found to be 2.4% and these cohorts by reason of their jobs have been identified as a high-risk group⁶.

Another descriptive study carried out in 2014 among 597 transport workers in south eastern Nigeria showed that 51.3% of respondents had poor knowledge of STIs including HIV and AIDS, 33.2% lacked interest in condom use and 39.7% had inconsistent condom use. About half (47.3%) did not know their status⁵. Studies carried out among commercial drivers in Nigeria and other developing countries showed that commercial drivers exhibit high risk sexual behaviour, high prevalence of STI and poor treatment practices⁷⁻⁹. In a 2012 study carried out among the general population in Nigeria an estimated seven percent reported symptoms of STI ranging from burning

sensation, genital discharge, genital ulcers and genital swelling in the twelve months preceding the study¹⁰.

The 2013 Nigeria Demographic and Health Survey (NDHS) showed that knowledge of HIV prevention among men in the general population has remained unchanged: in 2008 an estimated sixty-eight percent knew that limiting number of sexual partners and condom use prevents STI including HIV, the recent survey recorded seventy percent¹¹.

This study was carried out to assess the knowledge and measures used in prevention and treatment of HIV/AIDS and Sexually Transmitted Infections among National Union of Road Transport Workers in Mushin, Lagos State. The result of this study will add to the body of knowledge available for this high-risk group of men.

MATERIALS AND METHOD

According to the 2006 state census, Lagos state is estimated to have a population of about 17.5 million. Mushin local government area (LGA) is one of the major twenty local government areas in Lagos state¹². Bounded in the North-west by Oshodi-Isolo LGA, in the East by Shomolu LGA, in the South by Surulere LGA and in the North by Ikeja LGA, Mushin LGA is made up of three main divisions; Mushin, Ilupeju and Itire¹³.

The National Union of Road Transport Workers (NURTW) is an entity of the Nigerian Labour Congress (NLC) registered as a trade union in 1978. It has an estimated national membership of over 1.5 million. It is comprised of all professional commercial drivers, including bus town service or interstate drivers, taxi drivers involved in transportation of passengers and goods from government owned motor parks. The aim of the association is to promote the economic wellbeing of her members¹⁴. NURTW in Mushin LGA has commercial bus drivers' division both interstate and intra-city, tricycle operators' division, motorcyclist division, trailer lorry drivers' division and taxi drivers' division. The commercial bus driver division 3 branches namely: Itire, Mushin-Ajina

and Odeolowo,

This study was carried out using a cross-sectional descriptive design. Sample size calculation was done using the Cochran's formula $n = z^2 pq/d^2$, and a sample size of 225 was obtained using prevalence of 82.2% (the proportion of market men and women who knew of abstinence, being faithful and consistent condom use as preventive measures against HIV/AIDS transmission in a previous study carried out in Nigeria)¹⁵.

One of the three divisions (Mushin-Ajina division) was selected using the random sampling method. There are 13 parks/units in Mushin-Ajina namely, Mushin main garage 1 and 2, Palm avenue, Idi oparun 1 and 2, Onilegogoro, Idi-oro, Mushin-Obalende, Dakobiri, Kajola, Mushin total 1 and 2 and Pako junction and in these parks, there are 236 registered members. All the registered drivers who were available during the period of the study were interviewed during the two-month course of this study.

Data was obtained from the respondents using an interviewer-administered semi-structured pre tested questionnaire. The questionnaire was categorized into three sections; section A elicited the socio-demographic characteristics of the respondents; section B the knowledge of respondents about HIV/AIDS and STIs and section C prevention and treatment modalities for HIV/AIDS and STI. Ethical approval for the study was obtained from the Research and Ethics Committee of Lagos University Teaching Hospital. Permission was obtained from the chairman of National Union of Road Transport Workers of each garage (unit). Written informed consent was also obtained from each respondent. Respondents were assured of confidentiality of information provided and participation was voluntary.

Data entry and analysis was done using EPI Info version 7.0. The data was presented as tables. Mean and standard deviation was computed for continuous variables while frequency was generated for categorical variables. Twenty-three

knowledge questions were scored and graded; respondents who scored below the mean were graded as having poor knowledge while those with scores above the mean were graded as having good knowledge. Treatment was categorized into appropriate and inappropriate. Going to the hospital as the first line of action being appropriate treatment practice. Association between variables was determined using Chi square at $p < 0.05$.

RESULTS

The mean age was 34.89 ± 10.88 . More of the respondents (34.75%) were between the ages of 26-35 years. Almost two thirds had secondary school education (63.14%) and were married (65.25%). Majority of the respondents resumed in the garage between 4am to 6am (53.39%) and leave between 8pm to 11pm (57.63%). One-fifth (21.37%) of respondents smoked cigarette among this group majority smoked less than 5 sticks per day. About a quarter (24.68%) smoke hemp with majority smoking it on a regular basis. More than half (59.72%) of respondents consume alcohol and most of them drink alcohol on a regular basis.

Awareness of HIV/AIDS was almost universal, the commonest source of information being television and radio. Almost all (97.87%) the respondents knew that HIV and STIs could be prevented. Regarding modes of transmission, 99.13% knew about unprotected sex, 93.48% knew about blood transfusion, 96.52% knew it can be transmitted through sharing of sharp objects, 57.83% knew that an infected mother can infect her unborn baby while 59.57% knew that breastfeeding can transmit the virus. To prevent infection 7.87%, 5.24% and 77.90% knew that abstinence, being faithful to one partner and use of condom respectively are ways of prevention.

The five STIs known by most of the respondents were; Gonorrhoea 98.70%, Syphilis 72.29%, Genital warts 42.42%, Public lice 38.10% and Hepatitis 31.60%. Regarding symptoms of STIs, 90.91% knew of pain during urination, 84.45% genital discharge, 72.73% genital itching, 69.26% genital sore, 67.97% genital swelling while 69.70% knew that STIs could be asymptomatic. Less than

half (45.76%) of the respondents had good knowledge regarding modes of transmission and prevention of HIV/AIDS and STIs.

With regards to prevention of HIV/AIDS and STIs, majority of the respondents used the male condom (63.14%). Among users only 9.40% were consistent users. A quarter (25.50%) of the respondents used condom at first sex and 46.31% used condom at last sex. About one-third (36.86%) of the respondents had been tested for HIV. Almost half did the test to know their status (44.95%). Majority took the test at a government health facility (60.92%). More of the respondents (62.07%) that took the test did so only once and most had it between 2009 and 2012. Amongst respondents that had been tested less than half (43.68%) did the test with their main sexual partner.

About a quarter of the respondents (28.38%) reported previous episode of an STI, among this group, the first step they took was to seek counsel from family and friends (59.70%), go to the chemist (19.40%) while 14.93% went to the health facility. More of the respondents eventually sought treatment from a traditional healer (40.30%), followed by 37.31% that got treatment at a chemist and 22.39% that got treatment at a health facility.

The study showed that a higher proportion of the young respondents less than 30 years of age used condom at last sex ($p = 0.006$). Age also affected HIV testing, a higher proportion of the respondents between 30-40 years of age had tested ($p = 0.003$) and also tested with their main partner ($p = 0.001$). It also shows that respondents' level of education affected the use of condom at first sex. A higher proportion of those with a secondary/tertiary education used condom at first sex ($p = 0.019$). Also, there was an association between level of education and HIV testing with main sexual partner. A higher proportion of the respondents with secondary/Tertiary education had HIV test with main partner ($p = 0.006$).

There was an association between marital status and condom use. A higher proportion of single

respondents used condom ($p < 0.000$). It's also seen that there's an association between marital status and condom use at last sex. A higher proportion of the single respondents used condom at last sex ($p < 0.000$). Marital status also affected HIV testing. More of the married respondents had done the HIV test ($p = 0.015$). An association was observed between marital status of respondents and testing with main partner. More of the married respondents had HIV testing done with their main partners ($p < 0.000$). This study revealed that the closing time of respondents affected HIV testing. A high proportion of the respondents who closed late had done the test ($p = 0.030$).

This study also showed that cigarette smoking and alcohol consumption affected frequency of condom

use. Non-smokers and respondents who did not take alcohol were more likely to be consistent users ($p = 0.040$ and $p < 0.000$) respectively. Hemp smoking affected condom use and HIV testing, more of the respondents who smoke hemp used condom ($p = 0.022$), whereas non-Hemp smokers were more likely to have been tested for HIV ($p = 0.008$).

There was an association between level of knowledge and HIV testing. More of the respondents with good knowledge had been tested ($p = 0.018$). The study revealed that a higher proportion of respondents who practiced inappropriate STI treatment used condom at last sex ($p = 0.040$).

Table A: Relationship between socio-demographic variables and condom use

Variable	Condom use		Total	X ²	P value
	Yes Frequency (%)	No Frequency (%)			
Hemp	Ever used condom				
.....	102(70.3)	72(41.4)	174		
Smokes	43(75.4)	14(24.6)	57		
Total	145(62.8)	86(37.2)	231	5.20	0.023
Marital status	Ever used condom				
Married	83(53.9)	71(46.1)	154		
Single	66(80.5)	16(19.5)	82		
Total	149(36.1)	87(36.9)	236	16.26	0.000
Cigarette smoking	Consistent condom use				
Doesn't smoke	14(12.3)	100(87.7)	114		
Smoke	0(0.0)	33(100.0)	33		
Total	14(9.5)	133(90.5)	147	4.48	0.040
Alcohol	Consistent condom use				
Doesn't take alcohol	13(21.3)	48(78.7)	61		
Takes alcohol	1(1.2)	84(98.8)	85		
Total	14(9.6)	132(90.4)	146	16.61	0.000
Education	Condom use at first sex				
Secondary/Tertiary	33(31.7)	71(68.3)	104		
No formal/Primary	5(12.5)	35(87.5)	40		
Total	38(26.4)	106(73.6)	144	5.50	0.019
STI treatment	Condom use at last sex				
Appropriate	2(25.0)	6(75.0)	8		
Inappropriate	25(69.4)	11(30.6)	36		
Total	27(61.4)	17(38.6)	44	0.03	0.040
Marital status	Condom use at last sex				
Married	29(37.7)	48(62.3)	77		
Single	49(74.2)	17(25.8)	66		
Total	78(54.5)	65(45.5)	143	19.18	0.000
Age	Condom use at last sex				
<30 years	39(67.2)	19(32.8)	58		
30-40 years	26(50.0)	26(50.0)	52		
>40 years	13(39.4)	20(60.6)	33		
Total	78(54.5)	65(45.5)	143	10.26	0.006

Table B: Relationship between socio-demographic variables and HIV test

Variable	Ever had HIV test		Total	X ²	P value
	Yes	No			
Age					
<30 years	20(24.1)	63(75.9)	83		
30-40 years	42(50.0)	42(50.0)	84		
>40 years	26(37.7)	43(62.3)	69		
Total	88(37.3)	148(62.7)	236	11.99	0.003
Marital status					
Married	66(42.9)	88(57.2)	154		
Single	22(26.8)	60(73.2)	82		
Total	88(37.3)	148(62.7)	236	5.87	0.015
Closing time					
Early (4-7pm)	25(28.4)	63(71.6)	88		
Late (After 7pm)	63(42.6)	85(57.4)	148		
Total	88(37.3)	148(62.7)	236	4.73	0.030
Knowledge of HIV/AIDS and STI					
Good	49(45.4)	59(54.6)	108		
Poor	39(30.5)	89(69.5)	128		
Total	88(37.3)	148(62.7)	236	5.56	0.018
Hemp					
Doesn't smoke	74(42.5)	100(57.5)	174		
Smokes	13(22.8)	44(77.2)	57		
Total	87(37.7)	144(62.3)	231	7.11	0.008
Education	HIV test with main partner				
Secondary/Tertiary	34(52.3)	31(47.7)	65		
No formal/ Primary	4(18.2)	18(81.8)	22		
Total	38(43.7)	49(56.3)	87	7.78	0.006
Age					
<30 years	5(26.3)	14(73.7)	19		
30-40 years	24(57.1)	18(42.9)	42		
>40 years	9(34.6)	17(65.4)	26		
Total	38(43.7)	49(56.3)	87	14.87	0.000
Marital status					
Married	37(56.1)	29(43.9)	66		
Single	1(4.8)	20(95.2)	21		
Total	38(43.7)	49(56.3)	87	17.04	0.000

Table C: Relationship between education and knowledge of respondents

Variable	Good Knowledge Frequency (%)	Poor Knowledge Frequency (%)	Total	X ²	P value
Level of education					
Secondary/Tertiary	85(50.0)	85(50.0)	170		
No formal/Primary	23(34.8)	43(65.2)	66		
Total	108(45.8)	128(54.2)	236	4.40	0.036

DISCUSSION

This research work was done among commercial bus drivers registered under the NURTW in Mushin Local Government Area of Lagos state. Majority of the respondents in this study were young, sexually active, fairly educated, married, resumes early at the garages and closed late. Concerning social habits, alcohol consumption (59.72%), cigarette smoking (21.37%) and hemp smoking (24.68%) was popular among this study population compared to the result of a study carried out in Ilorin, Kwara state in 2007 among intercity commercial divers where only 24.6% consumed alcohol, 3.9% smoked hemp and 24.3% smoked cigarette⁷.

On preventive measures utilised, majority of respondents (77.90%) in this study knew about condom use as a preventive measure which was higher than what was noticed in a secondary analysis of data obtained from a market survey carried out in 2008 in Lagos where only 54.30% of male respondents knew that condom can be used for prevention. As regards other preventive measures respondents knew in this study, 7.87% knew about abstinence, 5.24% being faithful to a single partner, this is very low compared to the result obtained from the same Lagos market survey mentioned above where 50.40% and 22.70% of the male respondents respectively knew that being faithful and abstinence are preventive measures¹⁵.

A higher proportion of the respondents in this study compared to a sample of brothel based female sex workers in Lagos knew that STI could be asymptomatic (69.70% vs 13.9%). Use of herbal mixtures as a prophylactic measure against STIs was

also commoner among the NURTW (3.37% vs 2.5%). Furthermore, in this study about 4.50% of those who knew that HIV/STIs could be prevented took antibiotics as a preventive measure which was low compared to the 6.5% of the brothel based female sex workers mentioned above¹⁶.

Majority of the respondents (63.14%) reported male condom use in the past which is similar to the results obtained in a study carried out among long distance workers in East Africa where more than 60% of respondents used condom⁹. Hemp smokers and single men in this study were more likely to use condoms ($p=0.022$ and $p<0.001$ respectively). However, the values obtained for consistent condom use was lesser, only 9.40% of the respondents, which was low compared to 31.6% obtained in the aforementioned East African study.⁹ Consistent condom use was found more amongst commercial drivers who neither drank alcohol nor smoked cigarette ($p<0.001$ and $p=0.040$ respectively). This is not surprising because alcohol consumption has been linked to risky sexual behaviour from previous studies¹⁷.

Condom use with risky sexual partners (female sex workers and casual friends) was reported by about ten percent of the NURTW in this study which is lower than what was reported by the drivers who participated in the 2010 Nigerian Integrated Biological and Behavioural Surveillance Survey where 83.7% (9170/10955) of the respondents reported condom use with commercial partners and 63.9% (7001 of 10955) with casual partners¹⁸. Condom use increased from one quarter of respondents at first sex to almost half at last sex,

this is slightly low compared to the result obtained in a study carried out among automobile repair workers in Ibadan Nigeria where 59.00% used condom at their last sexual encounter¹⁹.

More of respondents with post-primary level of education used condom at first sex compared to those with primary or no formal education ($p=0.019$) Single respondents were more likely in this study to have used condom at last sex compared to the married ones $p<0.001$, age was also associated with condom use, higher proportion of young drivers less than thirty years of age were using condoms compared to the older ones $p=0.006$.

About one third of the drivers had been tested for HIV mainly to know their status which is similar to the result gotten from a study carried out among girls in some selected schools in Malawi where 31% of respondents had done HIV testing in the past and 87.1% took the test to be sure of their status²⁰. Among the drivers who had been tested, almost half had done it in the preceding year which is high compared to the result of the 2008 Nigerian National Demographic and Health survey where only 7% had HIV test in the preceding year²¹.

HIV testing was more likely to be done by respondents with good knowledge of STIs and HIV ($p=0.018$). Age was noticed to affect HIV testing, a higher proportion of the respondents between 30-40years of age had tested ($p=0.003$) and also tested with their main partner ($p=0.001$). A higher proportion of the married respondents and those with secondary/Tertiary education had HIV test with their main sexual partner ($p<0.001$ and $p=0.006$ respectively). Drivers who did not smoke hemp and closed late at the garage were more likely to have been tested for HIV ($p=0.008$ and $p=0.030$ respectively).

The pattern of STI symptoms reported by respondents in this study was similar to the results obtained from a study done in New Delhi, India in 2007. Genital discharge was the commonest symptom followed by genital itching. However, the prevalence was much lower among the Indian respondents²². A quarter of the respondents had an

STI in the past which was high compared to the results obtained in the National HIV/AIDS and Reproductive Health Survey of 2007 where only 3.00% of the respondents reported previous history of STI²³. About places where treatment was obtained, poor treatment seeking behaviour occurred in majority of cases. Less than a quarter were treated in health facilities, more than a third by chemist while more received treatment from traditional healers. Respondents in the 2007 study mentioned above reported comparatively better treatment seeking behaviour with 35.00% mentioning health facilities, 11.00% traditionalists and 13.00% chemists. The choice of treatment venue was based mainly on the cost of treatment, geographical proximity, family influence and expectation of good quality service, similar to the reasons given in this study²². A higher proportion of respondents who used inappropriate STI treatment measure used condom at last sex ($p=0.040$).

CONCLUSION

This study carried out among NURTW commercial bus drivers in Mushin Lagos state revealed that more of the drivers lack good knowledge about modes of transmission and prevention. The measures used in prevention of STI were condom and HIV test. Only a few practised consistent condom use. Majority had not been tested for HIV, and condom use with risky partner was poor. More of the respondents who had reported prior symptoms of STI which were treated by traditional healers.

It is our recommendation that more awareness is needed in form of seminars and training workshops for members of NURTW in garages as regards prevention and treatment of HIV/AIDS and STI. HIV and STI counselling and testing services should be provided in garages to aid uptake of these services, and likewise members should be trained as peer educators.

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