Knowledge About HIV/AIDS and Sexual Practices Among Automobile Repair Workers in Ibadan, Southwest Nigeria

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Abstract

HIV/AIDS is a rapidly growing epidemic in sub-Saharan Africa. Very few studies have focussed on outdoor workers. A cross sectional survey was conducted among automobile repair workers in Ibadan, Southwest Nigeria.

A structured questionnaire was administered by interviewers to collect information on knowledge of transmission and prevention of HIV/AIDS and sexual practices among automobile repair workers. Twenty five questions were designed to determine knowledge about HIV/AIDS, each with a minimum score of 0 and a maximum of 1.

Eight hundred workers participated in the study. They were all male aged between 12 and 80 years, mean 29.8 years. About half of the population were single. Majority (96%) had heard of HIV/AIDS. Over 95% of respondents knew about transmission by sexual intercourse and blood transfusion. A mean knowledge score of 17.6 out of 25 was recorded. Several misconceptions such as transmission of HIV/AIDS by mosquitoes and through sharing of clothes were prevalent. Ninety-three percent had ever had sexual intercourse and 87% of singles were sexually active. Two hundred and thirty-nine, (30%) had casual sex partners. Of these, only 59% used condoms during the last sexual intercourse with casual partners.

In spite of a high knowledge score among this male dominated low income workers, their sexual practices are such that will encourage transmission of HIV. (*Afr J Reprod Health* 2007; 11[2]:24-32).

Résumé

Connaissance par rapport au VIH/SIDA et les pratiques sexuelle chez les mécaniciens à Ibadan, sud-ouest du Nigéria Le VIH/SIDA est une épidémie qui s'accroît rapidement en Afrique subsaharéenne. Il y a très peu de recherches qui ont été consacrées au travailleurs au grand air. Une enquête transversale a été menée auprès des mécaniciens à Ibadan, au sud-ouest du Nigéria. Les enquêteurs ont administré un questionnaire structuré dans le but de recueillir des renseignements sur la connaissance relative à la transmission et la prévention du VIH/SIDA et sur les pratiques sexuelles chez les mécaniciens. Vingt-cinq questions ont été préparées pour déterminer la connaissance sur le VIH/SIDA, chacun ayant une note minimum de 0 et un maximum de 1. Huit cents mécaniciens ont participé à l'étude. Ils étaient tous des mâles âgés d'entre 12 ans et 80 ans avec une moyenne de 29,8ans. A peu près une moitié de la population était célibataire. La majorité (90%) avaient jamais entendu du VIH/SIDA. Plus de 95% des enquêtés étaient au courant de le transmission à travers des rapports sexuels et la transfusion sanguine. Une note de connaissance moyenne de 17,6 sur 25 a été enrégistée. Beaucoup de mauvaises conceptions telles la transmission du VIH/SIDA par les moustiques et par le partage des vêtements étaient répandues. Quatre-vingt-trois pourcent avaient jamais eu des rapports sexuels et 87% des célibataires avaient des partenaires sexuels occasionnels. Malgré une note de connaissance parmi ces travailleurs à faible revenu dominé par les mâles, leur pratiques sexuelles sont de nature à encourager la transmission du VIH. (*Rev Afr Santé Reprod* 2007; 11[2]:24-32).

Key Words: *knowledge, automobile mechanics, sexual behaviour, small scale industries*

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Introduction

HIV/AIDS is a rapidly growing epidemic in sub Sahara Africa. The report of the 2005 seroprevalence sentinel survey in Nigeria indicates that the current prevalence of HIV/AIDS is 4.4%[1]. Traditional beliefs, cultural factors, lack of knowledge about the disease and poverty were the most important factors related to the increasing HIV/AIDS prevalence in Nigeria[2]. Moreover, unprotected sex with several partners, patronage of commercial sex workers, polygamy, extra marital relationships and early marriage are risk factors for HIV infection in Nigeria[2,4,5,6]. Several efforts have been instituted to control the epidemic among the populace.

Several studies on knowledge of HIV have focussed on workers in the formal sector[7,8,9]. Workers in the informal sector may not have the opportunity of acquiring information and may be less equipped to protect themselves against the disease. There are much fewer studies on this category of workers. Automobile workers such as mechanics, welders and vulcanizers constitute a large proportion of the informal sector and characteristically have low educational status, low income and poor access to information. These workers may reflect the average social and cultural attitudes of the community. Automobile workers are predominantly and almost exclusively male. The vast majority are sexually active. They work on the roadsides and have frequent contact with food vendors and other roadside users. The outdoor nature of their work provides ample opportunities for sexual networking within the community and thus may increase their risk of acquiring HIV infection.

The study sought to determine the knowledge of these workers about transmission and prevention of HIV/AIDS and sources of information available to them. Information about their sexual practices was also obtained.

Method

This cross sectional study was carried out in Ibadan, Southwest Nigeria as the baseline survey for an intervention study among automobile repair workers. Automobile repair workshops are located in roadside premises along major routes across the city. Several mechanic workshops aggregate themselves together in large open spaces to form mechanic villages. Two large and two small mechanic villages were purposely selected for this study out of a total of seven mechanic villages in Ibadan North local government area. Mechanic villages were used because of the space and the ease of organization and mobilization of workers for the health education intervention programme designed for the study. Mechanic villages were purposely selected on the basis of proximity to our centre and accessibility for monitoring and evaluation of the intervention programme. Permission to conduct the study was sought from the Automobile Mechanic and Allied Workers union and this was given by written consent. All mechanic apprentices and qualified mechanics present in the mechanic village at the time of our visit were requested to participate in the study after a brief explanation of the reason for the study. In all, about 40 mechanics declined to participate in the study. The reason given by most of them was that they did not have time to answer the questions.

A structured questionnaire was administered to all workers by trained interviewers who were fluent in the local language. This questionnaire had been pretested and translated in the local dialect, Yoruba. It was also back-translated to English to ensure correctness. The questionnaires sought information on socio-demographic variables, occupational data, knowledge of transmission and prevention of HIV/AIDS and sexual practices of respondents. Twenty five questions were designed to determine the level of knowledge about transmission and prevention of HIV and scores were allotted with a minimum of 0 and maximum of 1 for each item. A maximum score of 25 was attainable.

Data was analysed using SPSS version 11.0. The Mann-Whitney test was used to compare the **variable 'knowledge score'** between two

groups and the Kruskall- Wallis test for comparison among three or more groups. A p value of <0.05 was considered as statistically significant. For the logistic regression analysis, we divided the variable 'knowledge score' into a dichotomous variable based on the median value. The odds ratios and the 95% confidence intervals are presented. The models included martial status, religion, educational level and age-groups.

RESULTS

Socio-demographic variables

Eight hundred automobile workers participated in the study from the four villages. They were all males with ages ranging from 12 to 80years, mean 29.8 $\pm$ 10.7. Table 1 shows the socio-demographic characteristics of mechanics. The study population comprised of 596 (75%) qualified mechanics and 204 (25%) apprentices. Almost all, 773 (97%) were Yoruba, 448 (56%) were Muslims and 352 (44%) were Christians.

Three hundred and sixty two (45%) had only primary education and 421 (53%) had attained secondary education. About 88% of respondents could read the local language Yoruba and 53% could read English. Half of the study population were married and half were single with 49 (12%) of married respondents reporting more than one wife.

One hundred and fifty-four mechanics or allied workers (21%) had at least four different sexual partners during the past 12 months and 351 (48%) had at least two different sexual partners during the same period.

Knowledge about HIV/AIDS

Majority, 791 (99%), had heard of sexually transmitted diseases; 649 (82%) knew about gonorrhoea, 101 (13%) knew about syphilis. Seven hundred and sixty two respondents (96%) had heard of HIV/AIDS. There was no association between awareness of HIV/AIDS and demographic variables, age, religion and educational status.

The commonest source of information for HIV/AIDS was the radio, 505 (63%) followed by television, 214 (26.8%). Only 12 (1.5%) respondents had heard about HIV/AIDS from health workers, Table 2. Two hundred and fifty seven (32%) had received sex education at school.

The mean score for all respondents was 17.6 and the median was 18. Mean knowledge scores for different sub groups are shown on Table 3. Knowledge increased with increasing educational status, p = 0.001. Knowledge scores were highest among those who were 20-39 year old and lowest among those 50 years and over, p = 0.01. There was no difference in knowledge scores with marital status, religion, ethnic group or job category. In a logistic regression analysis controlling for religion, education, age and martial status, only mechanics between 20-29 years-of-age had a significantly better knowledge about HIV/AIDS transmission,(Table 4). Religion, education or marital status were not predictive of having an above average knowledge of HIV/AIDS transmission.

Table 5 shows some of the responses to questions on knowledge about HIV/AIDS. Most respondents knew about the sexual transmission of HIV and transmission through transfusion of infected blood. However, a substantial number of respondents had some misconceptions about transmission through sharing of toilets, clothes, cups and plates. Fifty eight percent of respondents thought that HIV can be transmitted by mosquitoes.

One hundred and twenty four respondents (16%) thought that HIV/AIDS can be cured by modern medicine and 177 (22%) thought HIV/AIDS can be cured by traditional medicines. Twenty four (3%) thought that HIV/AIDS can be cured by having sex with a virgin. On ways to avoid getting HIV/AIDS, 691 (87%) knew that condoms can prevent HIV/AIDS.

Sexual practices

A total of 746 (93%) hadover had sexual intercourse. Three hundred and fifty (87%) of

Table 1: **Socio-demographic characteristics of the study population. N=800**

	%	(n)
Age-groups (in years)		
<20	8	(63)
20-29	55	(442)
30-39	19	(154)
40-49	9	(73)
>49	9	(68)
Religion		
Christian	44	(352)
Muslim	56	(448)
Ethnic group		
Yoruba	97	(773)
Others	3	(27)
Education	2	(14)
No education	45	(362)
Primary (1-6 years)	9	(72)
Some secondary (7-11 years)	44	(349)
Secondary or higher (>11years)	53	(423)
	88	(703)
Reading skills		
English	51	(406)
Yoruba	49	(394)
Marital status		
Single	43	(347)
Married	6	(49)
Number of wives		
1 wife	13	(99)
> 1 wife	3	(22)
Number of different sexual partners during the previous 12 months		
None		
I don't know		
1	37	(276)
2	17	(124)
3	10	(73)
≥4	21	(154)

the single respondents had ever had sexual intercourse. Mean age at first intercourse was 18.6 ± 4.4 with a range of 6 to 37years.

The mean number of sexual partners in the last one year was 1.9 +_1.58, range of 0-4. Five hundred and fifty six respondents (70%) had regular sexual partners and 239 (30%) had casual sex partners. Fifty nine percent of respondents with casual sex partners used condoms in their last sexual intercourse with casual partners.

Table 2: **Most important source of information about HIV/AIDS**

Source of information	**N**	%
Radio	505	63
Television	214	26.8
Newspapers	10	1.2
Friends	30	3.8
School	13	1.6
Health workers	12	1.5
Other	12	1.6
No response	4	0.5
Total	**800**	**100**

Table 3: **Knowledge regarding HIV/AIDS among different subgroups of automobile repair workers**

Variable	**Mean score (0-25)**	**p-value for difference**
Religion		
Christian	17.8	0.049[1]
Muslim	17.4	
Ethnic group		
Yoruba	17.7	0.053[1]
Others	18.9	
Marital status		
Single	17.6	0.472[1]
Married	17.5	
Job classification		
Qualified worker/boss	17.6	0.520[1]
Apprentice	17.6	
Education [2]		
No education	16.7	<0.001[2]
Primary education	17.1	
Some secondary	17.8	
Secondary or higher	18.4	
Age-groups (in years)		
< 20	17.1	0.010[2]
20-29	17.9	
30-39	17.9	
40-49	17.4	
>49	16.7	

[1]Mann Whitney test
[2]Kruskall-Wallis test

Table 4: **Odds ratios and 95% confidence interval of having a better knowledge of HIV/AIDS transmission (>18 knowledge points) by and adjusted for population characteristics**

	OR[1]	95% CI[2]
Marital status		
Single	1	Reference value
Married	1.09	0.73-1.62
Religion		
Christian	1	Reference value
Muslim	0.88	0.65-1.21
Education		
None	1	Reference value
Primary	1.44	0.46-4.44
Some secondary	1.64	0.48-5.57
Secondary or higher	2.89	0.92-9.07
Age groups (years)		
<20	1	Reference group
20-29	1.97	1.02-3.83
30-39	1.98	0.90-4.34
≥40	1.30	0.58-2.88

[1]Odds ratio
[2]Confidence interval

Table 6 presents the odds ratios for having ever used a condom among those who have had sexual intercourse. None of the explanatory variables was found to be a significant predictor of having ever used a condom. However, there seemed to be an increasing probability of having ever used a condom with increasing education.

Discussion

The results of this survey represent the perceptions of HIV/AIDS in this stratum of the population. Awareness about HIV/AIDS in the population was almost universal. This has been reported in other studies [10,11,12,13]. The Nigerian Demographic and Health Survey carried out in 2003 [14] showed that 97% of men had ever heard of AIDS and as in this study there was little variation by socio-demographic variables. The electronic media have consistently been reported as the commonest source of information about HIV/AIDS [15]. However, unlike other studies, the radio seems to be the commonest source of information in this low income population.

While most people have heard about HIV/AIDS, knowledge about modes of transmission and methods of prevention are still inadequate[4,15,16]. Most respondents knew that HIV/AIDS can be transmitted through sexual intercourse and blood transfusion. However, several misconceptions about transmission were recorded. Fifty eight percent of respondents in this survey thought that HIV/AIDS can be transmitted by mosquitoes. This figure is higher than the 44.6% recorded for the same item in the NDHS survey [14] and 29% among journalist in Ibadan[7]. There seems to be a widespread misconception that since the AIDS virus like malaria is

Table 5: **Responses to questions on transmission of HIV/AIDS**

	Yes	No	Don't know	No response	Total
Mosquitoes can spread HIV/AIDS	458 (57%)	262 (33%)	75 (9.4%)	5 (0.6%)	800 (100%)
Can get HIV by sharing toilets with HIV infected person	420 (53%)	300 (37%)	77 (9.6%)	3 (0.4%)	800 (100%)
Can get HIV by sharing clothes of HIV infected person	302 (38%)	420 (52.6%)	75 (9%)	3 (0.4%)	800 (100%)
Can get HIV by sharing cups and plates with HIV infected person	334 (41.6%)	391 (49%)	69 (8.6%)	6 (0.8%)	800 (100%)
Can get HIV through sexual intercourse with infected person	789 (98.6%)	5 (0.6%)	3 (0.4%)	3 (0.4%)	800 (100%)
Can get HIV/AIDS by sharing shaving instruments	758 (94.8%)	28 (3.5%)	10 (1.2%)	4 (0.5%)	800 (100%)
Can get HIV/AIDS by transfusion of infected blood	791 (98.8%)	3 (0.4%)	3 (0.4%)	3 (0.4%)	800 (100%)
A woman can transmit HIV/AIDS to her baby by breastfeeding	615 (77%)	101 (12.6%)	81 (10%)	3 (0.4%)	800 (100%)

Table 6: **Odds ratios and 95% confidence interval of having ever used a condom among mechanics and allied workers by and adjusted for population characteristics**

	OR[1]	95% CI[2]
Marital status		
Single	1	Reference value
Married	0.87	0.56-1.37
Religion		
Christian	1	Reference value
Muslim	0.92	0.65-1.31
Education		
None	1	Reference value
Primary	1.56	0.52-4.67
Some secondary	2.27	0.66-7.81
Secondary or higher	2.69	0.88-8.27
Age groups (years)		
<20	1	Reference group
20-29	1.87	0.95-3.70
30-39	1.44	0.63-3.26
≥40	1.82	0.79-4.20

[1]Odds ratio
[2]Confidence interval

blood borne, mosquitoes which transmit malaria have the potential of transmitting the virus. A significant proportion of respondents believed that HIV can be transmitted through sharing of toilets, sharing of clothes and sharing of cutlery. The high prevalence of misconceptions among these workers is probably due to their low educational status. These misconceptions need to be addressed through AIDS intervention programmes as it has implications for wrong attitudes towards people living with AIDS in the community.

Higher educational status and age between 20-39 were associated with increased knowledge about HIV. However, those below 20 and those above 49 had low knowledge scores indicating the need for education in these age groups. The NDHS results show the same age trends. The older age group, those above 49 years of age, had the lowest score and it seems they have been left out of AIDS education programmes. As they exert significant influence on young people, they need to be equipped with correct information about HIV/AIDS to enable them adopt safe lifestyles and encourage younger people to do the same.

High risk sexual behaviour was recorded in this study. About one third of the population reported that they had casual sexual partners and nearly half of these did not use condoms during the last sexual intercourse with their casual sex partners. A similar finding was reported for drivers in Ilorin , Southwest Nigeria, where 60% of respondents reported that they were unwilling to use condoms [17]. A knowledge- practice gap with respect to HIV has been observed in several studies [12, 18, 19] and this continues to be a cause for concern in the prevention of HIV/AIDS.

This study shows that several misconceptions about HIV/AIDS still exist in urban communities especially among workers in the informal sector. HIV/AIDS prevention programmes for this group of workers should focus on eliminating these misconceptions and include specific interventions to effect a change in sexual behaviour in order to reduce the risk of transmission of the disease in the community.

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