



A Cross Sectional Study on HIV Risk Perception and Sexual Behaviours among Commercial Motorcyclists in Makurdi, Benue State Nigeria

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Abstract

The study was aimed at determining the HIV risk perception and sexual behaviour among commercial motorcyclists in Makurdi, Benue State, Nigeria. The study design was cross sectional study among 344 consenting, registered commercial motorcyclists, aged 18 years and above working in Makurdi, Benue State capital. A multistage sampling technique was used to select the respondents from a total of 5000 motorcyclists spread across 45 stations within Makurdi. Data was collected in September 2014 using structured interviewer administered questionnaire. Analysis was done with SPSS version 20.0. The mean age was 28.18 (\pm 7.94) years. Approximately 93% of the participants reported ever having sex. The average lifetime number of sexual partners was 8.9 (\pm 20.26) while 48.0% reported having had more than one sexual partner in the previous one year. A two third of the respondents (66.7%) reported use of condom during their last sex with a non-regular partner. Slightly less than a quarter (24.1%) of the respondents have paid to have sex in the previous one year. However only 29.6% perceived themselves as been at moderate or high risk of contracting HIV. There was significant association between risk perception and use of condom during last sex with any partner {OR-2.687 (95% CI= 1.337 – 5.400) $p=0.005$ }. There is low personal risk perception despite high proportion of risky sexual behaviours among the respondents. HIV prevention interventions among commercial motorcyclists need to be more tailored and with the objective of building assertive skills in addition to imparting knowledge.

Keywords: Sexual risk behavior, Risk perception, HIV and AIDS, Benue, Nigeria.

1. Introduction

HIV and AIDS burden is high among young persons in Nigeria (HSS, FMOH, 2008). Commercial motorcyclists, like most other young artisans, have regular and daily source of income and are therefore at increased risk of engaging in risk behaviours that put them at high risk of HIV transmission. Previous Studies have documented high rate of HIV risk taking behaviours amongst young people including commercial motorcyclists in Nigeria and other developing countries. (Nwaorgu, Onyeneho, Okolo, Obadike, Enibe, 2008; Adebisi and Asuzu, 2009; Owoaje and uchendu, 2009; Gitau, Wandia, Marum, 2004; Adeoye, 2005 and, Abiodun, 2013)

A risk is defined as the probability that a health event (usually adverse) will occur. An individual perception of his or her risk depends on a complex interplay of many factors including knowledge level of the individual, previous experiences and economic, social and cultural contexts. (Taylor-Gooby, Zinn, 2006) A perceived HIV threat at individual level may be

a motivation for positive behavioral change. The health belief model, developed in the 1950s, states that people with high perception of risk for an adverse outcome are more likely to reduce behaviours that put them at risk of such outcomes. (Janz, and Becker, 1984) However, results from previous studies have shown that perceptions of risk of HIV may not always reflect the risk profiles of the individuals concerned. (SFH, 2005; Maharaj and Cleland, 2005; Meekers and Klein, 2005 and Adih and Alexander, 1999)

Targeted HIV Prevention interventions would require a good understanding of peoples' perceptions of their risk of contracting HIV. The relationship between personal risk perception and risky behaviours associated with HIV transmission in different populations in our environment, including commercial motorcyclists is not well established. It is therefore imperative to study the interplay between HIV risk taking behaviours and protective behaviours and personal perception of risk of HIV transmission among commercial motorcyclists especially in view of the high HIV burden in Benue state. This would help policy makers and implementers of HIV programmes develop appropriate strategies to fight the HIV scourge. The objectives of the study was to determine the sexual risk taking behaviours and the personal HIV risk perception among commercial motorcyclists in Makurdi, Benue State Nigeria.

2. Research Methods

2.1 Study Setting

This study was carried out in Makurdi, the state capital of Benue State in North Central Nigeria. It lies between latitude 7.73⁰ and 8.32⁰. It has a population of about 300,377 people. Majority of the population are farmers. The major ethnic groups are the Tiv, Idoma and Iggede. As of 2007, Makurdi had an estimated population of 500,797. (NPC, 2006) Owing to its location in the valley of River Benue, Makurdi experiences warm temperatures most of the year, the period from November to January when the harmattan weather is experienced is however relatively cool. Commercial motorcycling business is thriving most especially among the teeming youth population. There are 45 motorcycle stations in Makurdi with about 5000 registered members.

2.2 Study design

An analytical cross sectional study was used to determine the sexual risk taking behavior and personal perception of risk of HIV transmission among commercial motorcyclists in Makurdi, Benue State. Study population includes all commercial motorcyclists working in Makurdi, Benue state capital. The inclusion criteria included all registered commercial motorcyclist in Makurdi aged 18 years and above and have spent at least 3 months in the business. All eligible respondents who do not consent to the study were excluded. The sample size was calculated using the formula $n = Z_2pq/d^2$. (Dahiru, Aliyu and Kene, 2006) Based on the estimated multiple sexual partnering of 30% (Winifred and Uchenna , 2011), 95% confidence level and 5% precision level, the estimated minimum sample size was approximately 323. Adjusting for population of $\geq 10,000$ and 15% non-response rate the sample was adjusted to 358, of which only 344 had completed information (96.1% response rate).

A multistage sampling technique was employed in selecting the study participants. Selection of four motorcycle stations from the total 45 stations. This was done by simple random sampling. The list of all the 45 motorcycle stations was used as the sampling frame, and four were selected by toss of coin. In the second stage, with the register of all commercial motorcyclists in each of the selected stations serving as the sampling frame, the table of ransom numbers was used to select commercial motorcyclists to be included in the study. Eligible respondents who were not available at the period of survey were giving a second chance of period they were likely to be present. After second visit, those selected respondents who were not present were replaced with other respondents present.

2.3 Data Collection

Data collection was done using a structured questionnaire which obtained information on socio- demographic characteristics of the respondents, sexual Practices, HIV risk perception and HIV prevention. Pretesting of the questionnaire was carried by the researchers by administering the questionnaire to twenty eight (10% of calculated sample size) commercial motorcyclists in Wanunne, Tarka LGA of Benue State (about 30 minutes' drive from Makurdi town) where errors in the questionnaire were identified and corrected.

The questionnaire was administered to respondents by the authors and four trained research assistants. The interviewers were trained on the questionnaire, survey procedures including sample selection and other aspects of field work.

2.4 Ethical consideration

Ethical clearance was obtained from the health research ethics committee of Benue State University Teaching Hospital. Permission was also obtained from the chairman of the Association of Commercial motorcyclists, Makurdi branch. Each respondent was briefed and adequately informed on the purpose of the study and assured of privacy and confidentiality. A written consent was obtained from each of the participants before administering the questionnaire.

2.5 Data Analysis

All questionnaires collected were checked for completeness and analyzed using Statistical Programmes for Social Sciences (SPSS) version 20.0. Data was summarized and presented as charts and tables. Statistical levels of significance were set at $p < 0.05$ with a 95% confidence interval. The main outcome variable was personal risk perception of contracting HIV. The risk factor of interest includes multiple sexual partners, non-condom use with non-regular partners. The relationships between the outcome variable and the risk factors were determined using chi square test and logistic regression modeling was used to determine adjusted Odds Ratio (OR) and 95% Confidence Interval.

3. Results

3.1 Socio-demographic characteristics of respondents

All the respondents were male. The mean age was 28.18 (± 7.94) years and the majority, 195 (56.7%) were between 20-29 years. The respondents were predominantly of the Tiv ethnic group, 201 (58.4%) and majority, 296 (86.0%) were Christians. Majority of the respondents 190 (55.2%) had secondary education. About half, 178 (51.7%) were never married while 132 (38.4%) and 92 (26.7%) of the respondents lived with their relatives and their spouses respectively (Table 1).

Table 1: Socio-demographic characteristics

	Frequency	Percent (%)
Age (years)	Mean (SD) =28.18 (± 7.94) years	
• ≤ 19	28	8.1
• 20-24	83	24.1
• 25-29	112	32.6
• 30-34	61	17.7
• ≥ 35	60	17.4
Religion		
• Christianity	296	86.0
• Muslim	48	14.0
Ethnicity		
• Tiv	201	58.4
• Idoma	51	14.8
• Hausa	40	11.6
• Igede	36	10.5
• Others	16	4.7
Duration on Okada work (years)		
• 1-2	69	20.0
• 3-4	91	26.5
• 5-6	87	25.3
• ≥ 7	97	28.2
Education		
• None	6	1.7
• Primary	42	12.2
• Secondary	190	55.2
• Tertiary	98	28.5
• Quranic	8	2.3
Marital Status		
• Never married	178	51.7
• Ever married	166	48.3

Whom do you live with most of the time?		
• Relatives	132	38.4
• Wife	92	26.7
• Friends/peers	60	17.4
• Alone	57	16.6
• Girlfriend	3	0.9

3.2 Sexual Behaviours of respondents

Approximately 93% of the participants reported ever having sex and majority of them (52.6%) had their first sexual intercourse 15-19 years (mean age at first sex was 19.0 ± 3.66 yrs). The average lifetime number of sexual partners was $8.9 (\pm 20.26)$ with 99 (28.8%) having had more than 10 lifetime sex partners. About 153 (48%) of the respondents reported having had more than one sexual partner in the previous one year. A two-third, 204 (66.7%) of respondents used condom during their last sex with a non-regular partner while 102 (33.3%) don't use condom during sex with a non-regular partner. Slightly below a quarter 83 (24.1%) of the respondents have paid to had sex in the previous one year (Table 2).

Table 2: Sexual Behaviours of Respondents

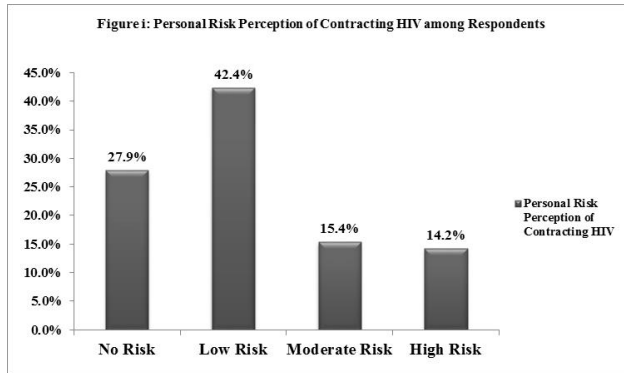
Variable	n	%
Ever had sex		
• Yes	319	92.7
• No	25	7.3
Age at Sexual Initiation (Years)		
	Mean age (SD)= 19.0 (± 3.66)	
• ≤ 14	14	4.4
• 15-19	181	52.7
• 20-24	91	28.5
• ≥ 25	33	10.3
Lifetime number of sexual partners		
	8.94 (± 20.26)	
• 0	25	7.3
• 1	53	15.4
• 2-4	94	27.3
• 5-9	73	21.2
• ≥ 10	99	28.8
Ever had sex with non-regular partner (n=319)		
• Yes	306	95.9
• No	13	4.1
Used condom during sex with non-regular partners* (n=306)		
• No	76	24.8
• Sometimes	115	37.6
• Always	115	37.6
Had more than one sexual partner in the last 12 months (n=319)		
• Yes	153	48.0
• No	166	52.0
Used condom during last sex with a non-regular partner* (n=306)		
• Yes	204	66.7
• No	102	33.3
Ever paid money for sex (n=344)		
• Yes	83	24.1
• No	261	75.9

*For respondents who have had sex with non-regular partners only

3.3 Personal risk perception of contracting HIV among Respondents

The risk perception of contracting HIV amongst the respondents is summarized in figures i and ii. Majority of the respondents (42.4%) perceived self as being at low risk of contracting HIV. About twenty nine percent perceived self as

being at no risk and 14.2% thought they were at high risk of contracting HIV (Figure 1). Majority (66.0%) of the respondents with low or no risk perception had more than one sexual partner in last 12 months before the survey. Similarly, used of condom with any partner or non-regular partners and ever done an HIV test was more amongst the respondents with low or no risk perception (57.8%, 69.8% and 67.4% respectively). The relationship between the selected behaviours (except greater than one sexual partner in last three months) and personal risk perceptions were statistically significant ($p < 0.005$) (Figure i).



3.4 Logistic regression of association between sexual and other behaviours and Personal risk perception of contracting HIV among Respondents

Amongst the predictors of personal risk perception by respondents, those with moderate or high risk perception were about three times more likely had used condom during their last sexual intercourse ($\{OR-2.687 (95\% CI= 1.337 - 5.400) p=0.005\}$).

Table 3: Logistic regression of association between sexual and other behaviours and Personal risk perception of contracting HIV among Respondents

	OR	Sig.	95% CI
Number of lifetime sex partners			
- ≥ 2	0.520	0.170	0.205 – 1.322
- ≤ 1	Ref		
Have sex in the last 12 months?			
- No	0.637	0.357	0.244 – 1.661
- Yes	Ref		
Had more than one sexual partner in the last 12 months?			
- No	0.736	0.327	0.399 – 1.359
- Yes	Ref		
Used condom during last sexual intercourse with any partner?			
- No	2.687	0.005	1.337 – 5.400
- Yes	Ref		
Used condom during last sex with non-regular partner?			
- No	1.483	0.297	0.707 – 3.114
- Yes	Ref		
Ever done an HIV test			
- No	1.193	0.631	0.579 - 2.458
- Yes	Ref		

4. Discussion

The mean age of the respondents was age was 28.18 ± 7.94 years with majority (56.7%) of them aged between 20-29 years, all were men. This age indicates that the commercial motorcyclist are relatively young but generally than what

obtained in some previous studies. (NPC, 2009) It is also worthy of note that 83.7% of the participants had at least a secondary education with 28.8% of them having had tertiary level education. Majority of them have been on the job for over 7 years. The level of education of commercial motorcyclists can be said to be high when compared to the percentage of Nigeria's male population aged 25-29 years with at least secondary education as 51% and the average for the whole population in North central region as 21%. (Mishra, Praween, Soumya, Yuan and Shanxiao, 2009) The relative high level of educational attainment among commercial motorcyclists and their duration of been on the job is probably a reflection of the level of unemployment in the country. The study revealed that 100% of the respondents were males indicating the commercial motorcyclist work is an exclusive preserve of men. While close to half of the respondents reported being married at the time of data collection, only 26.7% were staying with their spouses. This indicates that close to a quarter of the married respondents was not staying with their wives thus exposing them to risky sexual practices. The mean age at first sex in our study was 19.0 (\pm 3.7) years which is almost in agreement with the previous estimates of 20.4 years for Nigeria and 19.7 years for the North central zone. (Mishra, Praween, Soumya, Yuan and Shanxiao, 2009) It is within the estimated Sub-Saharan Africa range of 16.6 to 22.0 years. (Wusu, 2011)

This study revealed relatively high sexual activity. In this study, most of the respondents have had sex and mean number of lifetime sexual partners is 8.9 with almost 29% having had more than 10 partners. There is relatively high proportion of multiple sexual partnering (44.5%) and payment to have sex (24.1%). Paying for sex in this study was higher than finding from a previous study in Ibadan, Nigeria among male out of school youths aged 15 – 24 years (20.6%). Multiple sexual partnering was reported as 58.2% and 60.0% among commercial motorcyclists in Ibadan and Benin city Nigeria respectively. (NPC, 2009 and Owoaje and Uchendu, 2009)

Inadequacy or lack of sex and reproductive health education in schools and at home may be responsible for the high level of risky sexual behaviours among commercial motorcyclist in our study population. In addition, staying away from home coupled with availability of daily disposable income among commercial motorcyclist puts them at risk of risky behaviours. There is need for parents to commence sex education early for their children. In addition, the sexual and reproduction health education which has been introduced into the Nigerian educational curricular should be taken more seriously. Targeted health education campaigns including increasing access to condoms should be intensified for commercial motorcyclists.

Our study has demonstrated a feeling of relative low vulnerability and high risky sexual practices among commercial motorcyclists in Makurdi, Benue state in the midst of high level of knowledge on HIV transmission. The study revealed that almost 30% of the respondents considered themselves to be at moderate or high risk of getting infected with HIV but higher proportion of the respondents engage in risky sexual behaviours. For instance, about 44% had multiple sex partners in the previous one year, 77.4% had two or more lifetime sex partners and about 62.4% reported none or inconsistent condom use during sex with non-regular partner. Previous studies have shown varying findings with regard to association between personal risk perception of contracting HIV and risky behaviours. (Adedimeji, Omololu and Odutolu O, 2007; Maharj, 2006, Shaobo, 2007; Adetunji and Meekers, 2011 and Macintyre, Rutenberg, Brown and Karim, 2004) A relatively low personal perception of risk of contracting HIV and high level of risky sexual behaviours especially among young persons could be attributed to HIV stigmatization, as admitting to be at risk of HIV means accepting to be in a group that is stigmatized and thus a tendency to underestimate their own risk. It is also worthy of note that there was agreement between non use of condom with personal risk perception. Perceived threat can serve as a strong motivation for behavioral change and so the relative low perception as shown in this study should be taken into consideration by HIV planners and implementers in the state.

A major limitation of this study is that the instrument used was interviewer administered and so some sensitive questions might not have been responded to with honesty that was desired. There is a tendency to under report risky behaviours. An exploratory component would have helped us to understand more about the context and bring up issues that were not considered. Application of focus group and key informant interviews should be considered in future studies on this subject matter among the commercial motorcyclists.

5. Conclusion

There is low personal risk perception among commercial motorcyclists in Makurdi, Benue state despite high proportion of risky sexual behaviours among the respondents. HIV prevention interventions need to be more tailored and with the objective of building assertive skills in addition to imparting knowledge. Our study found a feeling of relative low vulnerability despite high proportion of risky sexual behaviours among commercial motorcyclists in Makurdi, Benue state. Health education / campaign should be organized for them through the EXCO of their association. Sexual and reproductive health education in schools should be taken more seriously. HIV prevention interventions for commercial

motorcyclists need to be more tailored and use one on one approach as much as possible with the objective of building assertive skills in addition to imparting knowledge.

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