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YETUNDE A. AKEN'OVA

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A. O. OGUNNIYI
O. D. OLALEYE

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Sociodemographic characteristics and health risk behaviours among students of a tertiary institution in South Western Nigeria

JO Bamidele, EO Asekun-Olarinmoye, OO Odu,
OA Amusan and BE Egbewale

Department of Community Medicine, Ladoke Akintola University of Technology (LAUTECH), College of Health Sciences, Osogbo, Nigeria.

Summary

The identification of early risk factors among undergraduate students that impact on health, both mental and physical is a primary focus of this survey. This is more so since people suffering from an illness may not be currently engaging in any health risk behaviours but might have engaged in such behaviours before they developed the illness condition. Therefore the identification of health risk behaviours among this group of people would permit a better understanding of localized patterns of health risk behaviours as well as help to target intervention activities towards this particular group of people. The study is based upon data obtained from a cross-sectional survey of students in a tertiary institution in South Western Nigeria. Participants voluntarily and anonymously completed a baseline semi-structured questionnaire which elicited information on demographic information, sexual behaviours and substance use among others. Of the 368 respondents, majority 225 (60.9%) are in the age group of 20-24 years. A total of 152 (41.3%) are either currently or have previously indulged in heavy drinking of alcohol and a statistically significant association ($p < 0.05$) was found between the use of alcohol and having multiple sexual partners and use of commercial sex workers. Ninety-four (25.5%) and 52 (14.1%) are currently smoking or have smoked cigarette and marijuana before respectively; while 56 (15.2%) are currently using or have before used narcotic drugs. The relationship between hard drug use and non use of condom was statistically significant ($p < 0.05$). Ninety-two (25.0%) have more than one sexual partners at the same given period; the male respondents indulged more in having multiple partners than the female and the result was statistically significant ($p < 0.05$). As many as 155

(47.8%) of the 324 (88.0% of the respondents) sexually active respondents had never used condom during sexual intercourse. Also 88 (27.1%) of this group of the respondents have had sexual relationship with commercial sex workers (CSW) at one time or the other. Condom use was low among the sexually active respondents. Only 29.3% of the respondents always use condom when having any sexual relationship. This study has shown that students in this survey indulge in health risk behaviours such as "unsafe sexual practices", alcohol, cigarette smoking and other substance use. The males are more involved in having multiplicity of sexual partners than their female counterpart. The study also revealed a significant association between the use of alcohol and in having multiple sexual partners. Comprehensive health education and intervention programs are needed to influence positive behavioural change among this group of students and this will require working in partnership with schools authorities and other local community groups.

Keywords: *Sociodemographic characteristic; health; risky behaviours; undergraduate students.*

Résumé

Cette étude avait pour but d'identifier les comportements à risque ayant un impact sur la santé physique et mentale des étudiants qui permettront une bonne compréhension des fréquences des risques de santé aussi bien que assister à cibler les activités d'interventions dans ce groupe d'âge. Les données étaient obtenues d'une proportion des étudiants des universités au Sud-Ouest du Nigeria. Les participants complétaient volontairement un questionnaire semi structuré contenant les informations démographiques, comportements sexuels et les substances utilisés parmi tant d'autres. Sur 368 participants, 225 (60.9%) étaient dans l'âge de 20-24 ans. Au total 152 (41.3%) étaient ou avaient des grand buveurs des boissons alcooliques ou bières et une association statistiquement significative était trouvée entre la consommation alcoolique et avoir multiple partenaires

sexuelle et usage des prostitués. Quarante neuf (5.5%) et 52(14.1%) étaient des fumeurs de cigarettes et marijuana respectivement alors que 56(15.2%) utilisaient ou avaient utilisés les médicaments narcotiques. La relation entre l'usage des médicaments et le non usage des condoms étaient statistiquement significative ($P < 0.05$). Cinquante deux (25.0%) avaient plus d'un partenaire sexuel à la même période, plus statistiquement significative chez les males que les femelles. 155(47.8%) des 324 étaient sexuellement actifs et n'ont jamais utilisés le condom durant les rapports sexuel avec les prostitués. L'emploi des condoms était faible parmi les participants sexuellement actifs. Seulement 29.3% des participants utilisaient les condoms durant les relations sexuelles. Cette étude a montré que les étudiants s'exposent aux facteurs à risque tels que les rapports sexuel sans protection, l'alcoolisme, la cigarette et d'autres substances. Ceci relevait aussi une association significative entre la consommation alcoolique et l'usage des multiples partenaires sexuelles. Une éducation compréhensive de santé et des programmes d'interventions sont nécessaires pour promouvoir des changements positifs chez les étudiants dans un partenariat entre les autorités et les communautés locales.

Introduction

Health has been defined by the World Health Organization as a state of complete physical, mental and social well being and not merely an absence of disease or infirmity [1]. However, it has been noted that unmindful of personal safety, students and young adults involve themselves in various forms of health risk behaviours among which are violence, sad feelings, tobacco use, alcohol abuse and drug use and 'unsafe sexual activity' [2]. All these are risk behaviours that are detrimental to health. Health risk behaviours increase the chance an individual has for developing an illness or injury which are the primary causes of mortality, disease, injury, other health and social problems among the adolescent and youths. It is known that some problems of old age are as a result of life time abuse of alcohol and cigarette [3]. Early sexual exposure, low use of safe-sex methods and multiple sexual partners have been documented to increase the rise of HIV/AIDS. Students have been found to be at higher risk for most categories of health-risk behaviours such as unintentional and intentional injuries, smoking, alcohol abuse, glue sniffing, inadequate physical activity, insufficient consumption of fresh fruits and vegetables and early sexual activity with multiple partners. Findings suggest

that the school environment is an influential factor on the lifestyle behaviour of students [4,5]. Among students, several social and psychological factors were predictive of health risk behaviours. These included frequency and duration of heroin use, polydrug use, alcohol abuse, gender, ethnicity, having a drug-using partner, anxiety and depression [6].

Health risk behaviours cover a broad range of topics, including ineffective coping life styles, obesity, eating disorders, sexual risk taking, and failure to access health services. The identification of early risk factors among undergraduate students that impact on health both mental and physical is a primary focus of this survey. This is more so since people suffering from an illness may not be currently engaged in any health risk behaviours but might have engaged in health risk behaviours before they developed the illness condition. Therefore the identification of health risk behaviours among this group of people would permit a better understanding of localized patterns of health risk behaviours as well as help to target intervention activities in this particular group of people.

Methodology

The study is a descriptive cross-sectional survey of students in a tertiary institution in Ede, South Western Nigeria. The institution which is made up of 4 schools/faculties and 14 departments at the time of conducting the survey had a student population of about 12,000. Before the commencement of the survey, informed consent was secure from the institutions administrative authorities and from the students that were recruited into the study. The calculated sample size [7], was 384, but a total of 400 questionnaires were distributed to respondents in order to make allowance for defaults, uncompleted or poorly filled questionnaires.

Respondents were selected using the stratified sampling method. Stratification was done along the levels of study i.e. Ordinary National Diploma 1 and 2 and Higher National Diploma 1 and 2. Based on the 400 questionnaires and study population, proportionate sampling was used to determine the sample size (number of needed respondents) from each department. Simple random sampling method was finally used to select the participants in each level of study in each department. Participants voluntarily and anonymously completed a baseline semi-structured questionnaire which had been earlier pre-tested among medical students of Ladoké Akintola University of Technology (LAUTECH), located in Osogbo. The questionnaire

elicited information on social demographic biodata, sexual behaviour, and substance use and abuse (alcohol, cigarette smoking, marijuana and heroine use among others). Selected respondents self administered the questionnaires at a convenient time in-between lecture periods in the presence of trained Resident Doctors in the Department of Community Medicine of the LAUTECH Teaching Hospital, Osogbo who were recruited as research assistants.

The filled questionnaires were manually checked for completeness and edited, then entered and analyzed on a micro-computer using the SPSS version 10.0 software packages. Data were presented using frequency distribution tables and analysis was made between categorical variables to determine association using chi-square test statistics. P-value was also used to determine significance level at 5%.

Results

Of the 400 questionnaires that were distributed, 368 respondents (92.0%) answered the questionnaires adequately for analysis.

Table 1: Socio-demographic characteristics of the respondents.

<i>Age groups of respondents</i> (in years)	F	%
<20	68	18.2
20-24	225	60.9
25-29	57	15.2
30+	21	5.7
Total	368	100.0
<i>Sex of respondents</i>		
Female	145	39.4
Male	223	60.6
Total	368	100.0
<i>Religion of respondents</i>		
Christianity	230	62.5
Islam	128	34.2
Others	10	2.7
Total	368	100.0
<i>Ethnic group of respondents</i>		
Yoruba	287	78.0
Ibo	32	8.7
Hausa	13	3.5
Others	36	9.8
Total	368	100.0
<i>Marital status of respondents</i>		
Single	318	86.4
Married	50	13.6
Total	368	100.0

As shown in Table 1, majority 225 (60.9%) of them are in the age group of 20-24 years. There were 145 (39.4%) female and 223 (60.6%) male respondents. Of the respondents, 318 (86.4%) were single, while 50 (13.6%) were married. Majority 287 (78.0%) of the respondents were of Yoruba ethnic group, while other major ethnic groups were Ibo and Hausas. Two hundred and thirty (62.5%) of the respondents were Christians, while 128 (34.8%) were of the Islamic religion.

The different types of substances being used or abused by the respondents are shown in Table 2. A total of 152 (41.3%) are either currently indulging or have previously indulged in drinking of alcohol and of this number, 81 (53.3%) had one time or the other abuse it by drinking excessively and getting drunk. Ninety-four (25.5%) respondents are currently smoking or have smoked cigarette and 39 (41.5%) have abused it before. As many as 52 (14.1%) are currently or before have smoked marijuana, and out of this group, 35 (67.3%) admitted they have many times had hangover from excessive marijuana smoking. Also 56 (15.2%) are currently using or have before used narcotic drugs and of this number, 48 (85.7%) admitted having had hangover from narcotic drug use on many occasions. However, as shown in table 2, the number of respondents currently using these substances is less than they were previously.

Of the respondents under survey, 250 (67.9%) have had sexual intercourse with two or more people before; 92 (25.0%) currently have more than one sexual partners (Table 3). Of the 324 (88%) sexually active respondents, 155 (47.8%) never used condom during marital or extra-marital sexual activity; while only 95 (29.3%) have always use condom during any sexual relationship. Also as many as 88 (27.1%) of this group of the respondents have had sexual relationship with commercial sex workers (CSW) at one time or the other. Of this number, 24 (27.3%) occasionally or never used condom when having sex with the CSW.

As shown in Table 4, further analysis of the results shows a statistically significant difference ($p < 0.05$) between gender (male and female) having multiple sexual partners, with the male indulging more in this habit than the female. There are also significant associations ($p < 0.05$) between use of alcohol and having multiple sexual partners and in having sexual intercourse with CSW. Infact, the risk of using the services of CSW is more than 2 for those who had previously used alcohol. OR = 2.31;

Table 2: Distribution of substance use or abuse by the respondents.

Variables	Used before	Currently using	Never used	Ever used	Excessive use/ use with resultant hangover
	F (%)	F (%)	F (%)	F (%)	F (%)
* Alcohol	90 (24.5)	62 (16.8)	216 (58.7)	152 (41.3)	81 (53.3)
* Cigarette Smoking	58 (15.7)	36 (9.8)	274 (74.5)	94 (25.5)	39 (41.5)
* Marijuana smoking	31 (8.4)	21 (5.7)	316 (85.9)	52 (14.1)	35 (67.3)
* Narcotic Drug use	31 (8.4)	25 (6.8)	312 (84.8)	56 (15.2)	48 (85.7)
* Others	14 (3.8)	15 (4.1)	339 (92.1)	29 (7.9)	15 (51.7)

Table 3: Distribution of sexual behaviours risky to health among respondents.

Variables	Yes		No	
	F	%	F	%
• How many sexual partners do you have presently?				
None	148	40.2		
1	128	34.8		
2 or more	92	25.0		
Total	368	100.0		
• How many people have you ever had sex with before?				
None	44	12.0		
1	74	20.1		
2 or more	250	67.9		
Total	368	100.0		
• Have you ever used condom	169	45.9	199	54.1
• How often do you use condom when having any sexual relationship?				
-Never use	155	47.8		
-Sometimes use	74	22.9		
-Always use	95	29.3		
Total	324	100.0		
• Have you ever made use of the services of a commercial sex worker (CSW)?	88	27.2	236	72.8
• Do you use condom if your partner is a CSW?				
-Never	11	12.5		
-Occasionally	12	14.8		
-Always	64	72.7		
Total	88	100.0		

95% CI (1.22, 4.35). The association between non use of condom and hard drug use is also statistically significant ($p < 0.05$). It can be seen that despite the fact that a substantial number of respondents engaged in different kinds of sexual risk behaviours, there is no statistically significant association between respondents' age and marital status and in having multiple sexual partners; having sex with commercial sex workers and not regularly using condom.

Discussion

Key risk factors of chronic diseases both in middle age and in later life include tobacco, abuse of alcohol, illicit drug use and unsafe sexual practices. This survey tried to investigate these social determinants of behaviours that impact on individual wellbeing and on the community at large. Tobacco smoking contributes to more deaths and drug-related hospitalizations than excessive alcohol and drug use combined. It is a major risk factor for coronary heart disease, stroke, peripheral vascular disease, cancer, and a variety of other diseases and conditions [8]. Of all health risk factors, smoking is responsible for the greatest disease burden in Australia [9]. Globally, the WHO estimates that tobacco causes 8.8% of deaths and 4.1% of the total burden of disease [10]. Estimates from the 2001 National Drug Strategy Household Survey indicate that 3.1 million Australians (19.5% of people aged 14 years and over) smoked tobacco daily. In this present study among undergraduate students 94 (25.5%) are

Table 4: Some selected differentials to determine association between sociodemographic characteristics and sexual/health risk behaviours.

i. Association between gender and having multiple sexual partners.						
Sex	1 boy/girl friend		2+boy/girl friends		P-value (p<0.05)	
Female	92 (78.6)		25 (21.4)		P<0.05	
Male	140 (67.6)		67 (32.4)		chi sq. 4.73 (2)	
ii. Association between age: condom use and having multiple sexual partners.						
Age	Condom use		p-value (P<0.05)	Multiple sexual partners		p-value (p<0.05)
	Yes	No		Yes	No	
24 yrs and below	167 (55.1)	136 (44.9)	0.130	75 (40.8)	109 (59.2)	0.494
25 yrs and above	42 (64.6)	23 (35.4)	2.290 (NS)	16 (47.1)	18 (52.9)	0.408 (NS)
iii. Association between marital status: condom use and having multiple sexual partners.						
Marital status	Condom use		p-value (p<0.05)	Multiple sexual partners		p-value (p<0.05)
	Yes	No		Yes	No	
Single	180 (93.8)	138 (43.4)	0.853	83 (26.2)	234 (73.8)	0.316
Married	29 (58.6)	21 (42.0)	0.034 (NS)	10 (19.6)	41 (80.4)	1.006 (NS)
iv. Association between non use of condom: alcohol use and hard drug use.						
Non use of condom	Alcohol use		p-value (p<0.05)	Hard drug use		p-value (p<0.05)
	Yes	No		Yes	No	
Yes	45 (93.8)	3 (6.3)	P=0.19	2 (50.0)	2 (50.0)	P=0.02
No	252 (87.2)	37 (12.8)	(NS)	38 (11.7)	286 (88.30)	(S)
v. Association between having multiple sexual partners: alcohol use and hard drug use.						
Having multiple sexual partners	Alcohol use		p-value (p<0.05)	Hard drug use		p-value (p<0.05)
	Yes	No		Yes	No	
Yes	35 (46.1)	41 (53.9)	P=0.000	2 (33.3)	4 (66.7)	P=0.658
No.	52 (18.8)	224 (81.2)	(S)	85 (25.4)	250 (74.6)	(NS)
vi. Association between use of Commercial Sex Workers: alcohol use and hard drug use.						
Use of commercial sex workers (CSW)	Alcohol use		p-value (P<0.05)	Hard drug use		p-value (P<0.05)
	Yes	No		Yes	No	
Yes	19 (27.9)	49 (72.1)	P=0.009 (S)	2 (3.7)	52 (96.3)	P=0.17
No.	37 (14.4)	220 (85.6)	Or = 2.3195?% CI (1.22, 4.35)	3 (1.2)	257 (98.8)	(NS)

either currently smoking cigarette or have done so before. Worst still more than a third 39 (41.5%) of this group of smokers had smoked excessively before and experienced hangover on many occasions. Tobacco smoking in whatever amount is injurious to health being the only consumer product that instead of healing its patient kills him. Excessive alcohol consumption is a major risk factor for morbidity and mortality. The harmful burden of disease as a result of excessive alcohol consumption is highest in the 15-24-year age group, mainly due to road trauma and other injury [11]. An earlier study in Lagos reported that alcohol consumption increases the risk of both liver cirrhosis and hepatocellular carcinoma and concluded that alcohol is an independent risk factor for chronic liver disease and appears to act in synergy with viral hepatitis B infection to potentiate the risk of chronic liver disease [12].

Finding in this survey revealed that of the 152 (41.3%) respondents that ever used alcohol, 81 (53.3%) consumed it excessively and confessed to having been drunk many times before. It is also noteworthy that majority of the respondents were in the 20-24-year age group. This study also showed a statistically significant association ($P < 0.5$) between the use of alcohol and use of CSW and having multiple sexual partners. Illicit drug use is a major risk factor for ill health and can also be a direct cause of death. Ill health associated with illicit drug use includes HIV/AIDS, hepatitis C virus (HCV), low birth weight, malnutrition, infective endocarditis (inflammation of the lining of the heart), poisoning, suicide, self-inflicted injury and death by drug overdose. Many of these conditions are the result of risky behaviours, for example sharing needles. Globally, the WHO estimates that 0.4% of deaths (0.2 million) and 0.8% of the total burden of disease are attributable to illicit drug use [13]. As seen in this study, 52 (14.1%) and 56 (15.2%) respondents indulge in marijuana or narcotic drug use respectively either currently or ever before. Of those who ever used marijuana and narcotic drugs, 35 (67.3%) and 48 (85.7%) respectively used them excessively with resultant hangovers many times before. The result of the survey also showed a significant association ($P < 0.5$) between the use of hard drug and non use of condom during any sexual intercourse.

Sexual activity can carry health risk such as sexually transmitted infections (STIs) and cancer of the cervix. It can also lead to unplanned pregnancy. The risks are mainly due to 'unsafe sex', where precautions are not taken against transmitting infections or against unintended pregnancy. Unsafe sex can lead to infections such as chlamydia, gonorrhoea, genital herpes, genital warts, syphilis, hepatitis B and HIV/AIDS. The use of condoms is very important in preventing the spread of STIs, HIV in particular. Only 44 (12.0%) of the students under survey never had sex before; while 250 (67.9%) have had sexual intercourse with two or more people before. Among the respondents, 92 (25.0%) currently have two or more sexual partners. In one study, 66.0% of the males and 31% of females ages 9-19 years reported having sexual relations with two or more partners [14]. In another study to examine associations between health behaviours and lifetime sexual partners among college students, it was found out that having multiple lifetime sexual partners ($> \text{ or } = 2$) was associated with several negative health behaviours [15]. Of the sexually active respondents in this present study, 155 (47.8%) never used condom during marital or extra-marital sexual intercourse; while only 95 (29.3%) always use condom during any sexual relationship. Worse still, of the 88 (23.9%) respondents that had made use of the services of a CSW, about 24 (27.3%) of them never or occasionally use condom if partner is a CSW. The inconsistent or non-use of latex condom during unsafe sexual intercourse as revealed in this present survey had earlier been reported in local studies by other authors [16]. The CSWs transmit infections to the general population through their clients. A study of prostitution in Nigeria revealed that many Nigerian men patronize prostitutes and each prostitute on the average was reported to entertain 1046 male client per year [17]. Another study had revealed that early sexual debut, multiple sexual partners, non use of health/family planning services including condoms are risky behaviours that predisposed the adolescents to development of reproductive health problems [18]. The students in this study could serve as interface between this high-risk groups (CSWs) and the community at large. High-risk behaviour such as casual and multiple sexual partners and patronage of CSWs have been reported in earlier studies

[19,20]. Among the population under study, the males were found to indulge more in having multiple sexual partners than the females and this is statistically significant ($P < 0.05$). However, there is no statistically significant association between age and marital status of respondents and their indulgence in unprotected sexual intercourse with CSW and having multiple sexual partners.

Conclusion

This study has shown that students in this survey indulge in health risk behaviours such as alcohol abuse, cigarette and marijuana smoking and other narcotic drug use. They are involved especially in unsafe sexual practices like having multiple sexual partners, use of CSW and low rate of condom use. The school environment might have been an influential factor on the lifestyle behaviour of these students. Comprehensive health education and intervention programs like counselling and cancer screening (pap-smear for early detection of cervical cancer) are needed for these students. Influencing the change of these behaviours will require working in partnership with school authorities and other local community groups. Further studies are needed to elucidate the role of the students' family background and negative biopsychosocial events that may have influenced this high level of risky health behaviours found among this group of students.

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