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Health related practices of students of the University of Ibadan

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Summary

University students are predisposed by environmental factors to adoption of habits that impact on their health. Smoking, alcohol abuse, a sedentary lifestyle and failure to use health services appropriately may all impair current or future health. These students represent a large population of young persons but have not been recognised as a specific concern among health care planners except in the area of reproductive health and sexuality. Seven hundred and fifty students of the University of Ibadan were randomly selected from the halls of residence by multi stage sampling. Verbal consent was obtained and trained student peers administered questionnaires to the subjects. Seven hundred and twenty-four students returned completed questionnaires, an overall response rate of 96.5%. The respondents consisted of 484 males and 240 females. Six hundred and two were undergraduate and 122 were graduate students. All the university's faculties were represented. Most (92.3%) of the respondents were single. The mean age of the group was 23.8 years (SD 4.6). Current and ever used smoking prevalence was 5.7% and 23.2% respectively. Smokers were predominantly males pursuing degrees in the Arts and Humanities. Current and ever use of alcohol were reported by 24.7% and 46.1% respectively of the students. Main associations with alcohol consumption were with male gender, age less than 30 years, single marital status and non-medical course of study. Only 12 students (1.8%) exercise daily. This study demonstrates the need for continued surveillance of health related habits of young persons, not only for the benefit of the individual students but also for the general population for whom these educated persons represent lifestyle models.

Keywords: *Health related practices, lifestyles, university students, smoking, alcohol consumption, recreational activity.*

Résumé

Les étudiants à l'université d'Ibadan sont prédisposés par des facteurs environnementaux par l'adoption des habitudes qui affectent leur santé. La cigarette, l'alcoolisme, vie sédentaire et l'absence d'utiliser les services de santé effectivement peuvent affecter leur santé quotidienne ou au future. Ces étudiants représentent la grande population

des jeunes personnes mais ne sont pas reconnus comme priorité spécifique parmi les promoteurs de centre de santé à l'exception des domaines de sexualité et santé reproductive. Sept cent cinquante étudiants de l'université d'Ibadan étaient sélectionnés au hasard des halls de résidence par un choix multiple. Après un consentement verbal, des questionnaires étaient administrés à tous ces sujets. Sept cent vingt quatre étudiants (96.5%) complétaient effectivement et consistaient de 484 mâles et 240 femelles. Six cent deux étudiants sous licences, plus de 92.3% étaient des célibataires. La moyenne d'âge était de 23.8 ans (SD :4.6). la prévalence des fumeurs de 5.7% au passé s'élevait à 23.2%. Les fumeurs étaient plus des mâles poursuivant une licence en art ou en humanité. Le taux d'alcoolisme passait de 24.7% à 46.1%. Les associations principales avec une consommation d'alcool étaient avec le genre mâle, l'âge de moins de 30 ans, célibataire et filière non-médicale. Douze étudiants seulement s'exerçaient journalièrement. Cette étude démontrait le besoin d'une surveillance continue de la santé des jeunes pour le bénéfice de la population générale pour laquelle ces éduqués représentent leur modèle de vie.

Introduction

Students in universities are predominantly young adults. Hormonal, social, biological and psychological factors combine to make them a target group for health service intervention. Moreover, they reflect the state of health of other members of the age group, which, according to the 1991 National Census, constitutes 23% of the total population in Nigeria. Students, on account of their age generally enjoy a good level of physical health. However, some tend to adopt lifestyles and habits that pose a threat to their future health. Smoking, alcohol consumption, a sedentary lifestyle, failure to use health facilities and non-participation in health promotive activities are some of these habits which have been shown to lead to negative health outcomes. Institutions have a responsibility to ensure that students are fit and healthy as they are potential policy makers and professionals and their attitudes and beliefs are likely to have a disproportionate effect on population health [1].

The health of students has been the subject of extensive research. Most of it has however been focussed on sexuality and reproductive health concerns to the neglect of other important health issues [1]. This trend is not

unique to Nigeria. The American College Health Association observed that college age populations were not specially recognized as a concern among planners and that little consistent data on their health status existed [2].

Methods

This study was undertaken to determine the prevalence and correlates of lifestyles and practices such as smoking, alcohol use, recreational physical activity, and utilization of health facilities among a student population with access to a free health service. The University of Ibadan is a first generation, multi disciplinary, co educational institution located in the heart of Nigeria's southwest region. With an estimated student population of 18, 690, it had a male: female ratio of 2:1 and undergraduate: postgraduate ratios of 5:1. With about 4000 bed spaces available in the 9 undergraduate and 2 postgraduate halls of residence, most students stayed off campus or "squatted" with friends.

A cross sectional design was adopted. The subjects of this study were all students registered in the University for the 1996/97 academic session. All the university's eleven halls of residence were surveyed. A multi-stage sampling technique was adopted in each hall and rooms were selected using a sampling fraction of 1 in 4. Trained research assistants, second year medical students, visited each of the selected rooms. In each room, one student was selected by balloting and the questionnaire was then administered to this selected student. Students' questions on health problems were answered at the same time by the interviewers. The questionnaires were manually screened for completeness. All questionnaires less than 75% completed were rejected and excluded from further analysis. The data was entered into a computer and managed using the EpiInfo version 6.04 database package.

Results

Altogether, 750 students were surveyed in this study with 724 returning appropriately completed questionnaires. The response rate was 96.5%. The general characteristics of the students are summarized in Table 1. Of the 724 students who returned completed questionnaires, 484 (66.9%) were males and 240 females with 602 undergraduate and 122 postgraduate students. These sample proportions, 2:1 for sex and 5:1 for level of study are approximately the same as in the general student population of the University.

Six hundred and eighty eight respondents (95.03%) recorded their age. The mean age of the sample was 23.8 years (S.D 4.6 years) with a range of 17 to 45. The modal age was 20 years and 491 (72.5%) of the respondents were 25 years or younger. Overall, females were younger (mean age = 22.8, SD = 4.1) than males (mean age = 24.3, S.D = 4.7, $P = 0.000015$). However, this difference was among undergraduates only. Postgraduate students were significantly older than undergraduates $P < 0.0000001$. Seven hundred and twenty three (723) respondents re-

corded their marital status of which 667(92.3%) had never been married, 8(1.1%) were divorced or separated and 48 (6.6%) were married. Six hundred and twelve (84.4%) respondents were Christians, 100 (13.8%) were Muslims and 3(0.4%) were Traditionalists. Seven (1%) declared no religious affiliation.

Table 1: Socio demographic characteristics of students of the University of Ibadan.

Students' characteristics	Males n (%)	Females n (%)
<i>Age (yrs)</i>		
16-20	110 (24%)	66 (28.8%)
21-25	200 (43.6%)	123 (53.7%)
26-30	113 (24.6%)	30 (13.1%)
31-35	22 (4.8%)	6 (2.6%)
36 and above	14 (3.1%)	4 (1.8%)
Total	459 (100%)	229 (100%)
<i>Level of study</i>		
Postgraduate	80 (16.5%)	42 (17.7%)
Undergraduate	404 (83.5%)	196 (82.3%)
<i>Marital status</i>		
Never married		
Separated/divorced		
Currently married		
<i>No. of occupants per room</i>		
1-5 persons	332 (68.6%)	91 (38.2%)
6-10 persons	150 (31%)	111 (46.6%)
11 + persons	2 (0.4%)	36 (15.1%)
Total	484 (100%)	238 (100%)
Mean	4.4	6.7
<i>Smoking prevalence</i>		
Former smoker	105 (21.7%)	23 (9.6%)
Currently smoke	32 (6.6%)	9 (3.8%)
Never smoked	347 (71.7%)	208 (86.7%)
<i>Alcohol intake</i>		
Never drank	218 (45.0%)	173 (72.1%)
Ever drank	266 (55%)	67 (27.9%)
Current drinker	140 (28.9%)	39 (16.3%)
Binge drinker	141 (29.1%)	21 (8.8%)

Respondents were drawn from all the faculties in the university. These were grouped into three related disciplines as follows: Medical Sciences including Medicine, Dentistry, Pharmacy, Nursing, Physiotherapy, Biochemistry, Physiology and Human Nutrition (28.1%); Science and Technology including Technology, Engineering, Physical Sciences, Agriculture and Veterinary Medicine (30.7%) and Arts and Humanities including Social Sciences, Law and Education. (41.2%).

Smoking

Of 724 respondents, 41(5.7%) reported current tobacco smoking and 128 (17.5%) were former smokers giving an ever-used prevalence of 23.2%. The vast majority, 555 (76.8%) had never smoked. Smoking prevalence was 6.6% among males and 3.8% among females, $P = 0.004$; 5.5% among undergraduates and 7% among postgraduate stu-

Table 2: Correlates of smoking among students of the University of Ibadan.

Variable	Groups	Never	Former	Current	Test statistic	D.F	P	Comments
Gender	Male	347	105	32	$X^2 = 20.3$	2	0.00004	Significant
	Female	208	23	9				
Course group	Arts	223	55	20	$X^2 = 0.33$	4	0.33	Not significant
	Science	172	35	15				
	Medical	160	38	6				
Age	Mean (SD)	23.73 (4.72)	23.83 (4.11)	23.74 (4.72)	$H = 0.83$	2	0.66	Not significant
Study level	UG	463	106	33	$X^2 = 0.25$	2	0.88	Not significant
	PG	92	22	8				
Material needs	None	90	29	3	$X^2 = 12.08$	4	0.017	Significant
	Some	320	58	21				
	alot	137	40	16				
Clinic attendance	Yes	191	50	18	$X^2 = 2.48$	2	0.3	Not significant
	No	361	78	22				
Alcohol intake	Never	380	9	2	$X^2 = 258.8$	4	10-8	Significant
	Former	92	60	2				
	Current	83	59	37				
Room Occupancy	1 -5 >=6	303 250	216 35	34 4	$X^2 = 14.62$	2	0.00067	Significant

Table 3: Correlates of alcohol consumption among students of the University of Ibadan.

	Sex		Marital status		Course groups			Age (years)			
	Male	Female	Currently Single	Currently Married	Medical Sciences	Sciences and Tech.	Arts and Humanities	16-20	21-25	26-30	>30
Current drinker	140	39	173	6	40	57	82	43	89	37	2
Ex-drinker	126	28	127	27	45	37	72	22	55	43	24
Never drank	218	173	375	15	119	128	144	111	179	63	17
Total	484	240	675	48	204	222	298	176	323	143	46
Test Statistic	$X^2 = 47.72$		$X^2 = 37.51$		$X^2 = 9.66$			$X^2 = 47.9$			
Degrees of freedom	2		2		4			6			
P value	<0.00000001		0.00000001		0.047			<0.00000001			

dents $P=0.25$. Smoking was also significantly associated with alcohol intake, Table 2. There was no significant relationship with level of study or marital status. There was also no age difference in smoking status. The mean ages (SD) were 23.73 (4.73), 23.83 (4.11) and 23.74 (4.2) respectively among students who had never smoked, who had smoked in the past and who currently smoke, $P = 0.66$. Smoking prevalence was highest among students in the Arts and Humanities with a prevalence of 9.01% compared to 5.03% in Science and Technology and 2.9% in students in Medical sciences but differences were not significant, $X^2 = 4.61$, $d.f = 4$, $P = 0.33$. Smoking rates increased with increasing material needs $P=0.017$.

Alcohol consumption

There were 179(24.7%) current and 154 (21.4%) former alcohol drinkers in the sample. The prevalence of ever drinking

was therefore 46.1%. No attempt was made at quantification. The main factors associated with drinking were age less than 30 years, male sex, single marital status and non-medical course of study as shown in Table 3. A higher proportion of Christians, 48.4% (296) have ever taken alcohol compared to Muslims, 29% (29). Binge drinking, the consumption of three or more (bottles of) beer(s) at a single sitting, was reported by 162 students (22.4% of all students, or 49.7% of ever drinkers). Male students, those staying in rooms with fewer than 6 occupants, or aged 21 and above reported binge drinking more often as shown in Table 4. Level of study, course group and marital status were not significantly associated with binge drinking.

Physical exercise

Six hundred and eighty four students responded to this question giving a response rate of 94.5%. Of the 684, 207

Table 4: Binge drinking among students of the University of Ibadan

Binge drinking status	Sex		Current marital status		Number of students per room			Level of study		Age in years			
	M	F	Single	Married	1-5	6-10	11-15	PG	UG	16-20	21-25	26-30	31 and above
Yes	141	21	150	12	111	47	4	33	129	23	78	37	13
No	343	219	525	36	312	214	34	89	473	153	245	106	33
Total	484	240	675	48	423	261	38	122	602	176	323	143	46
Test Statistic	$X^2 = 37.21$		$\chi^2 = 0.07$		$X^2 = 9.56$			$X^2 = 1.54$		$X^2 = 11.37$			
Degrees of freedom	1		1		2			1		3			
P value	<0.0000001		0.79		0.0084			0.22		0.01			

Table 5: Clinic attendance by students of the University of Ibadan.

Variable	Groups	Yes	No	Total	Test Statistic	D.F	P	Comments
Gender	Male	169	312	418	$X^2 = 0.34$	1	0.51	NS
	Female	90	149	239				
Course Group	Art	119	176	295	$X^2 = 4.48$	2	0.11	NS
	Science	76	146	222				
	Medical	64	139	203				
Room size	10 or less	20	18	38	$X^2 = 486$	1	0.028	S
	11 or more							
Study level	Undergraduate	211	288	599	$X^2 = 0.86$	1	0.35	NS
	Postgraduate	48	73	121				
Alcohol intake	Never	135	254	389	$X^2 = 2.4$	2	0.3	NS
	Former	57	97	154				
	Current	67	110	177				
Smoking	Never	191	278	419	$X^2 = 2.38$	1	0.09	NS
	Former	50	164	261				
Level of exercise	Current	20	18	38	$X^2 = 24.56$	2	0.00005	S
	Adequate	47	62	109				
Number of days disabled	Not	198	373	571	$X^2 = 24.56$	2	0.00005	S
	Adequate	136	322	458				
	None	80	90	178	$X^2 = 24.56$	2	0.00005	S
	1 - 3	35	32	67				
	4 or more	35	32	67				

(28.6%) reported no day of exercise per week. Another 309 (42.7%) exercise on only one or two days weekly. Only 12 students (1.8%) exercised daily. The mean number of days of effective exercise for the respondents was 2 days. Students commonly perform the following forms of exercise; press-ups, walking and jogging. The median duration of physical exercise was 30 minutes (range 0 to 120 minutes).

Care seeking and other health related activities

In this study, 441 students (60.9%) reported a medical check-up in the preceding 5 years. A further 105 (14.6%)

had one more that 5 years before the survey while 175 (24.3%) had never had one. Only 186 respondents (25.7%) had received any vaccination since their admission to the university. Immunization with tetanus toxoid was reported by 119 (63.6%) of those immunized. Other vaccines received included yellow fever vaccine in 29 cases (15.5%) and cerebrospinal Meningitis vaccine in 27 (14.4%). Health talks were organized at a variety of fora especially during hall week activities, to disseminate health information. One hundred and sixty three students (22.5%) reported having attended one since admission. Among the students who

indicated they had attended a health talk, 110 (67.5%) indicated that the talks were on contraception, sexually transmitted diseases and AIDS prevention, 48 (29.4%) on general health including hygiene and environmental health and only 5 (3.1%) indicated that they attended talks that covered other issues including prevention of sickle cell gene transmission, hypertension and obesity.

In the index semester, 259 (36%) of the respondents attended the Health Center for various reasons. Of these, 90 (37.8%) were female and 169 (62.2%) male. Table 5 shows the distribution by socio-demographic and other variables. No significant association with sex, course group, level of study, smoking and alcohol intake was found.

Discussion

The overall response rate in this study (96.5%) is much better than that in previous university based studies [3,4]. Direct surveying of student rooms and the use of student peers as research assistants made it possible to attain this response. An additional strength of this study was the inclusion of postgraduate students in the sample. This enabled comparisons between these two different student groups.

Smoking prevalence in the study was 5.7% (6.6% among males and 3.8% among females). Postgraduate students smoked more than undergraduates but this difference was not statistically significant. These figures are relatively low compared to the national average of 8.9% (15.4% in males, 1.7% in females) reported in the survey of non-communicable diseases in 1992 [5]. Kaur [6] reported a higher prevalence of 19.3% in a 1973 study from the University of Nigeria, Nsukka. Smoking prevalence in this study is less than the 13.9% that Olowookere [7] reported from the Ondo State University, Ado Ekiti. The values recorded in this study are also lower than in other countries. Piko, Barabas and Markos⁸ reported that 20.9% of a Hungarian medical student population smoked.

Smoking is commoner among males than females. However, the prevalence among females is thought to be on the increase. The national survey reported a prevalence of 1.7% among women. In this study, it was 3.8% and this may represent the prevalence in this age group. When compared to others, students in medicine related courses smoked less even though these group of students experience more adverse effects of stress [8]. Higher prevalence of smoking and drinking among medical students has also been reported in the past [9]. However, they have a higher ever-used prevalence suggesting a greater rate of smoking cessation. The availability of information on the effects of smoking gathered during the course of routine learning may have resulted in behaviour change. Smoking was found to be associated significantly with alcohol consumption. This clustering of 'bad' habits is important as the occurrence of two or more causative factors may significantly increase the risk of developing ill health.

Alcohol consumption was reported more often with current – and ever-use prevalence rates of 24.7% and

46.1% respectively. Other Nigerian studies on drinking among Universities students have given comparable results [5,6,10]. Binge drinking, which has not been reported from any other location in Nigeria, was also common in this study with about half of all drinkers reporting at least one episode of bingeing. Binge drinking is a concept recently described in the United States. It is defined as the taking of three or more beers at a sitting [11]. In a large-scale study of 140 campuses in the U.S., this was found to be associated with negative health and social outcomes both for the binge drinkers themselves and for other students. There was generally a low level of physical activity with only 12 students (2.2%) exercising daily. The mean duration of physical exercise in the sample was 27 minutes, and average number of days, 2. These were both less than the 30 minutes and three to five days respectively advocated by the World Health Organization in its 2002 World Health Day message as well as by McAuley [12] Keays and Allison [13] and Cooper-Patrick [14]. The commonest form of exercise reported was walking, undertaken in the course of day-to-day activities like going for lectures. While this has often been reported to be beneficial to health, the students cannot be commended for it, as it is a necessity and not a deliberate effort on their part. It must be anticipated that when the need to walk is removed, the students may lapse into a sedentary existence with its potential sequelae. There is therefore a need to encourage other forms of exercise like jogging and team sports. The benefits of adequate exercise include direct effects on health, like prevention of coronary heart diseases, obesity, insulin resistant diabetes mellitus and cerebrovascular disease. There are also other hypothesized benefits on academic outcomes [13], self-esteem [16], sense of mastery and overall well-being [14]. This further stresses the need for concerted action to encourage a culture of physical activity so as to assure future health and to provide models of good health promotion to the larger society. It can be argued that regular medical check-ups are unnecessary at the young age that is characteristic of most students although postgraduate students (mean age 30 years, range 22-45 years) were also included in the study. Although a comprehensive medical examination is a compulsory requirement for registration in this university, over 24% of the students reported they had never had a medical check-up. It would appear that these 175 respondents somehow evaded the screening programme which is a major preventive health initiative in the Health Centre.

Immunization against common endemic diseases is a way of assuring the health of populations at risk. Health talks in turn provide avenues for the dissemination of health information. Yellow Fever and Cerebrospinal Meningitis are two conditions endemic in Nigeria, which often break out in deadly epidemics. Vaccination and environmental hygiene can effectively control them. The low rate of immunization in the sample is therefore disturbing as these students will be susceptible in the event of a yellow fever

epidemic. Most health talks focus on reproductive health concerns. This is without doubt justifiable as students are a special risk group for sexually transmitted infections (including HIV) and unplanned pregnancies. However related and equally important issues like physical health and fitness need to be emphasized to prepare students for a healthy adult life.

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