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Prevalence of Substance Abuse among Students in Medical Training Colleges in South Nyanza Region, Kenya

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Abstract

Substance abuse among the youth is a worldwide public health challenge. An estimated 10-15% of medical students risk substance abuse in their lifetime. Risk potential evaluation would inform appropriate intervention. This study sought to establish the prevalence of substance abuse among medical students. Methods: A descriptive cross-sectional study was carried out involving students in Medical Training Colleges in South Nyanza region, Kenya. A self-administered structured questionnaire was used to collect information on substance abuse. Results: 303 students were recruited for this study. The mean age of the respondents was 21.96 years (18-23, S.D 0.4) with majority being females. Nearly all respondents were Christians 295 (97.4%). More than half (n=159, 52.5%) of the respondents reported having ever used at least one substance. Those who had ever used and who sustained the use of the substances respectively was as follows: alcohol 52.5%, 27.4%; tobacco 12.2%, 2.6%; khat 17.5%, 3.6% and marijuana, 9.2%, 2.0%. Among the prescription drugs, diazepam was abused by 7 (2.3%) of the respondents while shisha (6.6 %) was the commonly abused among the emerging substances of abuse. Conclusion: The lifetime prevalence of any one of the substances abused by students in the medical training colleges was high. There is need for the management of these colleges to mainstream substance abuse preventive measures in their policies.

Introduction

Substance abuse is a major public health problem worldwide, cutting across all social strata and penetrating every part of the globe (Njeri, 2014). In this predicament, the youth are the most affected (Mokua, 2012), leading to indiscipline,

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academic under achievements and psychiatric disorders among students in colleges (Changalwa, 2012). Substance abuse by students in medical training colleges (MTCs) could equally impact negatively on their future professional conduct and efficiency, and hence compromise the safety of patients (Rai, 2008). This makes substance abuse among MTC students an important area of research due to the implications on public health.

Alcohol remains the commonest psychoactive substance used (Eze, 2015). Although alcohol use has been part of human societies throughout history, its prevalence has increased among the youth particularly college students (Mphele, 2013). Other substances commonly abused in Kenya include tobacco, bhang (marijuana), glue and miraa (khat) (NACADA 2010). Whereas alcohol and tobacco are legally and socially approved in the society, they serve as a 'gateway' to use of other substances as young people begin experimenting with them (Eze, 2015).

Data from different studies indicates that substance abuse is a public health concern especially among MTCs students, who constitute more than 80% of health care professionals in Kenya. According to Nwadigwe (2008) of Nigeria, substance abuse was prevalent among medical students while in South Africa, it was reported that 32% of medical students admitted to taking alcohol exceeding the recommended limits. 55.3% of them were identified as at-risk drinkers (Smit, 2009). In Kenya, it is estimated that 60% of students abuse drugs (Ondieki, 2012). However, information on prevalence of substance abuse among MTC students is still lacking. This study therefore sought to answer these research questions: What is the prevalence of the substances abused by MTC students in South Nyanza Region, Kenya? And, what substances are abused by MTC students in South Nyanza Region, Kenya?

Methodology

This was a descriptive cross-sectional study conducted in May 2015 at Homa-Bay, Kisii, Nyamira, Migori and Kendu-Bay Medical Training Colleges. Data was collected using a self-administered structured questionnaire that was pre-tested among students at Kisumu MTC and revised accordingly. Information on socio-demographic factors, specific substances abused and their prevalence was collected. The study participants consisted of students in the five medical training colleges in South Nyanza Region. Stratification of the respondents was done based on the college, programme being undertaken, year of study and gender. A proportional sample was determined based on the student population in each college. Thereafter, systematic sampling using the class attendance registers was used to select the respondents. The eligible respondents included all those students who were 18 years old and above and were in the said medical training colleges at the time of the study and consented to participate in the study. A sample of 303 medical students was recruited for the study.

The study was approved by Maseno University Ethical Research Committee. Data was analyzed using SPSS for Windows version 17 (SPSS, Chicago, IL, USA). Frequencies of all variables were run and descriptive statistics computed to characterize the study population. Descriptive statistics generated was used to obtain prevalence data on the substances abused.

Findings

Demographics

As is shown in Table 1, demographically, the 303 respondents had an average age of 21.96 years (18-23, SD=0.4), with majority being female 153(50.5%). Nearly all respondents were Christian 295 (97.4%), most were single 278 (91.8%),

most were enrolled for Diploma in Nursing Sciences 155 (51.2%), and most 117 (38.6%) were in their second year of the study.

Table 1: Characteristics of the Respondents

Characteristics	Frequency, n = 303	Percent (%)
Sex		
Male	150	49.5
Female	153	50.5
Age		
18-23 years	150	49.5
23-33 years	153	50.5
Religion		
Christian	295	97.4
Islam	5	1.7
Others	3	1.0
Marital status		
Single	278	91.8
Married	25	8.2
Course Undertaken by the Respondents		
Clinical medicine	104	34,3
Nursing sciences	155	51.2
Laboratory sciences	14	4.6
Physiotherapy	12	4.0
Community Nutrition	18	5.9
Year of study		
First	111	36.6
Second	117	38.6
Third	58	19.1
Fourth	17	5.6

Prevalence of Drug Use

The study sought to establish past and continuing use of substances of abuse. It is worth noting that 52.5 per cent of the respondents reported having ever used at least one substance of abuse. Table 2 below summarizes the prevalence of past and continuing use of substances of abuse, while Table 3 summarizes the prevalence of abuse of prescription drugs (consuming prescription drugs without medical prescription):

Table 2: Prevalence of Substances Abused by MTC Students in South Nyanza Region

Variable		lifetime use, n=303		Current users, n=303	
Alcohol	Yes	159	52.5	83	27.4
	No	144	47.5	220	72.6
Tobacco	Yes	37	12.2	8	2.6
	No	266	87.8	295	97.4
Khat	Yes	53	17.5	11	3.6
	No	250	82.5	292	96.4
Cannabis	Yes	28	9.2	6	2.0
	No	275	90.8	297	98.0
Heroin	Yes	4	1.3	4	1.3
	No	299	98.7	299	98.7
Prescription Drug	Yes	38	12.5		
	No	265	87.5		
Emerging Substances	Yes	34	11.2		
	No	269	88.8		

Table 3: Prevalence of Prescription Drugs and Emerging Substances of Abuse

Prescription Drugs being used without medical reason		Frequency, n= 303	Percentage
Response	Phenobarbitone	5	1.7
	Diazepam	7	2.3
	Morphine	6	2.0
	Others	24	6.6
	No abusing any	265	87.4
Emerging substances being abused		**Frequency, n= 303**	**Percentage**
Response	Shisha	20	6.6
	Kuber	12	4.0
	Shashaman	3	1.0
	Others	3	1.0
	Not abusing any	265	87.5

Discussion

Overall, the findings of this study concur with other studies that the most often abused substances are alcohol, tobacco, miraa, marijuana, heroin, prescription drugs, shisha and kuber. This compares to the findings by NACADA (2010) on Kenya and the United Nations Office of Drugs and Crimes (2010) on worlwide drug abuse. Ghuman S MeyerWeitz (Ghuman. S. Meyer-Weitz, 2012) reported similar findings in a study on South Africa.

The study found a lifetime prevalence rate of 52.5% of any one of the substances used / abused. This prevalence was lower than 69.8% that was reported among college students in Eldoret, Western Kenya but higher than the prevalence of 41% reported among high schools in Kenya (Atwoli, 2011). This may imply that substance abuse rates in the country increase with transition through the education system hence the need to focus on substance abuse interventions among the young learners in primary and secondary schools. A statistically significant difference in the lifetime substance abuse prevalence rates was reported between males and females, with males having a higher rate than females. This is consistent with findings in Nigeria (Odeyemi, 2014) and may reflect a more tolerant social attitude towards males as compared to females on substance abuse (Atwoli, 2011).

The study established that more than half (52.5%) of the Medical Students had ever taken alcohol. This was consistent with a study by Otieno (2009) in Kisumu, Western Kenya, which reported that 57.9% of secondary school students had consumed alcohol at least once in their lives. This was expected as alcohol is widely available to adults and its use is legal and accepted in many societies; including the region where the study was conducted. The study also reported that 27.4% of the respondents were still taking alcohol at the time of the study. The current use of alcohol was consistent with National Campaign against Drug Abuse (NACADA) report (2010) that showed the prevalence of alcohol in Nyanza was 26.8%.

Medical students in this study who had ever used tobacco were reported to be 12.2%. This was similar with the national average for tobacco consumption among adults, which was reported to be 14% (NACADA, 2012). The reported prevalence of tobacco use in this study was however lower than the reported findings among secondary school students in Kisumu, Western Kenya, which stood at 34.7% (Otieno, 2009). Comparatively, a higher prevalence of regular smoking at 13.6% was reported among medical students at a university college in Saudi Arabia (Elamin, 2013) and 10% among medical students at a university in Sudan (Elamin, 2013).

Khat chewing among the medical students in the study had a lifetime prevalence of 17.5% while 3.6% of them were still chewing the stimulant at the time of study. This prevalence was higher than the national average reported for the same age group (NACADA 2012). It was however lower than the prevalence reported among secondary school students in Kisumu, Western Kenya (Otieno, 2009). Khat chewing in Ethiopia among college students reportedly had a higher prevalence compared to the findings in this study (Wazema, 2015).

Cannabis had reportedly been used by 9.2% of the medical students. This prevalence was lower than the 18.3% reported among secondary school students in Kisumu, Western Kenya (Otieno, 2009). However, the lifetime prevalence reported in this study was higher than the average national prevalence of 5.4% reported by NACADA among adults (NACADA 2012). This could be attributed to the proximity of South Nyanza Region to the main transit routes of Cannabis since the region borders Tanzania. Most of the Cannabis consumed in Kenya is believed to originate from Tanzania.

Prescription drug abuse is an enormous problem in the modern society resulting in more injuries and deaths than all illegal drugs combined (Halldorsson, 2006). This study established that 12.5% of the medical students admitted ever using prescription drugs without medical reason. The abused prescription drugs were phenobarbitone, diazepam, morphine, emergency pills, misoprostol and antibiotics. The reported findings were higher than the average lifetime prevalence of prescription drug use without medical reason in the general adult population in Kenya (NACADA 2012). This could be explained by the fact that prescription drugs could fairly be accessible to medical training college students given their availability in the clinical areas they practice in. However, the findings were consistent with those of Halldorsson (2006) which reported that prescription drug abuse, specifically benzodiazepines and opiates, was higher among medical personnel than in the general population. These findings were also consistent with those of another study which established that benzodiazepines were the most frequently used sedative-hypnotics among medical students (Akvardar et al, 2004).

The medical students who had ever used emerging substances of abuse according to this study were 11.2%. The emerging substances of abuse used were shisha, kuber, shashaman, cocaine, heroin and barbarian beer. The reported prevalence for kuber was higher than that from another study by Simatwa (2014) which established a prevalence of 2.9% among secondary school students in Kisumu County. Kuber use could be higher because when one is using it, it is not easily noticeable. It does not emit any smoke or smell when it is being abused. Kuber is also cheap and comes in small sachets that are very easy to conceal in any part of the body.

Conclusion

The lifetime prevalence of any one of the substances abused by students in medical training colleges in South Nyanza Region was high and consistent with that of other college students in Kenya. We recommend that the managements of medical training colleges need to mainstream substance abuse prevention in their policies. This could be achieved by creating a more positive campus culture with student academic support, facilitating a wider range of social and recreational activities, institutionalizing alcohol and drug awareness and counseling services.

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