



A Qualitative Study on Alcohol and Drug Abuse among Undergraduate (University Students) in The Coastal Region of Kenya

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Summary

BACKGROUND

Substance use poses a significant threat to the health, social and economic fabric of families, communities and nations. In Kenya, alcohol and drug abuse has been identified as a hindrance to education, development and by extension, to national development. Alcohol and drug abuse has been associated with crime and indiscipline e.g. poor class attendance, poor performance, school dropout and destructive strikes that lead to damage the institution property or even death. Alcohol and drug abusers are also likely to lower their morals and engage in risky sexual activities that can lead to sexually transmitted diseases including HIV infection and AIDS.

OBJECTIVES

The aim of this study therefore was to explore on the perceptions and the magnitude of substance abuse among undergraduate (University students) in the two public Universities in the coastal region of Kenya. Also find amicable solutions to curb the menace that can destroy the future of a generation aged between 18–29 years at the peak of their life.

METHODOLOGY

This was a qualitative study involving undergraduate (University students), dean of students and counsellors from Pwani University and Technical University of Mombasa. Focus Group Discussions (FGDs) and Key informant interviews were used to collect data. The number of KIIs was guided by data saturation. Thematic analysis was done by identifying, coding, and categorizing patterns or themes found in the data.

RESULTS

The problem of alcohol and substance abuse among undergraduate students was a reality. The commonly abused substances were alcohol, *miraa (khat)*, *marijuana* (cannabis) and cigarettes. Some of the factors predisposing students to abuse drugs were; easy accessibility to drugs, peer pressure, availability of funds, excess freedom, male gender, stress, not being active in religious activities, poor parenting and the African culture that uphold substances such as alcohol as an acceptable social drink. Participants noted that alcohol and drug abuse had led to various negative effects. The major ones affecting the students being poor performance, risky sexual behaviour, and mental disturbances. Participants suggested that Universities ought to intensify awareness campaigns to sensitize students against substance use.



CONCLUSION

The commonly abused substances were alcohol, *marijuana*, *miraa (Khat)* and tobacco. Alcohol and drug abuse has left a negative impact among undergraduates (university students). The main consequences being; discontinuation of studies, mental disturbances and risky sexual activities. All stakeholders must take action creating awareness among students on the negative effects of substance abuse. Universities should set up programs with an aim to curb substance abuse in the institutions of higher learning. The government should reinforce the set laws and regulations and deal with trafficking of illicit substances into the country.

Keywords Alcohol and drug abuse, substance abuse, undergraduate students, qualitative study, Kenya.

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Introduction

Substance abuse among college students is a public health concern. The use of drugs at this early age predisposes one to drug dependence later in adulthood. Studies have shown that consumption of licit and illicit substances among young people had increased all over the world. The age of initiation to substance abuse was progressively falling as reported that, all forms of drug dependence and disease burden were highest at the age group of 20–29 years [1 - 2].

This study noted that, mental disorder resulting from use of drugs was affecting young adults at a crucial time in their lives while adversely damaging their future. Research has shown that, experimenting with drugs was considered to be normal by many students who seem to overlook the negative consequences drug and alcohol use might cause [3].

Advertising equates alcohol with pleasure, relief, fun, fashion, friendship, and happiness. That made alcohol use like an adult initiation rite therefore pleasing to students joining Universities and colleges.

Substance use tends to peak between the ages of 18 and 25 years with University students being at higher risk for the vice if compared to non-college peers. This made it a public health concern given the negative social and health consequences of the vice and the link with other unhealthy behaviours [4, 5, 6].

Alcohol use amongst university students was a major public health disquiet. Substance use among college and university students was likely to interfere with their studies and as result their career development ends in jeopardy. Majority of the studies done on alcohol and drug abuse in low and middle-income countries have focused mainly on primary and secondary school pupils [7, 8].

Studies done among University students in Kenya showed that, substance abuse was a hazard with alcohol being the most frequently abused stuff [9, 10].

Alcohol and substance abuse was an increasing menace to the country and in particular the coastal region which was a major transit hub that had easy access to illicit drugs. Coastal region was known to have a large-scale sex trade often aimed at raising funds to sustain the drug habits [11].

However, there was no documented studies on the perceptions and the magnitude of alcohol and drug abuse among University students studying in the coastal region. The aim of this study therefore was to explore on the perceptions and the magnitude of substance abuse among undergraduate in the two public Universities in the coastal region of Kenya.

Materials and Methodology

Study Design

This study had a descriptive and exploratory design, Focus group discussion and key informant's interviews were chosen for data collection. These methodology had proved useful in the collection of data regarding perceptions and experiences.

Study Population

The participants were Deans of students, counsellors and undergraduates of Pwani University and Technical University of Mombasa.

Sampling Technique

The two public universities in the coastal region with their deans of students and counsellors from both Universities purposively included in the study because they were likely to hold information on the magnitude



of drug abuse in their Universities. They were the ones who deal with indiscipline cases in their institutions.

Data collection

Key Informant Interviews (KII's): Four KII's with the deans of students and counsellors from the two Universities were conducted. There were two interviews in each University about the perceptions on the problem of drug abuse and the magnitude of the problem among students. The number of KIIs was guided by data saturation. By the time the third interview was conducted, the interviewer noticed there was repetition of issues that had already been raised and a decision was made not to conduct further interviews.

Focus Group Discussions (FGDs)

Four FGDs with students from both Universities were carried out. In each University two focus group discussion comprising of 10 students grouped by gender were conducted. The number of FGD was guided by data saturation. By the time we conducted the third and fourth FGD we noticed that issues already identified earlier were being repeated and there was no need for further discussions.

Recruitment of Participants

Participants willing to take part in the FGDs were recruited through snowballing;- an acceptable method in the qualitative paradigm. The study used deans of students and departmental secretaries as gatekeepers for creating initial contacts with students.

We were introduced to four class representatives whom after introducing ourselves and explaining the nature of the study they were willing to help. They were able to refer students who in turn came with other volunteers.

A total of 40 students(20 Females and 20 Males) between 18 - 25 years actively took part in FGDs conducted in the two Universities. During recruitment, we ensured that both genders were equally represented. Those referred respondents were encouraged to bring friends drawn from all the four years of study and from different programs to allow for better representation.

After getting the list of the 20 participants from each University willing to participate, the dates for the FGDs were agreed upon. During FGDs, there was always moderator research assistant who kept time and took short notes of the discussions. An FGD guide

with a list of questions was used in the meetings. With informed consent of respondents, the FGDs were also tape recorded. respondents being University students who understood and spoke English. The discussions were held in English language. Each FGD lasted between 40 - 50 minutes. The taped discussions were then transcribed in readiness for analysis.

Reliability and Validity of Data Collection Instruments

A pilot study was done in Moi University College of Health Sciences. The purpose of the pilot study was to pre-test the interview guides so as to ensure that the questions were able to capture the information required to answer research questions. The data collection instruments were accordingly revised before the main study.

Data Management and Analysis

The audiotaped discussions were kept under lock with a key and once transcribed they were stored in a hard drive with password protection awaiting analysis.

Thematic analysis was carried out by identifying, coding, and categorizing patterns or themes found in the data. Data was presented in form of texts and where possible verbatim quotes used to amplify the voices of the informants.

Ethical Considerations

The research proposal was approved by Moi University school of medicine / Moi Teaching and Referral Hospital Institutional Research and Ethics Committee (IREC) {Formal Approval Number: IREC 000955}. Permission to carry out the study was also sought from the National Commission of Science and Technology (NACOSTI) also the University administration of both Universities. Respondents were assured of confidentiality and anonymity for any information they gave. Participation in the study was voluntary, and written informed consent was obtained from each respondents.

Results

Five major themes were derived from the content of the focus group discussions and key informant interviews. These were;

1. The burden of alcohol and drug abuse.



2. Factors predisposing students to alcohol and drug abuse.
3. Effects of alcohol and drug abuse among students.
4. Relationship between drug abuse and risky sexual behaviour.
5. Measures required to curb substance abuse.

Burden of Alcohol and Drug Abuse

Participants agreed that alcohol and drug abuse was a major problem affecting a good number of University students in the coastal region of Kenya. Alcohol was the most abused substance while other commonly abused substances were identified as *miraa (Khat)*, tobacco and *marijuana*. The local brew commonly known as *Mnazi* in the respondents local language was widely consumed by students since it was cheap and locally available. Some of the participants had this to say:

“The problem is quite substantial.

If you were to put on percentage

I would say roughly 25 – 30 % of the students abuse drugs....

The most common abused substance was alcohol in this case mnazi.

Mnazi I would say 70-80% of our students take mnazi because it is cheap and available locally. It provide excitement.

Many of them come from upcountry and when they get here they want to taste mnazi”.

(KII1).

“One it is alcohol.

Few cases of bhang but the major one is alcohol.

For cigarettes, not very much cases.

The cases that we have had mostly are on alcohol.”

(KII3)

“I have one of my classmates who is now in rehabilitation centre because he took a lot of weed last semester.” (FGD2)

According to the participants, other illicit substances such as *cocaine* and *heroin* were also abused but their use was highly secretive and determining the magnitude of their use is difficult. The participants noted that in order to reduce the burden of substance abuse it calls for different stakeholders to take action.

The government should reinforce the set laws and regulations to deal with drug traffickers and other illicit substances into the country. They also noted that, Universities should set up and reinforce alcohol and drug abuse policies. Awareness campaigns among students should be heightened with educational programs on drug abuse incorporated into the syllabus at different levels of learning.

Factors Predisposing Students to Engage in Alcohol and Drug Abuse

The key informants from both Universities agreed that, the environment in which the Universities in the coastal region are located was conducive for students to engage in alcohol and drug abuse. Accessibility of alcohol and other drugs was a major contributing factor to the vice. This universities are located next to slums where there were illegal dens selling the local brew and other drugs. The participants noted that the easy accessibility of drugs was major impediment to the fight against alcohol and drug abuse. This is what the key informants had to say:

“Students take mnazi because it is cheap and available locally(KII2)

“We are neighbouring several slums.

In fact our institution is in the middle of them.

On one side is the ‘nduke’ slum

That is a slum where there are a lot of activities going on one being the issue of drug and substance abuse.

They usually sell chang’aa, mnazi and even bhang”

on the other side, you find ‘kiziwi’ slums.

There is plenty of alcohol, busaa and bhang.

The furthest end is ‘chura’ slums so you can imagine the environment.

It has a lot and it’s favourable for the consumption of those things.

(KIII)

“Where we are,

we are surrounded by dens or magwes where mnazi was sold even next to our gates there was a big magwe. You know what magwe is?

It is a place where they sell mnazi.

It is not only for our students but for the manambas and other people.

So we are surrounded by areas that one can access mnazi easily”

(KIII)



“As much as we are fighting drugs and substance abuse the commodity is readily available. I can get it when I want without any restriction. The fact that they say, it is for persons above the age of 18 years! who confirms that, the person buying is above 18 years?”.
(KII3)

The easy access to alcohol and other drugs, predisposes students to engage in the vice. According to the facilitators, pubs were readily accessible and those willing to buy the substance didn't have to incur any transport cost to access them. They also noted that local brew was near and quite affordable.

“There are many bars and pubs around the University. So the access was very fast you don't even have to incur any costs to access them they are readily available”.
(FGD1)

“I think alcohol is the most abused substance I think 9 out of 10 abuse alcohol. It is easily available and cheap. A bottle goes for around 50 bob so it's very cheap and convenient”.
(FGD3).

The study identified other factors predisposing students to drugs to be; peer pressure, availability of funds, excess freedom, male gender, stress, not being active in religious activities, poor parenting and culture. Both the FGDs and the KII's participants seemed to agree that peer pressure was a major contributing factor to alcohol and drug abuse. According to the participants, University students were usually swayed to alcohol and drug abuse just to conform to what their peers were doing. They had this to say:

“The peers compel others to join into alcoholism and other substance abuse. Of course if you don't take you will be the odd one out but for you to fit in the group you need to do what others do”.
(KII4).

“Peer influence, like when we came in this institution as freshas, we didn't have such kind

of behaviours, but maybe if your first roommates were taking alcohol so they influence you to start taking the stuff and as you move you get influenced”
(FGD2).

The facilitators also noted that students have a lot of free time and freedom when they join Universities compared with their previous life in high school. This makes them vulnerable to engage in drugs. Similarly they indicated that students who had access to “excess” funds tend to indulge in substance abuse. That included not only students from well up families but also those from humble families who were able to cater for school fees and once they receive funding from the higher education loans board this act as extra funds with which they engage in substance abuse. Two participants had this to say;

“It can also be idle mind. You don't have something to engage into So your brain is just idle and you want to do something to make you active mentally. You take alcohol or engage in activities that can prevent the risk of taking drugs. Some students while in high school were so much restricted with minimal freedom, and no time to waste. coming here and finding so much freedom, they feel like they are in heaven”.
(FGD1)

“Most of my friends that are alcoholics, come from very well up families. Imagine per week your parent is sending you sh.5000 you ask, what do I do with this money? How can I utilize this money? Being careless, taking alcohol for pleasure come first. Others are not from very well up families, but their parents are able to pay school fees for them, yet they have applied for HELB loan. So when the loan comes they misuse it since their parents had paid even hostel fees, given all the monetary support and still you have extra money like sh.21, 000/= and you are like; oh this is too much for me, Through wondering how to spend the money, everything else and processes, one get into drugs. ”
(FGD3)



According to the facilitators the male gender was a predisposing factor to alcohol and drug abuse. They reckoned that, more male students engaged in substance abuse compared to a few females mainly because they are risk takers.

“If you compare male students with female students abusing drugs, you will find a higher percentage of those who abuse drugs are the male students. Reason being men take risks but ladies take precautions at times.”(FGD4)

Stress was also identified as a factor leading students to abuse drugs. Stress for students was noted to arise from both institution and the family back home. Some of the issues stressing students include lack of school fees, failure in exams and relationships. One of the participants said;

“Others abuse alcohol maybe to get rid of the stress they got from poor Exam results, breakup of relationships or lack of school fees”.
(FGD1)

Religiosity was identified as an important factor that determine whether students engage in alcohol and drug abuse. According to the facilitators students who were committed in their religious affiliation and attended church / mosque services regularly, were unlikely to abuse alcohol and drugs. It was important to uphold religious values be it Christianity or Islam. Some of the participants said;

“You know somebody who has never stepped in a church or a mosque will just be predisposed to drug abuse”.
(FGD1)

“May be if they can set a rule that every student should belong to a certain religious group it could reduce cases of drug use ”.
(FGD2)

“...the spiritual bit is equally important we uphold our faith be it Christianity or Islam coz there are some elements that are closely related to drug and substance abuse”.
(KII4)

The role of parenting in influencing individual behaviour were cited from the discussions. According to the facilitators, parents ought to be role models to their children and if parents exposes their children to substances as they grow up. There was likelihood of them emulating bad habits of consuming the substances later in life. Facilitators had this to say;

“Parents have a very big role to play coz all these things begin in the family. If the parent is a smoker and smokes in front of the children, if the parent chews Miraa in front of the children or even sends them to go and buy cigarettes or something similar, automatically you are telling them this is the way to go. So if it can start from the family, it can go a long way”
(KII3).

“For those whose parents are using drugs at home it is easy for them to interact with students using drugs in school hence, they can get into drug abuse more easily as compared to those whose parents are against it”.
(FGD2)

Culture was also raised as a factor influencing the youths to engage in alcohol and drug abuse. They noted that alcohol was well accepted in the African culture as a social drink and most customary events were incomplete without alcohol. That include payment of dowry and rite of passage events such as circumcision and weddings. According to the facilitators that sends the wrong message to the youths, that alcohol was acceptable. One of the key informants had this to say:

*“ the social aspect of alcohol was well accepted in our communities.....
Like in my tribe, you can't get a wife unless you produce alcohol and it is not only my tribe I know several communities in Kenya. Our alcohol is 'mnazi' but in some regions they talk of 'chang'aa', they talk of 'busaa', some will even produce Miraa, beer so it is culturally accepted to consume alcohol.*



While you were doing that, what message were you sending to the youths? You were telling them it was acceptable to take alcohol and miraa or even busaa and chang'aa. So that was the first factor that, the society had accepted alcohol
“(KII3).

Here at night security is very minimal. There was a lady whose boyfriend lured to come here while drunk at around 2 a.m and she was raped but the case did not come out because it could have ruined the profile of the institution”.
(FGD3)

Effects of Drug Abuse

The problem of drug abuse has had a negative effects on both students and staff in institutions of higher learning. This has an impact on the students' learning activities. Drug abuse leads to poor class attendance and poor performance that sometimes lead to discontinuation from the university. One facilitator reckoned that, the cases of alcohol abuse were many

Substance abuse particularly use of *marijuana* (*bhang*) had been linked to mental health problems. Participants confirmed witnessing students with mental disorders which after follow-up was established to be associated with the intake of *bhang*. They gave an example of a student who was rescued after attempted suicide as a result of the effects of *bhang*. Rape cases, sodomy and physical assaults were among other effects resulting from drug abuse.

The Relationship between Alcohol, Drug Abuse and Risky Sexual Behaviour

The participants from both Universities seemed to agree on the fact that alcohol and drug abuse was associated with risky sexual behaviour. According to the facilitators, students who abuse drugs were likely to engage in risky sexual behaviours such as having sexual intercourse while under the influence of alcohol, unprotected sex and having multiple sexual partners.

Cases of sexual molestation while under the influence of alcohol were reported by several respondents That is too risky for the individuals as it predisposes them to sexually transmitted infections and unintended pregnancies.

“.... There were 2 cases of rape in the past two years and the victims were drunk at the time of the incident”.
(FGD1) *...” 2 students were sodomized along the bridge when drunk”.* (FGD2)
“People got drunk and,

Participants alluded to the issue of university students engaging in relationship with the working class as factor that lead students to excessive overindulgence in alcohol use leading to risky sexual behaviour. One participant narrated the experience of her fellow student as follows;

“.....used to drink 24/7 because she used to date a Manager. One day she got drunk as I was told the following day, coz I was not staying there I was residing in she was so drunk. Her name was on the notice board that every man who was within the institution had sex with her and she didn't know because she was totally drunk. They even made fun of her, They were posting on the notice board that, if you haven't gone through her, you are a woman and not a man. Isn't that very dangerous? you can contract HIV or you pregnant her. Unfortunately, you won't know the father of the child.”
(FGD3).

The facilitators also emphasized the relationship between substance abuse and HIV /AIDs acquisition. They noted that majority of the known HIV cases have been involved in alcoholism or drug abuse at one time of their life. Further they indicated that alcohol and other substances interferes with the individual's ability to make the right choices. The likelihood to engage in unprotected sex thus contracting the disease was relatively high. Similarly the injectable drug users were hardly cautious and easily share the needles exposing themselves to risk of contracting HIV infections.

“It is easy at this point to draw the line linking issues of drug abuse and cases of HIV/AIDs. Majority of the students who have come out in public to declare that they are HIV positive, if you look at their history



you will see they were cases of alcoholism or drug abuse...".(KII3)

"I would say 40-45% of the cases of HIV/AIDs were linked to alcoholism and other drug use.

Because when they are 'high' as they say they forget all these things we tell them about being careful when they engage in these acts

Of course when you go to this other drugs the injectable ones,

you don't expect them to be cautious .

like you are my friend I know you, we are high and it is safe".

(KII2)

"There was a correlation between HIV and drugs,

The very strong relationship between them was proofed by some cases of people who had put themselves at the risk of getting infected were usually under the influence of alcohol.

So it brought about impaired judgment.

Once you are drunk you might even have your protection on board

but you find yourself unprotected.

"(KII2)

"Some girls take wines with boys

so maybe they are actually not ready to have sex

but they end up having sex because they were not in their senses ".(FGD2).

According to some respondents, drugs enabled them to associate with the opposite sex. Alcohol to them, acts as a social lubricant. One is less intimidated and get courage to engage in sex.

Measures Are Required to Curb Alcohol and Drug Abuse.

There was need for consulted efforts from all stakeholders to deal with the issue of substance abuse among University students. The Government should be a key player in implementing the already existing drug laws and regulations.

Universities and any other institutions of higher learning should intensify awareness campaigns to sensitize students against substance use. Similarly alcohol and drug abuse institutional policy should also be instituted in the institutions. Proper mechanisms in dealing with those who already have the problem of drug abuse must be put in place. Participants had this to say:

"Posters, campaign and video shows on effects of drug should be used to sensitize students against drug abuse" (FGD1)

"Counselling programs are irregularly conducted.....if they were regular they could teach students on the dangers of alcohol (FGD2)

"Government!... because all these issues are about policy, the government is directly responsible.

The drug barons are known me and you can only do our part but dealing with supply chain ,of drugs it is the government's part" (KII3)

"if the government curb the supply that could be the best way to go no supply automatically the demand would go down". (KII2)

"The policy was also very clear that, if a staff member or a student was caught up with issues of drugs, there was a certain procedure that would be followed to rehabilitate or support the victim" (KII3)

Discussions

To the best of our knowledge this was the first qualitative study looking into the issue of alcohol and drug abuse among undergraduates in the Coastal region of Kenya. Our study found that the burden of alcohol and drug abuse among the University students was quite substantial and it impacts negatively on those involved in the vice.

The study showed alcohol was the commonly abused substance. Other abused substances included *marijuana*, *miraa* and cigarettes. These findings concur with other studies done in Kenya that displayed alcohol as the most commonly abused substance. [9] documented lifetime alcohol prevalence of 52 % for alcohol and 43% for tobacco among college students. Another study showed that, the Kenyan population aged 15-65 were consuming substances were as follows:



- a. 14.2% alcohol
- b. 5.5% *miraa*
- c. 1% *bhanga* [12].

In another survey involving public officers, the prevalence was much higher with employees in the public sector currently using substances as:

- a. 33.3% alcohol,
- b. 8.5% tobacco,
- c. 3.8% *miraa*
- d. 1.1% *bhanga* [13].

Alcohol has also been documented as the most widely used and abused substance world wide [14].

Some factors predisposing the undergraduate (University students) to substance use were both individual and environmental. These included:

- a. Male gender,
- b. Peer pressure,
- c. Religiosity,
- d. Freedom,
- e. Availability of funds,
- f. Exposure to drugs by parents who are not good role models,
- g. Culture that upholds use of various substances
- h. Easy accessibility to alcohol and other drugs.

These findings concur with other studies done in South Africa that documented risk factors for substance abuse to be either intra-personal, interpersonal or environmental [8].

The intra-personal factors were factors such as; the age of the student, gender, race, self-esteem and the psychological challenges the student could be facing while the interpersonal factors were such as; influence from other peers, parenting guidance, parental substance use, conflict in the family and parental level of education.

All these factors predisposes the young person to substance abuse at an early age. Similarly [8]) noted that environmental risk factors such as widespread availability of substances like in the case in our study, social norms that are supportive to substance use, a lot of free time and lack of healthy recreational activities were likely to predispose the youth [8].

In another study done in Ethiopia [15] male gender had strong association with substance use while being muslim or protestant was protective against

substance use among students. Marital status, year of study and depression were also found to be independent predictors of substance use among students.

Our study cited discontinuation from the University, risky sexual behavior and mental disturbances were some of the major effects of alcohol and drug abuse students. Other researchers have also confirmed that, alcohol and drug abuse are contributing factors to sexual risk-taking as it is believed to interfere with judgment and decision-making [16-19]. Elsewhere studies have shown that acute effects of substance abuse cause one to take sexual risks that otherwise would not have been taken [20].

Evidence also show *marijuana* use could induce or exacerbate a number of mental health problems. Studies have shown that, there was a relationship between the use of *marijuana* and conditions like depression, anxiety disorders, mania as well as psychosis [21]. A study done in Canada involving more than fourteen thousand adults in the general population showed diagnosed depression was very common among heavy *cannabis* users compared to the non-users [22]. *Marijuana* use may also decrease age at onset in both schizophrenia and bipolar disorder [23, 24].

Substance abuse result to even more serious effects that were not emphasized by the participants probably due to lack of awareness or because they haven't seen the effects affecting them directly as these are mostly the end results of substance abuse. Various substances affects the brain and most organs and systems, and their use is related to a large number of health problems mainly non communicable diseases. Alcohol use has been linked with the development of 60 diseases including high blood pressure, coronary heart disease and some cancers [25].

After tobacco and hypertension, alcohol consumption is the third highest contributor to the burden of disease in developed countries [25]. Globally, non-communicable diseases (NCD) related burden of deaths, net years of life lost (YLL) and net disability adjusted life years (DALYs) , 3.4%, 5.0% and 2.4% respectively can be attributed to alcohol consumption, with the burden being particularly high for cancer and liver cirrhosis [26]. Alcohol consumption contributes to disease, injury, disability and premature death more than any other risk factor in developing countries with low mortality [25].



Alcohol consumption was documented along with tobacco, diet and lack of exercise, as the four major common risk factors for NCD in the World Health Organization [27] and by the Lancet NCD action group [28]. Given the overwhelming evidence that substance abuse contribute to ill health, there is need to educate students on the effects of alcohol and drug abuse as well as put measures to curb the issue of drug abuse among youth.

Conclusion and Recommendations

The problem of substance abuse among the undergraduates in the coastal region was of concern to both students and the staffs. The most commonly abused substance was alcohol particularly the local brew (*mnazi*). Easy accessibility to various substances was a main factor predisposing students to engage in drug abuse. Among other effects, alcohol and drug abuse lead students to engage in risky sexual behaviour exposing themselves to the risk of contracting sexually transmitted diseases including HIV / AIDS.

There is need to sensitize this group of student on the harm associated with drug abuse and dissuading them from engaging in substance abuse. This will require universities to set up programs aimed at creating awareness on the harmful effects of the substances.

Competing Interests

The authors declare that they have no competing interests.

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Reference

1. **Jennison, K.M.** The short-term effects and unintended long-term consequences of binge drinking in college: a 10-year follow-up study. *Am J Drug Alcohol Abuse*, 2004. 30(3): p. 659-84.
2. **Bate, S.L., Stigler, M. H., Thompson, M. S., Arora, M., Perry, C. L., Reddy, K. S., & Mackinnon, D. P.** Psychosocial mediators of a school-based tobacco prevention program in India: results from the first year of project MYTRI. *Prev Sci*, 2009. 10(2): p. 116-28.
3. **Larimer, M.E., J.R. Kilmer, and C.M. Lee.** College student drug prevention: A review of individually-oriented prevention strategies. *Journal of Drug Issues*, 2005. 35(2): p. 431-456.
4. **Karam, E., K. Kypri, and M. Salamoun.** Alcohol use among college students: an international perspective. *Curr Opin Psychiatry*, 2007. 20(3): p. 213-21.
5. **Kypri, K., M. Cronin, and C.S. Wright.** Do university students drink more hazardously than their non-student peers? *Addiction*, 2005. 100(5): p. 713-4.
6. **White, H.R., E.W. Labouvie, and V. Papadaratsakis.** Changes in substance use during the transition to adulthood: A comparison of college students and their non-college age peers. *Journal of Drug Issues*, 2005. 35(2): p. 281-306.
7. **Amosun, P., O. Ige, and O. Ajala.** A study of some causative factors of substance abuse among selected secondary school students in Ibadan, Nigeria. *Volume 10 Number 2 December 2010*, 2010: p. 4.
8. **Onya, H., Tessera, A., Myers, B., & Flisher, A.** Adolescent alcohol use in rural South African high schools. *African journal of psychiatry*, 2012. 15(5): p. 352-357.
9. **Atwoli, L., Mungla, P. A., Ndung'u, M. N., Kinoti, K. C., & Ogot, E. M.** Prevalence of substance use among college students in Eldoret, western Kenya. *BMC Psychiatry*, 2011. 11: p. 34.



10. **Odek-Ogunde, M. and D. Pande-Leak.** Prevalence of substance use among students in a Kenyan University: a preliminary report. *East Afr Med J*, 1999. 76(6): p. 301-6.
11. **Weldon, K.** An analysis of drug abuse along the coastal region of Kenya. *International NGO Journal*, 2013. 8(7): p. 153-158.
12. **National Campaign Against Drug Abuse Authority.** Rapid Assessment of Drug and Substance Abuse in Kenya. 2007.
13. **National Campaign Against Drug Abuse Authority (NACADA).** Alcohol and drug abuse situation analysis among employees in the public sector institutions in Kenya 2011.
14. **Basangwa, D., Ndetei, D. M., Kuria, M., Ongecha-Owuor, F., & Abdullahi, A.** Alcohol and other substance related disorders in The African textbook of Clinical Psychiatry and Mental Health. , D.M. Ndetei, Editor. 2006, Africa Medical Research Foundation. Nairobi p. 228.
15. **Tesfaye, G., A. Derese, and M.T. Hambisa.** Substance Use and Associated Factors among University Students in Ethiopia: A Cross-Sectional Study. *Journal of addiction*, 2014.
16. **Lawyer, S., Resnick, H., Bakanic, V., Burkett, T., & Kilpatrick, D.** Forcible, drug-facilitated, and incapacitated rape and sexual assault among undergraduate women. *Journal of American College Health*, 2010. 58(5): p. 453-460.
17. **Palmer, R.S., McMahon, T. J., Rounsaville, B. J., & Ball, S. A.** Coercive sexual experiences, protective behavioral strategies, alcohol expectancies and consumption among male and female college students. *Journal of interpersonal violence*, 2010. 25(9): p. 1563-1578.
18. **Ross, L.T., Kolars, C. L. K., Krahn, D. D., Gomberg, E. S. L., Clark, G., & Niehaus, A.** Non-consensual sexual experiences and alcohol consumption among women entering college. *Journal of interpersonal violence*, 2011. 26(3): p. 399-413.
19. **Testa, M. and J.A. Livingston.** Alcohol consumption and women's vulnerability to sexual victimization: can reducing women's drinking prevent rape? *Subst Use Misuse*, 2009. 44(9-10): p. 1349-76.
20. **Berhan, Y., D. Hailu, and A. Alano.** Polysubstance use and its linkage with risky sexual behavior in university students: significance for policy makers and parents. *Ethiop Med J*, 2013. 51(1): p. 13-23.
21. **Richardson, T.** Cannabis use and mental health: A review of recent epidemiological research. *International Journal of Pharmacology*, 2010. 6(6): p. 796-807.
22. **Cheung, J.T., Mann, R. E., Ialomiteanu, A., Stoduto, G., Chan, V., Ala-Leppilampi, K., & Rehm, J.** Anxiety and mood disorders and cannabis use. *The American journal of drug and alcohol abuse*, 2010. 36(2): p. 118-122.
23. **De Hert, M., Wampers, M., Jendricko, T., Francic, T., Vidovic, D., De Vriendt, N., . . . van Winkel, R.** Effects of cannabis use on age at onset in schizophrenia and bipolar disorder. *Schizophrenia research*, 2011. 126(1): p. 270-276.
24. **Veen, N.D., Selten, J.P., van der Tweel, I., Feller, W. G., Hoek, H. W., & Kahn, R. S.** Cannabis use and age at onset of schizophrenia. *American Journal of Psychiatry*, 2004. 161(3): p. 501-506.
25. **Rehm, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J.** Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *Lancet*, 2009. 373(9682): p. 2223-33.
26. **Parry, C.D., J. Patra, and J. Rehm,** Alcohol consumption and non-communicable diseases: epidemiology and policy implications. *Addiction*, 2011. 106(10): p. 1718-24.
27. **World Health Organization.** Description of the global burden of NCDs, their risk factors and determinants in Global status report on noncommunicable diseases 2010. 2010, World Health Organization: Geneva, Switzerland.
28. **Beaglehole, R., Bonita, R., Horton, R., Adams, C., Alleyne, G., Asaria, P., . . . Watt, J.** Priority actions for the non-communicable disease crisis. *Lancet*, 2011. 377(9775): p. 1438-47.