Alcohol and drug problems and sexual and physical abuse at three urban high schools in Mthatha

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Abstract

Background

Alcohol is the most important substance of abuse in South Africa. There are, however, reports of an increase in the use of other drugs among adolescents. The aim of this study was to assess the use of alcohol and other drugs of abuse and their association with physical or sexual abuse in three urban high schools in Mthatha.

Method

The Alcohol Use Disorders Identification Test (AUDIT), embedded in a broader questionnaire, was used as a screening tool to assess primary and secondary objectives among the student population (N = 1 424) attending school on a given day at three urban high schools in Mthatha (a cut-off point of 8 was selected).

Results

Of the 266 (18.6%) students who tested AUDIT positive, 63 (4.42%) were female and 203 (14.26%) were male (P< 0.01). AUDIT-positive students between the ages of 15 and 17 years represent 10.18% of the total number of students tested. A total of 169 (11.87%) students showed symptoms of dependence, while 355 students (24.93%) reported drug-related problems in their families. Two hundred and twenty-five (15.8%) of the students admitted using dagga (cannabis) at some point, while 69 (4.85%) had used mandrax and 64 (4.49%) had used cocaine. A total of 149 (10.46%) students had been victims of physical abuse and 91 (6.39%) of sexual abuse. Sexual and physical abuses were statistically significantly correlated with alcohol-related problems.

Conclusions

Alcohol was the most commonly abused drug in the screened group, followed by cannabis, mandrax and cocaine. Sexually or physically abused students were at a higher risk of developing a substance-related problem.

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Introduction

Alcohol is the most important substance of abuse in South Africa due to the high levels of its consumption and its association with violence, crime and traffic-related trauma.[1] Research conducted by the National Institute on Alcohol Abuse and Alcoholism Task Force (EU) found that college drinking was more extensive than it had ever been and that it was responsible for a large number of deaths among youngsters between 18 and 24 years of age.[2]

The Sacendu Project found that about one in four Grade 7, 10 and 11 learners in a Pretoria school survey undertaken by UNISA reported getting drunk occasionally during the course of a typical month. The same group has published a report on the increasing use of cannabis, mandrax and other hard drugs among young people in South Africa.[3]

The first step in a successful intervention is to determine how extensive the damage is and to target risk groups.

Objectives

The primary objective was to determine the number of students affected by alcohol use at three urban high schools in Mthatha. The secondary objective was to determine the number of students affected by other drugs of abuse besides alcohol and to assess the correlation between sexual or physical abuse and substance use.

Methods

The Alcohol Use Disorders Identification Test (AUDIT) is used world wide to identify persons whose alcohol consumption has become hazardous or harmful to their health.[4,5,6] As an instrument, AUDIT is recommended for use in researching adolescent populations at risk.[7]

The authors of the present study selected AUDIT as the screening tool to assess hazardous or harmful alcohol use among the whole population of students who were present at three urban high schools in Mthatha and agreed to participate in the research (N = 1 424). Out of 1 443 questionnaires, 19 were discarded (1.3%) because answers were left blank, which was understood as an unwillingness to participate. AUDIT was embedded in a broader questionnaire that included questions for general identification, questions to determine other substance use and two questions on physical and sexual abuse.

A group of fourth- and sixth-year medical students was trained to participate in the study as facilitators. The participation of younger facilitators improves communication with adolescents and at the same time contributes to a better understanding of alcohol-related disorders.

The objectives and methodology of the study, as well as the use of AUDIT as a screening tool, were explained to the group of medical student participants. The questionnaire was self-administered and voluntary participation was encouraged. The disadvantages of the self-rated scales essentially focus on reliability, but this is more of a problem where lack of insight is a key feature of the disorder, as in psychotic disorders. Self-rated scales can be used in general population surveys, as well as in psycho-educational interventions, to raise awareness of patient self-identification of illness-targeted symptoms.

The questionnaire was applied to each of the three schools at the same time on the same day, and to each group in its own classroom. Data collection was completed in March 2003.

Descriptive statistics were used to characterise the study group. A frequency distribution was done for each variable and statistically significant differences between the subgroups were analysed using chi square with continuity correction factor and Fisher exact probability ($P < 0.05$ was considered statistically significant). Odd ratios (ORs) were analysed for both subgroups (AUDIT positive and negative) at 95% confidence intervals (CI). The statistic analysis was done using Epi Info 3.2 software.

Ethical Issues

Consent was obtained from the educational authorities by prior contact with the school principals and the teachers' boards. The purpose of the study was explained to the students and voluntary participation

Figure 1: Correlation between being AUDIT positive and gender

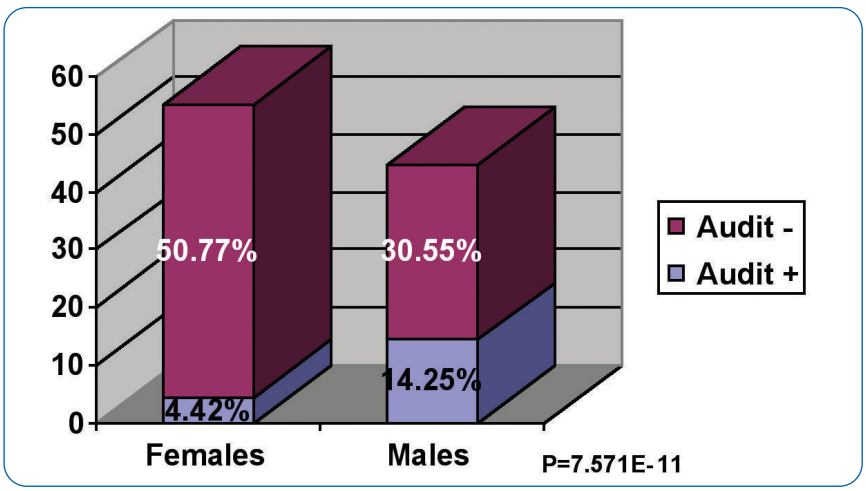

Table I: Symptoms associated with dependence, hazardous drinking and harmful drinking

	Dependence-indicative symptoms						Symptoms associated with hazardous drinking				Symptoms associated with harmful drinking			
	Unable to stop		Failed to do what expected		"Eye-opener"		How often do you drink alcohol		More than 6 drinks		Guilty feeling after drinking		"Black-outs"	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%
Never	1209	84.9	1255	88.13	1253	87.99	984	69.1	1115	78.3	1196	83.99	1255	88.13
Less than monthly	66	4.63	64	4.49	58	4.07	217	15.24	113	7.94	91	6.39	67	4.71
Monthly	62	4.35	39	2.74	35	2.46	121	8.5	102	7.16	42	2.95	36	2.53
Weekly	43	3.02	28	1.97	38	2.67	52	3.65	64	4.49	42	2.95	33	2.32
Almost Daily	38	2.67	35	2.46	38	2.67	45	3.16	28	1.97	50	3.51	31	2.18
No answer	6	0.42	3	0.21	2	0.14	5	0.35	2	0.14	3	0.21	2	0.14

Table II: Symptoms associated with harmful drinking (continued)

	Have you or someone else been injured as a result of your drinking?		Has a relative, a friend, or a doctor suggested to you that you cut down your drinking?	
	f	%	f	%
No	1241	87.15	1278	89.75
Yes (but not in past year)	105	7.37	70	4.92
Yes, during past year	73	5.13	71	4.99
No answer	5	0.35	5	0.35

Table III: Other drugs used

	Cannabis (dagga)		Methaqualone (Mandrax)		Cocaine	
	f	%	f	%	f	%
No	1195	83.92	1352	94.94	1357	95.29
Yes	225	15.8	69	4.85	64	4.49
No answer	4	0.28	3	0.21	3	0.21

was encouraged before the questionnaires were administered, thus individual consent was granted.

Results

The total study size was 1 424 students. Of these, 786 (55.2%) were female and 638 (44.8%) male; 120 (8.3%) were in Standard 6, 110 (7.72%) in Standard 7, 378 (26.5%) in Standard 8, 467 (32.8%) in Standard 9 and 349 (24.5%) in Standard 10. Of the total number of students, 168 (11.8%) were between 12 and 14 years of age, 766 (53.8%) were between 15 and 17 years of age and 490 (34.4%) were older than 18.

Two hundred and sixty-six (18.68 %) students tested AUDIT positive (cut-off point 8), 63 (4.42%) of whom were females and 203 (14.26%) of whom were males ($P < 0.01$) (see Figure 1). Of these, 145 (10.18%) were between 15 and 17 years of age and 112 (7.87%) were older than 18.

When looking at the symptoms related to alcohol dependence, 209 (14.67%) students reported that they were unable to stop drinking once they had started, 166 (11.66%) reported having failed to do what was normally expected of them because of drinking and 169 (11.87%) confirmed that they needed a drink in the morning to get themselves going after a heavy drinking session. Binge drinking, defined as five or more drinks per occasion, was reported by 12% of the students interviewed.

Seventy-three students (5.13%) reported having been injured or having injured somebody else during the preceding year as a result of their drinking (see Tables I and II).

A total of 355 students (24.93%) reported drug-related problems in their families. Those who admitted to using dagga on occasion amounted to 225 (15.8%), while 69 (4.85%) used mandrax and 64 (4.49%) admitted using cocaine at some time in their lives (see Table III).

One hundred and forty-nine (10.46%) of the students were victims of physical abuse and 91 (6.69%) had suffered sexual abuse. Sexual and physical abuse were statistically significantly correlated with an AUDIT-positive rate (see Table IV).

Discussion

AUDIT is a useful tool to detect alcohol-related problems in a primary health care (PHC) situation. In this group of students, there is clearly a large number with some kind of alcohol-related problem. There is a statistically significant association between males and the AUDIT-positive results, consistent with the SACENDU findings.[8]

Important symptoms of alcohol dependence were found in a relatively large number of students. This should be understood as being an indicator of the severity of the alcohol problem in this group of students, despite the fact that no diagnostic conclusions could be extracted from the above data.

Drinking excessively on a single occasion, known as binge drinking, is associated with high rates of academic failure and high-risk sexual behaviour. This is reported by Parry as the most common form of

Table IV: Correlation between sexual and physical abuse and alcohol-related problems

	Sexual abuse			Physical abuse		
	Sexual abuse	No sexual abuse	Total	Physical abuse	No physical abuse	Total
AUDIT +	34	232	266	49	217	266
AUDIT -	57	1101	1158	100	1058	1158
Total	91	1333	1424	149	1275	1424
P= 4.491E-06				P= 4.413E-06		
OR = 2.83 95% CI [1.77; 4.73]				OR = 2.39 95%CI[1.62;3.52]		

substance misuse among youngsters of both genders.[8] In our group, this form of hazardous drinking was reported by only 12% of the students.

The relationship between alcohol use and accidents is highlighted by the number of students who reported having been injured while under the influence of alcohol within the previous year or even during the year when the study was undertaken.

An issue of concern is the number of students admitting to the occasional use of cocaine. These data need to be confirmed because cocaine is expensive and a small city such as Mthatha does not seem to be the logical market for this type of drug. Nevertheless, cocaine has been reported by Parry as one of the "emerging problem drugs of abuse" used by adolescents in large cities like Johannesburg and Cape Town.[8]

The reported use of cannabis (dagga) was higher than that of Methaqualone (Mandrax), coinciding with other studies in South Africa.[8] The use of Methaqualone varies according to the sites assessed, but its consumption is associated in some regions with a risk of involvement in criminal activities.[8]

There are numerous reports in the literature about the relationship between sexual and physical abuse and substance-related disorders.[9,10,11,12] In this group of students, a high number of them confirmed physical or sexual abuse and a statistically significant association with being AUDIT positive was found in both situations. Disclosure of physical and/or sexual abuse is a very sensitive issue to be reported in a self-administered questionnaire but, since anonymity was granted, the results could be considered valid.

The Odds Ratios (ORs) of sexual and physical abuse for both males and females revealed a higher risk of developing a substance-related problem in the individual victim of such abuse.

Conclusions

Alcohol was the most commonly abused drug in the screened group, followed by dagga, mandrax and cocaine; this concurs with similar studies in South Africa.[1,3,8] Students from this group who were sexually and/or physically abused are at higher risk of developing a substance-related problem later in their lives. A health education programme and more specific interventions should be designed on the basis of these research findings.

A brief psycho-educative intervention in the form of a talk on alcohol-related disorders and their complications was offered by the medical students in charge of each particular school after applying the questionnaires. Specialised psychological and/or psychiatric assistance was offered to those students who requested help.

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