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CONTENTS

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## ORIGINAL ARTICLES

- |   |  |     |
|---|--|-----|
| Neoplasms involving the spinal cord in Zimbabweans: an analysis of 262 cases .....  | PI Garrido, S Laher-Mooncey, NL Murphree,<br>N Jonker, LF Levy, S Makarawo ..... | 201 |
| Termination of pregnancy using extra-amniotic prostaglandin F <sub>2α</sub> - experience in a peripheral hospital .....                                 | A Krolkowski, KA Janowski, JV Larsen .....                                       | 204 |
| Epidemiological study of drug use in urban and rural secondary schools in Zimbabwe .....  | SW Acuda, AH Eide .....  | 207 |
| A comparison of three types of "M" traps for sampling tsetse fly (Diptera: Glossinidae) populations at South Luangwa Game Management Area, Zambia ..... | MM Ziba, M Mukunyandela, S Siziya, JS Chipipa, L Mwanza .....                    | 212 |
| Increased susceptibility of erythrocyte membrane lipids to peroxidation in sickle cell disease .....  | EU Essien .....  | 217 |

## CASE REPORTS

- |   |  |     |
|---|--|-----|
| Intracranial Burkitt's lymphoma with extension into orbital spaces resulting in bilateral blindness ..... | K Ramesh, LD Gahukamble, DB Gahukamble ..... | 220 |
| Munchausen syndrome by proxy - a case report and review of literature .....                               | OA Oyelami, AM Albaj, IK Airede .....        | 222 |
| Hypothyroxinemia in Acquired Immune Deficiency Syndrome (AIDS) .....                                      | CC Ezeala, E Chukwurah .....                 | 226 |

## REVIEW ARTICLES

- |  |                                  |     |
|--|----------------------------------|-----|
| Advances in electrodiagnosis in Zimbabwe. Part II: "Evoked Potentials" ..... | O Parry, LF Levy, J Mielke ..... | 229 |
|--|----------------------------------|-----|

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# Epidemiological study of drug use in urban and rural secondary schools in Zimbabwe

SW ACUDA\*, AH EIDE\*\*

## SUMMARY

In this survey a total of 2783 secondary school students of both sexes, mean age 15.5 years, from randomly selected schools in both rural and urban areas of Zimbabwe were studied using a self report questionnaire. The results strongly indicated that drug use was quite prevalent among the students.

The main drugs involved, in descending order, were: alcohol, tobacco, inhalants (solvents), amphetamines and cannabis. Others included mandrax, tranquilisers, sedatives and the hallucinogen *mudzepete*. No students reported use of heroin, cocaine, LSD or opium. Drug use increased with age and involved both sexes, the problem being more acute in the urban schools.

A differential use pattern is revealed, implying valuable information for targeted prevention efforts.

## INTRODUCTION

The last decade has brought to attention an emerging problem of substance abuse in the southern African region, including Zimbabwe. Available sources strongly indicate that consumption of both legal and illegal drugs are increasing.<sup>1,2</sup> However, knowledge about the situation is so far scarce, being either anecdotal or emanating from scattered small scale research or from the law enforcement agencies involving seizures and other drug related offenses.

In Zimbabwe, a few studies which have been carried out fairly recently<sup>3,4,5</sup> strongly indicate the presence of substance use among adolescents. Small scale studies in Nigeria and Kenya<sup>6,7</sup> also show that the drug abuse problem may be present throughout the sub-continent. This fear is further confirmed by publications which give a broader picture of the situation.<sup>1,8</sup>

Ethnographic and qualitative studies, have contributed significantly to the understanding of the integration of alcohol and to a lesser extent, cannabis use in many traditional African societies<sup>9,10</sup> and the economic, social and cultural mechanisms underlying these developments.<sup>11</sup>

All currently available studies point to alcohol as the main drug of abuse in the region. A recent study by Kortteinen has in particular presented reliable data on the changing and rapidly increasing use of industrially manufactured alcohol in Africa.<sup>12</sup> Available public statistics in Zimbabwe confirm this trend.<sup>13</sup> Among the illegal drugs, cannabis has been regarded as the most important, as it is both easily available and traditionally used.<sup>14</sup> In the southern African region, methaqualone (mandrax) has for some time been present mainly in transit to the South African market.<sup>8</sup> Even though there have been seizures of other types of illegal drugs,<sup>2</sup> such as heroin, cocaine and LSD, these are believed to constitute a minor but very likely growing problem.

In Zimbabwe, like in all the other countries in the region, government efforts to tackle the drug and alcohol problem or to formulate a national policy in the field have been hampered by a lack of precise, reliable data. Through a government drug and alcohol project in Harare, supported by the International Labour Organisation, a survey on the extent and nature of substance use among secondary school students was carried out in 1990. Being the first study of its kind in the region to establish baseline data, this study forms an important point of departure for future research and policy development.

## MATERIALS AND METHODS

The survey was conducted in seven secondary schools in one rural province in Zimbabwe (Mashonaland East) and in Harare province, representing urban schools. The schools were selected through stratified random sampling, the variables deciding the stratification being urban versus rural, government versus privately owned and high density versus low density areas of the city.

\*Department of Psychiatry

University of Zimbabwe

School of Medicine

P O Box A178 Avondale

Harare, Zimbabwe

\*\*University of Bergen

Research Centre for Health Promotion

Oisteingsgt 3

N-5007 Bergen, Norway

National Institute of Public Health

Geitemyrsveien 75

N-0468 Oslo, Norway

In all the seven schools data were collected from all forms one and three and five and six (mean age 15,5 years, range 12 – 21 years) students who were present in the sampled schools on the day of data collection, making a total of 2 783 respondents. This forms 1,7 pc of secondary school students within the two regions and 0,4 pc of all secondary school students in Zimbabwe.

The study took place between 24th September and 12th October 1990. Two hundred and two (7 pc) of the questionnaires were spoilt.

Table I: Details on sample sizes.

Count	Male	Female	1	3	5 + 6	pc
Rural	487	381	441	427		34
Urban	954	759	800	660	253	66
Public	1 114	879	960	841	201	77
Private	327	261	281	246	52	23
Total	1 441	1 140	1 241	1 087	253	
n = 2 581	(56 pc)	(44 pc)	(48 pc)	(42 pc)	(10 pc)	

A self administered questionnaire in the English language, developed by World Health Organisation specifically for student drug use surveys,<sup>15</sup> was used for data collection after minor adaptations/modifications following pretesting. The questionnaire, which was developed in a multi-centre, cross cultural study, had been shown to have high reliability and validity.

Data collection was conducted in classrooms by members of the research team. The teachers were not present during the exercise, and students were guaranteed confidentiality and anonymity. A standardised set of instructions was read to the students before they filled in the questionnaire.

An Amstrad PC/microcomputer with a 40 mb hard disc and the Statistical Package for Social Sciences (SPSS) software at the University of Zimbabwe was used for data analysis.

## RESULTS

According to this study, the main drug used by Zimbabwean secondary school students is alcohol: 38 pc stated that they have "ever used" it (i.e. at least once). The prevalence of all drug types is shown below. Table II shows prevalence of high use/abuse, defined as use on 20 or more days during the month preceding the survey.

Table II: Use of drugs ("have ever used").

	pc
Alcohol	37,5
Tobacco	20,3
Inhalants	11,4
Amphetamines	8,2
Cannabis	6,2
Mandrax	1,6
Mudzepele	1,3

Table III: Use of drugs on 20+ days last month.

	pc
Alcohol	3,4
Tobacco	1,4
Amphetamines	1,3
Inhalants	1,2
Cannabis	0,7
Mandrax	0,2
Mudzepele	0,2

While 7,6 pc of the students admitted having tried alcohol before they were 10 years old, corresponding figures for other drugs were 5,6 pc for tobacco, 1,8 pc for amphetamines, 2,1 pc inhalants, 1 pc cannabis and 0,5 pc mandrax. Use of drugs and drug abuse increased with age except for mandrax, amphetamines and inhalants (Table IV).

Generally, use of drugs by female students was less frequent than that for male students, except for amphetamines where the converse was true. It must be taken into account however, that the respondents' understanding of "amphetamines" varied very much to also include various pharmaceuticals. Figures for this drug, therefore, must be interpreted with caution.

Table IV: Drug use by age.

Have ever used	14 years or less pc	15-16 pc	17-19 pc	20+ pc	
Alcohol	31,1	39,5	46,1	43,2	p < 0,001
Tobacco	15,5	20,8	27,5	32,4	p < 0,001
Cannabis	3,2	5,9	10,6	18,9	p < 0,001
Inhalants	10,2	12,6	11,7	13,5	p > 0,05
Methaqualone	2,2	1,2	1,3	2,9	p > 0,05
Amphetamines	7,6	8,4	8,5	18,9	p > 0,05

As expected, a general difference was found between the sexes, with the exception to the rule being amphetamines.

Table V: Drug use by sex.

Have ever used	Male pc	Female pc	
Tobacco	26,8	12,2	$p < 0,001$
Alcohol	41,7	32,7	$p < 0,001$
Cannabis	9,5	1,9	$p < 0,001$
Inhalants	13,9	8,4	$p < 0,001$
Methaqualone	1,2	2,1	$p > 0,05$
Amphetamines	7,2	9,5	$p > 0,05$
Hallucinogen	1,4	1,2	$p > 0,05$

The majority of students that have ever tried tobacco, do so between 11 to 15 years of age. Comparing the sexes however, we find that the highest figure for first use of alcohol, cannabis, inhalants and amphetamines for males is in the age range 15+, whereas for females it is in the 11 to 14 year age range.

The results show clearly that there are very clear differences between the schools, as shown in Table VI and VII. Prevalence of alcohol, inhalants and amphetamines was higher in the private schools. For cannabis and mandrax the converse was true, although the registered difference is not statistically significant.

Table VI: Have ever used.

	Government pc	Private pc	
Alcohol	30,2	60,1	$p < 0,001$
Tobacco	15,5	36,9	$p < 0,001$
Inhalants	9,7	17,3	$p < 0,001$
Amphetamines	7,7	9,9	$p > 0,05$
Cannabis	6,5	5,0	$p > 0,05$
Methaqualone	1,8	0,9	$p > 0,05$

Urban students score significantly higher than rural students on use of tobacco and alcohol and slightly higher on use of mandrax.

One private high fee school scored much higher than any other school on tobacco and alcohol use. The private missionary rural school scored highest on use of

Table VII: Have ever used.

	Urban pc	Rural pc	
Alcohol	40,7	30,7	$p < 0,001$
Tobacco	22,5	15,9	$p < 0,001$
Inhalants	10,5	13,1	$p > 0,05$
Amphetamines	8,4	7,5	$p > 0,05$
Cannabis	6,7	5,1	$p > 0,05$
Methaqualone	0,8	3,1	$p < 0,001$
Mudzepepe	0,9	2,1	$p < 0,05$

inhalants and amphetamines, while the government rural school scored highest on cannabis.

With regard to source of drugs, 27,1 pc stated that friends are the most common source of drugs, followed by family (14,8 pc) and doctor/health worker (11,4 pc). However, one finds that friends are more important as a source for males than for females students (31,1 pc versus 22 pc), whereas the doctor/health worker is more important for females compared to males (13,9 pc versus 9,5 pc). Further, friends have a stronger influence on older students and the family becomes a less important source as the students become older. Friends are more important as a source for students at private secondary schools than for those in government schools, while the converse is true for the doctor/health worker.

The three most important reasons stated for drug use by the students were enjoyment (14,5 pc), religious custom (10,5 pc) and treatment (7,4 pc). Females score lower than males on enjoyment but higher on treatment, reflecting the higher prevalence among female students of using various pharmaceuticals. Concerning the urban-rural dimension, treatment is more important for the urban students. Likewise, urban students score higher on the negative reasons for drug use ("to be accepted", "to be sociable", "relief of stress") and on "curiosity". Rural students score higher on "enjoyment". The three negative reasons together were indicated by 7,4 pc of the students.

Regarding the students' attitudes to drug use, 50 to 60 pc report negative attitudes, and in particular to "regular use of cannabis" (64,7 pc). Fewer students indicate negative use towards alcohol. There is no significant difference in attitudes between sexes. The

urban students have clearly more negative attitudes towards cigarette smoking, trying and regular use of cannabis and regular use of alcohol. One also finds that students at private schools are more negative towards drug use than their government schools counterparts.

### DISCUSSION

In general, the findings of this study confirmed results from similar studies of drug use among secondary school students in Zimbabwe and other African (sub-Saharan) countries.<sup>3,4,5,6,7</sup> Alcohol is the most frequently used drug, followed by tobacco. However, it was unexpected and indeed surprising that the use of inhalants and amphetamines (such as pep/pills, slimming pills etc.) was more prevalent than cannabis use, which ranked as number five. Previous studies quoted above had ranked cannabis as the third most frequently used drug among the population in question. It is possible that the relatively low figure on cannabis use is related to its status as an illegal drug. It is also possible and very likely that the results were affected by the respondents in this survey being predominantly very young. The present study and previous studies have clearly shown that cannabis use increases with age, peaking in the mid-twenties.

An explanation for the relatively high prevalence of inhalants might be that these are substances easily available at no or very low price, and that there currently is little awareness in Zimbabwe of their harmful effects. This is a rather disturbing finding which points to the importance of also addressing these substances in prevention efforts among the very young. Heavy use of inhalants is known to be associated with serious damage to liver, kidneys and the central nervous system.<sup>16</sup> Research in western countries has estimated that inhalant users run a five to 10 times greater risk of using other types of dangerous drugs.<sup>17</sup>

Another unexpected finding in this survey was the low self report on use of mandrax, a tranquiliser which has received much attention in recent years following major seizures in the region. It is recognised that this drug is currently being trafficked from India to markets in South Africa through its bordering countries. It has been expected that a blooming market would be created in the transit countries ("spillover effect"). This survey indicates however that this drug at present is not easily available to or affordable by secondary school pupils, thus constituting a marginal problem among the population in question.

The relatively low number of "heavy users" does not mean that the drug problem in secondary schools in Zimbabwe should not cause concern. The low figures could be due to the low mean age of the respondents. Development of heavy/frequent drug use or abuse can take years.

Although this study does not provide information on development over time, it should be noticed with concern that a large number of students under 14 years of age have already been involved in taking alcohol and inhalants. Future research should be able to tell whether new cohorts of high consumers are under development or if the early experimenting is now harmless. As previous European research has shown a clear link between early experimenting/use and later abuse, it is likely that the early use and experimenting noted here will negatively influence future drug use level among young Zimbabweans. Nevertheless, the main implication of this finding is, again, that preventive measures should be directed towards children at a very early age, starting in primary school.

The difference in drug use between sexes is expected. It is, however, surprising that the number of female heavy users equals that of males on most of the commonly use drugs.

A viable interpretation of this finding is that it is easier for a female to develop a drug problem when the initial barrier to drug use has been crossed. Eventually it might be a reflection of the tendency for female students to experiment with some of the drugs at an earlier age. For the policy on prevention this implies that identification of female users as early as possible could have a substantial positive effect.

*Table VIII: Heavy drug use (20+ days last month) by sex.*

	Male pc	Female pc	
Alcohol	3,6	3,1	p > 0,05
Tobacco	2,0	2,0	p > 0,05
Inhalants	1,3	1,1	p > 0,05
Amphetamines	1,1	1,4	p > 0,05
Cannabis	0,9	0,3	p < 0,001
Methaqualone	0,2	0,3	p > 0,05

The differences between the various categories of schools is another interesting finding in this study. The broad picture is that experimenting and use of drugs is more prevalent in private than in Government schools, and more prevalent in urban than in rural schools. It is, however, worth noting that this broad picture has exceptions, i.e. that use of the low prevalent mandrax and hallucinogen (*mudzepete*) mainly takes place among rural students and that cannabis and mandrax score higher in public schools than in private schools. Thus, there are likely to be different types of drug use patterns among different sub groups of this population.

It is clearly shown that peer pressure ("friends") is important as a source for drug use, but also that the pressure from friends to experiment with and use drugs is much stronger in private schools than in Government schools. The "casual acquaintance" is hardly relevant for the rural student but more so for older, male urban students. This type of information is useful for planning of prevention programmes directed at various sub groups.

The fact that females more often state "treatment" as a reason for drug use underscores that gender is an important variable regarding influence by the medical professions. Thus prevention efforts through the health services will be likely to reach female secondary school students more effectively than males. The males on the other hand will more easily be reached through utilising methods to influence the group.

The fact that "treatment" as a reason for drug use scores significantly higher in the rural area where health services in general are less developed and less accessible compared with urban areas, might reflect an influence from traditional medicine.

The group of students stating negative reasons for drug use forms an important target group for early identification and intervention. It is more likely that individuals with negative reasons attached to drug use are more vulnerable to developing drug problems than others.

**Conclusion:** This survey forms one of very few efforts to establish baseline data on drug use in Zimbabwe and in the region. It is important as necessary groundwork for monitoring trends in drug use in the future. In providing information on secondary school students' drug use related behaviour, a point of departure for preventive education and health promotion has also been established.

The results indicate that drug use among this population is established, although still not as serious as one could fear. An effective prevention programme within the primary and secondary school system could therefore be of great importance in arresting the problem from developing into the dimensions known in other parts of the world.

The results of the study indicate clearly that the pattern of drug use varies between different sub categories of students. Prevention programmes should thus be differentiated to fit the Zimbabwean reality.

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