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SUBSTANCE USE BY STUDENTS IN SOUTH AFRICA, TANZANIA AND ZIMBABWE

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The study aimed to compare substance use of students in South Africa, Tanzania, and Zimbabwe. Multistage sampling produced samples of 2946, 2491 and 183

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students aged 13-14 in Cape Town, Dar es Salaam (DAR) and Harare respectively. Questionnaires were administered in classrooms. High prevalence rates of tobacco, alcohol and solvent use and site differences were noted – among males in the previous year, 23.5% in Cape Town had smoked cigarettes, 15.2% in DAR had inhaled solvents and 29.5% in Harare had drunk alcohol. Lifetime prevalence rates for cannabis were low. Except for solvents, rates were lowest in DAR. Gender differences were noted in Harare and DAR for certain substances. The importance of transnational research using comparable methodologies and analytical designs is emphasized.

KEY WORDS: Students, adolescents, substance use, South Africa, Tanzania, Zimbabwe

INTRODUCTION

In the 1990's, epidemiological studies that aimed to document prevalence rates of substance use among high-school students were carried out in Cape Town (South Africa)(Flisher, Parry, Evans, Lombard, & Muller, 1998; Flisher, Ziervogel, Chalton, Leger, & Robertson, 1993a, 1993b, 1993c), Dar es Salaam (Tanzania) and Harare (Zimbabwe)(Eide & Acuda, 1995, 1996). These studies all had large samples of school students who completed self-report questionnaires in a classroom context. However, we were unable to locate any reports containing inter-country comparisons for prevalence rates of substance use by school students. One cannot draw such comparisons from the reports cited above since the samples are heterogenous in terms of variables such as age and urbanicity.

An further important aspect of the epidemiology of substance use is gender differences. In industrialised western countries during the first half of the 20th century, the prevalence of smoking was much higher among men.

During the second half of the 20th century, the prevalence of smoking increased among women in many countries, while decreasing among men. These trends were particularly pronounced among young adults and adolescents. In some countries, the prevalence of smoking among adolescents became higher among girls than among boys (Waldron, 1991; Pierce, 1989). These changes can be understood as reflecting a comprehensive diffusion process (Rogers, 1995). The groups who first began smoking (men, well educated and with high income) tended to be first to cease smoking (Ferrence, 1996). These changes first took place in Western countries. Developing countries seem to go through similar processes of change after a time lag, which may vary across regions and countries. Similar processes are relevant also for other health related behaviours such as alcohol use and use of illicit drugs.

Studying gender differences in substance use among adolescents within countries provides information important for the planning of interventions. Substance use control efforts should be aimed at reaching young people before and at the age when the recruitment of users is high. This age may be different for boys and girls. Furthermore, gender differences in substance use may reflect gender differences in aetiologies and may indicate a need for gender specific control strategies. Comparisons of gender differences across countries may shed light on the diffusion processes described above.

We decided to address these aspects by conducting secondary data analyses of school-based projects from Cape Town (South Africa) (Flisher et al., 1998), Dar es Salaam (Tanzania), and Harare (Zimbabwe) (Eide & Acuda, 1995). Specifically, a subset of each sample was selected to ensure demographic similarity between the samples to facilitate inter-city comparisons. The aims of the analyses were as follows: (a) to provide prevalence rates for use of selected substances among urban school students aged 13-14 years in the three cities, and (b) to document the male:female prevalence ratios for these students.

METHOD

Participants

Cape Town. The study population for the study from which the data for the present report were extracted consisted of all grade 8 and 11 students at public high schools in the Cape Town metropole. Schools in the Cape Town metropole were stratified according to postal code grouping. We selected a total of 39 schools such that the number of schools selected from each stratum was directly proportional to the number of students in all the schools in that stratum. The probability of selection of a school was directly proportional to the number of students in the school. Within each school, two classes were randomly selected from all the classes in grades 8 and 11. Forty students were randomly selected from the combined class lists of the two classes. Absent students were replaced from a maximum of five additional randomly selected students from the combined class lists. For the present report, only students in grade 8 were included as no students in grade 11 were aged 13-14 years.

Dar es Salaam. The study population for the project from which data for the present analysis were extracted consisted of students in standards 6 and 7 in primary schools and in forms 1 and 2 in secondary schools in Dar es Salaam. A total of 44 primary schools and 5 secondary schools were selected by simple random sampling. One class within each standard or form was randomly selected, and all the students in the selected class participated in the study. For the present report, only students in standards 6 and 7 in the 34 urban primary schools were included.

Harare. The study population was high-school students in forms 1, 3, 5 and 6 in four of the nine provinces in Zimbabwe: Harare, Mashonaland East, Mashonaland West and Matabeleland. A total of seventeen schools were sampled randomly within four categories: private high fee paying, low density urban, high density urban and rural. A fixed number of students (125 at small schools and 250 at large schools), stratified by gender, were randomly selected at each school. The 6 government schools in the Harare province were included in the present analysis.

Instruments

In all three sites, self-report questionnaires were used. However, there were some differences in the instruments used in the three sites.

Cape Town. Very similar versions of the instrument have been used in previous studies and it has been subjected to extensive pilot studies in small groups and classrooms (Flisher, Ziervogel, Chalton, & Robertson, 1993). The instrument was translated from English into the other main languages spoken in Cape Town (Afrikaans and Xhosa) and then back translated by other people who had these languages as home language.

To assess cigarette smoking, we asked, "Have you ever smoked a whole cigarette?". If they answered affirmatively, they were asked (inter alia) "In the past year, have you smoked a whole cigarette?" and "In the past month, on how many days did you smoke cigarettes?" To assess alcohol use, we asked, "Have you ever used alcohol (including beer and wine), other than a few sips?". If they had done so, they were asked, "In the past year, did you use alcohol other than a few sips?" and "In the past month, on how many days did you have at least one sip of alcohol?". For cannabis, we asked, "Have you ever smoked dagga on its own?" The word "dagga" is South African English for cannabis. The words "on its own" were included since cannabis is frequently mixed with other substances (especially methaqualone)

in Cape Town. Again, if they replied that they had used cannabis on its own, they were asked whether they had done so in the previous year and the number of days they had done so in the previous month. Finally, we asked, "Have you ever sniffed petrol, glue or thinners?", and, if they had ever done so, similar two contingent questions as for the other substances. We regarded a student as having used a substance in the previous month if the response to the question involving how many days they had used the substance in the previous month was at lest one day.

The test-retest reliability of the items comprising the questionnaire was documented in a pilot study involving 358 students attending private schools in Cape Town (Flisher, Evans, Muller & Lombard, 1999). For lifetime use, Cohen's kappa (Cohen, 1960) was 0.85 for tobacco, 0.78 for alcohol, 0.80 for cannabis, and 0.71 for sniffing solvents (Flisher et al., 1999).

Harare. The questionnaire was adapted from that developed by the World Health Organisation for use among school students in different social and cultural settings (Acuda, Eide, Butau, Khan, & Aarø, 1996). It also drew on experiences the European study on Health Behaviour in School-Aged Children (HBSC)(Wold, Aarø, & Smith, 1994). It was administered in English.

We asked, "Have you ever smoked, chewed or sniffed any tobacco product (such as cigarettes, cigars, pipe tobacco, chewing tobacco, snuff products, mudzanga, sharatu, chikwepa, mudhombo, chimonera, etc.)?", "Have you ever smoked, chewed or sniffed a tobacco product in the pat 12 months?" and "Have you smoked, chewed or sniffed a tobacco product in the past 30 days?". Regarding alcohol use, they were asked, "Have you ever drunk any alcoholic beverage (including beer, wine, spirits, chibuku, kachasu, sikokian, tototo, kangopisa, hwetematanda)?", and if they had drunk any alcoholic beverage in the previous 12 months and 30 days. For cannabis, we asked, "Have you ever taken any mbanje (i.e. cannabis, dagga, marijuana, hashish, bhang, joint, pot, ganja)?", and whether they had taken

cannabis in the previous 12 months and 30 days. For solvents, we asked, "Have you ever sniffed or inhaled things like glue, spray, paint, petrol, solvents, aerosols, thinners, to get high or to feel good? (Do not include smoke)", and whether they had sniffed or inhaled things to get high in the previous 12 months and 30 days. For each substance, possible responses were "Yes" and "No", except for the final question for each substance when there were three options for "Yes", each corresponding to a range of days. The test-retest reliability was assessed in two secondary schools. The Pearson's product moment correlations for the items involving lifetime use of the substances were 0.73 for tobacco, 0.71 for alcohol, 1.00 for cannabis, and 0.74 for inhaling or sniffing (Acuda et al., 1996).

Dar es Salaam. The questionnaire used in Dar es Salaam was based on that used in Harare, although we modified some questions after piloting to ensure relevance to the Tanzanian setting. Although there was one form of the questionnaire, each question was available in both English and Kiswahili.

Procedure

In all three sites, members of the research teams distributed a self completed questionnaire to students in a normal classroom context. The questionnaire was anonymous and confidential, and we took care to ensure that students were not able to observe the responses of their classmates. Consent was obtained from the education authorities, the schools, and the students.

Analysis

We analysed the data for each site separately. To address the first aim, we calculated prevalence estimates for use of tobacco, alcohol, cannabis and solvents, stratified by gender. We calculated prevalence estimates for lifetime use and use in the previous year and month. In addition, we calculated the 95% confidence intervals for each estimate.

We used contrast ratios to document the male/female ratios in Cape Town and odds ratios for the other sites, with 95% confidence intervals. Contrast and odds ratios can be declared significant at the 5% level of significance if their 95% confidence intervals do not contain 0 and 1 respectively.

For the Cape Town analyses only, we took the design effect into account. Prevalence rates with 95% confidence intervals were calculated, taking the multistage stratified design into account. The without replacement design option was used and the design stages included were postal code area, school and grade. Sampling weights were calculated using the number of students in the school, the number of students in the grade (in a specific school) and the number of students sampled from the grade. Prevalence rates were calculated as ratios: the number of students who engaged in the activity divided by the number of grade 8 students aged 13 and 14 years.

RESULTS

There were 1046 students in the Cape Town sample, 2491 in Dar es Salaam and 366 in Harare.

For tobacco, the prevalence rates for each time frame and for each gender were highest for Cape Town. The prevalence rate for lifetime use by males, for example, was 38.9% in Cape Town, 12.6% in Dar es Salaam, and 15.2% in Harare. The 95% confidence intervals for Cape Town did not overlap with those for either Dar es Salaam or Harare for any time frame for either gender (Table 1). Conversely, the 95% confidence intervals (CI's) for Dar es Salaam and Harare overlapped with each other for each time frame and both genders.

For alcohol also, the rates were highest in Cape Town (Table 1). With the exception of use in the previous month by females, the rates were higher

in Harare than Dar es Salaam (Table 1). However, many of the CI's between the three cities overlapped. For lifetime use, the prevalence rates for males were 37.3% in Cape Town, 24.8% in Harare and 8.7% in Dar es Salaam.

For cannabis, the highest prevalence rate was 5.1% for lifetime use for Cape Town males (Table 1). The only consistent inter-country difference was that rates were highest for Cape Town. However, the CI's for all three countries overlapped for all time frames and for both genders.

For solvents, for males, for all time frames, the rates were highest in Dar es Salaam (Table 1). For lifetime use, for example, the prevalence rates were 17.5% for males in Dar es Salaam, 8.5% in Harare and 5.9% in Cape Town. The CI's for Dar es Salaam did not overlap with those for the other cities, except for previous month use and Harare. For females, there a pattern for the rates to be highest in Dar es Salaam, although many of the confidence intervals overlapped.

Prevalence rates were significantly higher in males compared to females in Harare for lifetime and previous month use of alcohol, and for lifetime use for alcohol (Table 2). In addition, prevalence rates were significantly higher in males in Dar es Salaam for lifetime and past year use of tobacco. Prevalence rates for solvent sniffing were significantly higher for males in Dar es Salaam. There were no other differences between the genders. In Cape Town, for example, there were no gender differences for any substance and time frame.

DISCUSSION

The results suggest that adolescents in Cape Town, Dar es Salaam and Harare are at risk for the adverse consequences of substance use, especially use of alcohol and tobacco. Students in Cape Town appeared to be more at risk than their counterparts in Dar es Salaam and Harare, except for solvent use for which students in Dar es Salaam were more at risk.

Table 1. Prevalence rates (95% confidence intervals) for use of selected substances

	Cape Town South Africa (n = 2,946)		Dar es Salaam, Tanzania (n = 2,491)		Harare, Zimbabwe (n = 183)	
	Males %	Females %	Males %	Females %	Males %	Females %
Tobacco						
Lifetime	38.9 (33.5-44.0)	34.5 (28.6-40.4)	12.6 (9.7-16.1)	5.0 (3.6-7.0)	15.2 (10.9-20.6)	4.5 (2.0-8.7)
Previous year	23.5 (19.0-28.0	24.2 (18.3-30.1)	9.1 (6.7-12.2)	3.2 (2.0-4.8)	7.6 (4.6-11.8)	1.9 (0.5-5.1
Previous month	21.1 (17.2-25.0)	21.3 (16.0-26.6)	0.4 (0.1-1.7)	0.3 (0.1-1.1)	2.9 (1.2-5.8)	0.6 (0.0-3.1)
Alcohol						
Lifetime	37.3 (32.2-42.4)	31.2 (25.9-36.5)	8.7 (6.1-11.5)	9.9 (7.7-12.4)	28.4 (22.7-34.8)	17.9 (12.5-24.6)
Previous year	21.4 (15.9-26.9)	18.9 (13.6-24.2)	8.7 (6.1-11.5)	2.9 (1.8-4.5)	14.7 (10.4-20.0)	12.2 (7.7-18.0)

Table 1. (Contd.)

	Cape Town South Africa (n = 2,946)		Dar es Salaam, Tanzania (n = 2,491)		Harare, Zimbabwe (n = 183)	
	Males %	Females %	Males %	Females %	Males %	Females %
Previous month	16.2 (13.1-19.3)	16.6 (12.9-20.3)	2.6 (1.4-4.7)	2.9 (1.8-4.5)	4.7 (2.4-8.3)	2.6 (0.8-6.1)
Cannabis						
Lifetime	5.1 (2.55-7.6)	3.5 (1.5-5.5)	3.6 (2.1-5.8)	2.2 (1.3-3.7)	2.8 (1.2-5.8)	1.9 (0.5-5.1)
Previous year	3.1 (1.1-5.1)	2.3 (0.5-4.1)	2.0 (1.0-3.9)	1.5 (0.7-2.8)	2.4 (0.9-5.2)	1.3 (0.2-4.2)
Previous month	2.7 (0.7-4.6)	2.2 (0.8-3.6)	0.4 (0.1-1.7)	a	2.4 (0.9-5.2)	1.3 (0.2-4.2)
Solvent						
Lifetime	5.9 (3.4-8.4)	6.0 (2.1-9.9)	17.5 (14.2-21.5)	10.2 (8.1-12.8)	8.5 (3.1-9.5)	7.1 (3.8-11.9)
Previous year	1.4 (0.2-2.6)	3.2 (0.8-5.6)	17.1 (13.8-21.0)	10.2 (8.1-12.8)	5.7 (3.1-9.5)	3.3 (1.5-6.5)
Previous month	1.4 (0.2 – 2.6)	1.8 (0.2 – 3.4)	8.2 (5.9-11.2)	3.8 (2.5-5.6)	3.3 (1.5-6.5)	1.9 (0.5-5.2)

[a]Data missing owing to a questionnaire error

One possible reason for the finding that students in Cape Town have higher prevalence rates of alcohol and tobacco use is that they have more disposable income than their counterparts in Dar es Salaam and Harare. Also, the rates for alcohol use were lowest in Dar es Salaam. A possible reason for this is that alcohol is strictly proscribed by Islam, which is the dominant religion in Dar es Salaam. In both Cape Town and Harare Christianity is the dominant religion. But why should students in Dar es Salaam have relatively high rates of solvent use? This could be related to the finding that the rates of alcohol use are lowest in Dar es Salaam.

It is possible that solvents are used as a substitute for alcohol, resulting in high rates of solvent use. In other words, a student in Dar es Salaam who would have used alcohol if it had not been strictly forbidden resorts to solvents to meet the psychosocial needs that would have been met by alcohol. Further research is necessary to investigate whether this "substitution hypothesis" is supported by empirical evidence (Eide, Diallo, Thioub, & Blom, 1999).

It is unlikely that inconsistencies in question format can account for all the differences. Indeed, this cannot account for any differences between Dar es Salaam and Harare since the questionnaires used in these two cities were very similar. It is unlikely that the phrasing of the question involving solvent sniffing would account for the relatively low rates in Cape Town. In both Dar es Salaam and Harare, the questions referred to sniffing or inhaling substances to get high or feel good. In Cape Town, this motivational aspect was not included. Thus, one might expect that the Cape Town rates would be higher than those in the other cities if the phrasing of the question was the only factor accounting for the differences. Similar considerations apply to tobacco use. In Cape Town, the question referred to "smoking a whole cigarette", whereas in the other cities it referred to smoking, chewing or sniffing any tobacco product.

Thus, all other things being equal, one would expect lower rates of tobacco use in Cape Town than in Dar es Salaam or Harare. The questions for alcohol and cannabis are very similar in all three sites and are thus unlikely to account for inter-city differences.

Table 2. Ratios (95% confidence interval) for males vs. females for use of selected substances

Drug Use	Cape Town, South Africa (Contrast ratios)	Dar es Salaam, Tanzania (Odds ratios)	Harare, Zimbabwe (Odds ratios)
Tobacco			
Lifetime	4.4 (-4.4-13.2)	2.7* (1.7-4.1)	3.8* (1.6-9.8)
Previous year	-0.7 (-8.3-6.9)	3.2* (1.7-5.2)	4.2* (1.1-18.5)
Previous month	-0.2 (-6.8-6.4)	1.3 (0.2-10.9)	4.6 (0.5-10.5)
Alcohol			
Lifetime	6.0 (-1.4-13.4)	0.9 (0.6-1.4)	1.8* (1.1-3.11)
Previous year	2.5 (-5.3-10.3)	0.9 (0.6-1.4)	1.2 (0.7-2.4)
Previous month	-0.4 (-4.5-3.7)	0.9 (0.4-1.9)	1.9 (0.5-7.3)
Cannabis			
Lifetime	1.6 (-0.9-4.1)	1.7 (0.9-3.4)	1.5 (0.3-7.7)
Previous year	0.7 (-1.5-2.8)	1.4 (0.6-3.4)	3.8 (0.4-86.0)
Previous month	0.5 (-1.6-2.6)		1.9 (0.3-14.1)
Solvent			
Lifetime	-0.1 (-3.4-3.2)	1.8* (1.3-2.6)	1.2 (0.5-2.9
Previous year	-1.8 (-4.3 – 0.7)	1.8* (1.3 – 2.6)	2.3 (0.7-8.6)
Previous month	-0.5 (-2.0 – 1.0)	2.3* (1.3 – 3.7)	1.8 (0.4-8.7)

* $p < 0.05$

There were no significant differences between males and females in South Africa for any substances for any time frame. However, in Dar es

Salaam and Harare, there were several instances where males had significantly higher prevalence rates then females. For tobacco, males in both Dar es Salaam and Harare had significantly higher prevalence rates for both lifetime and previous year use; for alcohol, males in Harare had significantly higher rates for lifetime use; and for solvents, males in Dar es Salaam had significantly higher rates for all three time frames. Why should gender differences no be apparent in South Africa? First, economic factors could be implicated; males in Dar es Salaam and Harare may have greater access to money to purchase substances than females. In South Africa, this may not be the case. Second, gender roles may be less rigid in Cape Town, resulting in fewer behavioural discrepancies between the genders.

These explanations may both fit into the larger theoretical framework of diffusion of innovations (Rogers, 1995). The Cape Town area of South Africa may have reached a stage of development where gender differences in factors influencing substance use are generally less pronounced. This may be the case on various levels, for instance with regard to education, income, culture and social factors such as social norms. We may hypothesise that the social disapproval of substance use among young women is not as strong in Cape Town as in Harare and Dar es Salaam.

Consistent with the diffusion of innovation perspective, a future increase in substance use among girls and young women in Harare and Dar es Salaam may be expected. An important challenge for control policies is to develop strategies which can counteract this tendency at an early stage. Preventing an increase would be more beneficial to public health and may prove easier that to reverse the trend after a period of increasing prevalence of substance use.

There are some important methodological limitations in the study. First, the results are applicable only to 13- and 14-year-olds attending in selected urban areas in the three countries. We thus do not know the extent to which the results are generalisable to other age groups, to rural areas, to students who were absent on the day the questionnaire was administered or to adolescents who have dropped out of school. Second, differences in the phrasing of the questions could have affected the rates of substance use. However, as explained above, this is unlikely to account for the differences that we observed between the cities. Third, the sampling strategy differed between the sites. Although there is no specific reason to suspect that this could have biased the results since an attempt was made to obtain a representative sample of students attending school at each site, it is possible that unrepresentative samples at one or more sites could account for some of

the differences in prevalence rates. It is unlikely that they would account for the gender differences since there is no reason to think that any bias would apply systematically to one gender. Fourth, there were differences between the sites in terms of analytical strategy, with the design effect taken into account in South Africa only. However, the impact of the design effect is primarily on the precision of the estimates as opposed to the magnitude of the estimates themselves. Finally, the sample size in Harare was small, which contributed to the wide confidence intervals. One would have been more confident about the representativeness of the sample if the sample size had been higher.

Future projects involving substance use by school students in South Africa, Tanzania and Zimbabwe should aim to produce data unencumbered by these limitations. Thus, they should employ identical or very similar questionnaires, sampling strategies and analytical approaches. They should include rural populations and a wide range of ages of the participants. However, while prevalence data are crucial in identifying a need for intervention strategies and mobilising commitment from politicians and other stake holders, they are insufficient as a basis for developing such strategies. Analytical studies that aim to understand the reasons for substance use will suggest what specific causes of adolescent substance use should be prioritised in prevention programmes. Future research efforts will have maximal influence on adolescent substance use if they include prominent analytical components.

The Southern African Development Community (SADC) Epidemiology Network on Drug Use has recently been formed to improve the information base for policy makers in SADC countries to address the health and socio-economic burden caused by the misuse of alcohol and other drugs. This provides an opportunity to further comparative research between scientists in South Africa, Tanzania and Zimbabwe and other SADC states.

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DRUG AND ALCOHOL CONSUMPTION BY OUT-OF-SCHOOL NIGERIAN ADOLESCENTS

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This study assessed the consumption of alcohol among out-of-school adolescents in one urban area of Central Nigeria. Unlike earlier studies of alcohol use in Nigeria, the study focussed on a segment of the population that is difficult to reach and probably at high risk of alcohol and drug abuse. In addition, the focus of the study was on both western and traditional alcoholic beverages. The sample consisted of 292 adolescents aged 11 to 20 years who were engaged in different occupations, including street hawking, carpentry, motor mechanic and shoe repair work. Lifetime consumption of alcohol was reported by 38.7% of the adolescents. Beer was the most often consumed alcohol in the past year and past month. The average age of self-initiated drinking was 13.2 years. The consumption of alcohol was described as "very harmful" to health by 30.1% of the sample. The use of inhalants and cannabis was strongly associated with alcohol use in the past year. The odds of drinking beer in the past year increased with age. Adolescents who were 17 years or older were 3 times more likely to have consumed beer in the past year than those who were 11-14 years of age. Irrespective of age of participants, perceived harmfulness was inversely associated with beer drinking. There was no relationship between parental level of education and alcohol consumption. In spite of the limitations of this study, it is significant in shedding some light on alcohol and drug use in a segment of Nigerian youth not often included in epidemiological surveys.

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INTRODUCTION

Prior to Africa's contact with the West, the only alcoholic beverages consumed by Nigerians were produced locally from palm tress and grains. In the southern parts of the country palm wine was (and continues to be) produced from rafia or oil palm trees. In the "grains belt" of northern Nigeria, several types of drinks are produced from millet, guinea corn, rice, and soya beans. Among these are the very popular beverages known as burukutu and pito. These drinks are of low alcohol content when consumed fresh but with fermentation the alcohol content increases significantly. Among the locally produced drinks, the most potent in terms of the ethanol content, is a distillate of palm wine known locally as ogogoro, kinkana, firewater, among other names. This drink is of historical significance in Nigeria because, as a local gin, colonial administrators banned it in an attempt to control the West African liquor trade in the early part of the last century.

The first Western beverages were introduced into Nigeria by explorers who brought them as gifts to African chiefs and elders. Soon after, the continent witnessed the introduction of alcohol as a commercial product in the late 19th. Century (Pan, 1975). Not long after this the effects of these "new drinks" on the local populations were felt. A chief in what is present day Nigeria is quoted as complaining to a colonial administrator that rum was ruining his people. "It has made them mad" (Pan, 1975).

The first local brewery for the commercial production of beer opened in Nigeria in 1949 and by 1979 there were 9 breweries, including the first Guinness (stout) brewery outside Ireland. In the 1980s there were as many as 30 breweries and many distilleries producing more that 40 brands of beer and a wide variety of wines and liquors. After several difficult years for the alcoholic industry during which some breweries were closed due, in part, to a ban on the importation of barley, the industry is on a significant upswing today. The new economy, which, like democracy, followed many years of military rule, has opened the market for largely unrestricted production and importation of all types of alcoholic beverages. Local and foreign beverages now compete for the attention of consumers. Indeed, there are few parts of the country today – whether rural or urban - where commercial alcohol products are not one of the easiest products to obtain.

There is a relatively long tradition of alcohol epidemiology in Nigeria. Surveys among students in secondary and tertiary institutions have been

conducted for many years. One of the consistent findings from these studies is that beer is the most popular alcoholic beverage in Nigeria. The Nigerian beer is sold in 60 cl. bottles (about twice the quantity liquid in a typical American bottle of beer). The Standard Organization of Nigeria (SON) specifies a minimum ethyl alcohol content of 3% for lager and a maximum of 6% for stout. A typical beer has about 4% alcohol content but one popular brand has 5.8% ethanol.

There are many limitations in the epidemiologic studies conducted in the country (Obot, 1993), especially the problem of measuring the quantity of alcohol consumed and the lack of some standardization of alcohol abuse measures. It has therefore been difficult to compare findings from different studies. Yet, there is evidence showing the extent of alcohol use and abuse among youth and adults in Nigeria (Obot, 1990). In several studies from different parts of the country, high proportions of students report lifetime and recent alcohol use. In a survey of secondary school students in 17 schools, Anumonye (1980), reported that 20.9% of the students had taken alcohol at least once. Nevadomsky (1982), found a much higher rate of lifetime alcohol use (about 66%) in another survey of secondary students. What is not clear is how these studies measured first contact with alcohol, i.e., whether the distinction was made between sips from parents' cups and self-initiated drinking of a glass or bottle of an alcoholic drink. This is an important distinction to make because it is not uncommon for parents, including mothers who brew the traditional beverages, to give alcohol to very young children (Ojiji, 1993; Tamen at al., 1995). Studies that have taken this into consideration have shown that drinking among Nigerian adolescents begins between the ages of 11-15 years (Oladimeji & Fabiyi, 1995).

As one of its objectives, the National Drug Law Enforcement Agency (NDLEA, 1992, 1993) embarked on a school survey several years ago. In selected secondary schools in two major metropolitan centres (one in the north and the other south), the NDLEA surveyed students on their use of alcohol and other drugs in 1991 and 1992. The results of these surveys showed a clear difference between alcohol use in both regions of the country which can be attributed to the effect of religion. (The north is predominantly Muslim while most southerners are Christian). The rate of reported current drinking among students in the northern city (Kano) was much lower than among students in the southern city (Lagos). What these surveys have suggested has been the need to study regional variations in drinking behavior and use of other drugs in Nigeria.

Surveys have also been conducted among university students. For

example, in one of the earliest studies of its kind, Oshodin (1981), showed that 40% of university students had "abused" alcohol in the previous year. In two surveys in 1984 and 1988 in one university, Oldimeji and Fabiyi (1995) reported past year use of alcohol of 66.4% and 84%, respectively.

The purpose of this study was to assess the level of drinking and drug use among youth who had dropped out of school and were engaged in street hawking, apprenticeship, or sale of other products. Because little is known in the literature on alcohol use in Nigeria about the use of traditional drinks, a secondary objective of the study was to assess the consumption of these beverages. The significance of this lies in the high potential for the abuse of these drinks because they are cheap, locally produced in large quantities and, depending on type, can be very potent. This study was exploratory in nature, so no specific hypothesis was tested.

METHOD

Participants

Participants in this study were male youth aged 11-20 years who were engaged in different unskilled occupations or undergoing apprenticeship training in these occupations at the time of the study. We were specifically interested in youth, therefore older persons were not interviewed. The study was conducted in Jos, a small town on the Jos Plateau in central Nigeria. The different occupations were street hawker, petrol station attendant, carpenter, shoe repairer, and car mechanic. Only male adolescents were selected for the study because, even though females are engaged in street hawking and the selling of petrol. On the other hand, it is very rare to find female mechanics, shoemakers, or carpenters and we were particularly interested in these occupations.

Procedure

All interviews were conducted in each participant's place of work. Street hawkers were approached on the street or around the motor park by trained interviewers most of whom were students of the University of Jos. Apprentices were approached in their shops and asked to participate in the study. Even though participation was voluntary, almost everybody approached agreed to be interviewed.

Measures

A survey protocol developed for use in a household survey of alcohol and other drug use (Obot, 1993) was adapted for this study. In the study the focus was on the use of alcohol, tobacco and other drugs. Questions on alcohol use included types of alcohol used, frequency of use, and perception of harm caused by drinking. The demographic variables of interest were age and level of education of father and mother.

Table 1: Occupations of out-of-school adolescent survey respondents (n =292)

Occupation	N	%
Carpenter	69	23.6
Mechanic	98	33.6
Petrol Station attendant	31	10.6
Shoemaker	32	11
Street Hawker	61	21

Note: Percents do not add up to 100 because of missing data.

RESULTS

Table 1 shows the distribution of adolescents in different occupations. More than half (50%) of the respondents were mechanics or carpenters or serving as apprentices in these professions. The average age of participants in the study was 16.5 years (SD = 2.2). None of the respondents had completed secondary school and many never went beyond primary school. Their parents were also disproportionately of low educational attainment. Seventy percent of the fathers and 86 percent of the mothers either never entered school or did not go beyond primary school.

Table 2: Reported number of alcohol drinkers in the "past year" and "past month" by type of beverage

Alcohol use	Past year		Past month	
	n	%	n	%
Beer	82	28.1	57	19.5
Burukutu	32	11.0	28	9.6
Pito	24	8.2	23	7.9
Ogogoro	33	11.3	24	8.2
Palmwine	50	17.1	35	12.0
Other	24	8.2	19	6.5

Alcohol use

The average age of self-initiated drinking by the respondents in this study was 13.2 years (SD = 2.7). More than one-third (38.7%) of the sample had taken alcohol at least once in their lives. Table 2 shows past year and past month use of different types of drinks by these adolescents. Beer was the most often consumed alcoholic beverage in the past year (28.1%) and past month (19.5%) in this sample, seconded by palm-wine (a local beverage) - 17.1% and 12%, respectively. The number of days alcohol was consumed in the past month is shown in Table 3. Again beer was consumed in more days during the past month than any other beverage. About 4 percent of the sample reported drinking beer 12 or more days during the month preceding the interview.

Table 3: Frequency of alcohol drinking in the past month by type of beverage (%)

Beverage type	Never/Not in Past month	1-2 days	3-6 days	7-12 days	>12 days
Beer	80.5	8.2	4.8	2.4	4.1
Burukutu	90.1	4.8	1.4	1.4	2.1
Pito	91.4	4.5	0.7	1.4	1.7
Palmwine	87.7	7.9	2.4	0.7	1.0
Ogogoro	91.4	5.5	1.4	0.7	0.7
Other	92.8	3.4	1.7	1.0	0.3

Use of other drugs

We were also interested in the use of other drugs by these adolescents. In Table 4 we report the frequency of use of tobacco, cannabis, and inhalants. High proportions of the respondents reported high rates of past year and past month use of these drugs. Inhalants were the most popular drugs, used even more frequently than alcohol in the past year (33.2%) and past month (27.7%).

Perceived harmfulness of alcohol and other drugs

In the analysis for perceived risk to health, we created three categories of risk, namely, Not Harmful/Don't Know, Slightly Harmful, and Very Harmful. Table 5 shows the risks associated with different drugs, including alcohol. Cannabis was more often described as "very harmful" than any other drug. Alcohol was described as "very harmful" by 30.1% of the sample and "slightly harmful" by 16.4%. If the two last categories of risk are combined, drinking alcohol was associated with risk more often than smoking cannabis, tobacco, or taking cocaine and heroin.

Table 4: Use of other drugs in the past year and past month

Type of drug	Use in the past year		Use in the past month	
	n	%	n	%
Cigarettes	61	20.9	55	18.8
Cannabis	30	10.3	24	8.2
Inhalants	97	33.2	81	27.7
Cocaine	13	4.4	12	4.1
Heroin	8	2.7	4	1.3

Table 5: Perception of risk to health of use of alcohol and other drugs (percent)

Drug category	Not harmful/ DK	Slightly harmful	Very harmful
Alcohol	53.4	16.4	30.1
Cigarettes	56.2	10.6	33.2
Cannabis	58.9	3.1	38.0
Cocaine	66.1	1.7	32.2
Heroin	71.6	0.7	27.7

DK = don't know

Relationship between alcohol use, age, risk perception and inhalant use

We tested for the relationship between beer consumption during the past year and past month with perception of harm, age, and lifetime use of inhalants using both the Pearson r and logistic regression analyses. All three predictors were related to drinking beer in the past year. The older respondents were more likely to have taken beer in the past year than the

younger ones; perception of harm was negatively related to beer drinking; inhalant users were more likely than non-users to have drunk beer in the past year. Lifetime use of inhalant was also associated with drinking in the past month.

Logistic regression analyses generally supported these findings. Age was associated with beer drinking in the past year (OR = 1.2, $p < .017$, CI = 1.0-1.3) and strongly, though not significantly, associated with drinking in the past month. In a separate analysis with age entered as a categorical variable, participants who were 17 years or older were 3 times to have consumed beer in the past year than 11-14 year olds. Perception of harm was negatively associated with drinking in the past year but not in the past month, OR = 0.7, $p < .02$, CI = 0.5-0.9. But when harm was categorized into "not harmful/don't know", "slightly harmful", and "very harmful", the inverse association was observed only for those who perceived alcohol as very harmful to health. Indeed, there were elevated odds of beer, burukutu, ogogoro, and palmwine consumption among participants who described alcohol as slightly harmful. Respondents who reported lifetime use of inhalants were two times more likely to have taken beer in the past year (OR =2, $p < .007$, CI = 1.2-3.4) and also had an elevated odds of having taken beer in the past month (OR = 1.8, $p < .05$, CI = 1.0-3.2). There were also elevated odds of consuming different types of alcohol in the past year and past month among adolescents who reported use of marijuana in the past year.

We also tested for the association between parental educational attainment and alcohol use of the adolescents but found no statistically significant relationship between these variables and drinking in the past year or past month.

DISCUSSION

This study reports data on alcohol use by Nigerian youth who are usually not included in surveys of school children and other groups. What the study and other available evidence show is that many types of alcoholic beverages are widely consumed in Nigeria by young people. Drinking begins early in life and is associated with the use of other drugs, especially inhalants.

Alcohol was described by most participants as having health-associated risks, even though 38% (versus 30.1% for alcohol) described cannabis as

"very risky". The low scores for heroin and cocaine seem to have been affected by the high proportions of students who were not aware of the risks associated with these drugs. It is also possible that seeing alcohol drinking as a harmful behavior might have been a reflection of the experiences they had in their families. A further study suggested by this finding is the assessment of the alcohol use and mental health problems of adolescents from families with alcohol problems.

Drinking in the past year but not in the past month was associated with age of respondents and perception of the harm of alcohol consumption. Other "predictors" of alcohol drinking were perception of harm and use of inhalants and cannabis. The high rates of use of inhalants in this sample as in other samples of Nigerian adolescents (e.g., Obot, 1995) and its strong association with beer drinking need further inquiry and suggest a more comprehensive approach to drug education among youth.

This study is limited in several ways. First, as in many studies conducted in Nigeria, the quantity of alcohol consumed was not measured in any satisfactory way. It is, therefore, difficult to assess the volume of drinking in this sample of youth. A second problem is that the highest level of educational attainment was not assessed. Even though our focus was on adolescents who were out of school, the sample must have included children who had never attended school and those who dropped out school. This is an important distinction because of recent findings with U.S. data which suggest that dropping out of school is a risk factor for alcohol and other drug abuse (Crum et el., 1998; Obot, Hubbard, & Anthony, 1999; Obot & Anthony, 1999). The third limitation of the study is the exclusion of females from the sample. Young women engage in the same occupations from which we recruited our sample, except maybe serving as apprentices in shoemaking and carpentry. Including females in the sample would have given a clearer picture of alcohol use by out-of-school young people, especially since school surveys show lower rates of alcohol use by females in Nigeria.

In spite of these limitations, this study is important for two reasons. It is one of those rare studies in Nigeria that assess alcohol use in a population of people that is not easy to reach and has been grossly understudied. Second, unlike most studies of young people in the country, one of the objectives of this study was to determine the types of alcoholic drinks consumed by youth. Beer is certainly the most popular beverage in Nigeria, but the evidence of this study shows that the traditional beverages are also very popular among this group of underprivileged adolescents.

The implications of these findings are unambiguous. There is urgent need to target specific populations for alcohol and drug education in Nigeria. The school focus in drug information and education needs to be expanded to include high-risk populations of young people who have never attended school or have dropped out in school. Another implication of this study is that more surveys of specific groups in the general population are needed. Epidemiologic research in Nigeria has been primarily done among children in schools (Obot, 1993) because of the cost and difficulty involved in reaching children in other settings. Nonetheless, in a country where a high proportion of the young people are not in school there is need to take the necessary steps to reach these children. Without this, we will be limited in our efforts to design effective intervention strategies for alcohol and drug abuse control.

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ADOLESCENT ALCOHOL MISUSE: CORRELATES AND IMPLICATIONS

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The main purpose of this study was to assess the direction of the relationship between educational aspirations and alcohol use among high school students in Cape Town, South Africa. Using a longitudinal prospective design involving students in three schools from distinct communities, males' and females' educational aspirations and drinking behaviour were assessed while they were in Grades 10 and 12, respectively. Educational aspirations at Time 1 predicted alcohol use at Time 2 among males and among all respondents in Schools 1 and 2. For the female students alcohol use at Time 1 predicted educational aspirations at Time 2. Results failed to provide support for a bidirectional relationship between educational aspirations and alcohol use. The findings suggest a need for targeted prevention programmes that take into account possible differences in the strength and direction of the relationships between drinking and educational aspirations among different sub-groups of students. They also suggest that the improvement of the educational aspirations of young people may be a potentially useful approach to be included within other comprehensive strategies aimed at preventing alcohol misuse among young people.

KEY WORDS: Adolescents, alcohol misuse, South Africa

INTRODUCTION

Binge drinking has been on the increase among high school students in Cape Town (Flisher et al., 1998) confirming the concerns that have been expressed about this behaviour and in particular, the various negative outcomes with which it is associated (Parry & Bennetts, 1998). The concern about binge drinking among adolescents in South Africa usually relates to the consequences of the behaviour rather than the behaviour per se. These consequences have been variously described as including interpersonal violence, injury, alcohol poisoning, increased chances of unsafe sex, and reduced success in the academic arena. For a country such as South Africa which is pursuing a rapid development agenda, it is of major concern that adolescents' educational success might be hindered by their misuse of alcohol.

Thus far the extent to which the educational success of adolescents in South Africa is hindered by their alcohol consumption and engagement in binge drinking in particular has not been ascertained. The only South African research of which we are aware that points to the possibility of such an effect was conducted by Flisher and Charlton (1995). They found that adolescents who had dropped out of school were more likely to engage in alcohol consumption than were adolescents who were part of a comparison group of non-drop-outs.

Internationally there is strong support for the existence of a negative relationship between alcohol consumption and various types of educational outcomes including educational aspirations (Schulenberg et al., 1994), commitment (Bahr et al., 1995) expectations (Singh & Mustapha, 1994) and actual attainment (Gliksman et al., 1997; Schulenberg et al., 1994; Yamada, Kendix & Yamada, 1996). Many theoretical approaches to adolescent alcohol and other drug use and misuse emphasise a relationship whose direction involves educational factors preceding the use of alcohol and other drugs. This has been supported empirically (for a review pertaining to drug use, see Newcomb and Bentler, 1988; and alcohol use, see Schulenberg et al., 1994).

There has also been some, although less frequent, support for the relationship being in the opposite direction with alcohol and other drug use preceding academic experiences and drop-out (Mensch, & Kandel, 1988; Newcomb, & Bentler, 1988; Yamada et al., 1996). In this case it is proposed

that adolescents' drinking will give rise to reduced motivation with respect to academic pursuits. In addition, adolescents' drinking has been associated with greater rates of absenteeism, and students who drink alcohol also report more frequently than non-drinking students, being late to school, attending class after having drunk some alcohol, and also drinking on school premises during school hours, all of which are likely to affect adversely their performance on academic activities.

With the exception of the study by Flisher & Chalton (1995) mentioned earlier, there are no other studies that we know of that have examined specifically the relationship between South African adolescents' drinking behaviour and their academic aspirations and/or performance. Flisher and Chalton found that rates of drinking were higher among drop-outs than among those who were still attending schools. However, that study was cross-sectional, and did not allow for any conclusions about the likely direction of the relationship between dropout and alcohol consumption.

This research seeks to examine the nature of the relationship between alcohol use and educational aspirations among high school students in Cape Town, South Africa. Previous research on binge drinking among South African adolescents (Morojele et al., 1998; Ziervogel et al., 1997/1998) has suggested that both commonalities and differences exist among males and females, and among adolescents from different communities (that differ in terms of their 'racial' make-up based on segregation laws of the former apartheid system) in the nature of the relationships between binge drinking and certain social psychological variables. This suggests a need to determine the relationships between educational aspirations and alcohol consumption for sub-groups of respondents that are distinguishable on the basis of their gender and the 'racial' groups to which they would previously have been assigned under apartheid.

This study uses longitudinal data obtained from high school students from three schools in the Cape Peninsula (South Africa). The students were first assessed in 1995 (Time 1; T1) when they were in Grade 10. They were followed-up in 1997 (Time 2; T2) when most of them were in Grade 12. The main purpose of the study was (a) to determine the nature of the relationship between students' alcohol use and their educational aspirations cross-sectionally, and, (b) to determine the nature of the relationship between students' alcohol consumption and their educational aspirations over a two-year time period.

METHOD

Participants: The original cohort comprised male and female students from three schools located in three different communities in Cape Town. The schools were located in residential areas originally assigned under the Apartheid government to 'white', 'coloured' and 'African' people. The schools within these respective communities are referred to as 'School 1', 'School 2', and 'School 3', respectively. At the time of first contact with the students, they were predominantly of the respective 'racial' categories. The numbers of male and female students in each school and their respective ages can be seen in Table 1.

Measures: *Drinking behaviour measures*: The four drinking behaviour measures that were used in these analyses assessed the respondents': (a) life time use of alcohol, (b) past month drinking frequency, (c) binge drinking status, and (d) binge drinking frequency. Binge drinking was defined as the consumption of five or more alcoholic beverages on one occasion at least once during the previous two week period.

Educational aspirations: The measure of educational aspirations was created by summing scores on two items. The two items were worded as follows: (a) "I think of myself as someone who wants to achieve in life"; and (b) "I see myself as someone who wants to do well at school". The correlation between the two items was $r = .273$ ($p < .001$) and $r = .456$ ($p < .001$) at T1 and T2, respectively. Respondents indicated their extent of agreement or disagreement with these two items on five-point scales, with higher scores denoting greater agreement.

Procedure: At T1 the respondents completed questionnaires in their classrooms. To facilitate contacting respondents for a focus group study (Ziervogel et al., 1997/1998), respondents wrote their names on the questionnaires at that time and were informed of the confidentiality of their responses. We were granted permission from the Department of Education, the schools' principals and the students' parents to conduct the follow-up study. We visited each school again in 1997 (T2) and distributed questionnaires to all Grade 12 students who were present at school on the day. At T2 the students first signed consent forms (on which they also wrote their names) which they then handed in to the researchers. They then

completed the questionnaires which were collected separately from the consent forms. Each consent form had a pre-written code number, and was attached to a questionnaire on which the same code number appeared. This was done so as to not require students to write their names on the questionnaires, but to enable us to match the consent forms and questionnaires at T2. We were also then able to use the respondents' names to match their T2 questionnaires with those they had completed at T1. Drinking-related characteristics of the respondents at both time periods are presented in Table 1.

RESULTS

Comparison of followed-up and non-followed-up respondents

We obtained consent from, and matched questionnaires of 259 of the original 497 males and females from the Grade 10 classes. Most of those who were not followed-up had dropped out of school, or were still in either a Grade 10 or Grade 11 class, two years after they were first seen. At T1 the students in the followed-up sample had been older ($p<.01$) than the non-followed-up group, had comprised more females ($p<.05$), were less likely to report drinking in the past month ($p<.07$), and to report binge drinking ($p<.001$).

Drinking rates at T1 and T2

The drinking rates of the males and females in each of the schools and at each wave of data collection can be seen in Table 1. It is evident that at both T1 and T2 the males were more likely than the females from Schools 1 and 3 to have ever used alcohol. Overall increased rates of binge drinking were in evidence between T1 and T2 for the males in Schools 1 and 3, and the females in Schools 1 and 2. The School 3 females were least involved in drinking at both waves of data collection.

Correlations between educational aspirations and alcohol use

Correlations at T1: Pearson correlation coefficients between educational aspirations and drinking measures at T1 were computed, and are presented in Table 2. It is apparent that at T1, educational aspirations were significantly related to past month drinking for School 1 ($p < .10$) and School 2 ($p<.05$) students, and binge drinking frequency for the male ($p<.05$) and

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Correlations between educational aspirations and alcohol use

Correlations at T1: Pearson correlation coefficients between educational aspirations and drinking measures at T1 were computed, and are presented in Table 2. It is apparent that at T1, educational aspirations were significantly related to past month drinking for School 1 ($p < .10$) and School 2 ($p<.05$) students, and binge drinking frequency for the male ($p<.05$) and

School 2 students ($p<.10$). Educational aspirations were not significantly related to any of the drinking measures for the School 3 students.

Correlations at T 2: At T2 there were no significant correlations between the drinking variables and educational aspirations for any of the sub-groups. The corresponding correlation coefficients are presented in Table 2.

Predicting T2 educational aspirations from T1 drinking frequency

Table 3 shows the correlations between respondents' educational aspirations and drinking frequency at T1, and their educational aspirations at T2. It is apparent that educational aspirations at T1 were significantly related to educational aspirations at T2 for the School 3, male and female respondents, but not for the respondents from Schools 1 and 2. With the exception of the females, all the sub-groups of respondents' educational aspirations at T2 were not significantly related to their past month and binge drinking frequency at T1. The females' educational aspirations at T2 were related to their frequency of drinking during the past month ($r = .193$, $p < .05$), and binge drinking frequency ($r = .140$, $p < .05$) at T1.

As noted above, for the female students there was a significant correlation between past month drinking at T1 and educational aspirations at T2, but it was not clear whether these effects could be due to their previous (T1) educational aspirations and/or their age, or whether their drinking at T1 was associated independently with their educational aspirations at T2. To address this question we conducted a hierarchical multiple regression analysis in which we entered educational aspirations and age at T2 in the first step, followed by past month drinking frequency at T1 at the second step. The results of that analysis (shown in Table 4) revealed that educational aspirations at T1 and age were significant predictors of educational aspirations at T2 ($R^2 = 0.120$). Adding past month drinking frequency at T1 led to a significant increase in prediction of educational aspirations (from $R^2 = 0.120$ to $R^2 = .148$; $p<.05$).

Predicting T2 drinking frequency from T1 educational aspirations

Pearson correlation coefficients were computed between drinking variables at T2 and educational aspirations at T1, and are presented in Table 5. For School 1 and School 2 respondents there was a significant association between educational aspirations at T1 and past month drinking at T2.

Table1. Age and drinking rates for males and females in each school at T1 and T2

		School 1		School 2		School 3	
		Male	Female	Male	Female	Male	Female
Age Mean (SD)	T1	15.6 (1.7)	15.5 (0.7)	16.0 (1)	15.6 (0.8)	19.4 (1.9)	18.0 (2)
	T2	17.3 (0.6	17.4 (0.6)	17.7 (0.9)	17.5 (0.7)	20.6 (2.1)	20.1 (2)
Ever drink alcohol , n (%)	T1	73 (94)	79 (89)	41 (51)	47 (53)	68 (90)	13 (16)
	T2	43 (100)	53 (95)	20 (71)	33 (67)	32 (87)	12 (33)
Drink in past month, n (%)	T1	49 (64)	40 (46)	20 (25)	27 (31)	34 (44)	4 (5)
	T2	29 (71)	37 (67)	10 (36)	25 (52)	20 (59)	1 (3)
Binge drink, n (%)	T1	30 (39)	16 (18)	21 (26)	22 (25)	26 (35)	3 (4)
	T2	20 (47)	17 (31)	7 (26)	17 (35)	18 (53)	1 (3)

SD = standard deviation

Table 2. Correlation between educational aspirations and drinking variables

	Educational Aspiration at T1				
	School 1	School 2	School 3	Male	Female
Time 1					
Past month drinking	0.136‡	-0.174*	0.055	-0.09	-0.04
Binge drinking frequency	-0.072	-0.128‡	-0.123	-0.160*	0.038
	Educational aspiration at T2				
Time 2					
Past month drinking	0.073	-0.126	0.082	0.082	0.08
Binge drinking frequency	0.007	-0.119	-0.01	-0.35	0.02

‡$p<.10$ *$p<.05$

Table 3. Correlations between educational aspirations and drinking variables at T1 and educational aspirations at T2

	Educational Aspiration (T2)				
	School 1	School 2	School 3	Male	Female
Educational aspirations (T1)	-0.02	0.054	0.311*	0.226*	0.220**
Past month drinking (T1)	0	0.108	0.161	0.085	0.193*
Binge drinking frequency (T1)	-0.04	0.139	0.019	0.034	0.140‡

‡$p<0.10$ *$p<0.05$ **$p<0.01$

Table 4. Results of hierarchical multiple regression analysis-prediction of female students, educational aspirations (T2)

Step	Beta	R^2ch	R^2
Step 1			
Age	-0.27**	0.12***	0.12***
Educational aspiration (T1)	0.19*		
Step 2			
Past month drinking	0.17*	0.03*	0.15***

* $p<.05$ ** $p<.01$ ***$p<.001$

For males the correlation between the two variables approached statistical significance ($p<.10$). For the School 3 and female students, educational aspirations at T1 were solely associated significantly with educational aspirations at T2, and had no bearing on past month and binge drinking frequency at T2.

Hierarchical multiple regression analyses were then conducted to determine whether the association between the respondents' past month drinking at T2 could be accounted for by their educational aspirations at T1, even after controlling for their age and past month drinking at T1. These analyses were conducted for the School 1, School 2 and male students since they were the only sub-groups for which significant correlations between past month drinking at T2 and educational aspirations at T1 were observed.

Results of the hierarchical multiple regression analyses can be seen in Table 6. For School 1 students, after controlling for past month drinking and age at T1, educational_aspirations at T1 failed to account for past month drinking at T2. This suggests that those students' educational aspirations at

Table 5. Correlations between educational aspirations at T1 and educational aspirations and drinking variables at T2

	School 1	School 2	School 3	Males	Females
Educational aspirations (T2)	-0.02	0.054	0.311*	0.226*	0.220**
Past month (T2)	-0.203*	-0.407***	0.118	-0.186‡	-0.025
Binge frequency (T2)	-0.158	-0.167	0.091	-0.052	-0.028

‡ $p<.10$ * $p<.05$ ** $p<.01$ *** $p<.001$

T1 are not independent of their past month drinking at T1, in predicting their past month drinking at T2. For the School 2 students, after controlling for age and past month drinking, educational aspirations at T1 still had a significant effect on past month drinking at T2 in the hierarchical multiple regression analysis (see Table 6). This suggests that the educational aspirations of the School 2 respondents at T1 were directly associated with their past month drinking two years later. For the male students, age and past month drinking at T1 were significant predictors of past month drinking at T2. As shown in Table 6, addition of educational aspirations at T2 led to a marginally significant increase in the variance in past month drinking that was explained.

DISCUSSION

This study sought to determine the nature and direction of the relationship between high school students' educational aspirations and their alcohol consumption. Separate analyses were conducted for different sub-groups of students in the sample employed. The finding revealed that for each sub-group barring School 3 students, either educational aspirations at T1 predicted alcohol use at T2 or, alcohol use at T1 predicted educational aspirations at T2.

Table 6. Results of hierarchical multiple regression analyses – prediction of past month drinking (T2)

	School 1			School 2			Male		
	Beta	R^2ch	R^2	Beta	R^2ch	R^2	Beta	R^2ch	R^2
Step 1									
Age	-0.20*	0.33***	0.33***	-0.11	0.12*	0.12*	-0.1	0.25***	0.25***
Past month drinking (T1)	0.60***			0.33**			0.50***		
Step 2									
Educational aspirations (T1)	-0.06	0	0.33***	-0.38***	0.14***	0.26***	-0.16‡	0.03‡	0.28***

p‡<.10 *p<.05 **p<.001 ***p<.001

In particular, there were strong indications that T1 drinking was associated with later (T2) educational aspirations for the females. However, the general pattern of results for the remaining sub-groups (i.e. the School 1, School 2 and male students) pointed to the respondents' educational aspirations being antecedents of their drinking behaviour. This is consistent with the bulk of the relevant research that emphasises educational factors as antecedents (or risk factors for) rather than consequences of drinking among adolescents (Newcomb, & Bentler, 1988; Schulenberg et al., 1994).

This study found a positive correlation between the female students' alcohol use at T1 and their educational aspirations at T2. In other words, their past month drinking frequency as well as their binge drinking frequency at T1 are significantly associated with their educational aspirations at T2. Furthermore, their prior drinking status is associated positively with their educational aspirations at T2, even after controlling for their educational aspirations at T1. The observed positive correlation was unexpected, and can likely be explained within a multivariate model. Another plausible explanation for this finding is that the female respondents with the most positive educational aspirations tended to be in Schools 1 and 2, and as observed previously, these females were also most likely to be involved in alcohol use at the two data collection points.

The students' educational aspirations were not stable over time for all the sub-groups. For the School 1 and School 2 respondents educational aspirations bore no relation to each other whereas they were strongly associated with each other for respondents from School 3, and for the sub-groups of males and females.

The associations between drinking and educational aspirations were much stronger at T1 than at T2. It is not clear why these effects were obtained, although this finding could be attributable to the two developmental levels in question. Indeed, as noted by Bentler and Newcomb (1988), the relationship between levels of drug use and academic achievement is generally stronger among high school students than among University-aged students. Furthermore, associations between educational aspirations and drinking were stronger among the males than among the females at T1. It appears that drinking plays a greater part in the educational aspirations of males than females concurrently, while the longer term (two-year) association between the two variables is stronger among the females. This is consistent with Ziervogel et al.'s (1997/1998) finding that binge drinking male adolescents tend to have more of a short-term inclination than do males who do not binge drink.

This study describes the nature of the relationship between educational aspirations and alcohol consumption among a sample of South African adolescents. One of its limitations, however, is its relatively high attrition rate, necessitating caution in generalising the findings to other adolescents. Those who were followed-up at T2 tended to be significantly different from those not followed-up on a few key drinking variables. A second limitation of the study relates to the design we employed. In spite of its potential to allow for directional prediction, the study's longitudinal prospective design does not allow for conclusions about causality.

More in-depth research is needed to further understand how South African students' educational aspirations and their alcohol consumption interrelate, and to verify the observed gender and community-based commonalities and differences in the associations between the two variables. Future research that examines the nature of the relationship between educational aspirations and alcohol use among much younger school-going adolescents, as well as among much older University students would also be useful.

The study's findings suggest that educational aspirations can be associated with alcohol use among South African school-going adolescents. As part of the South African government's proposed Curriculum 2000 that aims to contain elements that are geared to preventing adolescents' substance misuse, it would seem crucial that students' overall educational aspirations are strengthened. As suggested by the present findings, targeted alcohol prevention programmes would seem to be particularly useful given the differential associations between educational aspirations and alcohol use that were observed among the different sub-groups of respondents.

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CULTURAL TRANSFORMATION AND THE CHANGING PATTERN OF ALCOHOL CONSUMPTION AMONG THE TIV OF CENTRAL NIGERIA

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The rate and pattern of alcohol consumption among the Tiv have changed significantly over the past few decades. This paper has used Bales' theory of alcoholism to account for these changes. The main thrust of this analysis is that alcohol consumption patterns have changed because of societal changes that have resulted in stressors and tension, permissive attitudes toward alcohol use, alcohol availability, and the absence of alternative mechanisms of relieving tension. Theory-based interventions for moderating alcohol consumption, including innovative ways of reducing cultural stress and tension, modifying prevailing attitudes toward alcohol use, managing the availability of alcohol, and finding alternatives for obtaining psychic release, have been proposed.

INTRODUCTION

This paper attempts to make the first systematic analysis of the changing patterns of alcohol consumption among the Tiv of central Nigeria. Not much alcohol-related research has been conducted in Nigeria, particularly in

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central Nigeria known as the Middle Belt. In one of the few major studies on drinking behavior and attitudes toward alcohol in the Middle Belt region of Nigeria (which did not include Benue state where a majority of the Tiv live), Obot (1993), concludes that "alcohol policy is overdue in Nigeria. Problems often associated with misuse have been increasing over the years. But this information has not been sufficiently documented and disseminated" (p. 32). A viable alcohol policy must be based on empirical data and an incisive analysis of the problem. This article is intended to provide some of the information and analysis toward that goal. Given the dearth of empirical data on actual consumption levels and the nature and rate of alcohol-related problems among this population, we will first present a broad theoretical framework encompassing major variables related to alcohol consumption patterns among the Tiv. These insights will lead to testable hypotheses likely to lead to a deeper understanding of the causes of increased drinking, prevalence rates, identification of at-risk groups, the impact of drinking on society, and the ways of combating problem-related alcohol consumption. We will base our analysis mainly on Bales' theory of alcoholism. Proposed initially in 1946 and modified in 1991, Bales' theory still remains perhaps the most comprehensive socio-cultural theory in literature on alcoholism.

Briefly stated, Bales proposes three main ways in which alcoholism or problem drinking occurs within a society. First, there must exist certain structural factors that bring about stressors -- culturally induced anxiety - - that require an acute need for adjustment. Second, there needs to be culturally supported favorable attitudes toward drinking or intoxication as a way of dealing with stress and tension. The third factor is the extent to which the culture or society has alternative mechanisms for providing relief to the induced stress or tension (Bales, 1947; Bales, 1991). Thus, alcoholism or drinking in general will increase in a society if a) certain factors have operated to bring about needs for adjustment; b) societal attitudes favor or at least tolerate drinking as a means of dealing with tension; and c) the culture does not provide suitable alternative means of satisfaction or mechanisms for dealing with stress. In the next few sections, we will provide an historical background of the Tiv and the prevailing pattern of alcohol consumption as it existed under the socio-cultural context of the past. We will then present the nature of societal transformation that has occurred over time and how this has resulted in a corresponding change in the pattern of alcohol consumption among the Tiv. Finally, we will attempt to explain the current high rates of alcohol consumption using Bales' theory, and on that basis, suggest possible ways of dealing with this serious problem.

SOCIO-CULTURAL HISTORY OF THE TIV

The Tiv of central Nigeria, an egalitarian (Keil, 1979) ethnic group is one of the top five most populous ethnic groups in Nigeria; a country of 120 million people with at least two hundred and fifty ethnic groups (Federal Ministry of Information and Culture, 1997). Although the Tiv have settled in central Nigeria for centuries and have been well-known to their neighbors, the outside world knew little about them until in the 1850s when their presence among freed slaves who settled in Freetown, Sierra Leone, was discovered (Gundu & Jockers, 1985). Still, not enough is known about the Tiv or their kith and kin in the Republic of Cameroon or the Congo, where they are generally believed to have originated. Considered among the Bantu family of ethnic groups, the Tiv have a population of approximately five million and occupy a land area of 10 thousand square miles, an arable soil of the Benue Valley. They have, for centuries, earned a living by cultivating and maintaining family farms, passed on from generation to generation. Artistically astute, the Tiv are also hardworking (Perham, 1962) and efficient producers of potatoes, rice, sorghum, soybeans, and yams among other crops, and assorted fruits. They supply a significant share of Nigeria's food needs. For this reason, Benue State where they reside with a few other ethnic groups is commonly referred to as the Food Basket of Nigeria.

As recently as 86 years ago, the Tiv lived in relative isolation even as the British rule was upon the newly amalgamated territory named Nigeria. The Tiv were one of the last ethnic groups to be conquered by the British troops and forcibly integrated in the Nigerian Territory (Makar, 1994). In fact, as Perham (1962) has aptly remarked, "few African tribes can boast of longer resistance to European influence than these vigorous people...there can be few African tribes so large as the Tiv which have been so late in coming under British administration" (pp. 152, 154). Yet, they have traditionally treated visitors to Tivland "with a spontaneous enthusiasm...seldom seen equaled in Africa" (p. 153). Prior to British colonialism, the Tiv were a classless, decentralized and democratic group of people whose government constituted of clan elders who met and rendered judgments on conflicts brought before them on the basis of long-standing customs and traditions. They were unaffected by the oligarchy of the Jukun, their Moslem-leaning neighbors in the north. The elders' sources of authority were age, which connotes wisdom and experience, and a deeper understanding of customs and traditions. The elders could not be autocratic because the Tiv would not

condone such leadership. Autocracy arose in Tivland out of government created District Headships composed mostly of young people who used British authority accorded them to treat their fellow Tiv in high-handed ways. Traditionally, every household has an elder member, usually the oldest person, who presides over disputes involving family members. Throughout the period of British colonialism and forty years after political independence, the Tiv, for the most part, still consider it an anathema to take one's clansman to a state court for adjudication of disputes rather than to the elders (Bohannan & Curtin, 1988).

Since the British colonization of Nigeria, the Tiv, which had until hitherto, been fiercely an independent ethnic group have been acculturated through western education, Christianity, political indoctrination and economic domination. The colonial legacy has left an indelible mark on Tiv's cultural and socio-political systems. Unhappily, the Tiv have been contributing to what is already an immense human tragedy by adopting indiscriminately, cultural practices that do not have any basis in their history. We are, however, cognizant that as a conquered people, the Tiv had to adjust in order to live in peace under the new political and social arrangements. In addition, like other British subjects, they had to fight in foreign wars such as World War I and World War II where they came in contact with unfamiliar environments and cultures which have impacted them. Ferocious assaults on Tiv culture, however, may be attributed to global capitalist forces which have combined with other factors to transform Tivland forever. Unfortunately, the transformation of Tiv cultural patterns like many other aspects of the Tiv, such as their rich history and artistic accomplishments are neither adequately studied nor clearly understood. Some of the few studies that have been done tend to lack a theoretical framework that would unify, and thus illuminate and integrate, the various facets of Tiv culture. This paper is one among a series of studies that will begin the crucial task of documenting important changes in Tiv culture and traditions by focusing on one salient element after another.

To summarize, the primary purpose of this work is to examine the history and patterns of alcohol consumption among the Tiv and explain, within a theoretical framework, the reasons behind these changes, which have, in recent decades, been easily noticeable. Questions to be posed and answered include: What has been the role of alcohol and consumption thereof in Tiv tradition? What brought about the heavy alcohol use that had traditionally not been the case in Tiv culture? What are the palpable consequences of the changes? What portends for the future?

The Role of Alcohol in the Tiv Cultural Ethos

As people who have to carry out very physically demanding tasks as farmers, the Tiv clearly understood the interplay between alcohol and farm work. As a result, they limited their consumption of alcohol to specific occasions so that they could succeed in carrying out their responsibilities. Formerly, no crops were exchanged for money; thus, the survival of a family, and indeed, a clan depended on its members' ability to grow enough food to feed family members. Urban dwelling is a relatively recent aspect of Tiv people. Traditionally, people lived in clans of their birth and occupied a specific geographical area according to ancestral land ownership patterns. The majority of Tiv still live in rural areas. Those who live in cities have their roots in the rural areas in the clans into which they were born. However, since 1900, urban areas began to sprout; a significant number of Tiv people are city dwellers nowadays. Consequently, local customs including those relating to alcohol consumption began to change. For instance, urban dwellers began to produce and consume *tashi,* also known to others as *burukutu*, a locally brewed alcoholic beverage, on a regular basis by alternating consumption from one *tashi* maker to the other, while those in the rural areas continued to produce and consume *tashi* mostly once a week. To the Tiv, alcohol usually serves a socio-cultural function; therefore, the consequences of heavy alcohol use are clearly understood but have yet to be seriously tackled. The proceeding paragraphs will outline types of alcoholic beverages produced and the traditional contexts in which they were consumed.

Types of Alcoholic Beverages Produced

The main alcoholic beverages the Tiv produced and consumed during the pre-colonial era were, *tashi* and *ityo,* also known as palmwine. These beverages are still being produced and consumed along with others newly discovered. *Ayashi*, one of the more popular versions of *tashi,* was produced by women from millet or sorghum. It usually takes approximately four days to ferment *ayashi* from millet. It is a labor intensive and difficult task. *Ityo*, on the other hand, is produced by men from palm trees where the alcohol is tapped by cutting down a palm tree or by simply climbing it and extracting the alcoholic liquids from the tree. In the production of alcohol, as in other areas of the Tiv social life, labor is divided fairly between women and men. In contrast to *ayashi, ityo* may be produced continuously, especially during the dry season. Both alcoholic beverages had to be consumed within a short period of time otherwise, they would no longer be healthy for consumption. However, *ityo* usually lasts longer than *tashi.* While *tashi* lasts only for a

day, *ityo* may last up to five days. Both alcoholic beverages contain nutrients rich in vitamins such as B and C found in *ityo* and complex carbohydrates in *tashi* (Oshodin, 1995). After consuming these beverages for centuries, the desire to consume alcohol on a continuous basis encouraged some to explore ways of extending tashi's and *ityo's* shelf life. Consequently, two types of alcoholic beverages have arisen out of the original two in the last three decades. One is *akpetashi*, a native gin, is distilled from *tashi*, initially illegally, by men and now by both men and women. The other is *ogogoro*, which is distilled from *ityo*, and is far more potent than *akpetashi*. Today, in Tivland, all four alcoholic beverages are regularly consumed in addition to beer.

ALCOHOL DRINKING PATTERNS AMONG THE TIV

Prior to the widespread organization of open markets in Tivland, alcohol had several uses among the Tiv but was consumed sparingly. The main avenue of alcohol consumption was recreational drinking which took place mostly through traditional ceremonies organized once in a while and on market days. For the Tiv, alcohol was seldom used for ritualistic purposes or as a rite of passage. It was also not consumed at funerals. When used as a recreation, ceremonies were organized which included such occasions as when a praise singer was invited by an individual or a group of persons mentioned by name in such songs to sing. The singer then sang several songs specifically composed for the occasion. During such occasions, alcohol was consumed as family members, neighbors and friends gathered to hear the songs which were usually sang well into the night. Traditionally, everyone at such gatherings was offered alcohol to drink. The thrill of free drinks attracted huge crowds.

Similarly, the Tiv have usually consumed alcohol during ceremonial occasions such as during *amar a mirin* or the process of brewing *tashi* when the millet is soaked and then ground until it turns into a broth, which in turn is boiled at a very high temperature for several hours as part of the distillation process. This was a big ceremony involving many guests organized by any successful Tiv person to share his wealth with his kinsmen. Activities at such ceremonies included horseback riding, trumpet and horn-blowing, gunshots to the air, singing, dancing, and of course, eating and drinking alcohol. It was the highest point of merriment in Tivland. Tiv society is still a lineage-based, collectivist society where individualism is not only shunned but also despised (Williams, 1987: 21-22). Those who have

succeeded are expected to share their success with their kinsmen.

Another context in which alcohol was consumed was during marital arrangements. Typically when the Tiv want to transact a marriage, relatives of the prospective husband visit those of the prospective wife. In the formal gathering where the prospective husband's family asks the prospective bride's hand in marriage, they present among other gifts, alcohol and kola nuts. When marriage is agreed upon the first step is to invite members of the extended family who are also offered alcohol. Since marriage took place once in a while, opportunities to drink were also infrequent.

In addition to the aforementioned contexts, the Tiv organized open markets scheduled every five days where *tashi* was produced and sold mostly in the afternoon among other market place activities. The usual practice was for people to first work on their farms in the morning before proceeding to such markets to drink in the late afternoon and evening hours. That way, alcohol consumption could not prevent them from tending their farms because, drinking was generally viewed a mere pass time. While the Tiv are generous, they have little sympathy for those who are hungry because they have failed to work (Bohannan & Bohannan, 1966). Moreover, market days were limited to one day a week to make it possible for everyone to work on their farms and still socialize at the market places. However, since the amalgamation of southern and northern Nigeria and Britain's conquest of Tivland in the 1920s, patterns of alcohol consumption, like all other aspects of Tiv culture, have changed tremendously.

Contemporary Pattern of Alcohol Consumption

It is apparent to any regular observer of social life in Tivland that alcohol consumption has increased since the 1940s. The regularity with which alcohol is used both in the rural and urban areas have brought about a potential problem that should be addressed. Quite apart from the intoxicating effects and attendant health and other problems associated with long-term heavy use of alcohol, consumption nowadays constantly takes place in the presence of children and adolescents who are likely to be exposed to drinking before they are old enough to decide whether or not they want to drink. It is not that Tiv children were not exposed to drinking in the past, but rather regularity with which they see adults drinking that is the point here. The proceeding paragraphs address factors responsible for widespread and regular alcohol consumption in Tivland, alcohol-related problems and what the Tiv people can do to ameliorate the problems.

Factors Accounting for the Increased Rate of Alcohol Consumption

As indicated in the introduction, we propose to use Bales' theory of alcoholism to explain the increased rate of alcohol consumption in contemporary Tiv society. The three factors central to Bales' theory are the prevalence of stressors within the society that tend to create tension, attitudes within the culture that favor alcohol use, and the absence of alternative mechanisms for the release of that tension. In addition to these three factors, we introduce two additional variables not explicitly covered by the theory, namely, availability of alcohol and social learning. We begin the analysis with the stress factor.

Many drastic changes in Tiv society that began about three to five decades ago have brought about major stressors among the Tiv. Some of the major stressors have been changes that were introduced in the socio-economic arena. As indicated earlier, Tiv people were subsistence farmers who did not exchange crops for money. Much of the land was, therefore, devoted to the production of crops that were used to feed family members. The family also served as the major source of labor; grown children were expected to work the fields to contribute to the cultivation and harvesting of crops. The changing economic landscape that required the use of cash to fulfill such obligations as the payment of taxes and other purchases required that a different class of farm products - cash crops - had to be introduced. Since the basic feeding needs of the family did not abate, it meant that more land was needed for the cultivation of the cash crops. This diversity in the range of agricultural products, plus the explosion in the population over the years exerted considerable pressure on the limited fertile land available for cultivation. This factor has brought about a lot of tension not only among the Tiv themselves, but also with their neighbors. Whereas disputes over land were infrequent, the reverse is the case today. Among recent examples are the clashes between the Mbagen clan and Etulo; between sections of Ukan and Gaav; between Mbaduku and ethnic groups around Obudu in Cross-River State, and several groups along the border of Benue and Taraba States, to name only a few examples.

Another stress and tension factor is urbanization, which is also a major variable under availability. Even though most Tiv still live mainly in rural areas, urbanization has increased dramatically over the past three decades. This has led to the migration of many able-bodied youth who were a major source of labor on the farms to the cities for the prospect of a presumed

easier lifestyle. The pressure of even fewer hands requiring doing more work with minimal returns has created a lot of stress in the rural areas. In the cities, the situation is not any better. Often lacking the skills for meaningful employment and competing with the ever-increasing numbers of other rural-urban migrants, the result is usually unemployment and its attendant consequences. These unfulfilled dreams of the better lifestyle usually lead to stress and tension, often resulting in crime and violence.

Amidst this tension is an uncritical attitude toward alcohol consumption. In every Tiv city today, all types of alcoholic beverages are heavily consumed on a daily basis. There are no laws against drinking by children and adolescents. Whether or not they drink depends on the whims and caprices of their parents. Religious beliefs have not sufficiently been effective in moderating alcohol consumption among believers. Laws regarding the production of *ityo* and *tashi* have been lax and hardly ever enforced. A license is required to sell alcohol, but this is generally viewed as a way of procuring revenue by the government rather than protecting consumers from excessive consumption or a hazardous brew.

Although Bales' theory does not specify the source of these attitudes, we propose that at least in the Tiv instance, one source of this permissive attitude comes from social learning -- imitating the attitudes and drinking patterns of other ethnic groups in Nigeria. The Tiv have thus adopted cultural practices alien to them. For instance, funerals had not been occasions for eating and drinking. But they have adopted this cultural practice from other Nigerians. Whereas in the past, ceremonies would be organized during which guests were 'spoiled' with drinks and food, they have completely given way to persistent recreational drinking at bars, homes, funerals and market places. To today's Tiv, a good funeral is one at which guests are entertained with lots of alcohol and food. This pattern of consumption has a bearing on the social fabric of Tiv society. First, people feel the pressure to entertain guests at the funerals of their relatives irrespective of whether or not they can afford it. The impoverishment of the Tiv nowadays may be attributed in part to the cost of funerals. This attitude that condones alcohol use thus appears conducive to people seeking psychic release from stressors and tensions in society.

The third variable accounting for the current pattern of alcohol consumption among the Tiv is availability. Even with tension and a permissive attitude, alcohol would still need to be available to people in order for them to use as a source of release. This is another factor not clearly stated in Bales' theory that we find to be an essential component to explain alcohol use. We also believe that urbanization has a major role to play in

alcohol availability. Whereas in the past, alcohol was available for consumption only once a week and on a limited basis, nowadays it is available every day both in the rural and urban areas. European gin, wines, and locally brewed beer factories, some of which are publicly owned and operated have proliferated since 1949, when the first brewery was established in northern Nigeria. Benue state, where the Tiv are the predominant ethnic group, until recently, used to own and operate a beer factory. The factory has now been sold to the private sector, which has actually increased the efficiency of beer production. In the 1960s and earlier, it was illegal to produce a native gin. But since the late 1970s, however, native gin has been widely distilled and consumed. Nowadays, beer and other alcoholic beverages are readily available throughout Tivland. Beer is the favorite beverage of the urbanites who leave their civil service positions, very often in the middle of a work day to go and have a drink in a beer parlor.

The final factor in the theory explaining the changed pattern of alcohol consumption is the absence of alternative sources to alcohol for people to use to gain release from tension. In the Tiv society of old, evenings were times for relaxation and presentation of oral history. More often than not, families would gather in groups where stories were told and people were quizzed with different kinds of riddles. The stories and quizzes used to be funny and often resulted in a hearty laughter by most participants. In addition, from time to time, activities involving dancing and singing were performed. These were very viable and sustained means of obtaining release. Changes in the social and family structure have made these activities a rarity. They have, thus, been replaced by alcohol consumption. The situation is worse in the cities. As anyone who has visited the urban centers in Tivland can attest, evening and night times are miserable times to a person who does not drink alcohol. Most people thus engage in the most readily available recreational activity, drinking alcohol. Although no studies have been done, a reasonable supposition can be made that, the Tiv are beginning to have among them, persons addicted to alcohol, an ominous sign that, this hardworking people will soon have to grapple with the problem of wide spread addiction to alcohol.

PROPOSED WAYS OF DEALING WITH THE CURRENT PATTERN OF ALCOHOL CONSUMPTION

We have attempted to explain the current high level of alcohol consumption among the Tiv using mainly Bales' theory of alcoholism. The advantage of providing a theoretical framework within which to account for a process is that the theory provides a helpful guide to the proposed solution. From the standpoint of the theory, it is evident that in order to reduce the current pattern of consumption, efforts have to be made to reduce the stress and tension that seeks psychic release, change the attitudes that encourage the use of alcohol as a means of release, control availability, and provide alternative means for the release of pent-up tensions. In our analysis, part of the tension arose from the pressure on land as well as consequences of arising from socio-economic changes. One reason for the pressure on land, aside from increased population, is the stagnation in agricultural practice. Methods of cultivation have not changed among the Tiv for probably hundreds of years. The improvement in the types of crops used, improved fertilizers and farming methods will mean that less land and fewer hands will be needed for a greater yield. Whereas only about 5% of the people feed the rest of society in more advanced systems, the reverse is the case among the Tiv. Changes in this regard will certainly reduce the stress and tension. With regards to urbanization, it is unlikely that changes can be brought about that would reverse the trend in rural-urban migration. However, the provision of opportunities, both in terms of education, jobs, and training would go a long way in reducing the problem.

Tackling the problem of attitudes also requires a multifaceted approach. This would require a bold leadership not only among the traditional hierarchy, but also by the government of Benue state where a majority of the Tiv reside. The leadership can begin by emphasizing the positive aspects about the Tiv of old. Practices that involve drinking at funerals and other occasions should be discouraged. Rather than glorify those who lavishly provide alcohol on these occasions, this practice should be frowned upon. If those in the leadership position refuse to live by this new, alien standard, it is likely that others would follow. People also need to be educated about the harmful effects of alcohol. The attitude factor may not work independent of availability. While we do not advocate for a ban on alcohol, we nevertheless, believe that its consumption should be regulated to some degree. The sale, purchase and consumption of alcohol should be limited to certain times and places. In addition, the already available laws on the books should be more vigorously enforced.

Finally, Tiv society should expand the activities that people have at their disposal for emotional release. Major urban areas in Tivland such as Gboko, Makurdi, Katsina-Ala, Adikpo and Vandeikya, have no movie theaters or other organized forms of evening and night entertainment. Government can encourage entrepreneurs willing to invest in these kinds of ventures. Efforts also can be made by both the Tiv traditional Council and the government to revive erstwhile viable forms of entertainment. For example, in the 1960s, there was a very popular type of entertainment called *Kwagh-ahir*, a puppet type of theater that often illustrated many aspects of Tiv existence and also conveyed different messages. This was not only a source for entertainment but also for education as well. At some point, competitive events were organized that brought many troupes together. These were very widely patronized. Besides, it gave much of the rural populace something to do after they returned from their farms, as people were preoccupied with making the crafts to be used as well, practicing their act. This and other related activities can provide viable options for people to gain relief from whatever stressors and tensions they may be experiencing and may help to reduce the reliance on alcohol. In conclusion, we concede that there are more reasons for increased alcohol use than are covered in the analysis presented in this paper. We believe, however, that much of the discussion in this paper covers a significant portion of the phenomenon. Interventions based on this approach may thus go a long way in changing the current pattern of alcohol consumption among the Tiv.

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CROSS-BORDER DRUG TRAFFICKING IN SUB-SAHARAN AFRICA: IMPLICATIONS FOR DRUG CONSUMPTION AND A REGIONAL DRUG CONTROL STRATEGY

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This study examines the implications of cross-border drug trafficking in sub-Saharan Africa and its relationship to the spread of hard drugs and consumption as well as development of a regional drug control to combat supply reduction. The study was based on observation of four west African countries borders at Aflao between Ghana and Togoland, at Ilaconji between Togoland and the Republic of Benin, and at Semen Republic of Benin and Nigeria during the summer months of 1996, 1997 and 1998. These borders are colonial legacy. These porous borders have a long history of movement of people and continue to be so today. At present, the borders cannot be effectively and efficiently patrolled by the border patrol agencies. The customs, immigration and other law enforcement officers always engage in petty corruption practices. This inappropriate behaviour has become institutionalized behaviour in these borders. As a result, these borders are open landscape to traffic drugs. There is paucity of research in this area. Since this area of drug research in sub-Saharan Africa has not sufficiently been explored, it is important to enhance policy makers understanding the dynamics and nature of cross-border drug trafficking for effective drug control strategy.

KEY WORDS: Drug trafficking, sub-Saharan Africa, drug control strategy

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INTRODUCTION

The appearance of a local market for hard drugs in Africa was an outgrowth of the continent's role as a transit point for drugs produced in Asia and South America and shipped to Europe and North America. Africa's well-established port system and its relatively permeable borders made it an ideal staging site for Northern Hemisphere markets. Thanks to these permeable borders, the spill over of drugs from transit points diffused rapidly through the surrounding countries, in effect translating a national problem into a regional one. There is now no African nation without a hard drug problem, a situation that was unthinkable just two decades ago.

Accordingly, the prevalence of cross-border drug trafficking argues for the development of regional operations to restrain the flow of such drugs as heroin, cocaine, and psychotropic substances. There are already a number of instances of this cooperation, including an extradition treaty among Southern African Development Community (SADC) and Economic Community of West African States (ECOWAS) member states. While these efforts mark a positive beginning, the member states of these groups must continue to work together to put a halt to cross border trafficking so that prevention and treatment programs have a chance to take effect.

CROSS-BORDER DRUG TRAFFICKING

The borders of African nations are a colonial legacy. Designed to achieve political ends, they are extremely complex and lengthy, making them difficult to patrol and rendering effective surveillance beyond the budgets of most African countries. Border patrol agencies in most countries are under-equipped and understaffed. Neither are the customs, immigration, and other law enforcement officers who have assumed the hard, dangerous work of guarding borders well paid. As a result, corruption is rife. Making matters even more difficult is the fact that borders were drawn in ways that disregarded natural obstacles and are crossed by navigable rivers, lakes, and lagoons. As a consequence, borders provide little obstacle even for the least enterprising of drug traffickers.

In fact, another factor weakening the effectiveness of African borders is that they were drawn with little regard to the origins of people in the region. As a result, they often separate people with same history, customs, and

language, a factor which undermines borders in the West African nations of Guinea Bissau, Sierra Leone, Liberia, Cote d'Ivoire, and Mali. Some villages are even split down the middle by the border (Laniel, 1996). The same patterns can be found in southern, middle and eastern African regions. Present day borders simply do not conform to the borders created by the history and culture of sub-Saharan African peoples.

This situation is only exacerbated by efforts to promote regional economic integration by facilitating the free movement of people, goods, and services from country to country. This is the rationale behind SADC and ECOWAS. This well intended policy is not without unintended consequences. In effect, these groups have simultaneously promoted the movement of both legal and illegal commodities across the national borders of member states. The policy of cooperation and economic integration without a matching set of controls has, in effect, provided drug traffickers with virtually unimpaired access to regional markets.

The author's own observation of crossing borders along the West Africa coast between Ghana and Nigeria shows only underscores how porous these borders are. These trips have involved crossing the border from Ghana to Togo at Aflao, from Togo to the Republic of Benin at Ilaconj and from the Republic of Benin to Nigeria at Semen. All three of these towns are small- or medium-sized. I crossed these borders in both directions a total of six times during the summers of 1996, 1997 and 1998 while traveling between Accra, Ghana, and Lagos, Nigeria.

Although the border officials in Nigeria and Ghana spoke English and those in Togo and Benin spoke French, it was not uncommon to find people in these border towns who spoke both languages. Besides these languages, the people around these border towns spoke such indigenous languages such as Ewe and Yoruba as well as other local dialects. The commonality of these languages and dialects facilitates social interaction and commercial intercourse and helps create a border-town culture.

These towns have long functioned as meeting places for trade. As a result, the social setting can be described as fluid and constantly changing as people cross borders, conduct their business, and continue on their way. Residents are outnumbered by the constant stream of travelers, drivers, and traders. The formal and informal economies operate side by side. In the formal sectors are the customs, immigration, and other auxiliary officials, as well as small-sized stores selling local and imported goods, foreign exchange bureaus, public transportation stations, communication and business centers, and beer parlors. The informal sector consists of street vendors, black market money exchangers, porters who help to carry heavy

loads, itinerant traders, and those men and women who help travelers without documents cross borders and smugglers. As we shall see, the distinction between the formal and informal economies does not hold.

I traveled through these borders with intention of conducting a systematic observation of the practices of customs, immigration and other officials. Because I actually wanted to cross these borders myself, I was a participant as well as observer. Besides the direct contact with the officers who stamped my passport, I also observed how they treated other travelers as well as their conversation with these individuals and drivers.

When you move from Accra by road to Lagos, you cross the border to Togo at Aflao. At this border, you have to present a valid passport to the immigration officers there, who must stamp it to indicate that you have departed from Ghana. Those travelers without passports can pay the officers a nominal amount, which could range from 5000 cedis and up. Before reaching the customs office on the Togo side, travelers are intercepted by two gendarmes, who demand between 200 and 1000 CFA. Travelers who refuse to pay are told to return to the Ghana. At the Togo customs office, immigration officers will stamp your passport. They too expected to be given a nominal amount to expedite the process of entering Togo. If you do have a passport, you simply pay more money.

At Ilaconj, on the border between Togo and Benin border, your luggage is searched on the Togo side and your passport is stamped. Travelers without passports, though, can simply walk through. To reach Benin, you must proceed through a small building. At the entrance, you pay gendarmes a fee ranging from 200 to 300 CFA. Crossing Nigeria at Semen, you can expect Benin customs officials to search your luggage as a pretext for demanding money. You are also expected to pay immigration officers a nominal amount, which could range from 300 to 500 CFA depending on whether your passport was stamped. In Nigeria, you encounter Nigerian immigration and customs officials and officers of the National Drug Law Enforcement Agency (NDLEA). The immigration officers ask for payment of between 200 and 300 Naira, though they will accept less if they have to. The customs and NDLEA officers demand their own fees, especially if they find contraband goods.

Given this system, it is not surprising that drivers and frequent travelers have little good to say about border officials of these four countries. Most of the people who use these borders are from the Economic Community of West African States (ECOWAS), and they are supposedly to be able to move freely without paying any fees. The government official at these border post have clearly developed a subculture of their own and rules of

business. My own experience has led me to believe that it is easier to pass through these borders without showing your passport.

In 1996, on a trip with my wife from Lagos to Accra, I was told by the driver of my car that following the proper procedures by showing our passport would further delay us. He then instructed us to walk through the nearby market to the Benin side of the border. We walked through the local open market as if we were intent on buying something and soon found ourselves beyond the border post. We also did the same thing at Togo and Ghana border without any incident. There are people at these borders who help travelers to cross the borders in such a way for a small fee.

These experiences provide a basic understanding of the conduct and patterned behavior of border post officers. They have developed a subculture and operative rules and regulation that undermine those of the agency or organization that employs them. So entrenched has this subculture become that travelers no longer question the practice of paying a fee for services that should be rendered automatically. It is but a short step from the imposition of such fees to the notion that all services, legal or otherwise, are negotiable. Unfortunately, this step is often taken, often at the prompting of organized crime syndicates and local drug smugglers.

CROSS BORDER DRUG TRAFFICKING IN THE CONTEXT OF THE GROWING AFRICAN DRUG PROBLEM

There has always been a regional drug trade in Africa, but for centuries drug abuse in Africa was, with some local exceptions, virtually confined to cannabis. The only other drug in Africa of any significance was khat, which is thought to be indigenous to the Horn of Africa. Khat grows in eastern Africa and southern Arabia in Democratic Yemen, Ethiopia, Kenya, Madagascar, Somalia, the United Republic of Tanzania, and the Yemen Arab Republic (Asuni, 1986; Bulletin on Narcotics, 1980).

In east, central, and southern Africa, Arab traders introduced cannabis early during their commercial relations with indigenous people of these regions. Du Toit (1980) maintained that during the first centuries A.D. Arab traders who had settled around the Horn and southwards from Mogadishu had introduced cannabis to the indigenous African population. Cannabis was traded along coast of Somalia and Kenya; it was also traded into interior in northwestern Ethiopia. Cannabis was introduced into southern Africa by the very first waves of Bantu invaders from the north,

and dagga pipe bowls of stone or earthenware have been found in association with early Bantu settlements in southern Rhodesia, the Transvaal, the Orange Free State, Basutoland, the Cape Province, and Natal (Watt, 1961). In the twentieth century, African soldiers in the First and Second World Wars returned home with a taste for cannabis, using it for recreational purposes or to escape from unpleasant feelings and memories (Kilonzo and Kaaya, 1994).

A number of other commentators support this picture. For instance, Asuni and Pela (1986) remarked that Asian traders and travelers introduced cannabis into Africa. They hypothesized that the cannabis plant and its use could have been spread across the Sahara to west Africa around the sixteenth century. They also ascribed to what I call the "returning soldier" hypothesis to explain the increased incidence of cannabis abuse in west Africa, as do (Asuni, 1964; Sagoe, 1965; Du Toit, 1980).

During most of this century, cannabis use was limited to certain social groups within a given society. In South Africa, the dagga habit was initially confined to the Bantu and the coloured. European youth in the urban areas and suburbs began indulging in dagga during late 1940s and early in 1950s (Watt, 1961). Asuni noted that in Nigeria cannabis was first introduced during the First World War, but failed to gain a foothold until the 1950s and early 1960s. At that point habitual cannabis use was found among lower classes in towns and among those on the fringes of society such as young migrants (Asuni, 1964).

The social and economic development and associated demographic transition in Africa during the 1960s accelerated the spread of cannabis abuse and the illegal movement of cannabis across borders. Development has led to large migrations of seasonal workers across borders, in part to participate in large construction projects such as the Tema harbor in Ghana, the Kariba hydroelectric scheme on the Zambesi, and the construction of railroads and motor roads (Lambo, 1965). These groups were prone to cannabis use. By the mid-1960s when the first systematic surveys of cannabis use in Nigeria and Ghana were carried out, cannabis use was also found among boys between the ages of 12 and 16 years (Sagoe, 1966; Amarquaye, 1967).

In the 1970s, the growing acceptance of cannabis across class and racial lines contributed to a growth in cross border trade. In South Africa, a study of South African adolescent drug use in 1974 concluded that there were the same relative percentages of cannabis users among whites and blacks at high school in 1974. In the follow-up survey in 1985, coloured, whites, and Indians all registered approximately the same rate of cannabis abuse (D

Toit, 1991).

Although Anumonye (1980) found that cannabis was the drug of choice in Lagos, he found that other drugs were beginning to appear on the scene. In addition to cannabis use, students and long distance drivers used amphetamines to stay awake. Other psychotropic substances such as barbiturates and Mandrax were equally abused. In addition, some students were poly-users who have used Mandrax and alcohol, stimulants and barbiturates, cannabis and alcohol. In studies among Bendel state students and two developing towns, Nevadomsky (1981, 1982) found that most students had used marijuana, and a significant number of the students had also used alcohol, diazepam, and cigarettes. Another study conducted among pharmacology students at the University of Ghana Medical School in 1970 revealed that none of the students had any experience with opioids, cocaine, or LSD. The study instead found excessive use of caffeine and alcohol by half of the students. In conclusion, the authors suggested that amphetamines and caffeine were relied on to aid the students in their school work (Ofori-Akyeah and Lewis, 1972; also cited in Affinnih, 1999). The climate of experimentation led to an increase in the spectrum of drugs available. An epidemiological study conducted among Ghanaian youth found that use of alcohol, coffee, marijuana, Valium, Librium, and Mandrax (i.e., Methaqualone) in the 1980s were significant enough to merit interventionist measures.

The rise of hard drug consumption in the 1980s and 1990s was dramatic, and virtually all of these drugs were imported. The United Nations International Narcotics Control Board (INCB) in 1983 reported that opiate abuse was not extensive in Africa. (INCB, 1983). By 1986, the INCB reported that heroin, which had been virtually unknown in Africa, was being abused in Mauritius and in Nigeria. In 1987, the INCB report confirmed the rapid spread of heroin abuse in Mauritius and the appearance of heroin addiction in Cote d'Ivoire, Ghana, Nigeria and Somalia. Cocaine seizures were noted in Morocco and Senegal and cocaine abuse in Ghana and Nigeria (INCB, 1987). Besides the heroin and cocaine abuse, amphetamine-type stimulants, sedative-hypnotics, benzodiazepines, barbiturates or barbiturates sedative-hypnotics were all catalogued (Bulletin on Narcotics, 1987). In 1988, the INCB report warned that no African country was safe from the danger of heroin (INCB, 1988).

By the mid-1990s, this situation had only worsened. A United Nations Drug Control Program study of ten sub-Saharan African countries drew a picture of a continent in which imported drugs are widely available . For instance, the study found that in a number of new substances such as

Methaqualone and heroin have progressively been penetrating Kenyan society, adding to the existing stock of popularly abused drugs such alcohol, cannabis, tobacco, and *khat*. In Cote d'Ivoire, the study found that the consumption of heroin, cocaine and psychotropic substances was increasingly becoming a cause for concern, while it found that amphetamine use was on the rise in northern Nigeria. In South Africa, cannabis remains the main drug of abuse, but designer drugs (ecstasy) crack cocaine, cocaine, LSD and heroin were expected to increase in popularity (UNDCP, 1995).

The prospects for the future are not promising. The study found that in Kenya, South Africa, Mozambique, and Cameroon that the drug situation would likely become worse. The report did note, however, that abuse of hard drugs such as heroin, cocaine, and LSD seems low beyond urban centers. Nonetheless, it is clear that sub-Saharan Africa has gradually been integrated into the international political economy of drug trafficking not only as a transit center for cocaine and heroin destined for European and United States markets, but also as a market in its own right.

DEMOGRAPHIC FACTORS LEADING TO CHANGES IN CONSUMPTION PATTERNS

The rise in local consumption in Africa closely parallels rapid growth of population and the spread of urbanization, which caused major economic and social disjunctions. Table 1 below shows urbanization trends in sub-Saharan Africa sub-regions. In addition to the dissolution of traditional relationships, urbanization brings large numbers of African citizens in contact with the international drug organizations that use cities as transshipment points. Drug organizations also directly or indirectly promote a variety of illegitimate economic activities such as drug trafficking, drug peddling, prostitution, and crime.

Another demographic factor that contributed to the rise of the drug problem in sub-Saharan Africa is the sharp increase in the size of the population under 15. Table 2 shows an estimated population under 15 by region in mid-1999, the percent of the population less than 15 years of age, and the percent of the general population who live in major cities and towns. The reason for this is the birth rate. In 1993, the population reference bureau reported that average annual rate of natural increase for sub-Saharan Africa is 3 percent. The individual countries' increase ranged from 3.8 to 2.5 percent (Population Reference Bureau, 1993). Several studies

Table 1. Urbanization in sub-Saharan African regions, 1950-2025 (percent of population in urban areas)

Region	1950	1975	1996	2025
Sub-Saharan Africa	11	21	32	49
Eastern Africa	5	13	23	39
Middle Africa	14	27	33	50
Southern Africa	38	44	48	62
Western Africa	10	23	37	56

Source: Goliber, T. J. (1997)

have indicated that the most vulnerable population is those who are less than 15 years of age, including street children, youths, and young adults.

Table 2. Southern sub-Saharan Africa: population, population under 15, and urban population, 1999

Region	Population (millions)	% under 15	Percent urban
Eastern Africa	235	46	20
Middle Africa	94	47	33
Southern Africa	49	35	2
Western Africa	223	45	24

Source: World Population Data Sheet: Demographic Data And Estimates for the Countries and the Regions of the World, 1999

Compounding this situation is widespread poverty and unemployment. The sub-Saharan Africa gross national product per capita income in 1997 ranged from a high of $3,030 in southern Africa to $260 in east Africa. In

west Africa, income was just $320 a year, while in middle Africa had an average income of $300 (Population Reference Bureau, 1999). Poverty and employment are particularly pressing in the growing urban centers. Rapid urbanization has created a reserve of unemployed people in cities who can easily fall prey to the local drug peddler or be recruited into a drug trafficking organization. In a recent study conducted in Accra, Ghana, Affinnih (1999) found that 50 subjects out of 117 were unemployed and 65 of these subjects had no source of income. The study also found that 77 subjects out of 117 surveyed indicated that they had used illegitimate means to support their drug habit.

DRUG CONTROL POLICY

Prior to independence, almost all of sub-Saharan African countries had some sort of drug laws in place or inherited a legacy drug control act or laws governing the use of therapeutic and non-therapeutic substances from previous colonial administrations. In the wake of the sharply increase in drug consumption, many countries have begun to put into effect a drug control policy of their own. Adelekan, (1998) has remarked that many sub-Saharan African countries have set up inter-ministerial committees (see Table 3) to formulate drug policies, which coordinate and supervise supply and demand reduction activities. Those sub-Saharan African countries that lack a ministerial organization to direct the fight on drugs typically have in place some form of anti-drug law focusing on drug control measures.

In either case, however, lack of funds, technical expertise, and surveillance equipment have hampered drug control efforts, and the effectiveness of these agencies and their ability to combat the drug trade has yet to be evaluated. All the factors that have encouraged cross-border drug trafficking--weak border patrols, understaffed law enforcement personnel without specialized knowledge and training in drug enforcement, and local corruption—are issues that must be addressed by policy makers.

On the regional level, there has been increasing cooperation among groups such as the Southern African Development Community (SADC) and Economic Community of West African States (ECOWAS) to control drugs and close borders. SADC members (with the exception of Angola) signed a protocol combatting illicit drug trafficking in 1996 (Oosthuysen, 1997) and a similar extradition treaty has been signed by ECOWAS states (United States International Narcotics Control Strategy Report (INCSR, 2000).

Table 3. Selected national drug control organizations

Country	Name of Organization
Cameroon	National Committee for the Fight Against Drugs (CNLD)
Cote d'Ivoire	National Drug Police (NDP)
Ethiopia	Ethiopian Counter-narcotics Unit (ECNU)
Ghana	Narcotics Control Board (NCB)
Lesotho	National Narcotics Board (NNB)
Kenya	Anti-Narcotics Unit (ANU)
Maldive	Narcotics Control Board (NCB)
Mauritius	Anti-Drug Smuggling Unit (ADSU)
Nigeria	Nigerian Drug Law Enforcement Agency (NDLEA)
South Africa	South Africa Narcotic Bureau (SANAB)
Zambia	Drug Enforcement Commission (DEC)

Source: U.S. Department of State, INCSR reports of 1993, 1994, 1997, and 2000.

In response to the regional drug control initiatives among the member states, the Organization of African Unity (OAU) has established an office in its secretariat to coordinate and monitor the implementation of the OAU drug control action plan, which will focus on cooperation with governments of African countries, with regional organizations like the ECOWAS and SADC, and with UNDCP and other international partners (INCB, 1999). On the international level, most sub-Saharan African countries are signatories to one or more of the following documents: the 1961 United Nations Single Drug Convention and its 1972 Protocol, the 1971 UN Convention on Psychotropic Substances, and the 1988 UN Drug Convention. (U.S. Department of State, 1993, 1994, 1997 and 2000).

CONCLUSION

At present the sub-Saharan African countries' are well integrated into the global system of drug trafficking and consumption, thanks to lax border controls. As a result, no sub-Saharan African country has escaped the problems of drug abuse. It was Africa's misfortune to be placed ideally as a transshipment point for Europe and the United States, and a side-effect of this export trade was a spill-over into local markets. The social, economic, and medical consequences of drug abuse now are a drain on the development of all African countries. Although they these problems have not reached the levels found in Europe or the United States, they are nonetheless pressing because African countries as a rule lack the resources needed to address them even at their current level. Restricting the flow of drugs across borders—or at least exacting a stiff price for any attempt to smuggle drugs—cannot only reduce the flow of drugs but make those drugs that do make it across borders prohibitively expensive. Such efforts are a prerequisite to successful prevention and treatment programs.

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