

## Risk-taking behaviour of Cape Peninsula high-school students

### Part IV. Alcohol use

A. J. FLISHER, C. F. ZIERVOGEL, D. O. CHALTON, P. H. LEGER,  
 B. A. ROBERTSON

**Abstract** The prevalence of a wide range of risk-taking behaviour among high-school students in the Cape Peninsula, South Africa, was investigated. In this article, the results for alcohol use are presented. Cluster sampling techniques produced a sample of 7 340 students from 16 schools in the three major education departments. A self-administered questionnaire was completed in a normal school period. Estimates for each education department were weighted to produce an overall estimate. Of the sample, 53,2% reported ever using alcohol; 26,2% had used it recently and 15,4% reported episodes of binge drinking in the previous 14 days. Drinking patterns varied according to school standard, home language, and gender. Males reported higher rates of alcohol use and for both genders rates increased with age. Overall, the prevalence of drinking was highest among adolescents whose home language was English. The proportion of Xhosa-speaking females who drank was very low.

The prevalence of binge drinking in particular was identified as being of concern. The findings indicate a need for preventive action and further local research in this area.

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Over the past 30 or 40 years increasing percentages of adolescents have started to drink alcohol, their alcohol consumption has increased in quantity and frequency, and the age at which drinking starts has declined.<sup>1</sup> Excessive alcohol intake results in alcohol intoxication in the short term, which has been shown to be significantly associated with interpersonal violence, motor vehicle accidents, and drownings.<sup>2-5</sup> In addition, inhibitions may be removed which would otherwise prevent risky sexual behaviours. Excessive alcohol intake over several years is associated with alcohol withdrawal delirium, hallucinosis, amnesic disorder and dementia, as well as various physical disorders including pancreatitis and hepatic cirrhosis.<sup>6,7</sup> The psychosocial consequences of prolonged excessive alcohol intake are also considerable and affect the national economy, the stability of family life and the future well-being of children.<sup>3</sup> However, not all adolescents who

drink alcohol excessively continue to do so into adult life,<sup>8,9</sup> and not enough is known about the relationship between age of onset of drinking and alcohol abuse and dependence in adulthood.<sup>4</sup>

Nevertheless, the serious short-term consequences of excessive alcohol intake in terms of adolescent morbidity and mortality make the introduction of intervention programmes to reduce this behaviour imperative. For such programmes to be effective, prevalence data and the identification of low- and high-risk groups are a prerequisite.

In South Africa recent media sentiment suggests that there has been an increase in teenage drinking and related problems.<sup>10</sup> Local systematic research on adolescent drinking behaviour is, however, generally lacking. Of South African prevalence studies undertaken, by far the majority are dated or confined either to adult populations or to specific subgroups of adolescents.<sup>11-14</sup> Generalisations are therefore impossible in an area noted already for its wide international and regional variations.<sup>4,15</sup> Alcohol use was therefore included as part of a larger prevalence study in which risk-taking behaviour of Cape Peninsula high-school students was investigated.<sup>16</sup>

### Methods

The methodology of the larger study of which this work forms a part has been described in detail elsewhere.<sup>16</sup> The study population was defined as all Cape Peninsula high-school students. Cluster sampling yielded a sample of 7 340 students from 16 schools in the three major education departments. A self-administered questionnaire was completed by each student under conditions approximating those of examinations. Means were weighted to account for the fact that different proportions of students were selected from each education department. The questions dealing with drinking behaviour were as follows: (i) have you ever used alcohol (including beer and wine)?; (ii) how many times have you used alcohol in the past 7 days?; (iii) how many times have you used alcohol in the past 4 weeks?; and (iv) how many times have you had 5 or more drinks on one occasion in the past 14 days?

### Results

#### Lifetime use (Table I)

Of the total sample, 53,2% (95% confidence interval (CI) 48,2 - 58,2) reported having ever used alcohol. A greater proportion of males than females for each standard and language group reported lifetime use and for both genders there was a trend of increased use with age. English-speaking students indicated the highest incidence of lifetime use. By comparison the proportion of female Xhosa-speakers who had used alcohol was low.

Centre for Epidemiological Research in Southern Africa and Institute for Biostatistics of the South African Medical Research Council, Parowvallei, CP, and Department of Psychiatry, University of Cape Town

A. J. FLISHER, M.S.C. (CLIN. PSYCHOL.), D.C.H.  
 C. F. ZIERVOGEL, F.F.PSYCH. (S.A.)  
 D. O. CHALTON, PH.D.  
 P. H. LEGER, M.A.  
 B. A. ROBERTSON, M.D.

**TABLE I.**  
**Percentage (with 95% CIs) of students who had ever used alcohol, by standard and home language(s), and gender (N = 7 340)\***

|                       | Males              | Females            |
|-----------------------|--------------------|--------------------|
| Standard              |                    |                    |
| 6                     | 40,2 (34,9 - 45,6) | 32,5 (27,2 - 37,9) |
| 7                     | 56,2 (51,2 - 61,2) | 43,8 (37,0 - 50,6) |
| 8                     | 66,5 (58,1 - 74,8) | 47,0 (40,2 - 53,7) |
| 9                     | 70,4 (62,7 - 78,0) | 57,6 (51,8 - 63,4) |
| 10                    | 79,8 (74,4 - 85,2) | 61,0 (56,3 - 65,7) |
| Language(s)           |                    |                    |
| Afrikaans             | 57,0 (52,1 - 61,9) | 47,5 (40,2 - 54,9) |
| Afrikaans and English | 58,3 (48,8 - 67,9) | 48,1 (37,9 - 58,3) |
| English               | 71,7 (66,6 - 76,8) | 60,8 (56,2 - 65,3) |
| Xhosa                 | 49,8 (46,1 - 53,5) | 16,7 (14,5 - 19,0) |

\* 160 missing responses.

**Recent use (Table II)**

Of the students 26,2% (95% CI 23,6 - 28,8) had used alcohol at least once in the past 7 days. There were more males than females involved in each standard and language group, with a steeper gradient of incidence among males. The incidence among English-speakers was again higher than that for the other language groups, and few Xhosa-speaking females reported recent alcohol use.

Of the sample, 2,4% (95% CI 2,0 - 2,8) indicated that they had used alcohol 4 or more times in the previous week. As before there was a male predominance and a trend towards increasing use with age. Variation across language grouping was not marked.

**TABLE II.**  
**Percentage (with 95% CIs) of students who had used alcohol in the past 7 days, by standard and home language(s), and gender (N = 7 340)**

|                       | Males              | Females            |
|-----------------------|--------------------|--------------------|
| At least once         |                    |                    |
| Standard              |                    |                    |
| 6                     | 15,5 (13,0 - 18,0) | 12,8 (9,3 - 16,3)  |
| 7                     | 27,6 (24,5 - 30,7) | 21,1 (16,2 - 26,1) |
| 8                     | 30,1 (23,5 - 36,6) | 20,3 (17,4 - 23,2) |
| 9                     | 39,4 (34,9 - 43,8) | 30,6 (27,4 - 33,8) |
| 10                    | 47,8 (39,9 - 55,7) | 32,0 (27,7 - 36,3) |
| Language(s)           |                    |                    |
| Afrikaans             | 28,1 (24,4 - 31,8) | 23,7 (20,0 - 27,3) |
| Afrikaans and English | 27,0 (22,0 - 32,1) | 22,1 (16,7 - 27,5) |
| English               | 37,7 (35,9 - 39,5) | 28,2 (25,2 - 32,2) |
| Xhosa                 | 29,2 (25,5 - 32,9) | 7,7 (7,0 - 8,4)    |
| 4 or more times       |                    |                    |
| Standard              |                    |                    |
| 6                     | 2,0 (1,1 - 2,9)    | 1,2 (0,5 - 2,0)    |
| 7                     | 3,1 (1,6 - 4,6)    | 2,3 (0,5 - 4,0)    |
| 8                     | 3,3 (1,4 - 5,3)    | 1,6 (0,4 - 2,7)    |
| 9                     | 3,4 (2,1 - 4,7)    | 1,4 (0,4 - 2,4)    |
| 10                    | 4,3 (2,7 - 5,8)    | 3,0 (1,8 - 4,3)    |
| Language(s)           |                    |                    |
| Afrikaans             | 2,6 (1,9 - 3,3)    | 1,7 (0,8 - 2,6)    |
| Afrikaans and English | 3,2 (1,8 - 4,6)    | 1,3 (0,5 - 2,0)    |
| English               | 3,1 (2,4 - 3,8)    | 2,7 (1,8 - 3,7)    |
| Xhosa                 | 4,7 (2,3 - 7,1)    | 0,9 (0,7 - 1,1)    |

**Binge drinking (Table III)**

Among the entire sample, 15,4% (95% CI 12,7 - 18,0) had had 5 or more drinks on at least 1 occasion in the previous 14 days. There were proportionately more males than females involved in each standard and language group. As with previous patterns, there was a higher incidence of binge drinking among English-speaking students. Among Xhosa-speaking females it was disproportionately low.

Finally, 3,0% (95% CI 2,4 - 3,6) of the total sample reported consuming 5 or more drinks on 4 or more occasions during the previous 14 days. For each standard and language group there was a male predominance which became increasingly marked in the higher standards. The incidence tended to increase with standard among males, whereas among females it was relatively constant. Among the language groups Xhosa-speaking males reported the highest incidence of heavy binge drinking.

**TABLE III.**  
**Percentage (with 95% CIs) of total students who had had 5 or more drinks on 1 or more occasions in the past 14 days, by standard and home language(s), and gender (N = 7 340)**

|                       | Males              | Females            |
|-----------------------|--------------------|--------------------|
| At least once         |                    |                    |
| Standard              |                    |                    |
| 6                     | 8,0 (6,4 - 9,6)    | 5,7 (3,0 - 8,3)    |
| 7                     | 16,0 (12,3 - 19,7) | 10,0 (6,7 - 13,4)  |
| 8                     | 21,1 (14,7 - 27,6) | 11,9 (8,3 - 15,5)  |
| 9                     | 29,9 (23,4 - 36,5) | 14,5 (11,9 - 17,0) |
| 10                    | 33,7 (24,9 - 42,5) | 15,3 (10,9 - 19,7) |
| Language(s)           |                    |                    |
| Afrikaans             | 15,4 (11,9 - 18,9) | 10,2 (8,9 - 11,5)  |
| Afrikaans and English | 20,2 (15,1 - 25,2) | 12,4 (9,0 - 15,7)  |
| English               | 26,9 (22,9 - 30,9) | 14,7 (12,7 - 16,8) |
| Xhosa                 | 24,0 (21,0 - 27,0) | 5,0 (4,2 - 5,7)    |
| 4 or more times       |                    |                    |
| Standard              |                    |                    |
| 6                     | 2,8 (1,9 - 3,6)    | 1,3 (0,5 - 2,0)    |
| 7                     | 4,1 (3,0 - 5,1)    | 2,1 (1,1 - 3,0)    |
| 8                     | 4,8 (3,5 - 6,2)    | 1,5 (0,8 - 2,2)    |
| 9                     | 7,5 (4,6 - 10,5)   | 1,8 (0,5 - 3,2)    |
| 10                    | 5,0 (3,0 - 6,9)    | 1,9 (0,9 - 2,9)    |
| Language(s)           |                    |                    |
| Afrikaans             | 3,5 (2,3 - 4,7)    | 1,7 (1,1 - 2,3)    |
| Afrikaans and English | 5,3 (3,2 - 7,3)    | 2,0 (0,7 - 3,3)    |
| English               | 4,6 (3,2 - 5,9)    | 1,7 (1,2 - 2,2)    |
| Xhosa                 | 8,4 (6,7 - 10,1)   | 1,4 (1,1 - 1,8)    |

**Discussion**

Several broad generalisations may be drawn from the results of this study. Male adolescents use alcohol more frequently and in greater quantity than females. Drinking tends to increase with age for both genders although this is more marked among males. Among the language groups the prevalence of alcohol use is generally highest in adolescents whose home language is English. However, heavy binge drinking is most prevalent among Xhosa-speaking males. In contrast, Xhosa-speaking females report drinking prevalences which are overall impressively low. Whereas more than half of Cape Peninsula school-going adolescents have used alcohol in their lifetime, the majority do not appear to drink excessively. Of concern is the fact that there are adolescents below the legal age of 18 years who appear to be drinking regularly, a small percentage excessively

so and that among the regular drinkers of all ages binge drinking is widespread.

Although data for this population are too fragmentary to justify precise comparison, our findings nevertheless largely concur with recent local studies on adolescent drinking patterns.<sup>13,14,17</sup> However, the incidence of drinking among South African adolescents has not reached international levels. While the present findings reflect the international profile of male predominance and increased incidence with age,<sup>18-21</sup> South African adolescents would currently appear to use alcohol less frequently and in smaller volumes than their overseas counterparts. For example, among Australian secondary school students the prevalence of recent drinking (at least 1 drink in the past week) in 1984 was 49% among females and 56% among males at 17 years of age.<sup>19</sup> Similarly, in the USA national school-based study found that 41% of students had had 5 or more drinks on 1 occasion during the 14 days before the survey.<sup>21</sup> Future studies would need to assess whether the current prevalence patterns in South Africa continue to hold, since there may be a time lapse factor involved between the local and the international scenario.

Owing to the cross-sectional methodology employed, this study provides little insight into any longitudinal aspects of the reported drinking patterns.<sup>16,22</sup> Since excessive drinking may be a temporary aberration for many adolescents, caution should be exercised when inferring possible long-term repercussions of their current drinking behaviour.<sup>22,23</sup> In terms of the more immediate consequences, however, the prevalence of binge drinking reported in this study does constitute cause for concern. The causal relationship between alcohol intoxication and motor vehicle accidents is well established both locally and internationally.<sup>3,5</sup> In the Cape Town municipal area, alcohol has been implicated in more than 60% of deaths resulting from traffic accidents.<sup>3</sup> The fact that a considerable number of adolescents are driving vehicles while intoxicated<sup>24</sup> exposes them and their passengers (as well as other vehicles and pedestrians) to risk. The problem is compounded by the combined effect of inexperience and intoxication.

Another area of concern is the association between adolescent drinking behaviour and illicit drug use. Following Kandel's continuum of drug stages,<sup>25,26</sup> along which the adolescent progresses from legal to illegal drugs, it has been suggested that problem drinking is a stage occurring after cannabis use and before other 'hard' drugs such as heroin.<sup>27</sup> According to Kandel, drugs from one stage are carried over into the next giving rise to multiple drug use. Although this practice is currently widespread in the USA, multiple drug use has not yet been noted among school-going South African adolescents.<sup>28</sup> In the future it may nevertheless emerge as a serious problem.

Despite the inherent difficulty of changing adolescent behaviour through education programmes,<sup>8,27,29</sup> there remains a need for intervention. Uniform programmes which fail to account for the cultural context of drinking and its particular meanings for different groups<sup>4,23</sup> are unlikely to be successful. Failing to distinguish between drinking which may be normative and that which constitutes a health risk could lead to exaggeration of the problem<sup>4,9</sup> and the inefficient use of scarce resources.

The present research has provided a starting point for further investigation and the planning of effective strategy. It is essential that future studies systematically explore the determinants and long-term consequences of the various patterns in the adolescent population in order to devise well-founded interventions.

Please see the first article in this series<sup>16</sup> for acknowledgements.

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