Risk-taking behaviour of Cape Peninsula high-school students

Part II. Suicidal behaviour

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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 suicidal behaviour 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. During the previous 12 months, 19% of students had seriously thought about harming themselves in a way that might result in their death, 12,4% had told someone that they intended to put an end to their life, and 7,8% had actually tried to put an end to their life. There were different trends according to gender, standard and language(s) spoken at home. Of those who had made a suicide attempt during the previous 12 months, 85,7% indicated that they had seriously thought about doing so, while 57,7% had told someone that they intended putting an end to their life. There is in many cases no continuity from suicidal ideation to communicating suicidal intent to an actual attempt.**

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There is a growing concern internationally and locally regarding the extent of suicidal behaviour among adolescents.[1-5] In the USA, suicide is the third leading cause of death in the 15 - 19-year age group, exceeded only by homicide and accidents.[3,6] In South Africa, there is a wide variation in the incidence of suicide between the population groups.[7] Among whites (for whom the incidence is highest) 10,7% of all deaths in the 15 - 19-year age group during the period 1984 - 1986 were caused by suicide.[7] Furthermore, there has been an increase in the adolescent suicide rate in several European and North American countries,[1-3,5,6,8] and local data suggest a similar trend.[4]

However, suicide rates account for only part of the broader problem of suicidal behaviour,[9] for the following reasons. Firstly, they ignore non-fatal suicide attempts.[9-12] Estimates of the ratio between completed suicides and non-fatal attempts, based on hospital figures, vary between 50 and 120 to 1.[9,13] These estimates would clearly be higher if those who attempted suicide and did not present at hospitals were also taken into account.[9] Secondly, many deaths ascribed to accidents, assault or undetermined causes may in fact be due to suicide.[14] Thirdly, there is some evidence that there is not necessarily a continuity of suicidal behaviour from suicidal ideation to attempt to completed suicide.[1,14-16] This is particularly pertinent for adolescents, where suicide attempts frequently represent an inappropriate coping strategy with low intentionality for death.[1,17]

Because of these limitations regarding the usefulness of suicide mortality data, *community-based* studies documenting the incidence of various forms of adolescent suicidal behaviour have been conducted.[5,9,18] However, South African studies have been confined almost exclusively to mortality data[7] or hospitalised patients.[4,7,19] It is necessary to have data regarding the extent of suicidal behaviour among South African adolescents in the community to inform preventive strategies. It was therefore decided to include suicidal behaviour as part of a larger study in which risk-taking behaviour of Cape Peninsula high-school students was investigated.[20]

Methods

The methodology of the larger study of which this work forms a part has been described in detail elsewhere.[20] 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 questionnaire items regarding suicide were as follows: (*i*) during the past 12 months did you ever seriously think about harming yourself in a way that might result in your death? (*ii*) during the past 12 months did you ever tell anyone that you intended putting an end to your life? and (*iii*) during the past 12 months did you ever actually try to put an end to your life? Each question required a yes/no answer.

Results

Of the total sample, 19% (95% confidence interval (CI) 16,9 - 21,0) had during the previous 12 months seriously thought about harming themselves in a way that might result in their death. There was a greater proportion of females than males in this regard for each standard and language (Table I). There was a tendency for the incidence of suicidal thoughts to increase with standard for both genders. The rank order from highest to lowest incidence for both genders with regard to language was as follows: Afrikaans and English; English; Afrikaans; and Xhosa.

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TABLE I.
Percentages (with 95% CIs) of students who during the previous 12 months had seriously thought about harming themselves in a way which might result in their death, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	11,6 (9,3 - 13,8)	19,9 (15,2 - 24,6)
7	12,8 (10,4 - 15,2)	22,0 (19,6 - 24,4)
8	16,1 (12,2 - 20,0)	25,6 (23,1 - 28,0)
9	16,8 (12,9 - 20,7)	24,5 (20,8 - 28,1)
10	15,5 (10,7 - 20,2)	24,9 (21,0 - 28,8)
Language(s)		
Afrikaans	11,6 (10,2 - 13,0)	20,5 (17,4 - 23,7)
Afrikaans and English	18,6 (15,1 - 22,1)	30,7 (27,0 - 34,3)
English	16,7 (13,2 - 20,1)	26,8 (22,0 - 31,6)
Xhosa	8,4 (5,6 - 11,3)	12,9 (11,2 - 14,6)

* No. of missing responses = 50.

Of the total sample, 12,4% (95% CI 11,1 - 13,8) had during the previous 12 months told someone that they intended to put an end to their life. Of these, 75,8% had in the same time period seriously thought about ending their life while 24,2% had not.

The trends were similar to those for the above item (Table II).

TABLE II.
Percentages (with 95% CIs) of students who during the previous 12 months had told someone that they intended putting an end to their life, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	7,0 (4,6 - 9,3)	12,2 (9,0 - 15,4)
7	7,9 (6,1 - 9,7)	16,7 (14,2 - 19,3)
8	9,8 (7,5 - 12,1)	16,3 (13,1 - 19,5)
9	11,2 (8,1 - 14,3)	15,6 (12,7 - 18,6)
10	10,7 (7,2 - 14,2)	17,2 (13,6 - 20,9)
Language(s)		
Afrikaans	7,7 (6,5 - 9,0)	15,1 (13,3 - 17,0)
Afrikaans and English	13,3 (10,3 - 16,3)	22,6 (19,3 - 25,8)
English	9,1 (6,7 - 11,6)	16,2 (12,6 - 19,7)
Xhosa	4,6 (3,5 - 5,7)	5,1 (4,3 - 5,9)

* No. of missing responses = 59.

Of the total sample, 7,8% (95% CI 6,2 - 9,4) had during the previous 12 months actually tried to put an end to their life. Of these, 85,7% had in the same time period seriously thought about harming themselves in a way that might result in their death while 14,3% had not. Similarly, 57,7% had told someone that they intended putting an end to their life while 42,3% had not.

Again, more females than males had made an attempt for each standard language group (Table III). There are important differences for the other trends between this item and the previous items. For males the incidence of suicide attempts decreased with standard while for females there was a peak at standard 7. With regard to language, the rank order for the incidence of suicide attempts differed between males and females and did not correspond to the rank, order for the above two items; however, of females, Xhosa speakers still had the lowest incidence.

TABLE III.
Percentages (with 95% CIs) of students who had in the previous 12 months actually tried to put an end to their life, by standard and language(s) spoken at home, and gender (*N* = 7 340)*

	Males	Females
Standard		
6	6,1 (4,3 - 7,8)	9,9 (6,4 - 13,4)
7	5,7 (3,3 - 8,1)	12,1 (8,8 - 15,4)
8	5,1 (3,8 - 6,3)	11,0 (8,7 - 13,3)
9	4,4 (2,1 - 6,6)	9,2 (6,6 - 11,8)
10	2,9 (1,2 - 4,7)	8,4 (5,8 - 10,9)
Language(s)		
Afrikaans	5,5 (4,3 - 6,7)	10,1 (7,9 - 12,3)
Afrikaans and English	6,1 (3,9 - 8,3)	10,1 (7,9 - 12,3)
English	3,0 (1,0 - 5,0)	9,4 (5,9 - 13,0)
Xhosa	5,7 (4,8 - 6,6)	7,8 (6,5 - 9,0)

* No. of missing responses = 54.

Discussion

Reliable comparison with previous work is impeded by the relative scarcity of relevant community-based studies[16,9] and differences in the way in which terms are defined.[21] This notwithstanding, the proportions of those experiencing suicidal feelings and making actual attempts do not contradict previous findings.[5,9,12,22] Furthermore, higher frequencies of suicidal ideation and attempts by females have been documented in Australia, Canada, the Netherlands, and the USA.[9,16] The relationship between school standard and suicidal ideation evident in this study is compatible with previous findings.[22] Although there are no comparable South African studies, there was a female preponderance among adolescents seen in a Durban general hospital after a parasuicide.[4,17] However, the finding that the majority of the adolescents who were referred to this hospital were in the older age group is not reflected in the present study.[4,17]

The usual tendency is for males to engage in more risk-taking behaviour than females. This has been observed in several international surveys[5,14] and for the other aspects of risk-taking behaviour reported in this series.[23-28] Thus, the finding that females are more at risk than males with regard to suicidal behaviour is anomalous. It can possibly be ascribed to a propensity for females to be more reflective and less likely to direct aggression outwards than males.

The increasing incidence of suicidal thoughts by standard for both genders may be a function of increasing academic and social developmental demands. The relatively low percentages of Xhosa-speaking students with suicidal thoughts may be related to the adverse social circumstances of these students. Lester[29] has argued that suicide is less likely to occur when people have an outside source to blame for their misery, since they can attribute their misery to this source. Additional factors that have been suggested in explaining the low incidence of suicidal behaviour in South African blacks include: (*i*) cultural factors, such as taboos; (*ii*) the prevalence of relatively close family ties; and (*iii*) a propensity for expressing emotions in somatic terms.[30-34]

One of the most striking findings is a different *pattern* for both standard and home language(s) for the items dealing with suicide attempts as opposed to the other items. Furthermore, there are relatively large subgroups of students who had made a suicide attempt but had not seriously thought about doing so and had not told anybody else of their intentions. This may indicate poor data quality. Conversely, it may indicate that there is in

many cases not a *continuity* from suicidal ideation to communicating suicidal intent to an actual attempt.

Some shortcomings of the study have been described elsewhere.[20] An additional point specific to suicidal behaviour is that, owing to limitations of space, no attempt was made to determine the extent to which those who had attempted to take their life had required medical attention at primary, secondary or tertiary level. This could have shed light on the severity of these attempts, and also served to bridge hospital- and community-based studies regarding suicidal behaviour.

The relatively high incidence of adolescent suicidal thoughts in the face of a substantially lower suicide mortality rate[7] has been invoked to support the argument that suicidal thoughts are a developmental phenomenon not requiring preventive action.[21]

However, suicidal thoughts can be regarded as a complex symptoms[2] that is associated with subsequent suicidal events and psychological dysfunction.[11,13,18,21,22,35,36] This study has shown that a large segment of the adolescent population is vulnerable in this regard, and has pointed towards certain demographic features that may be associated with increased risk.

Please see the first article in this series[20] for acknowledgements.

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