Risk-taking behaviour of Cape Peninsula high-school students

Part VIII. Sexual 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 sexual behaviour are presented. Cluster sampling techniques produced a sample of 7 340 students from 16 schools in the three major education departments, of whom 79,7% answered the section dealing with sexual behaviour. 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, 17,4% indicated a previous episode of heterosexual intercourse. The median age at first intercourse was 15,1 years. The median number of partners in the previous 12 months was 1,0. The median number of weeks since the most recent coital episode was 6,6; on this episode 76,6% had known their partners for more than 7 days, while 60,5% had done something to avoid pregnancy. The most frequently used method of contraception was injectable steroids for Xhosa-speaking students and condoms for the other students. Males and Xhosa-speaking students appear to be particularly at risk for the adverse consequences of sexual activity. The HIV epidemic has increased the urgency of introducing meaningful sexuality education in South African schools.**

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It has been concluded internationally that adolescent sexual activity is characterised by early onset, multiple partners, and a low incidence of contraception use.[1-7] The incidence of unwanted pregnancy[2,8] and sexually transmitted diseases (STDs) in this population are therefore relatively high.[2] Furthermore, although the recorded incidence of HIV infection among adolescents is still relatively low,[3,9,10] their sexual behaviour has direct relevance for HIV transmission because many HIV-infected adolescents will be diagnosed only in their 20s.

Despite these factors, there is a relative paucity of data regarding the sexual behaviour of South African adolescents. Sexual behaviour was therefore included as part of a larger study in which the prevalence of a wide range of risk-takng behaviour of Cape Peninsula high-school students was investigated.[11]

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Methods

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. Of the total sample, 5 851 (79,7%) answered the questionnaire items dealing with sexual behaviour. The remainder did not do so for one of the following reasons: (*i*) the school withheld permission in the case of 2 schools falling under the House of Assembly; (*ii*) the parents/guardians withheld permission; or (*iii*) the students themselves chose not to complete this section.

Students were asked whether they had experienced heterosexual vaginal intercourse. If they had, they were asked: (*i*) their age at first intercourse; (ii) whether they had known their partner for longer than 7 days on the most recent occasion they had had intercourse; (*iii*) the number of different partners with whom they had experienced intercourse in the previous 12 months; (*iv*) the number of weeks since the most recent occasion they had had intercourse; (*v*) whether they had done or had used anything to prevent pregnancy on the most recent occasion they had had intercourse and, if they had, which methods were used; and (*vi*) whether they had ever had heterosexual anal intercourse. All males were asked whether they had ever had homosexual anal intercourse. All these terms were defined using everyday language.

Means are provided when the data suggest a symmetrical distribution while medians are used when this was found not to be the case. Both these measures were weighted to account for the fact that different proportions of students were selected from each education department. Additional details regarding the methodology have been provided elsewhere.[11]

Results

Of the sample, 17,4% (95% confidence interval (CI) 14,4 - 20,3) reported that they had ever had heterosexual vaginal intercourse. With the exception of Standard 10, a greater proportion of males than females reported having had intercourse for each standard and language group (Table I). For both males and females, the proportion was higher among Xhosa-speaking students than those speaking other languages.

The median age at first intercourse was 14,9 years (interquartile range 12,8 - 15,9) for males and 15,6 years (interquartile range 14,6 - 16,6) for females. There was little variation in the median age at first intercourse between the language groups; for males, the median ages ranged between 14,3 and 15,0 years while for females they ranged between 15,3 and 16,0 years.

Of those students who indicated that they had had intercourse, 76,6% (95% CI 71,0 - 82,2) had known their partners for longer than 7 days before their most recent coital episode. With the exception of those speaking both English and Afrikaans at home, fewer males

TABLE I.
Percentage (with 95% CIs) of students who have had heterosexual intercourse, by standard, language(s) spoken at home, and gender (*N* = 5 851)

	Males	Females
Standard		
6	14,1 (11,5 - 16,6)	6,8 (4,5 - 9,0)
7	19,8 (16,4 - 23,3)	10,2 (9,1 - 11,3)
8	25,1 (19,4 - 30,9)	15,8 (14,2 - 17,5)
9	27,0 (21,5 - 32,5)	18,6 (12,8 - 24,4)
10	21,6 (13,5 - 29,7)	25,0 (16,4 - 32,5)
Language(s)		
Afrikaans	14,1 (13,0 - 15,3)	3,9 (3,0 - 4,8)
Afrikaans and English	18,9 (16,9 - 21,0)	6,9 (5,2 - 8,7)
English	18,0 (10,7 - 25,4)	12,7 (10,5 - 14,9)
Xhosa	68,3 (60,6 - 76,0)	60,8 (54,6 - 67,0)

than females had known their partner for longer than 7 days (Table II). For each gender, the proportion of Xhosa-speaking students who had known their partners for more than 7 days was smaller than for the other language groups.

TABLE II.
Percentage (with 95% CIs) of students who had had heterosexual intercourse who had known their partner for more than 7 days on their most recent coital episode, by standard, language(s) spoken at home, and gender (*N* = 1 781)*

	Males	Females
Standard		
6	54,0 (37,0 - 71,0)	59,9 (46,8 - 7,30)
7	71,8 (65,1 - 78,5)	79,0 (73,8 - 84,3)
8	68,0 (58,9 - 77,2)	86,9 (80,9 - 92,9)
9	78,7 (73,1 - 84,4)	82,9 (77,2 - 88,5)
10	86,4 (80,7 - 92,0)	89,9 (84,3 - 95,5)
Language(s)		
Afrikaans	60,6 (47,7 - 73,5)	81,9 (76,6 - 87,2)
Afrikaans and English	84,0 (77,3 - 90,8)	81,5 (68,2 - 94,7)
English	82,1 (78,8 - 85,4)	90,1 (86,8 - 93,3)
Xhosa	46,0 (39,7 - 52,2)	68,6 (60,5 - 76,7)

* 84,2% of the students who indicated that they had had sexual intercourse answered this question.

The median number of partners in the previous 12 months was 1,5 (interquartile range 1,0 - 3,5) for males and 1,0 (interquartile range 1,0 - 1,3) for females. There were no obvious trends with respect to standard. There was little variation between the language groups; for males, the medians ranged between 1,3 and 2,0 while for females the median was 1,0 for all the language groups.

The median number of weeks since the most recent coital episode was 6,1 (interquartile range 1,8 - 26,5) for males and 6,8 (interquartile range 2,0 - 24,3) for females.

Of those who reported having had vaginal intercourse, 60,5% (95% CI 55,7 - 65,3) had done something to prevent pregnancy on their most recent coital episode. Except for respondents in Standard 6, females were more likely than males to have taken steps against unwanted pregnancy for each standard and language group (Table III). Relatively low proportions of Afrikaans- and Xhosa-speaking males reported using contraceptive measures on their most recent coital episode.

TABLE III.
Percentage (with 95% CIs) of students who had heterosexual intercourse who had done something to prevent pregnancy on the most recent coital episode, by standard, language(s) spoken at home, and gender (*N* = 1 781)*

	Males	Females
Standard		
6	49,1 (34,4 - 63,8)	48,1 (37,3 - 58,9)
7	49,6 (42,9 - 56,2)	67,8 (61,1 - 74,5)
8	63,3 (52,4 - 74,2)	70,0 (64,3 - 75,7)
9	54,1 (47,6 - 60,7)	67,4 (61,1 - 73,6)
10	62,2 (54,1 - 70,3)	74,5 (70,4 - 78,6)
Language(s)		
Afrikaans	22,5 (16,6 - 28,5)	65,3 (60,5 - 70,1)
Afrikaans and English	57,1 (50,3 - 63,9)	65,6 (55,8 - 75,4)
English	63,7 (56,3 - 71,1)	68,5 (62,7 - 74,2)
Xhosa	23,6 (14,0 - 33,3)	73,3 (69,1 - 77,5)

* 78,1% of the students who indicated that they had had sexual intercourse answered this question.

There were no discernible trends regarding the methods of contraception used according to school standard. This was not the case in relation to language group (Table IV). Except for Xhosa-speaking students, the most frequently used method of contraception was condoms, with injectable steroids being used relatively infrequently. For Xhosa-speaking students the converse was the case, in that injectable steroids were the most frequently used method of contraception and condoms were used relatively infrequently.

Of all the students, 1,3% (95% CI 1,0 - 1,6) indicated that they had had heterosexual anal intercourse. Of all the male students, 1,4% (95% CI 1,1 - 1,7) indicated that they had had homosexual anal intercourse.

Discussion

Some methodological limitations of the larger study of which this report forms a part have been discussed elsewhere.[11] An additional factor relevant to this article is that about 20% of the sample did not complete that part of the questionnaire dealing with sexual behaviour. Clearly, this may have introduced a source of bias.

With the exception of Xhosa-speaking students, the prevalence of sexual activity of Cape Peninsula high-school students is somewhat lower than that reported internationally.[2,3,4,12] For example, in the USA approxi-

TABLE IV.
Percentage (with 95% CIs) of students in each language group who had used or had done something to prevent pregnancy on their most recent coital episode, who used various methods of contraception (*N* = 1 781)*

	Afrikaans	Afrikaans and English	English	Xhosa
Condoms	81,9 (77,1 - 86,8)	70,7 (49,7 - 91,7)	68,6 (65,7 - 71,5)	16,0 (14,9 - 17,2)
Oral steroids	6,7 (3,9 - 9,6)	18,2 (7,2 - 29,3)	32,6 (30,2 - 35,0)	13,6 (11,8 - 15,5)
Injectable steroids	4,2 (3,4 - 5,0)	2,2 (0,3 - 4,1)	7,8 (4,2 - 11,4)	75,5 (73,4 - 77,6)
Withdrawal	7,1 (3,5 - 10,8)	14,9 (0,0 - 31,3)	9,3 (7,0 - 11,6)	2,2 (1,5 - 2,9)
Rhythm	4,6 (0,0 - 10,0)	13,8 (0,0 - 29,6)	6,4 (2,7 - 10,0)	9,2 (7,3 - 11,0)

* Only methods used by more than 5% of all the students who had used or had done something to prevent pregnancy of their last coital episode are presented. Some students used more than 1 method.

mately half of 15 - 17-year-old males and one-third of 15 - 17-year-old females are reported to be sexually active.[12] Among Xhosa-speaking students, a relatively high incidence of sexual activity often with a partner who has been known for a short period of time, and a low incidence of condom use, suggests that Xhosa-speaking students may be at relatively high risk for the adverse consequences of sexual behaviour. These findings support the results of other South African studies conducted among black adolescents.[1,5,13] Furthermore, our data are consistent with the international trend that males are at greater risk than females in that they are more likely to commence sexual activity at an early age, to have known their partners for a short period of time, to have sexual encounters more frequently, and to have a greater number of sexual partners; in addition, they are less likely to use contraceptive measures. Xhosa-speaking males are especially vulnerable.

This study has shown that a substantial proportion of the heterosexual encounters of Cape Peninsula high-school students (especially those speaking Xhosa and males) are not safe in terms of unwanted pregnancy and STDs such as HIV infection. Consistent with epidemiological trends in developing countries,[14] the low rate of homosexual anal intercourse found in this study implies that the main threat of HIV infection is from heterosexual encounters.

Age at first intercourse may be a poor indicator of risk owing to the possibility of a long time interval between the first and subsequent sexual encounters[2] and infrequency of sexual intercourse. It is, however, associated with a higher incidence of obstetric complications, STDs, unwanted pregnancies, adverse emotional consequences, and socio-economic deprivation.[4,6] Our finding that a considerable proportion of adolescents are commencing sexual activity at a relatively early age, and furthermore that many of these younger students have not known their partner for more than 7 days and are not taking adequate precautions against pregnancy and STDs, implies that education regarding sexuality should commence in primary school.[6]

Failure to ensure adequate contraceptive use by adolescents has been documented in several countries.[1,2,6,7] Our findings add to the weight of this evidence, since relatively few Cape Peninsula high-school students take sufficient measures to protect themselves against unwanted pregnancy and STDs. This may partly reflect a lack of knowledge.[7] However, a low incidence of contraception use has been reported in adolescents who are knowledgeable in this regard[1,2,15] and have access to contraceptive services.[16] It is possible that adolescents perceive themselves to be at low risk[3] and invulnerable to the dangers of unsafe sex.[9] Alternatively, unsafe practices may reflect a need to engage in risk-taking behaviour or an unconscious wish to become pregnant.[3,8,11,13,16] The following factors have been invoked to account for the specific reluctance to use condoms: (*i*) concerns regarding an inhibition of pleasure; (*ii*) the fact that adolescent intercourse is frequently unplanned; (*iii*) unequal gender-based interaction resulting in females not being able to motivate males to use condoms; and (*iv*) difficulty in obtaining condoms from family-planning clinics.[15,17-19] Since condom use was relatively infrequent among Xhosa-speaking students, these factors may be especially relevant for this group. It is the experience of two of the authors (A.J.F., C.F.Z.) that the staff at community clinics serving Xhosa-speaking youth in the Cape Peninsula actively promote the use of injectable forms of contraception (which would result in a lower proportion of students using condoms). While our findings testify to the success of this effort, it may have resulted in the neglect of condom promotion. Implicit in much of this discussion is that important considerations determining whether appropriate contraceptive behaviour is adopted include cultural factors, political policies, and socio-economic constraints.[1,5,13,20]

Adolescent sexual behaviour is a complex phenomenon with multiple determinants. Complementary qualitative research efforts have the potential to increase understanding of some of this complexity. Failure to take it into account may explain why many sex education programmes and mass media campaigns have not succeeded in altering patterns of sexual behaviour.[14,15,21] Notwithstanding this, the HIV epidemic has increased the urgency of introducing comprehensive and effective sexuality education in South African schools. Innovative educational strategies are thus essential. These could include experimental education methods involving direct adolescent participation;[1] the creative use of puppets,[22] plays, music, soap operas and comic books;[23] social marketing strategies;[24] and school-based clinics offering a range of counselling and contraceptive services.[20] Whatever approaches are used would need to take as a point of departure the finding that a considerable proportion of Cape Peninsula adolescents are currently at risk for the adverse consequences of sexual activity.

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