

SEXUAL ACTIVITY, KNOWLEDGE ABOUT HIV/AIDS AND WILLINGNESS TO TEST FOR HIV AMONG YOUNG PEOPLE IN BOTSWANA

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Abstract

Introduction:

Botswana has an HIV prevalence rate of 38.8 percent, the highest in the world (UNAIDS, 2004). This study identifies factors that explain three important issues in the fight against HIV/AIDS in Botswana. These issues are sexual activity, knowledge about HIV/AIDS, and willingness to test for HIV infection among young people (12-23 years old).

Method

The data were collected using a 76 item self-administered questionnaire, which solicited information on demographic and background characteristics of respondents, the extent of their sexual activity, their knowledge about HIV/AIDS, and their willingness to test for HIV infection. The questionnaire was completed by 1294 students from a national sample of 84 educational institutions including (1) community junior secondary schools, (2) senior secondary schools, and (3) rural and urban post-secondary institutions.

Results

The study found sexual activity among students to be associated with rural residence, low socio-economic status, and having parents who are unemployed. Further, the findings indicate that family cohesion and the stability of the home environment for children are associated with sexual activity in young people. The study also reported that girls were more willing to test than boys, and students from more privileged backgrounds were more willing to test than those from less privileged households.

Conclusion

This analysis concludes that the problems of sexual activity and willingness to test for HIV among youth in Botswana are part of a general problem of poor familial relationships, lack of family cohesion and stability of the home environment for children, and poor psychological development.

Key words: knowledge, HIV/AIDS, young people, sexual activity

Introduction

Botswana is one of the countries in sub-Saharan Africa where the global HIV/AIDS epidemic, is a particular challenge. With a small population of about 1.7 million people, Botswana is said to have an HIV prevalence rate of over 38.8 percent, the highest in the world (UNAIDS 2004). By the end of 2002 there were an estimated 330,000 people living with HIV, and as much as 28,000 adults and children had developed AIDS (Botswana Government, 2003). Life expectancy was estimated at only 39 years instead of 72 years, if it were not for AIDS (Stanecki, 2004). The high prevalence rates mean that AIDS-related mortality will cause untold economic hardship, and, Botswana's economic and human development is likely to deteriorate or become reversed (Doehlie & Mashwabi, 2003; Fako & Linn, 2003).

Aim of the Study

This study identifies and documents factors that can explain three important issues in the fight against HIV/AIDS in Botswana. These issues are sexual activity, knowledge about HIV/AIDS and willingness to test for HIV infection among young people. The HIV/AIDS epidemic is a particular challenge among young people between 15 and 24 years who are estimated to contribute at least half or more of all HIV infections (almost 7000 daily) worldwide (UNAIDS, 2004). With young people at the center of the epidemic, it is important to know the factors associated with their sexual activity, their knowledge or

ignorance about HIV/AIDS and their willingness to test for HIV infection.

Sexual Activity among Young People

For a variety of reasons, including peer pressure, childish prestige, avoiding to be laughed at or called names such as "sack" (Seloilwe et al., 2001), adolescent curiosity and experimentation with sex, young people in Botswana engage in a variety of sexual behaviors that put them at risk of HIV infection. These behaviors include frequent change of sexual partners, exchange of sexual partners, exchange of sex for material goods or money, the use of sex to barter for good grades, the use of sex for stress relief, and sex with multiple partners. Various forms of sexual expression are facilitated by freedom from parental supervision, especially when alone without guardians, in scattered family residences, cattle posts and agricultural lands, and away in boarding school or at university.

One of the most important factors that place young people at the center of HIV vulnerability is early sexual debut, which has been reported to be as early as eight (8) years (Rakgoasi and Campbell, 2000), 10 years (Ball, 1996; Seboni, 1993) and 12 years of age (Seloilwe et al, 2001). However, most young people begin sexual intercourse when they are between the ages of 15 and 17 years (Ball, 1996; Rakgoasi & Campbell, 2000; Seboni, 1993). By 19 years of age, 70 percent of the boys and 66

percent of the girls will have initiated sexual intercourse (Botswana Family Welfare Association, 1996). By the end of their first year at the University of Botswana, 76.9 percent of females and 61 percent of males will have established a sexual relationship; and 80.3 percent males and 76.6 percent females have indicated having had penetrative sexual experience (Seloilwe et al., 2001).

Knowledge about HIV/AIDS

Several studies have shown that health related knowledge has power to change people's attitudes and health care behaviors. For example, in Kuwait and Northern Ireland, knowledge of oral and dental health care among students has been associated with visiting a dentist regularly and a decrease in the consumption of foods and drinks containing a lot of sugar (Al-Ansari et al, 2003; Freeman et al, 1993; Kinions et al, 1998). Knowledge of pregnancy risks and knowledge about HIV/AIDS has been associated with consistent use of condoms and a reduction in the number of sexual partners among Zambian adolescents (Magnani, 2000). In Nigeria, a focused health education program among students resulted in an increase in condom use, a reduction in the mean number of sexual partners and increased tolerance for people with HIV and AIDS (Fawole et al, 1999). Knowledge about HIV transmission has been associated with reduced high risk behaviors and practices among urban and rural students from Delhi University (Kuniar et al, 1996). Knowledge about HIV/AIDS is

among the most important tools for fighting the epidemic (Aggleton, 1996; Kiragu, 2001).

Willingness to Test for HIV

Knowledge about HIV/AIDS alone is not enough. Willingness to test for HIV infection and actual testing are the next logical step towards effective interventions and behavior change. But, while much effort has been invested towards improving knowledge about HIV/AIDS among young people (Jackson, 2002; Kiragu, 2001), not as much effort has been spent identifying the class of factors that promote a favorable disposition towards testing for HIV infection or to experiencing actual testing for HIV infection.

In Botswana, voluntary HIV counseling and testing (VCT) plays a key part in HIV related prevention and care. Since year 2000, the government of Botswana and the Center for Disease Control (CDC) have supported the Tebelopele network of VCT centers, which provide immediate, quality, accessible and confidential VCT services for sexually active people between ages 18 and 49 (AVERT.org, 2005). Although testing for HIV infection is an important pre-condition for receiving antiretroviral medication, people seem to be afraid to get tested, and characteristics of those who are not willing to test need to be systematically documented. This study, among other things, identifies and documents

characteristics of those who are willing or not willing to test for HIV infection.

Data Collection

The data were collected using a 76-item self-administered questionnaire, which solicited information on demographic and background characteristics of respondents, the extent of their sexual activity, their knowledge about HIV/AIDS, and their willingness to test for HIV infection. The questionnaire was distributed among students from a national sample of 84 educational institutions comprising of (1) community junior secondary schools (CJSS) that teach the first three levels of secondary school, (2) senior secondary schools that teach the last two years leading to a school-leaving certificate and (3) post-secondary institutions in both urban towns and rural villages. In each selected institution, random samples of students were selected at each level of education.

Measurement of Sexual Activity

Pilot work with students was done to determine the most culturally appropriate and valid way to find out whether students were sexually active or not. After several trial items

were tested for appropriateness, it was decided to measure sexual activity by asking students “which one of the following categories best describes your experience with sexual intercourse?” The following four response categories were provided: (1) very often; (2) sometimes; (3) rarely; and (4) never. During analyses, the categories were collapsed into two by combining the first three categories into a new category reflecting those who were “sexually active” and by labeling the fourth category “never”, as reflecting those who were “not sexually active”.

Measurement of Knowledge about HIV/AIDS

Knowledge about HIV/AIDS was measured using 19 questionnaire items, each of which the respondent was asked to agree or disagree with (see Figure1). Each response was classified into “correct” or “wrong” answers in a manner similar to the scoring of a “true or false” test. Test items were reviewed for their correctness or wrongness by a panel of experts on HIV/AIDS. All items were treated as being of equal weight and level of difficulty.

Table 1

| Table 1: Questions used to measure knowledge about HIV/AIDS |
|--|
| <ol style="list-style-type: none"> 1. AIDS is due to not observing a one-year period of abstinence after being widowed (Boswagadi). 2. AIDS is due to having intercourse with a young woman who has miscarried or performed an abortion (Dipadi). 3. AIDS is not a new disease. 4. AIDS is contagious. 5. AIDS is a punishment for immoral behavior. 6. AIDS is the fire that is described in the chapter of Revelations. 7. AIDS is God's punishment against homosexuals, drug users and prostitutes. 8. AIDS is someone else's fault and therefore someone else's problem. 9. AIDS is a result of the white community's effort to restrict the black population growth. 10. The immigrants from Northern Africa brought HIV/AIDS to Botswana. 11. A mosquito can transmit HIV/AIDS from one person to another. 12. Some traditional doctors can cure AIDS. 13. Nobody can stop AIDS. 14. Having sex with a virgin can cure AIDS. 15. Until a vaccine or a cure is found, nothing can be done to prevent AIDS. 16. Those with AIDS should be avoided. 17. Quarantines can manage AIDS because there will be no casual contact. 18. Only those who have contracted AIDS through blood transfusion should be given care. 19. Having AIDS is a crime that deserves punishment by death. |

Measurement of Willingness to Test for HIV

Willingness to test for HIV infection was measured by responses to a questionnaire item that asked the question: "How would you describe your feelings about being tested for HIV infection?" Response categories included:

- (1) *very comfortable about testing for HIV;*
- (2) *somewhat worried about testing for HIV;*
- (3) *very worried about testing for HIV* and (4) *I would never test for HIV infection.*

Data Analysis

Response categories for most items were either binary or took the general categorical ordered format: (1) high; (2) medium; (3)

low, or (1) very often; (2) sometimes; (3) rarely; and (4) never. All variables analyzed were categorical or converted into categorical format. This enabled contingency table analysis and Chi-square tests of association and independence to be used to investigate the nature and strength of associations between willingness to test for HIV infection and independent variables.

Findings

Table 2 shows the distribution of the sample of 1294 respondents by selected background characteristics. The sample consisted of 54.6 percent female, 56.7 percent from urban areas and 53.9 percent who were sexually active and 65.0 percent

who discussed sex with their families. Most students (63.1 percent) had adequate knowledge about HIV/AIDS, which means that they were able to answer 12 or more out of 19 questions correctly. As many as 674 students (52.7 percent) were willing to test for HIV infection, 606 were not willing to

test and 14 did not respond to the item on willingness to test. Most students led relatively happy lives with only 17.6 percent not happy with life in general, 18.3 percent not happy with life as students, and 17.6 percent receiving virtually no emotional support from their families.

Table 2: Distribution of Respondents by Selected Characteristics

| | Frequency | Percentage |
|--|-----------|------------|
| Gender | | |
| Male | 588 | 45.4 |
| Female | 706 | 54.6 |
| Age - Group of Student | | |
| 12-15 | 283 | 22.0 |
| 16-17 | 234 | 18.2 |
| 18-19 | 263 | 20.4 |
| 20-21 | 269 | 20.9 |
| 22 and Over | 238 | 18.5 |
| Educational Level | | |
| Junior Secondary | 552 | 42.7 |
| Senior Secondary | 216 | 16.7 |
| Junior Tertiary | 296 | 22.9 |
| Senior Tertiary | 229 | 17.7 |
| Sexual Activity | | |
| Sexually Active | 691 | 53.9 |
| Not sexually Active | 590 | 46.1 |
| Type of School Attended | | |
| Private School | 193 | 15.0 |
| Public School | 1060 | 82.9 |
| Type of Primary School Attended | | |
| Private English Medium School | 254 | 19.7 |
| Public or Government School | 1035 | 80.3 |
| Location of Residence | | |
| Urban Area | 729 | 56.7 |
| Rural Area | 557 | 43.3 |
| Class of Residential Area | | |
| High Cost area | 217 | 16.9 |
| Medium Cost Area | 730 | 57.0 |
| Low Cost Area | 334 | 26.1 |
| Common Residence among Parents | | |
| Most of the time | 740 | 57.8 |
| Sometimes | 325 | 25.4 |
| Never | 215 | 16.8 |

Factors Associated with Sexual Activity

Table 3 shows the distribution of the sample by sexual activity and background variables. The data show that most of those who had or used to have one or more partners were more likely to be sexually active than those who had never had a partner (p-value <0.0001). Males were more likely to be sexually active than females. While 62.2 percent of males were sexually active only 37.8 percent of females were sexually active. Older students were more likely to be sexually active than their younger schoolmates (p < 0.0001). Students in the last two years of secondary education (senior secondary) were more likely to be sexually active than those in the first three years of secondary school (p-value < 0.0001). Similarly, students that had reached the final years of university or equivalent tertiary education (senior tertiary) were more likely to be sexually active than

those in the first two years of tertiary education. There was a significant inverse relationship between the type of job that parents did and sexual activity among respondents. When the type of job parents did was of a lower status the proportion of students who engaged in sexual activity was higher (p = 0.002 for mothers' type of job; p <0.0001 for fathers' type of job). The proportion of students who engaged in sexual activity was highest among students whose parents were unemployed (72.0 percent for unemployed fathers; 57.0 percent for unemployed mothers) and lowest among students whose parents were professionals or executives' (48.6 percent for professional fathers; 47.6 percent for professional mothers). The type of primary school attended was not associated with sexual activity (p = 0.463). Similarly, the type of secondary school attended was not significantly related to sexual activity (p = 0.507).

Table 3: Distribution of Respondents by Sexual Activity and Socio-Demographic Variables

| Variable | Sexually Active % | Not Sexually Active % | Chi-sq | Df | p-value |
|---------------------------------------|-------------------|-----------------------|---------|----|---------|
| Gender | | | 29.157 | 1 | <0.0001 |
| Male | 62.2 | 47.1 | | | |
| Female | 37.8 | 52.9 | | | |
| Age - Group | | | 314.729 | 4 | <0.0001 |
| 22+ | 85.6 | 14.4 | | | |
| 20-21 | 76.8 | 23.2 | | | |
| 18-19 | 53.9 | 46.1 | | | |
| 16-17 | 38.8 | 61.2 | | | |
| 12-15 | 18.5 | 81.5 | | | |
| Educational Level | | | 258.954 | 3 | <0.0001 |
| Senior Tertiary | 85.0 | 15.0 | | | |
| Junior Tertiary | 76.4 | 23.6 | | | |
| Senior Secondary | 46.5 | 53.5 | | | |
| Junior Secondary | 31.9 | 68.1 | | | |
| Type of Primary School | | | 0.540 | 1 | 0.463 |
| Public/Government School | 54.3 | 45.7 | | | |
| Private School | 51.8 | 48.2 | | | |
| Type of Secondary School | | | 1.360 | 2 | 0.507 |
| Correspondence, Evening Classes | 62.5 | 37.5 | | | |
| Public/Government School | 53.9 | 46.1 | | | |
| Private School | 51.6 | 48.4 | | | |
| Type of Residential Area | | | 4.278 | 2 | 0.118 |
| Low Cost Housing Area | 59.1 | 40.9 | | | |
| Medium Cost Housing Area | 52.4 | 47.6 | | | |
| High Cost Housing Area | 52.8 | 47.2 | | | |
| Urban vs. Rural Residence | | | 27.729 | 1 | <0.0001 |
| Rural | 62.3 | 37.7 | | | |
| Urban | 47.5 | 52.5 | | | |
| Mother's Type of Job | | | 16.498 | 4 | 0.002 |
| Unemployed | 57.0 | 43.0 | | | |
| Clerical, Industrial, Informal Sector | 56.4 | 43.6 | | | |
| Middle Management | 55.8 | 44.2 | | | |
| Director, Executive, Professional | 47.6 | 52.4 | | | |
| Father's Type of Job | | | 26.536 | 4 | <0.0001 |
| Unemployed | 72.0 | 28.0 | | | |
| Clerical, Industrial, Informal Sector | 61.7 | 38.3 | | | |
| Middle Management | 50.9 | 49.1 | | | |
| Director, Executive, Professional | 48.6 | 51.4 | | | |

Table 4 shows associations between sexual activity and variables that measure aspects of family cohesion, interpersonal relationships and sexual behavior. The data show that attachment to mother had a significant and inverse relationship ($p = 0.016$) with sexual activity. But, attachment to father was not associated ($p = 0.080$) with sexual activity among respondents. When controlling for gender, however, the association between attachment to father and sexual activity was significant for females ($p = 0.010$) but not for males ($p = 0.951$). In other words, girls who were not

emotionally attached to their fathers were more likely to be sexually active than those who were attached to their fathers. On the other hand, boys who were attached to their fathers were not more likely to be sexually active than those who were not attached to their fathers. Attachment to aunts and uncles was associated with sexual activity. The majority of respondents who were not attached to any aunts or uncles (70.7 percent) were sexually active ($p < 0.0001$). The majority of respondents who were not attached to any grandparents (65.9 percent) were sexually active ($p = 0.001$).

Table 4: Association between sexual activity and independent variable.

| | Chi-sq | Df | p-value |
|--|---------|----|---------|
| Family Coherence | | | |
| Common Residence Among Parents. | 3.947 | 2 | 0.139 |
| Emotional Support from Family | 2.232 | 2 | 0.345 |
| Guardian During Primary School | 11.046 | 3 | 0.011 |
| Guardian During Secondary School | 8.297 | 3 | 0.040 |
| Attachment to Father | 3.070 | 1 | 0.080 |
| Attachment to Mother | 5.812 | 1 | 0.016 |
| Attachment to Aunts and Uncles | 26.628 | 2 | <0.0001 |
| Attachment to Grand Parents | 13.757 | 2 | 0.001 |
| Religiosity of Family | 10.026 | 3 | 0.018 |
| Interpersonal Relations | | | |
| Level of conflict in the family | 19.030 | 3 | <0.0001 |
| Disagreement with mother | 0.0886 | 1 | 0.770 |
| Disagreement with father | 2.507 | 1 | 0.113 |
| Physical fights with other children | 18.522 | 3 | <0.0001 |
| Level of happiness with life in general | 15.719 | 2 | <0.0001 |
| Level of satisfaction with life as a student | 3.084 | 2 | 0.214 |
| Relations with peers | 0.251 | 1 | 0.616 |
| Sexual Behaviors, Attitudes and Knowledge | | | |
| Number of Partners | 320.163 | 1 | <0.0001 |
| Discussion of sex with family | 35.865 | 4 | <0.0001 |
| Persons with whom sex is discussed | 53.828 | 3 | <0.0001 |
| Knowledge about condoms | 34.986 | 1 | <0.0001 |
| Knowledge about HIV/AIDS | 0.023 | 1 | 0.879 |
| Willingness to test for HIV infection | 82.89 | 2 | <0.0001 |

Religiosity of the family also had a significant association with sexual activity ($p = 0.018$). Students who were looked after by religious families were less likely to be sexually active than those who were looked after by families that were not at all religious.

There was a significant relationship ($p < 0.0001$) between the level of conflict in the family and sexual activity among students. Students who came from families that endured some level of conflict were more likely to be sexually active than those from families that enjoyed life without conflict.

Factors associated with Knowledge about HIV/AIDS

Table 5 shows that older students were more likely ($p = 0.015$) to have adequate knowledge about HIV/AIDS than younger students. Students in higher levels of education performed significantly better on a test of knowledge about HIV/AIDS than those in the lower levels ($p < 0.0001$). For example, 71.6 percent of students in senior tertiary education (i.e., the last two years of undergraduate education) answered 12 or more of the 19 questions correctly, compared to 58.0 percent of students in junior secondary schools (i.e., the first three years of high school)

Table 5: Distribution of Respondents by Adequacy of Knowledge about HIV/AIDS and Background Factors

| Variable | Adequate % | Inadequate % | Chi-Sq | Df | p-value |
|---------------------------------------|------------|--------------|--------|----|---------|
| Gender | | | 0.523 | 1 | 0.470 |
| Male | 62.1 | 37.9 | | | |
| Female | 64.0 | 36.0 | | | |
| Age – Group | | | 12.319 | 4 | -/15 |
| 12-15 | 56.5 | 43.5 | | | |
| 16-17 | 63.2 | 36.8 | | | |
| 18-19 | 61.6 | 38.4 | | | |
| 20-21 | 70.6 | 29.4 | | | |
| 22 and over | 64.7 | 35.3 | | | |
| Educational Level | | | 43.092 | 3 | <0.0001 |
| Junior Secondary | 46.0 | 54.0 | | | |
| Senior Tertiary | 49.5 | 50.5 | | | |
| Junior Tertiary | 65.9 | 34.1 | | | |
| Senior Secondary | 64.6 | 35.4 | | | |
| Type of Primary School | | | 11.921 | 1 | <0.001 |
| Private School | 72.4 | 27.6 | | | |
| Public/Government School | 60.8 | 39.2 | | | |
| Type of Secondary School | | | 7.514 | 2 | 0.023 |
| Private English Medium School | 65.3 | 34.7 | | | |
| Public/Government School | 63.8 | 36.2 | | | |
| Correspondence, evening Classes | 40.6 | 59.4 | | | |
| Type of Residential Area | | | 30.096 | 3 | <0.0001 |
| High Cost Housing Area | 66.4 | 33.6 | | | |
| Medium Cost Housing Area | 63.6 | 36.4 | | | |
| Low Cost Housing Area | 59.9 | 40.1 | | | |
| Urban vs. Rural Residence | | | 0.173 | 1 | 0.677 |
| High Cost Housing Area | 63.8 | 36.2 | | | |
| Medium Cost Housing Area | 62.7 | 37.3 | | | |
| Low Cost Housing Area | 77.3 | 22.7 | | | |
| Mother's Type of Job | | | 42.270 | 4 | <0.0001 |
| Urban | 71.2 | 28.8 | | | |
| Rural | 57.8 | 42.2 | | | |
| Director, Executive, Professional | 56.5 | 43.5 | | | |
| Middle Management | 47.1 | 52.9 | | | |
| Clerical, Industrial, Informal Sector | 70.3 | 29.7 | | | |
| Unemployed | 69.4 | 30.6 | | | |
| Unknown | 59.1 | 40.9 | | | |
| | 61.8 | 38.2 | | | |
| | 56.3 | 43.7 | | | |
| | | | 18.561 | 4 | <0.001 |

Students in private English medium primary schools were more likely ($p = 0.001$) to have adequate knowledge about HIV/AIDS than students in public or government primary schools. Students whose parents had high status jobs were more likely to have adequate knowledge about HIV/AIDS compared to students whose parents had low status jobs ($p < 0.0001$).

Gender had no influence on adequacy of knowledge about HIV/AIDS ($p = 0.470$). There was also no relationship between type of residential area that respondents lived in and adequacy of knowledge about HIV/AIDS ($p = 0.280$). Similarly, there was no relationship between urban-rural residence and adequacy of knowledge about HIV/AIDS ($p = 0.677$).

Factors Associated with Willingness to Test for HIV

Table 6 shows the distribution of respondents by willingness to test for HIV infection and socio-demographic background variables. The results show that girls were more willing to test for HIV infection than boys ($p = 0.001$). In both secondary and tertiary institutions, younger students (12-15 years) were more willing to test for HIV infection than those 16 years and older ($p < 0.0001$). Students who

attended private secondary schools were more willing to test than those who attended public/government schools or correspondence classes ($p = 0.029$). However, type of primary school attended (private or public/government) did not appear to affect willingness to test for HIV ($p = 0.106$).

Students with a higher socio-economic background, as reflected by type of housing and type of jobs parents did, were more willing to test for HIV than students with a lower socio-economic background. For example, 60.4 percent of students who lived in high-cost areas were willing to test compared to 45.6 percent of those who lived in low-cost housing areas.

Similarly, 61.4 percent of those whose mothers had jobs of a high status (and 59.4 percent of those whose fathers had jobs of a high status) were willing to test compared to 47.2 percent and 46.5 percent of those whose mothers and fathers had jobs of a low status, respectively. These differences were significant at the $\alpha = 0.025$ level. Students whose homes were in towns and cities were more willing to test for HIV than students whose homes were in traditional villages, agricultural lands and cattle posts ($p = 0.002$).

Table 6: Distribution of Respondents by Willingness to Test for HIV Infection and Socio-Demographic Background Variables

| Variable | Willingness To Test % | Not Willing To Test % | Chi-sq | Df | p-value |
|---------------------------------------|------------------------------|------------------------------|---------------|-----------|----------------|
| Gender | | | 10.903 | 1 | 0.001 |
| Male | 47.6 | 52.4 | | | |
| Female | 56.8 | 43.2 | | | |
| Age - Group | | | 70.763 | 4 | <0.0001 |
| 22+ | 39.7 | 60.3 | | | |
| 20-21 | 39.0 | 61.0 | | | |
| 18-19 | 55.2 | 44.8 | | | |
| 16-17 | 58.1 | 41.9 | | | |
| 12-15 | 69.4 | 30.6 | | | |
| Educational Level | | | 65.236 | 3 | <0.0001 |
| Senior Tertiary | 37.6 | 62.5 | | | |
| Junior Tertiary | 41.2 | 58.8 | | | |
| Senior Secondary | 56.4 | 43.6 | | | |
| Junior Secondary | 63.9 | 36.1 | | | |
| Type of Primary School | | | 2.608 | 1 | 0.106 |
| Public/Government School | 51.5 | 48.5 | | | |
| Private School | 57.2 | 42.8 | | | |
| Type of Secondary School | | | 7.073 | 2 | 0.0297 |
| Correspondence, Evening Classes | 53.1 | 46.9 | | | |
| Public/Government School | | | | | |
| Private School | 51.2 | 48.8 | | | |
| Class of Residential Area | 61.7 | 38.3 | 11.752 | 2 | 0.003 |
| Low Cost Housing Area | | | | | |
| Medium Cost Housing Area | 45.6 | 54.4 | | | |
| High Cost Housing Area | 53.3 | 46.7 | | | |
| Urban vs. Rural Residence | | | | | |
| Rural | 60.4 | 39.6 | | | |
| Urban | | | | | |
| Mother's Type of Job | | | 9.950 | 1 | 0.002 |
| Unemployed | 47.6 | 52.4 | | | |
| Clerical, Industrial, Informal Sector | 56.5 | 43.5 | | | |
| Middle Management | 48.9 | 51.1 | | | |
| Director, Executive, Professional | 47.2 | 52.8 | | | |
| Father's Type of Job | 54.5 | 45.5 | | | |
| Unemployed | 61.4 | 38.6 | | | |
| Clerical, Industrial, Informal Sector | | | 17.517 | 4 | 0.002 |
| Middle Management | 42.1 | 57.9 | | | |
| Director, Executive, Professional | 46.5 | 53.5 | | | |
| | 57.9 | 42.1 | | | |
| | 59.4 | 40.6 | | | |

Table 7 shows the association between willingness to test for HIV and several independent variables. Some indicators of family coherence and psychological bonding with members of the family such as common residence among parents, low levels of conflict among family members, attachment to parents and grandparents, emotional support from the family and discussing sex with members of the family were significantly related to willingness to test. The findings

show that students whose parents lived together most of the time were significantly more willing to test ($p = 0.001$) than those whose parents lived together only sometimes or those whose parents never lived together. Students from families that enjoyed low levels of family conflict were more willing to test ($p < 0.004$) than those who came from families that endured high levels of conflict.

Table 7: Association between willingness to test for HIV infection and independent variables

| | Chi-sq | Df | p-value |
|---|--------|----|---------|
| (a) Family Coherence & Psychological Bonding | | | |
| Marital Status | 7.398 | 2 | 0.286 |
| Common Residence Among Parents. | 13.063 | 2 | 0.001 |
| Emotional Support from Family | 6.995 | 3 | 0.030 |
| Attachment to Father | 18.421 | 1 | <0.0001 |
| Attachment to Mother | 9.570 | 2 | 0.002 |
| Attachment to Aunts and Uncles | 4.434 | 2 | 0.109 |
| Attachment to Grand Parents | 9.510 | 3 | 0.009 |
| Religiosity of Family | 17.570 | 3 | 0.001 |
| Religiosity of Respondent | 39.176 | 5 | <0.0001 |
| (b) Interpersonal Relations | | | |
| Level of conflict in the family | 13.211 | 3 | 0.004 |
| Disagreement with mother | 0.077 | 1 | 0.781 |
| Disagreement with father | 0.582 | 1 | 0.445 |
| Physical fights with other children | 22.307 | 3 | <0.0001 |
| Level of happiness with life in general | 30.681 | 2 | <0.0001 |
| Level of satisfaction with life as a student | 17.152 | 2 | <0.0001 |
| Relations with peers | 6.142 | 1 | 0.013 |
| (c) Sexual Behaviors, Attitudes and Knowledge | | | |
| Number of Partners | 77.269 | 2 | <0.0001 |
| Discussion of sex with family | 14.080 | 3 | 0.003 |
| Knowledge about condoms | 0.465 | 1 | 0.495 |
| Knowledge about HIV/AIDS | 0.125 | 1 | 0.724 |
| Sexual Activity | 82.860 | 1 | <0.0001 |

Students who reported never having had a partner were more willing to test ($p < 0.0001$) than those who reported having a partner. By the same token, 66.6 percent of students who reported not being sexually active were more willing to test compared to 40.9 percent of those who reported being sexually active. However, there was no association between overall knowledge about condoms and willingness to test ($p = 0.495$); between overall knowledge about sexually transmitted diseases (STDs) and willingness to test ($p = 0.495$); and between overall knowledge about HIV/AIDS and willingness to test ($p = 0.724$).

Discussion

The findings of this study are consistent with findings of other studies that have reported factors associated with sexual activity in Botswana (Botswana Family Welfare Association, 1996; Jack, et al, 1999; Social Impact Assessment Policy Corporation, 1993) and in the United States (Carnegie Council, 1995; Hollander, 1996). Widespread evidence shows that sex education combined with life skills development, including a focus on sexually transmitted illnesses (STIs), HIV/AIDS and reproductive health are key strategies for empowering young people to delay the onset of sexual activity and to make their sexual behaviors safer (Jackson, 2002).

The study found sexual activity among students to be associated with rural

residence, low socio-economic family status and having parents who are unemployed. Poverty, low educational aspirations, and lower grades in school have been associated with sexual activity among young people (American Academy of Pediatrics, 1999; Casper, 1990; Lamniers et al, 2000; Tubnian, Windle, & Windle, 1996). Lack of adequate recreational facilities may be responsible for higher proportions of respondents from low socio-economic backgrounds and rural areas being sexually active. High unemployment and poverty among parents has been associated with sexual activity especially among girls who are attracted to working men for financial reasons (Ball, 1996). Low socio-economic status is consistent with limited opportunities and limited access to modern recreational facilities. In these circumstances, sex becomes a readily available and accessible form of entertainment. This is especially true in rural areas where there is no electricity, which underpins and drives many electronic games, movies and other sources of entertainment for young people. Without electricity, there is also considerable literal and metaphorical darkness, which provides a suitable environment for sexual activity.

Willingness to Test

The study found that girls were more willing to test than boys. This is consistent with findings by Bond et al, (2005). In both secondary and tertiary institutions, younger students were more likely to test than older

students. This is consistent with findings by Gage & Ali, (2005). Students in lower educational levels were more willing to test than students in higher levels. This is contrary to findings by Lee et al (2005) and Renzi et al (2004).

Students with a relatively privileged background, as shown by attending private secondary schools, living in high-cost housing areas, and having parents who had jobs of a higher status were more willing to test than those with a less privileged background. This study also found that students from urban areas were more willing to test than those from rural areas.

Although knowledge about HIV has been associated with willingness to test for HIV (Gage & Ali, 2005; Lee et al, 2005), for this sample of young people in Botswana, it was found that knowledge about HIV/AIDS, had no impact on willingness to test. Just as with respect to sexual activity, the study highlights the importance of a coherent family background, psychological bonding among members of the family, a positive socialization environment, social and psychological adjustment outside the family context and a favourable socio-economic background in shaping attitudes of young people regarding testing for HIV.

Knowledge about HIV/AIDS

The study found that students from homes with high levels of conflict were less likely to

have adequate knowledge about HIV/AIDS compared to students who were from homes that enjoyed relatively no conflict. In such homes, there is little or no room for discussion on delicate and sensitive personal subjects. The combination of a turbulent social environment, cultural taboos, absence of parental experience and skills in sex education, ignorance and lack of skill in communicating about sex ensure that sex is not discussed in many families.

Students from families that were “not religious” were more likely to know about HIV/AIDS than students who were from “religious families”. In many religious homes, sex is a taboo subject that is rarely discussed. It has been noted (Itshekeng (2002) that the odds of being aware of HIV/AIDS were significantly reduced among religious household heads compared with household heads that were not religious. As a result of lack of discussion of sex in the household, either due to high levels of conflict or due to high levels of religiosity of the family, many adolescents obtain information about sexual life from their friends, teachers and doctors; as well as from newspapers, magazines, video films, TV and radio.

The study shows that students who lived in urban areas did not know more about HIV/AIDS than those who lived in rural areas. In Botswana, it is difficult to classify many people as urban or rural due to the fact that families live in a constant state of

semi-migration between multiple residences at the home village, agricultural lands, the cattle post and the town (Fako et al, 2003; Zaffiro, 1994). Many people may live, work or study in a town while their minds and hearts are in tribal rural areas with which they socially and psychologically identify. Due to relatively good infrastructure, there is a constant saw-saw of activities between urban and rural areas, and messages about HIV/AIDS are transported between towns and villages with relative ease.

Conclusion

This study concludes that the problems of sexual activity and willingness to test for HIV among adolescents is part of a general problem of poor familial relationships, lack of family cohesion and stability of the home environment for children, and poor psychological development. When young people are ushered into families that are socially problematic, full of conflict, in which effective guardianship of adolescents is not guaranteed, and in which a religious and moral base is weak or does not exist, they tend to become sexually active and unwilling to test for HIV.

The culture of multiple and scattered residences, which has been sustained over recorded history in Botswana, separates members of the family unit. This results in general instability in family life, inadequate child rearing practices and inadequate development and appreciation of cultural

beliefs, moral values, and religious norms that regulate and restrict sexual attitudes and behaviors (Fako and Linn, 2003).

The separation of family members robs many children of the opportunity to have proper parental guardianship and guidance. It also gives young people the opportunity to experiment with sex and to develop and maintain multiple partners and to develop attitudes against testing.

In the era of HIV and AIDS, permissive attitudes towards sex (Cobb, 1998), the tendency toward earlier sexual experience (Kaplan, 1998), a relatively high number of sexual partners among teenagers (Parrillo et al., 1997; Schickedanz et al, 2001) and the tendency for girls to date males who are much older and involved in antisocial behavior (Pawlby et al, 1997) present real challenges. Creating social conditions that would promote and enhance family cohesion and the stability of the home environment for children would go a long way towards ameliorating the situation in Botswana. The family should provide its young members a home base for proper socialization, for the development of a sense of identity, a sense of spiritual connectedness and a sense of psychological belonging, which should help reduce or delay the onset of sexual activity, engender a greater sense of responsibility in conducting relationships and promote willingness to test for HIV.

The study has shown that those at greater risk are less willing to test than those not at risk. This indicates that fear of testing is greater among those who fear being HIV positive, possibly due to fear of stigmatization which was not addressed by this study.

Recent research among heterosexuals across Europe has shown that between 49 percent and 89.3 percent of individuals reporting risk behaviors never sought voluntary testing (Renzi et al, 2004). Future efforts should therefore be geared towards encouraging those not yet at risk to test early so that they can start living positively before becoming sexually active. This might mean lowering the age limit of those who qualify for voluntary counseling and testing.

Education about voluntary counseling and testing should be improved and intensified among sexually active young people, especially those from poorer backgrounds, in rural areas.

The study has certain limitations. First, the data were based on self-reports, and the interpretation and understanding of each questionnaire item was not established. Second, sexual activity and willingness to test for HIV are delicate private matters that are subject of over-reporting or underreporting depending on perceived social correctness. Further research is required to test conclusions of this study.

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