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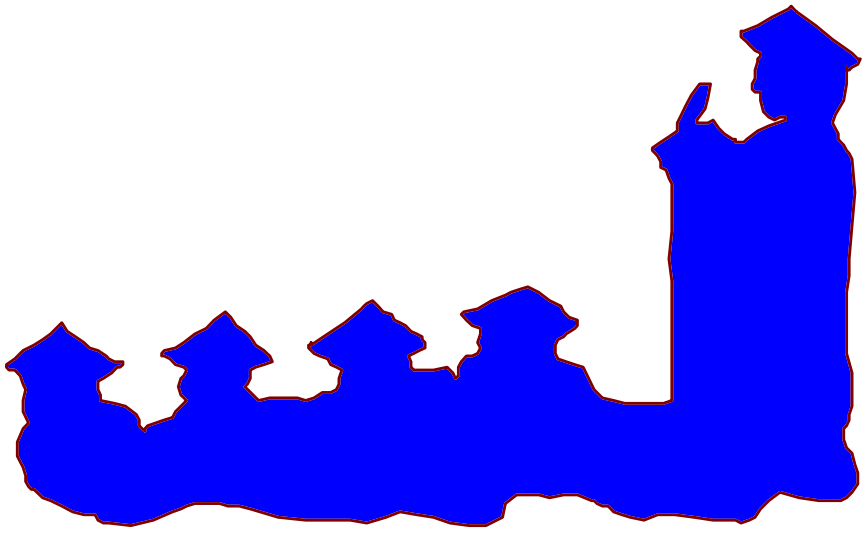


POSITIVE OUTCOMES:
The chances of acquiring HIV/AIDS during the school-going years in the Eastern Cape, 1990-2000

by Dr Robert C.-H. Shell and Rebecca Zeitlin

Abstract: The authors explore the probability of acquiring HIV/AIDS for learners enrolled in SA government schools in the Eastern Cape. Ante Natal Clinic published data and a 10 percent sample of the census of 1996 are used to calibrate the probabilities of becoming infected. While education is glibly assumed to be a key turnaround factor and cultural antidote to the further spread of the pandemic, the authors point out that this earnest and understandably near universal hope is unlikely to translate into reality. Evidently, learners in the new post-1994 schools are being exposed to peer group pressures which are overwhelming HIV awareness programmes the students may be exposed to even via the new government's revolutionary curriculum of 2005. While the number of years at school is correlated with lower STD rates, this does not find an echo in lower HIV rates, nor indeed, lower pregnancy rates. HIV rates among school-going adolescent women in the Eastern Cape are growing extremely rapidly. The HIV rates among the age group 15-19 in the Eastern Cape are now among the fastest HIV growth rates in the world. Interventions include single sex schools, single sex teaching and significant, interventionist, reproductive health counselling. Clearly, the educational system in and of itself provides no shield of knowledge against the pandemic and should be comprehensively reviewed long before 2005. The authors conclude that sex and death lurk on the playgrounds and in the classrooms as much as they do at truck stops and near military installations.

Positive Outcomes:

The chances of acquiring HIV/AIDS during the school-going years in the Eastern Cape, 1990-2000

> "We are taught how to live when life has already passed us by. A hundred schoolboys have caught the pox before they have studied Aristotle on temperance." — Michel Eyquem de Montaigne (1533-1592), *Essais*, 1,26

> "Aids constitutes one of the biggest threats to the global education agenda. What HIV/AIDS does to the human body, it does to institutions. It undermines those institutions that protect us." —Peter Piot, Director of UNAIDS, World Education Forum, Dakar (April 2000)

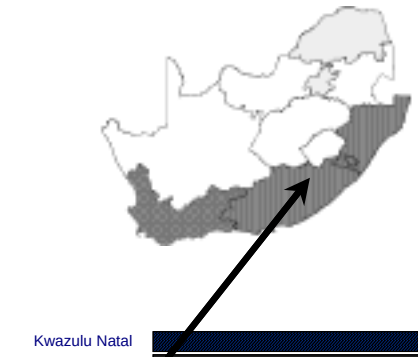
Introduction

Driving casually through the Eastern Cape, one might have the Panglossian impression that all is well in the fields of education. Indeed, there are many newly built schools in the rural areas, their bricks and new roofs glinting in the sun. Many are the result of hard work by both the state sector and private philanthropy. Eager African learners, so long denied the chance of proper schooling under Apartheid, now throng the roads in their colourful uniforms to join the queues at the windows of the enlightenment. It is not an unpleasing spectacle for progressively minded motorists as they wind through the hills and dales of the Eastern Cape. But are these assumptions correct?

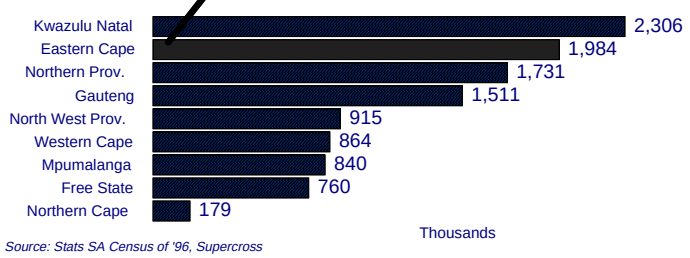
In South Africa, in 1999 there were 300,000 university students, 190,000 technikon students, 12,300,000 learners, 375,000 educators, 5,000 inspectors and 68,000 officials, managers and support personnel involved in the educational system (Coombe 2000: 14). Over 13 million people therefore, are part of the educational sector. Over one third of the total population of 41 million as measured by the census of 1996 are engaged in education.

On the one hand, this is a good thing. Until there is a vaccine, education is the only antidote to HIV/AIDS. But, on the other hand, the education system, by concentrating the population of children together, is also a source of infection.

The Eastern Cape is among the most populous of all the provinces (Stats SA 1996). The province is a source of out-migration for young males seeking employment. Consequently, there is a greater proportion of women and children in the province. The number of children studying at school is high in proportion to the rest of the EC population. Only the North West province reports a greater proportion of children studying at school. Only KwaZulu Natal has more full-time learners (see map graphic).



A population at risk: full-time learners by province, 1996



Source: Stats SA Census of '96, Supercross

Most people share the cherished belief that once the population is made literate or HIV aware, behaviour will automatically change for the better. As one of South Africa's leading researchers put it: "[i]n the absence of a cure or vaccine for the disease, education is the most important strategy in limiting the spread of HIV/AIDS" (Haldenwang 1993: 51). There is however, no evidence that this has happened in the rest of Africa where the pandemic began nor that it will automatically happen in South Africa unless there are dramatic changes in the education system.

Review of African school systems and HIV prevalence

The following literature review of HIV/AIDS in the education systems of the African continent gives an overview of the factors that cause school children—and female students in particular—to be at high risk of acquiring HIV. The articles were searched from Popline and the "Abstracts on Disk" CD of the 12th International Aids conference, "Breaking the Silence" from the 9th to 14th July 2000 using the keywords AIDS, EDUCATION and AFRICA. The article also presents some new primary data on the age of infection for the Eastern Cape.

Ghana

The results of a series of focus group studies in Ghana show that adolescents are interested and concerned about AIDS. Yet they do not change their risk behaviour (Porter 1994: 15). Almost every student in the focus group knew that HIV could be spread through sexual intercourse or through contact with blood. They also cited the key prevention methods: reducing the number of sexual partners, using condoms, abstaining from sex, sterilizing needles and avoiding unnecessary blood transfusions. At the same time, many continued to have unsafe sex. Female students acknowledged that young women were often economically forced to exchange sex for money with older men. Often, these men were their teachers. The girls commented that "instead of teaching the children against sex [the teachers] rather have sex with young girls" (Porter 1994: 14). Girls also complained about being forced into sex by male schoolmates. Furthermore, girls who used condoms were stigmatized as "flirts" while it was more socially acceptable for boys to use condoms (Porter 1994: 16). While the results were not quantitative, the authors believed that they clearly highlighted the reasons why girls were more susceptible to the virus (Porter 1994: 1-18).

Uganda

It is widely believed that the Ugandan government recognized HIV/AIDS as a major problem and reacted aggressively with a multi-sectoral approach well before other African governments. We learn that Uganda is one of the few African countries that has experienced any success in slowing down the HIV/AIDS pandemic. What does the scientific literature say?

A 1996 study confirmed earlier government findings that post primary students (youth under 16 years) were at high risk and would be suitable intervention targets (Migliori *et al.* 1996: 106). In response, the government allowed for the implementation of specially designed programmes to change adolescent behaviour.

In one recent evaluation of a particular program designed by the African Medical and Research Foundation in conjunction with the Soroti District Administration, the percentage of students in their last year of primary school who reported being sexually active dropped from 42.9% to 11.1% after two years of a special, intensive school health education programme (Shuey *et al.* 1999: 411). A control group only exposed to the national health education curriculum showed no significant decline after this same period.

Most significantly, Shuey also found that before this intervention, school children in their study who had a family member with AIDS were *more* likely to be sexually active, a finding which was contrary to near universal expectations of behavioural change following knowledge of AIDS within the family. After the programme, the learners in the intervention group—but not the control group—reversed this trend (Shuey *et al.* 1999: 418). This would suggest that we should research much more intensively the impact of HIV on individual families.

It is important to note that the Ugandan national curriculum was not effective in changing sexual behaviour during the surveillance period 1989 to 1992. Uganda's successes must therefore also be attributed to a dynamic response of the national government and also allowing local initiatives and experimentation with various NGOs. This evaluation also proved that sexual behaviour change is possible in a school-going adolescent population.

However, that success depends on early, intensive, locally administered education initiatives which are only now being reported on in South Africa (Kelly 2000: 6). The authors of the Ugandan study conclude that "the quality of implementation is probably more important than the detailed design of materials or curricula...efforts should concentrate on improving the quality of actual delivery of school health education, using simple, but effective behaviour change techniques such as experiential learning, peer interaction and supportive supervision" (Shuey *et al.* 1999: 418).

The flexible, multi-tiered but above all dynamic educational programs in Uganda may serve as a model for the rest of Africa and indeed the developing world. However, it must be recognised that Uganda began with an exemplary, dynamic program *early* in the course of their pandemic. Moreover, the national programme did not work at first. The state allowed for a generous NGO intervention.

Doubts about the overall success of the Ugandan program remain. In a letter to a medical journal, Massimo Fabiani *et al.* reported on a long-term study of Uganda from 1989 to 1996 incorporating 15,568 tests. While they confirm declining prevalence, they soberly conclude: "However, no conclusions about the underlying dynamic of the epidemic can be drawn from these seroprevalence data, because stable or decreasing HIV-1 seroprevalence over time does not necessarily imply a decreasing incidence of the infection. Many factors, such as increasing mortality and migration among HIV-1 infected individuals with respect to uninfected individuals could obscure an increasing incidence of the infection (Fabiani *et al.* 1998: 514). Such warnings could have a bearing on the S.A. government's reception of the latest annual ANC prevalence studies in South Africa which have, according to the Minister of Health, heralded a "stabilization" of the pandemic (DoH 2000).

Tanzania

A study of school children conducted in the Arusha and Kilimanjaro regions of Tanzania by Klepp *et al.* (1996: 218-224) looked at factors which contributed to decisions to engage in sexual behaviour. This study showed that past behaviour is the strongest predictor of intention to engage in sexual activity (Klepp *et al.* 1996: 218). Consequently, the authors logically came to believe that HIV/AIDS prevention programmes must start *before* the students have their first sexual experience. They concluded that educational programs that only disseminate information, without affecting changes in attitudes, will not be successful (Klepp *et al.* 1996: 224).

Matasha *et al.* (1998: 571-582) strongly argued in favour of sexual and reproductive health education in Tanzanian primary schools. Eighty percent of primary school boys and 68% of primary school girls in the Mwanza region were sexually experienced (Matasha *et al.* 1998: 575). The median age of first sexual intercourse was 15 for both boys and girls. The ratio of HIV infected young women to HIV infected young men was 4.1: 1.8, over two to one.

One quarter of primary school girls reported having sex with an adult—including teachers and relatives—and another 23% with "strangers" (Matasha *et al.* 1998: 575). "Forced sex" accounted for one third of all school girls' first sexual experience and nearly half reported "forced sex" at some point. Fifty-two percent of primary school girls cited money or presents as a reason for engaging in sexual activity. In contrast, only 12% of primary school boys reported having sex in exchange for money or gifts, less than 10% of boys were forced into sex as their first sexual act, and 76% percent were never forced into sex. About one quarter of the primary school students had "some" or "adequate" knowledge of STDs. However, there was no correlation between knowledge of STDs and sexual activity. Although condom use increased with education, sexual health education did not start until secondary

school when most students had already been sexually active for some time (Matasha *et al.* 1998: 575).

Zambia

In Zambia, where premarital sex is generally taboo, 77% of youth (15-19 years) interviewed in Lusaka were sexually active according to Feldman *et al.* (1997: 455-468). The median age of first sexual experience was between 14 and 15 for females. According to unpublished results from the University Teaching Hospital blood bank, female secondary students were almost four times as likely as male secondary students to be infected with HIV (Feldman *et al.* 1997: 460). The authors claimed that "sugar daddies" who exchange money, gifts, and a sense of security for sex, were partly responsible for this discrepancy. These older men have higher rates of HIV and spread it to the young girls.

Despite the national AIDS education and awareness campaign that was launched in 1986, more than half the sexually active student population had never used a condom (Feldman *et al.* 1997: 461). In the preceding month, only four percent of respondents used a condom with a partner who was not their boyfriend or girlfriend (Feldman *et al.* 1997: 461). Over half the respondents agreed that they needed to change their behaviour.

Yet even after education, 59% admitted they had not changed at all. The female dropouts showed the highest rates of behavioural change. Unlike school girls, dropouts did not face the same social stigma for using condoms. While school girls would be perceived as being promiscuous for wanting to use condoms, dropouts were already seen that way. High risk behaviour, including unprotected anal intercourse was reported (Feldman *et al.* 1997: 459).

Zimbabwe

According to Kasule *et al.* (1997: 78) 18 percent of 1,689 Zimbabwean students (10-19 years) sampled were sexually active. Due in part to the falling age of menarche, girls were becoming sexually active at an increasingly earlier age. The mean age of first intercourse for boys was approximately 12.0, and for girls approximately 13.6. These same children knew little about the sexual transmission of HIV/AIDS.

Most (83%) knew that HIV/AIDS was not curable, but only 13.2% knew that HIV was transmitted by having sex with an infected person (Kasule *et al.* 1997: 79). However, 69.2% answered that blood transfusions could spread the virus and 52.9% reported that a mother could infect her child at birth. The authors speculated that the falling age of menarche coupled with the lack of proper knowledge about HIV and sexual health put young women in the educational system of Zimbabwe at high risk (Kasule *et al.* 1997: 76).

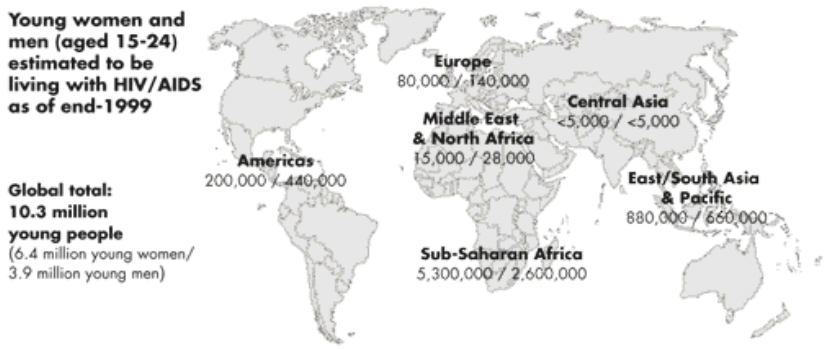
Tabulating the data

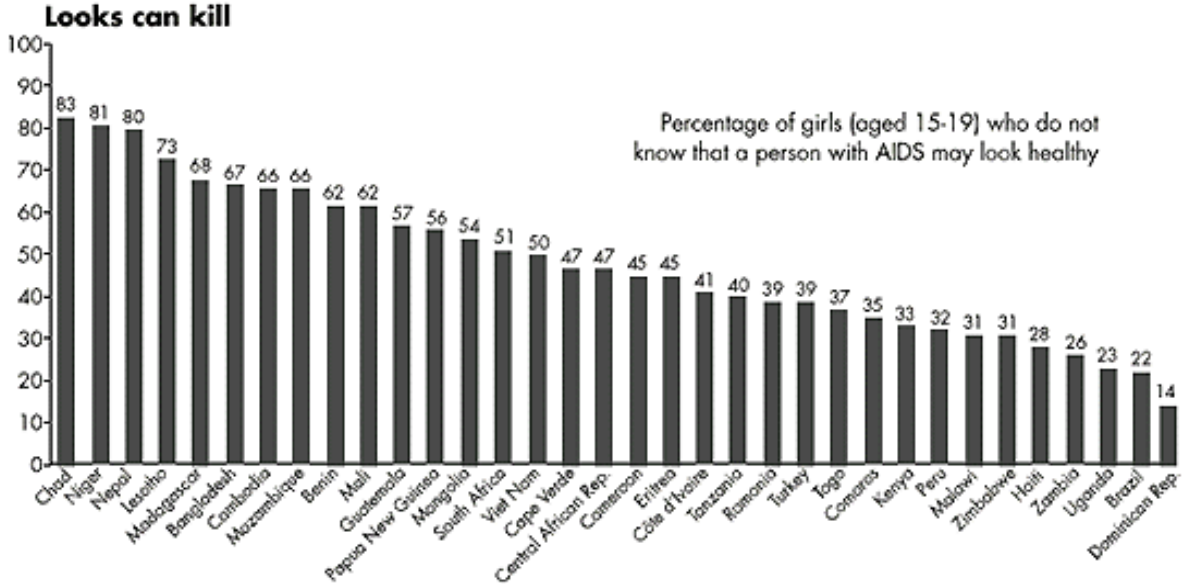
When we try and sytematize the data and look for some quantitative relationship explaining the variability in the HIV prevalence in African countries, there is little explanatory power in the old stand-by variables such as literacy, secondary school enrolment and age at first sex. None of the standard variables explain or can be used to predict the HIV prevalence satisfactorily, singly or, in combination (see tables at end of article). This is disheartening to the social scientist and frustrating to education reformers.

Conclusion of review of African school systems

This review shows clearly that the education systems of Africa are not providing effective reproductive health counselling for learners. Even the Ugandan system had flaws. There, NGO intervention had to be intensive to work at all. As leading epidemiologists have concluded: "education does not, of itself, confer protection from HIV infection" (Meidany 1998: 9) and "clearly, education on its own is insufficient to affect the transmission of HIV (Schoub 1999: 251).

The stronger statement, which nobody seems to have made, is that the educational system is part of the problem. The UNICEF map of HIV prevalence in the world shows just how vulnerable





Africa is. Ignorance is the big killer. Any education system surely should be able to transmit such simple, enabling knowledge such as that HIV positive people are asymptomatic and may look healthy? This is not the case as we can see from the UNICEF "Looks can kill" graphic.

South Africa

Cape Peninsula

According to a large study by Flisher *et al.* (1993: 495), out of 5, 851 participants, 17.4 percent of high school students in the Cape Peninsula region reported having had vaginal intercourse. The median age at first intercourse was 14.9 for males and 15.6 for females. The average number of sexual partners over the previous year was 1.5 for males and 1.0 for females (Flisher *et al.* 1993: 496). Students were concerned about pregnancy. Sixty percent had done something to prevent pregnancy the last time they had sex. However, their method depended on their first language. While 68.6, 70.7 and 81.9 percent of English, Afrikaans and English and Afrikaans-only speakers used condoms, only 16% of Xhosa speakers used condoms in their last sexual episode. In contrast, 75.5 % of Xhosa speakers used injectable contraceptive hormones and only 9.3, 14.9, and 4.6 of English, Afrikaans and English and Afrikaans-only speakers reported doing the same. The authors felt that this made Xhosa speakers more susceptible to the HIV virus because injectable contraceptive hormones (Depo-Provera, etc.) do not offer a barrier against STDs (Flisher *et al.* 1993: 496).

Cape Town

What is fascinating is the knowledge which was available when the pandemic was getting a foothold in one of the richest cities in Africa during the Apartheid era. Seventy-five percent of 377 students from township high schools in 1987

around Cape Town reported having had sexual intercourse (Mathews *et al.* 1990: 511). Almost half of the female students under 18 stated they were virgins, but only 9% of female students over 18 stated the same (Mathews *et al.* 1990: 512). Less than 15% of all male students reported being virgins and 36% claimed to have had two or more partners in the previous 10 months. Almost seventy four percent of students did not know that AIDS is incurable and most did not think they were at risk (Mathews *et al.* 1990: 513, Table 3a). While students most commonly cited condoms as the most effective prevention of STDs, they rarely used them. Instead, they most commonly maintained "one sexual partner at a time" for prevention. Over forty-three percent and 32.5 percent of female students under 18 and over 18, respectively, did not know what a condom was (Mathews *et al.* 1990: 514).

Eastern Cape, South Africa

Buga's study of 2,108 learners in 26 schools in 22 rural districts of the Transkei in the census year of 1996 concluded that "adolescent sexuality in rural Transkei is characterized by early initiation and high level of sexual activity, low contraceptive usage and a high rate of adolescent pregnancies and STDs...sexual intercourse is the rule rather than the exception." (Buga *et al.* 1996: 527). The mean age of the first sexual intercourse was 14.86 for girls and 13.43 for boys (Buga *et al.* 1996: 523). The average length of time between the first "date" and first intercourse was approximately three months for both boys and girls (Buga *et al.* 1996: 525, Table 4). Of all female sexually active respondents the most commonly reported reason for having sex was "forced by partner". The next most common was "peer pressure". Together, these responses accounted for almost half of all the responses. Males tended to report "proof of normality" as the reason for initiating sex (Buga *et al.* 1996: 525, Table 5).

Over three quarters of sexually active girls had never used contraception. Of those that did use protection, most used pills or injectable progestins. Over 80 percent of sexually active girls were not using barrier systems which would protect them from either STDs or HIV/AIDS (Buga *et al.* 1996: 525, Table 3). Furthermore, over 30% of the girl respondents had been pregnant. According to the researchers, "adolescent pregnancy is generally accepted, tolerated and even connived at by the society" (Buga *et al.* 1996: 526). Half the school boys and almost one quarter of the school girls had a history of STDs, which is known to increase the ease of HIV infection (Schoub 1999: 101-107). The Buga study found a direct positive correlation between initiation of sexual activity and both the age of menarche, which has been falling, and the age at the first date. When combined with the low use of condoms and the significant STD rate, these school children are clearly at a high risk for acquiring HIV. The authors recommend that full health education must start before students are 13 years old so as to delay the onset of sexual activity (Buga *et al.* 1996: 527).

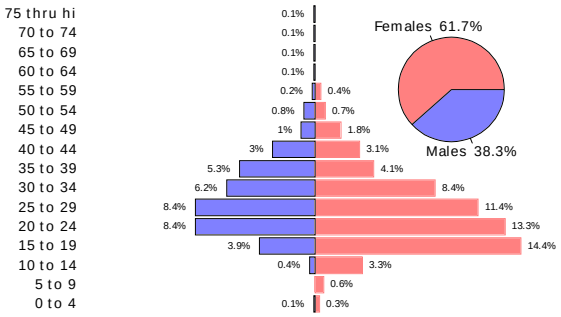
The age of HIV infection in the Eastern Cape

The Aids Training and Information Counselling Centre (ATICC) staff have collected data on AIDS deaths from Region A of the Eastern Cape since 1988. We know the ages of these AIDS deaths from a sample of 1,424 tested AIDS cases who were traced until they died. If we assume that they acquired HIV on average seven years before, we have a rough-and-ready population pyramid of the age of infection. The present authors had earlier used a ten-year average, but Aids statisticians such as Dr Hilary Southall pointed out that this period was too long (personal communication, 2000). If we take away the non-behavioural casualties of the pandemic—infants with HIV—we are left with a clear intervention target. By far the biggest group were female. As can be seen from the ogive of the above graphic, 23 percent of HIV in Region A is acquired in the age groups 10 to 19. That is to say, almost a quarter of all HIV is acquired in the teens, during the school years. If we add the positive infants born to positive adolescent mothers we can say that almost thirty percent of HIV in Region A is acquired by adolescent boys and girls and mothers of school-going age.

The loss of virginity and

The age of HIV infection

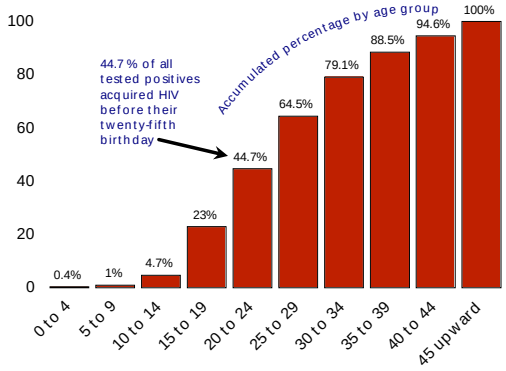
Age at death minus 7 years for HIV 1C



Sources: PE ATICC, 2000 (N= 1,424: 879 females, 545 males, vertically infected infants excluded)

Ogive of the age of HIV infection

Vertically infected infants excluded to show behavioural targets



Sources: PE ATICC, 2000 (N= 1,424: 879 females, 545 males)

HIV

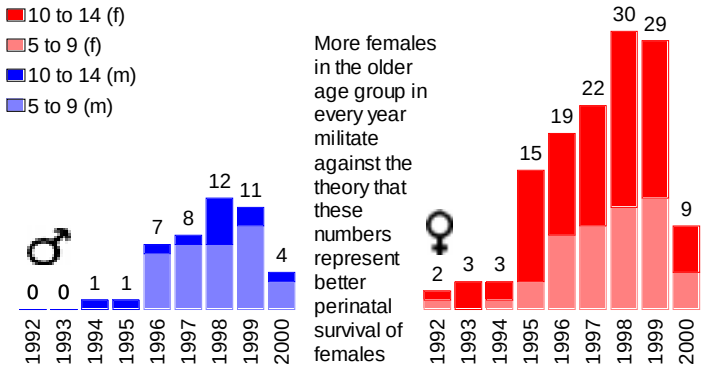
After the sexual revolution of the sixties seventies and eighties, the loss of virginity used to be a simple *rite de passage*. Today, in the era of HIV/AIDS, the event must be seen as a high risk, life-and-death episode. This is not simply due to the inherent risk of sex and HIV. The presence of the virgin's blood due to the breaking of the hymen *and* trauma to the vagina from stretching of the vaginal walls allows the virus to infect much more readily. Although small cuts and microscopic lesions are normal during any sexual penetrative encounter, lesions are guaranteed during sex with a virgin. It may be presumed from the studies done throughout Africa that the age of first sex is low and almost always in the school-going years. Furthermore, it often involves older men—"sugar daddies"—who have higher HIV and STD rates. Therefore, sex with an older man without a condom for a virgin girl is equivalent to sexual Russian roulette with several chambers loaded. Yet nobody seems aware of the obvious danger of the virgin HIV syndrome.

Of course, this process also affects young girls who have been raped by those who believe that sexual intercourse with a virgin will "cure" HIV/AIDS. This dangerous myth, which has been linked to the belief in a "virgin cure" for venereal disease, dates back to the demobilization period after the second world war when medical treatment of STDs became possible. Anne Mager, relying on seven interviews with Ciskei women regarding the late fifties wrote: "[t]he belief that venereal disease was cured by entering a virgin undoubtedly resulted in rape and the spread of disease" (Mager, 1995: 20). One can see how this myth evolved. Adults, who fear their peers may be infected with HIV, turn to children who are presumed free of HIV; but some desperate men living with HIV have come to believe sleeping with a virgin girl will actually cure them.

It is unclear how widespread this practice has become in the Eastern Cape. However, in the Eastern Cape (Region A), a girl in the virgin age grouping (5-14 years) is more than eight times more likely to be infected than her male counterpart (see graphic). Even in the 5-9 year age groups girls are more likely to be infected (PE ATICC 2000). This is even higher than the much cited United Nations International Children's Fund (UNICEF) study which showed that African

Virgin age group positives

January 1992- April 2000



Sources: PE ATICC data

girls aged between nine and 15 years are five times more likely to be infected with HIV than boys of the same age (Shell 1998b: 20).

Prof. Robert Dorrington, one of the country's actuarial experts on HIV, has observed that this finding might reflect the enhanced perinatal survival of females to HIV infection at birth (personal communication 1999). However, one should note that HIV infection in these age groups has grown from zero percent in 1991 to almost one percent of the total in 2000 (ATICC 2000). If this finding were due to perinatal survival availability there should be no increase. The figures should be constant. Moreover, the older age group of positives in this group should be smaller as fewer survive. This effect may be clearly visualised in the diagram entitled "Virgin age group positives".

It is also possible that the reported increase is a result of more children being tested. Some commentators have pointed out that there has been an increase in reports of child abuse since 1994 possibly as a result of the receptivity of the new ANC government to issues of gender (Coombe 2000: 13). Race may also be an issue here. Before 1994, it would have been unlikely for a black person to complain to a local white authority about child abuse.

Obviously, rape at any point will increase the susceptibility of the woman to HIV because of trauma to the vagina. This risk is enhanced for virgins. Whether school-aged girls are infected with the virus due to rape or unsafe consensual sex, the enhanced susceptibility of the young woman to HIV during her first sex act probably plays a role in the relatively higher HIV rates among young women. It would seem to be imperative to have special counselling on the values of virginity. Every virgin contemplating sex should have a condom.

Correlation between years in school and HIV infection

Data from ANC surveys in the poorest province—the Eastern Cape—show that the standard reached in school is positively correlated with HIV status (see graphic). People with matriculation have the highest HIV prevalence rate. This might mean that a girl in Standard 5 who drops out of school entirely will be safer from HIV/AIDS than her sister who stays until her matriculation. Education, considered by all to be the great hope for a change in behaviour, therefore might not be the hoped for panacea but instead, have unintended and indirect *accelerative* effects on the pandemic.

The data show that education does seem to work in relation to syphilis prevalence figures. The ANC blood sample is split and the donors are tested anonymously for both STDs and HIV. The higher the standard reached the lower are the syphilis prevalence figures (see figure). This simply shows that syphilis is curable and that older students with higher educational standards seek treatment.

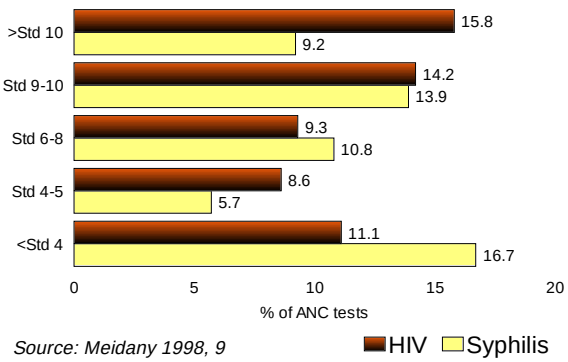
HIV, however, is irreversible and therefore the older age groups having HIV simply reflect the cumulative acquisition of the incurable and deadly virus acquired at younger ages. Education, in other words, did work for STDs but not for the deadly HI virus. While syphilis is curable, it grew steadily until 1997 (Meidany 1998: 7). The 1998 and 1999 results just released at a Department of Health conference in Umtata in August of 2000 show a slight decrease (Meidany 2000, personal communication).

In this context of infection, while schools might well act as formal disseminators of HIV awareness, they are simultaneously—and more importantly—arenas of peer group pressure and sexual contact. Children are being warehoused in government-sponsored institutions which currently present a mortal danger to them. The massive changes to the educational system such as outcomes-based education (OBE), right-sizing and regional redeployment of teachers have helped to destabilize the one profession that is going to be critical in the fight against AIDS. It is clear that the new education system is woefully unprepared and ineffective in combating the HIV/AIDS pandemic.

Until there is a stabilization of the profession and a revision of Curriculum 2005, which would include appropriate reproductive health education, the virus will continue to haunt the playground. However, it could be argued that such curriculum

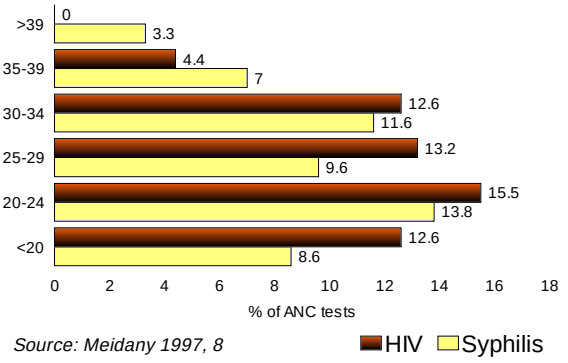
reform may also promote precocious sexual activity as safe sex practises become known and popular.

1997 Ante Natal Clinic results:
HIV and Syphilis by educational standard



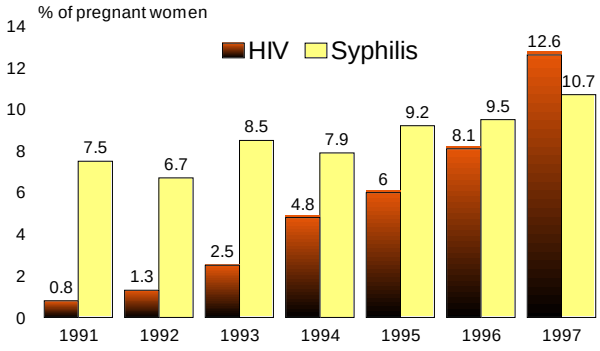
Source: Meidany 1998, 9

1997 Ante Natal Clinic results:
HIV and Syphilis by age group



Source: Meidany 1997, 8

HIV and syphilis prevalence
in the Eastern Cape over time



Source: Farshid Meidany, 1998, 7

The following letter to the *Daily Dispatch* on 9 March 2000 from Gilbert Daley, an experienced school teacher of rural Eastern Cape African learners, makes our point poignantly and effectively:

It is very disheartening to read your article on schools being "breeding grounds for AIDS". Many children of the rural schools come from abject poverty. This does not mean that they are immoral or necessarily involved in sexual activities. The permissive society contributes to the fall of adolescent girls to a great extent. Those guys after the initiation school take it for granted that they can do anything they want. There is no mechanism to curtail the male chauvinism in schools. More condoms than text books were distributed in rural schools last year, thereby transforming "learning culture" into "condom culture". One cannot help feeling that those who took the decision to contribute condoms lacked vision and wisdom. In my decades of teaching rural African children, it was shocking and morally repulsive to have learners fiddling with condoms while serious teaching was going on. It violates all bounds of decorum when you have to pick up used and unused condoms to clean up the classroom. The age-old values – like marriage is a sacred institution; premarital sex is abominable; and there are worthier pursuits than sex – should be inculcated in our learners. Above all, the dignity of the teacher and the teaching profession should be brought back... (Page 12, editorial page).

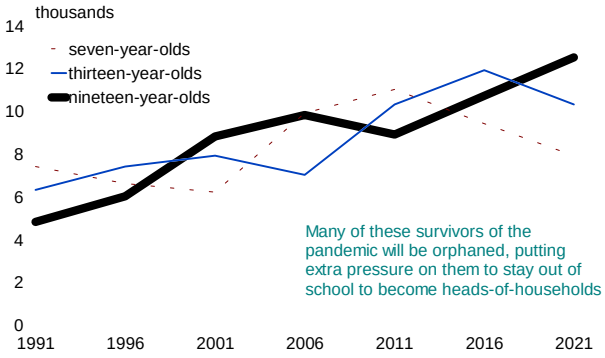
This letter highlights on an anecdotal level a perceived disrespect of learners for their teachers. More importantly, the letter implies that simple condom distribution is not enough to inform students and change underlying, atavistic attitudes. Rather, free condom distribution without appropriate reproductive health counselling might well further empower teen male chauvinism.

Projected enrolment

The expected enrolment of South African pupils at all three levels of learning will be unstable. While there will be a steady rise of potential learners, that supply will not be constant or predictable. Many of these learners progressively depicted in the graphic will be orphaned and will be obliged to look after their siblings, assume the headship of a household or simply drop out as a result of

economic circumstance. Carol Coombe has pointed out that in neighbouring Namibia, school enrolment for 2010 has been projected to be eight percent *lower* than it is in 1998 (Coombe 2000: 14 note 38). Will any further schools be built in Namibia?

Projections of fluctuations at the primary, secondary and tertiary enrolment ages in the King William's Town area (both sexes)



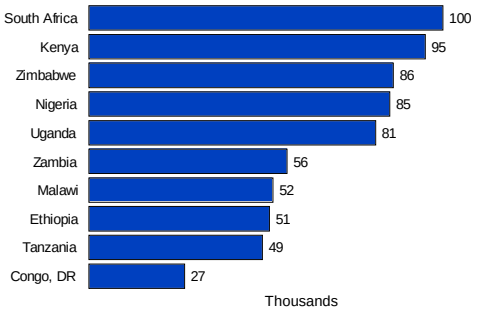
Source: Demographic Information Bureau projections for the PRU, 2000

Teachers and HIV

Much anecdotal evidence points to the unwanted role of teachers in the sexual life of learners. This is a universal and age-old problem. In the era of AIDS the problem becomes one which may not be swept under the carpet. As Coombe points out: "Teachers are educated, mobile, and relatively affluent and thus fall into a population category which has been shown to be especially at risk".

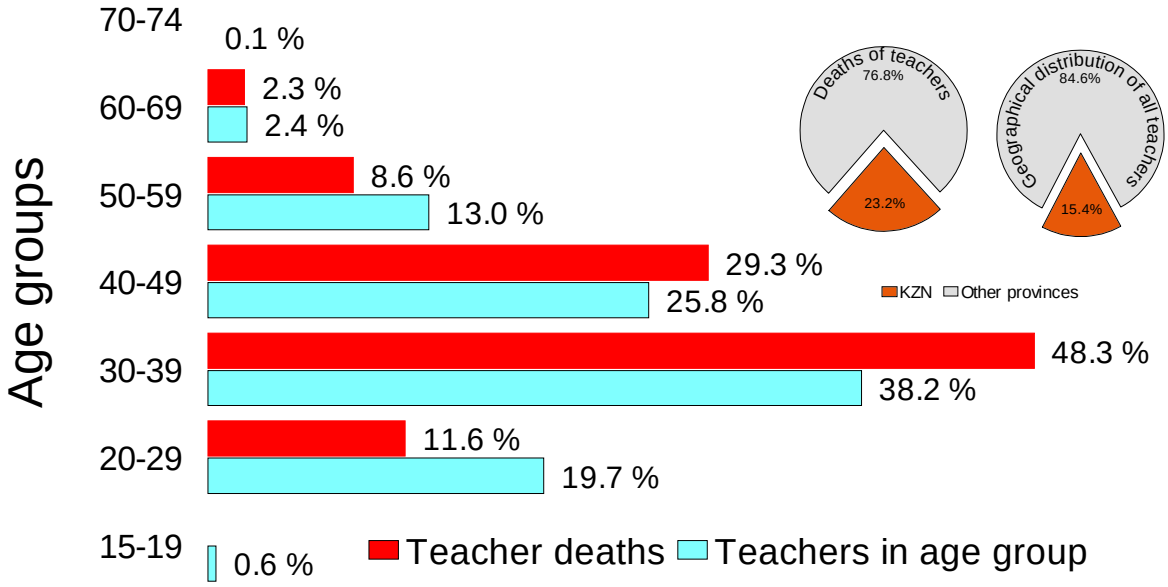
Teacherless children

Primary schoolchildren who lost a a teacher to AIDS

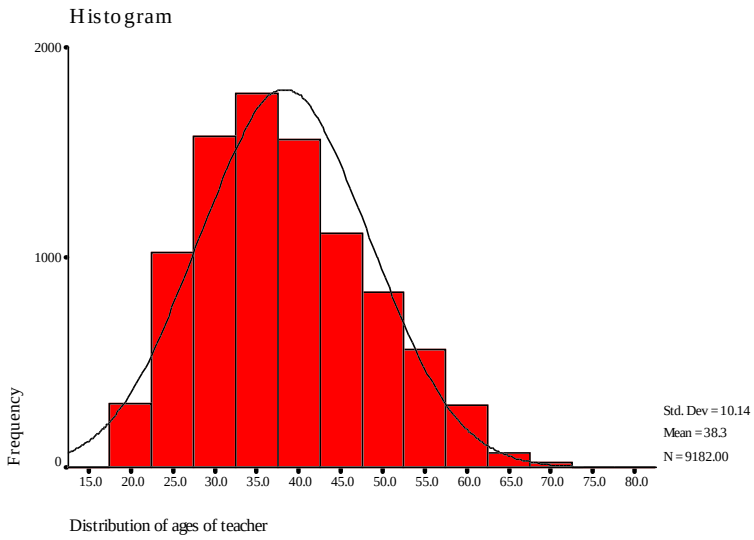


Sources: UNICEF, The Progress of Nations 2000, page 8; UNAIDS

A dearth of teachers
deaths occurring in the teaching profession in South Africa, by age group, August 1999 to May 2000



Source: Hassen Lorgat, "Breaking the Silence: Aids is killing teachers too," SADTU report in the Educators' Voice (June/July 2000) based on Persal statistics (n=701). The Persal system is used to pay all government employees; Stats SA 1996 Census, 10 percent sample.



Rates of teachers infected in certain regions have risen to as high as 40 percent for Malawi and Uganda (Coombe 2000: 15). M. Fassa has presented some compelling evidence on the prevalence of HIV among teachers in the Côte d'Ivoire and the Central African Republic. One of his most disturbing findings is that primary school teachers are more infected than secondary school teachers (Fassa 2000: 2). UNICEF calculates that South Africa leads the continent in primary teachers lost to AIDS (UNICEF 2000: 8).

We now know, thanks to SADTU, the South African Democratic Teachers' Union, that the mortality pyramid of South African teachers who died in 1999 resembles the AIDS mortality profile (Lorgat 2000: 2). This data is based on nine months of mortality data from the country's Persal system which tracks all government salaries and pensions. Obviously, if Persal could be persuaded to speak louder we would have a better picture over time and space.

Policy recommendations

The educational sector of South Africa faces an enormous challenge because of the sheer speed of the pandemic. Yet, South Africa is better placed in terms of infrastructure to develop a winning curriculum.

Some policy recommendations seem in order:

1. The introduction of single sex schools for the sake of empowering women in the classroom

2. The introduction of single sex teaching to avoid the possibility of transactional sex in the classroom.

3. The reduction of the age range within existing co-ed classrooms

4. The routine anonymous testing of teachers and learners for STDs and HIV/AIDS

5. The development of a special curriculum by the Departments of Education and Health for reproductive health and the empowerment of women.

6. Parents should be made aware of the special danger of their daughters losing their virginity while having unprotected sex during the AIDS pandemic.

7. Mandatory HIV education for all current teachers and an HIV courses for all teachers-in-training.

Age at first sex sorted HIV prevalence by country

Country	HIV prevalence (%)	Male age at first sex	HIV prevalence (M)	Female age at first sex	HIV prevalence (F)
References	*WHO*	*WHO*	*UNICEF*	*WHO*	*UNICEF*
Senegal	1.8	17.5	0.7	15.8	1.6
Ghana	2.4	16.9	1.4	17.6	3.4
Nigeria	4.1	16.6	2.5	16.5	5.1
Cote D'Ivoire	10.1	15.8	3.8	16.0	9.5
Cameroon	4.9	16.1	3.8	15.7	7.8
Uganda	9.5	16.5	3.8	15.9	7.8
Tanzania	9.4	17.4	4.0	16.6	8.1
Kenya	11.6	17.3	6.4	16.8	13.0
Zambia	19.1	16.9	8.2	16.6	18.0
Namibia	19.9	18.7	9.1	20.1	20.0
Zimbabwe	25.8	18.8	11.0	18.3	25.0
Botswana	25.1	17.2	16.0	18.1	34.0

Sources: WHO: www.who.int/emc-hiv/fact_sheets/africa; UNICEF Progress of Nations 2000

HIV prevalence and secondary school enrolment

Country	Adult HIV prevalence (%)	Male secondary enrolment (%)	Female secondary enrolment (%)
Senegal	1.77	21	11
Sierra Leone	3.17	22	12
Eritrea	3.17	19	13
Nigeria	4.12	33	28
DR Congo	4.35	33	15
Lesotho	8.35	23	34
Ethiopia	9.31	11	10
Tanzania	9.42	6	5
Uganda	9.51	14	8
Cote D'Ivoire	10.06	33	17
Kenya	11.64	28	23
Zambia	19.07	31	19
Namibia	19.94	57	69
Botswana	25.1	54	58
Zimbabwe	25.84	49	39

WHO publication on www.who.int/emc-hiv/fact_sheets/africa

HIV and development statistics

Country	Adult HIV rate (%) 1997	GRDI rank*	Adult Literacy rate	Male SSE#	Female SSE#	Age at first sex (m)	Age at first sex (f)
Ghana	2.4	111.0	65.0	45.0	29.0	16.9	17.6
South Africa	12.9	71.0	82.0				
Swaziland	18.5	98.0	77.0	53.0	51.0		
Lesotho	8.4	113.0	71.5	23.0	34.0		
Kenya	11.6	112.0	78.0	28.0	23.0	17.3	16.8
Nigeria	4.1	121.0		33.0	28.0	16.6	16.5
Cote D'Ivoire	10.1	126.0		33.0	17.0	15.8	16.0
Tanzania	9.4	123.0		6.0	5.0	17.4	16.6
Zimbabwe	25.8	109.0		49.0	39.0	18.8	18.3
Zambia	19.1	112.0		31.0	19.0	16.9	16.6
Namibia	19.9			57.0	69.0	18.7	20.1
Uganda	9.5	132.0	62.0	14.0	8.0	16.5	15.9
Botswana	25.1	79.0	70.5	54.0	58.0	17.2	18.1
Sierra Leone	3.2	146.0		22.0	12.0		
Senegal	1.8	134.0		21.0	11.0	17.5	15.8
Ethiopia	9.3	142.0	35.5	11.0	10.0		
Eritrea	3.2			19.0	13.0	17.9	16.0
DR Congo	4.4		77.5	33.0	15.0		
Cameroon	4.9					16.1	15.7

*Gender Related Development Ranking #Male (female) Secondary School Enrolment 1990-1995

Sources: WHO publication on www.who.int/emc-hiv/fact_sheets/africa

Literature consulted

ATICC. 1998. Aids Training and Information Counselling Centre Port Elizabeth. Clinic data.

Baganizi, E. *et al.* 1997. Prevalence and incidence rates of HIV-I infection in Rwandan students. AIDS 11 (5): 686-687.

Bénéfice, Eric *et al.* 1999. Growth and maturation of Sereer adolescent girls (Senegal) in relation to seasonal migration for labour. American Journal of Human Biology 11: 539-550.

Buga, Geoffrey A.B., Donald H.A. Amoko, Daniel J. Ncaylyana. 1996. Sexual behaviour, contraceptive practice and reproductive health among school adolescents in rural Transkei. SAMJ 86 (5) May: 523-527.

Coombe, Carol. 2000. Managing the impact of HIV/AIDS on the education sector. Pretoria. UNECA briefing paper. Draft MS.

Cunningham, Peter W. and Brenda E. Boult. 1996. Black teenage pregnancy in South Africa: some considerations. Adolescence 31 (123) Fall: 691-700.

Du Toit, Brian. 1987. Menarche and sexuality among a sample of Black South African schoolgirls. Social Science and Medicine 24(7): 561-571.

Fabiani, Massimo *et al.* 1998. 1989-1996 HIV-I prevalence trends among different risk groups in Gulu district, North Uganda. Journal of Acquired Immune Deficiency Syndromes and Human Retrovirology 18(5) 15 August: 514.

Fassa, M. 2000. HIV/AIDS and Education: sharing experiences, views and ideas from the Côte d'Ivoire and the Central African Republic: HIV/AIDS impact assessment and response. Unpublished poster, World AIDS conference, Durban, South Africa: , 9-14 July.

Feldman, D., P. O'Hara, K.S. Baboo, N.W. Chitalu and Y. Lu. 1997. HIV prevention among Zambian adolescents: Developing a value utilization/norm change model. Social Science and Medicine 44(4): 455-468.

Flisher, A.J., C.F. Ziervogel, D.O. Chalton, P.H. Leger, B.A. Robertson. 1993. Risk-taking behavior of Cape Peninsula high-school students: Part VIII. Sexual Behavior. SAMJ 83 (July): 495-497.

Haldenwang, B.B. 1993. AIDS in South Africa: its impact on society: a literature review. Stellenbosch. Institute for Futures Research. Occasional Paper no 21.

Kasule, J., M.T. Mbizvo, V. Gupta, S. Fusakaniko, R. Mwateba, W. Mpanju-Shumbusho, S.H. Kinoti and J. Padachy. 1997. Zimbabwean teenagers' knowledge of AIDS and other sexually transmitted diseases. East African Medical Journal 74(2) February: 76-81.

Kelly, Kevin. 2000. Communicating for action: a contextual evaluation of youth responses to HIV/AIDS. Department of Health.

Klepp, K.I., S.S. Ndeki, F. Thuen, M. Leshabari and A.M. Seha. 1996. Predictors of intention to be sexually active among Tanzanian school children. East African Medical Journal 73(4) April: 218-224.

Lorgat, Hassen. 2000. "Breaking the Silence: Aids is killing teachers too." SADTU report in the Educators' Voice (June/July), 1-4.

Lurie, Mark *et al.* 1997. Circular migration and sexual networking in rural KwaZulu/Natal: implications for the spread of HIV and other sexually transmitted diseases. Health Transition Review, supplement 3 to volume 7: 17-27.

Mager, Anne Kelk. N.D. Sexuality, fertility and male power in the Ciskei region, 1945-1959, unpublished ms. The section is elided in her book, Gender and the Making of a South African Bantustan. David Philip, 1999. The author verified

with Mager that the "virgin cure" information was acquired from seven interviews with Ciskeian women.
Marais, Hein. 2000. To the Edge: AIDS review 2000. University of Pretoria.

Matasha, E., T. Ntembelea, P. Mayaud, W. Saidi, J. Todd, B. Mujaya and L. Tendo-Wambua. 1998. Sexual and reproductive health among primary and secondary school pupils in Mwanza, Tanzania: need for intervention. AIDS Care 10(5): 571-582.

Mathews, C., L. Kuhn, C.A. Metcalf, G. Joubert, N.A. Cameron. 1990. Knowledge, attitudes and beliefs about AIDS in township school students in Cape Town. SAMJ 78: 511-518.

Meidany, Farshid. 1998. "Sentinel Surveillance of Antenatal clients for Human Immune-Deficiency Virus, Eastern Cape, 1997." In Eastern Cape Epidemiological Notes 1, 3 June: 1-10.

Migliori, G.B., A. Spanevello, V. Manfrin, A. Abongomera, R.F.E. Pedretti, L. Ballardini, M. Neri, A. Borghesi. 1996. AIDS and tuberculosis control programmes: an integrated approach at educational level. Monaldi Arch Chest Dis. 51(2): 102-107.

Morabia, Alfredo and Michael C. Constanza. 1998. International variability in ages at menarche, first live birth and menopause. American Journal of Epidemiology 148(12): 1195-1205.

Nilses, Carin *et al.* 1997. Trends in fertility patterns of women in Zimbabwe. Health care for Women International 18: 369-382.

Porter, R. 1994. Aids and youth in Ghana: A report on findings from an exploratory focus group study. Prepared for AIDSCOM.

Schoub, Barry D. 1999. AIDS & HIV in Perspective: A Guide to Understanding the Virus and its Consequences. 2nd Edition. Cambridge: Cambridge University Press.

Shell, Robert C-H. 1998b. "Sexual Culture and Death in the Era of HIV/AIDS: The HIV/AIDS Epidemic and its Transmission Vectors in the Western Region [Region A] of the Eastern Cape, South Africa, with Special Reference to the Port Elizabeth, Despatch and Uitenhage Urban Areas, 1988 to 1998." East London. Rhodes University, Population Research Unit.

Shuey, Dean A., Bernadette B. Babishangire, Samuel Omiat and Henry Bagarukayo. 1999. Increased sexual abstinence among in-school adolescents as a result of school health education in Soroti district, Uganda. Health Education Research 14(3): 411-419.

Stats SA. 1996. 10% sample.

UNICEF. 2000. The Progress of Nations, 2000. New York: UNICEF.

Youri, Pat. 1993. Female adolescent health and sexuality study in Kenyan secondary schools: an interim report. Nairobi: African Medical and Research Foundation (AMREF).