

HIV/AIDS-RELATED BELIEFS AT THE UNIVERSITY OF LIMPOPO¹

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Abstract

This paper seeks to reveal beliefs among young people in Limpopo that can be relevant to the success or failure of HIV/AIDS-education. A survey was conducted among 325 students at the University of Limpopo, Turfloop Campus. The point of departure for the development of the survey tool, which included 102 questions and statements, was an

1 This study formed part of the HACALARA project (HIV/AIDS Communication Aimed at Local and Rural Areas; see www.hacalara.org), and was supported by the South African-Dutch research organization SANPAD. The study was carried out by the first author of this article and supervised by the second author. A comprehensive overview of the results can be found in Verheij (2008); see www.hacalara.org (-> Publications and References).

adapted version of the PEN-model proposed by Airhihenbuwa (1989) and Van Dyk (2001a). Positive beliefs, which are beneficial to effective health education, were distinguished from negative beliefs, which are considered as harmful in view of the goals of health education. For the purpose of this study, a new category was added to the PEN-model: multifaceted beliefs, which could be either beneficial or detrimental to HIV/AIDS-education depending on the circumstances in which the belief is demonstrated. For all statements and questions about positive, negative and multifaceted beliefs, the percentages of respondents' confirming and disconfirming reactions were calculated. Subsequently, possible effects of gender and area of origin were investigated. The results of this study suggest that there is a wide range of positive, negative and multifaceted HIV/AIDS-related beliefs that deserve more attention from the developers of educational materials. It appears that from the threefold ABC messaging (Abstain, Be faithful, Condomise), 'Be faithful' rates highest for further consideration for extensive promotion within this target group. Furthermore, the option of including information about male circumcision into HIV/AIDS-educational materials may deserve more consideration from campaign developers.

Introduction²

There is little doubt that the country's linguistic and cultural diversity contributes to the difficulty in developing effective campaigns against HIV/AIDS in South Africa.³ It would seem, however, that for reasons of efficiency, a general approach instead of a culture-specific approach is preferred in many South African HIV/AIDS awareness campaigns. Sometimes, interventions that have been successful in developed countries are imported without any changes to South Africa.⁴

A growing number of health communication specialists⁵ are becoming more cautious about copying HIV/AIDS messages that

2 We sincerely thank the anonymous reviewers and the editor for their insightful comments on earlier versions of this article.

3 See for instance Haupt, Munshi and Smallwood 2004.

4 Caldwell, Caldwell and Quiggin, 1989; Green and Witte 2006.

5 See, among others, Airhihenbuwa 1989; Van Dyk 2001a; Van Dyk 2001b; Marcus 2002; Mulaudzi 2005.

originated in the west and about using them indiscriminately across South Africa. The cultural plurality and diversity in South Africa crave multiple and diversity of approaches, but is not yet clear how this will be achieved. There is need for a deeper understanding of the factors that are responsible for sexual health behaviour. As will be argued further below, culture does not influence health decisions directly, but via a path where a crucial role is played by the individuals' beliefs: their expectations, for instance, about the consequences of the various possible behaviours available to them. This study emanated in realisation of the potential relevance of HIV/AIDS beliefs to the success or failure of health campaigns aimed at students at the University of Limpopo, Turfloop campus.

In the sections that follow, we present the theoretical framework for this study, the *Integrative Model of Behavioural Prediction*, and an adapted version of the PEN-model. A distinction will be made between *Positive beliefs*, which are beneficial to effective health education; *Negative beliefs*, which are considered harmful in view of the goals of health education; *Exotic beliefs*, which are not expected to influence the effectiveness of health education in a positive or negative way; and *Multifaceted beliefs*, which could be either beneficial or detrimental to HIV/AIDS-education depending on the circumstances in which the belief is demonstrated. Next, we discuss the research design and methods. In section 4 the outcomes of the survey are presented. The focus will be on those results that appear to be most relevant for HIV/AIDS-education aimed at the target group of young black students in South Africa. Finally, we present the conclusions and a number of concrete suggestions for health education in South Africa.

Theoretical framework

The Integrative Model of Behavioural Prediction

Fishbein and Yzer (2003) provide a framework for gaining insight into the variables that determine the behavioural intentions and ultimately the health behaviour of members of varying target groups. Fishbein and Yzer (2003) developed the IMBP on the basis of major behavioural

theories, such as the Health Belief Model, the Theory of Reasoned Action, and Social Cognitive Theory.⁶

The IMPB is depicted in Figure 1.

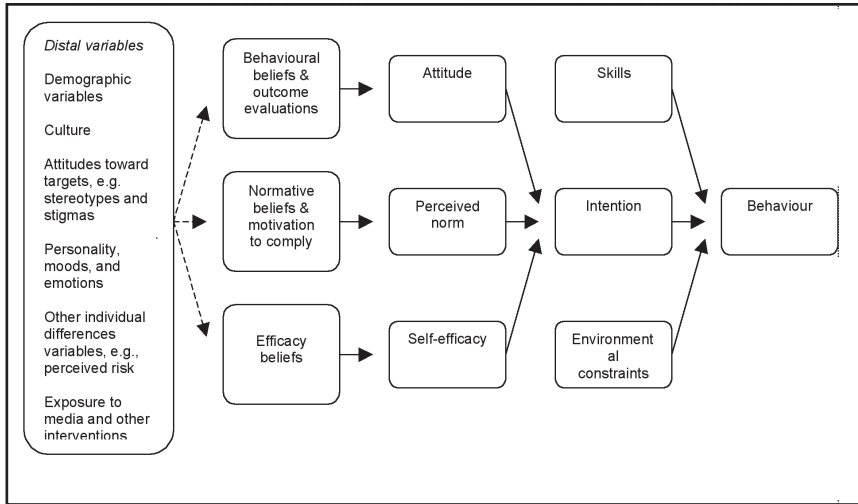


Figure 1. Integrative Model of Behavioural Prediction (Fishbein and Yzer 2003)

According to IMBP, three factors are primarily responsible for a person’s conscious decision regarding health behaviour, for instance whether or not to use a condom, or whether or not to go for VCT. The first factor relates to the person’s *skills*, for example, does he/she know how to use a condom? The second factor relates to *environmental* constraints; for instance, is there a testing facility that he/she can go to? The third and most important factor refers to *his/her intention* to perform that specific behaviour. The IBMP proposes that this *behavioural intention* is influenced by three types of *global perceptions*. Firstly, there is the *attitude* towards performing the given behaviour, that is, the person’s general evaluation of how favourable the behaviour would be for him or her. The second global perception is the *perceived norm*, which refers to the person’s opinion about the support or obstruction he/she might expect from social networks that he/she considers important for performing the behaviour. The third global perception is *self-efficacy*, meaning the extent to which a person thinks that he/she is capable of performing the behaviour in question.

6 For further information see Fishbein and Yzer 2003: 165-166.

Yzer (2008) makes it clear that the relative importance of the three global perceptions that influence the behavioural intention may differ between groups or subgroups in a population. For young men in a certain social group, for instance, their own evaluation of going for VCT may be more important than those of their peers, parents and teachers. However, the relative weights of attitude and perceived norm of young females in that same group may be quite different. Self-efficacy or self-confidence (or lack thereof) in remaining a virgin until marriage in one culture may be quite important in determining the behavioural intention to abstain from premarital sex. In another culture, however, perceived norm and attitude towards this behaviour may turn out to be much more relevant. Such variation in the weight of HIV-relevant determinants would clearly indicate a need for different interventions. Yzer (2008) further contends that HIV-prevention programmes cannot directly change a person's global perceptions, that is, his or her attitudes, perceived norms or self-efficacy. What can be addressed and influenced directly are the specific *beliefs* that are the precursors of these global perceptions.

Attitude towards certain behaviour depends on two factors: (i) *behavioural beliefs*: beliefs about the probability that the behaviour in question will have specific consequences and (ii) *outcome evaluations*: assessments (important or unimportant; positive or negative) of these consequences. If, for instance, someone believes that using condoms will prevent an HIV-infection but feels that this is not really an important advantage of this particular behaviour (because this person may live in a country with a very low HIV- prevalence), and if that same person believes that using a condom will decrease the sexual pleasure and evaluates this effect as very negative and important, then by combining these beliefs and evaluations, one may predict that the attitude of this person toward condom use will be negative. Perceived norm is based on *normative beliefs*: the levels of support a person expects from members of his / her social network (peers, parents, teachers, *et cetera*) and his/her *motivation to comply*, the extent to which one is motivated to comply with these referents, that is, to do what they want, hope or expect. Finally, self-efficacy depends on so-called *efficacy beliefs*, a person's expectations about his/her capability to perform the behaviour in question in specific challenging or facilitating

circumstances (Yzer 2008: 52).

The last group of variables that the IMBP distinguishes are *distal variables*. Although it is clear that these variables - personality traits, infrastructure, political system and shared culture - influence beliefs, and via these beliefs global perceptions, behavioural intention and ultimately health behaviour, there are no theoretical reasons to assume that distal variables will always and in the same manner shape specific beliefs. Although it is possible that a clear correlation exists between a certain distal variable and a specific kind of health behaviour, the IMPB suggests that the explanation for such a correlation will always involve empirically demonstrable relations between this distal variable and one or more relevant beliefs, between these beliefs and one or more relevant global perceptions, and also between these global perceptions and the health behaviour in question.⁷ The IMBP demonstrates how important it is that health educators concentrate on those beliefs which may be assumed to have an effect on global perceptions that, in turn, may influence the behavioural intentions and ultimately the behaviour of the specific group the campaign tries to reach.

This leads to the following question: which are the HIV/AIDS-related beliefs in various South African target audiences that should be addressed when trying to influence sexual health behaviour? A tool that may be helpful in answering this question, is the so-called PEN-model. The acronym stands for **P**ositive, **E**xotic and **N**egative beliefs and behaviours. Below the PEN-model is shortly discussed.

The PEN-model

The PEN-model, proposed in Airhihenbuwa (1989) and further elaborated in Van Dyk (2001a; 2001b) identifies *positive* beliefs and behaviours concerning sexuality, health and HIV/AIDS, which are considered to be beneficial to *effective health education* and which

7 Yzer (2008) gives the example of condom use that may be found to be quite different in two populations with different cultural backgrounds. Following the IMBP, this must imply that the two cultural groups do not only differ in this health behaviour, but also in one or more global perceptions (i.e. attitude, perceived norm or self-efficacy), and in one or more underlying beliefs as well (Yzer 2008: 53).

therefore should be encouraged. Examples mentioned in Van Dyk (2001a) include performing 'high sex' or other forms of non-penetrative intercourse, forbidding sexual intercourse before marriage, and the belief that intercourse with a person with an STD is dangerous.⁸ *Negative* beliefs and behaviours are those beliefs and behaviours which should be regarded as detrimental to reaching the goals of health education. Van Dyk (2001a) mentions, for instance, having multiple sexual partners, and the practice of 'dry sex' to heighten the sexual experience for men (Van Dyk 2001a: 65). *Exotic* beliefs and behaviours are those beliefs and behaviours which may be unfamiliar and strange to observers with a different cultural background, but which are not expected to influence the effectiveness of health education positively or negatively. Examples mentioned in Van Dyk (2001a) include polygamous marriages, ceremonies and herbal remedies (Van Dyk 2001a: 64).⁹

In this study it was decided to add a fourth category of beliefs and behaviours to the three categories that the PEN-model distinguishes. We call this fourth category *multifaceted* (M) beliefs or behaviours. In a number of cases it turns out that a belief or behaviour can be either positive, exotic or negative, depending on the circumstances in which it is demonstrated. An example is male circumcision, an important African tradition that is often related to rites of passage and to religious and tribal identity.¹⁰ When performed with instruments that have not adequately been sterilised, male circumcision should

8 Van Dyk 2001a: 64.

9 It is important to stress here that the qualifications positive, negative and exotic in the PEN-model are in no way meant as ethical judgments. It is quite possible that an evaluator may personally assess a certain belief as positive, if only because he or she shares that same belief. At the same time he or she may evaluate this belief as negative in the sense of the PEN-model, because it stands in the way of effective communication regarding HIV/AIDS-prevention. Still another belief may be evaluated negatively by an evaluator from his or her own ethical point of view. If, however, this belief does not influence the effectiveness of HIV/AIDS-education, then in terms of the PEN-model it is to be evaluated as exotic.

10 We do not in this paper concern ourselves with possible positive effects of female circumcision. As far as the authors know, such positive effects do not exist, and female circumcision can only be regarded as harmful for the physical and mental health of the girls and women who have to endure this operation.

be regarded as negative in the sense of the PEN-model: it may be detrimental to health; in fact, it may be a source for HIV-infections. But at the same time, male circumcision which is carried out safely should be recognised as positive if one applied the PEN-model. Male circumcision reduces the chance of HIV-infection, as has become clear in recent years. Circumcised men are between 8% and 60% less likely to acquire HIV during sexual intercourse (Alliance 2007), and according to a Ugandan study referred to in Epstein (2007), male circumcision may reduce the risk of infection for women too. A third, and again negative facet of male circumcision, however, is that it may work as a serious obstacle for the promotion of other HIV/AIDS-prevention methods.¹¹

Research design and methods

In order to determine which HIV/AIDS-related beliefs might prevail among young black South African students, a survey among 325 predominantly first year students was conducted at the University of Limpopo (Turfloop Campus). A printed questionnaire was used with questions focusing on the degree of adherence to positive, negative and multifaceted beliefs that might influence the effectiveness of HIV/AIDS-education. Questions about beliefs that according to the PEN-model would have to be categorised as exotic were not included, since by definition these beliefs would not be relevant for the effectiveness of HIV/AIDS-communication.

Development of the questionnaire

First of all, a literature study was carried out in order to find potentially valuable existing questionnaires about health related beliefs among students in South Africa. It was found that the so-called *Knowledge, Attitudes, Practices/Behaviours* (KAP/B) surveys provide

11 Quinlan (2008) explains this risk as follows: “[...] the question that needs to be asked is this: given the difficulty in persuading men to use condoms for HIV protection, and given the personal inconvenience and pain involved in circumcision which is accepted because of the alleged transmission-inhibiting powers of the intervention, how many will be prepared to use a condom over a circumcised penis?” (*Aids Review* 2008, 200: 77).

strong descriptive foundations for understanding students' sexuality, but revealed little about socio-economic and cultural factors which might co-determine their actual behaviour.¹² Beuster and Schwär (2005) developed the *South African Traditional Belief Scale* (SATBS), which appeared to be a reasonable framework for asking questions on traditional beliefs. In this questionnaire, however, hardly any questions are included about beliefs related to health, HIV/AIDS and sexuality.

Therefore, it was decided to develop a new research instrument. In this new questionnaire, questions were included about beliefs that, according to the literature, might be relevant for the spread of HIV/AIDS, especially among South African youths. Furthermore, the outcomes were used of two group discussions among a total of 69 third-year students from the University of Limpopo, and of eleven one-on-one interviews with three so-called *gate-keepers*. These gate-keepers were staff members who were expected to have particular expert knowledge about the subjects covered in the questionnaire. Interviews were also held with eight so-called *key-informants*. These key-informants were students (mainly in their third year on campus) who were expected to be willing and able to speak freely about health-related beliefs that they held themselves, or that they assumed to exist among other students.

Using these sources of information, a first draft of the questionnaire was developed. After feedback had been received from a number of experts in research methodology, a pilot study was conducted. One lecturer and eighteen students, other than those who filled out the final version of the questionnaire at a later stage, attended a meeting with the first author of this article, during which the questionnaire was introduced and tested for clarity and comprehensibility. All eighteen students were asked to fill out the questionnaire. Afterwards, the language used in the questionnaire, the scales, possibly unclear questions, and the layout and length of the questionnaire were discussed, as well as possible additional questions, which according to the students needed to be included in the questionnaire. After this pilot study, the wording of some questions was changed, some questions were added, and some of the answering scales were improved.

12 cf. Varga 1997: 50; Swanepoel 2003: 37-38.

Questions asked

In total, the questionnaire counted 102 questions. The first 6 questions were general questions about personal characteristics of the participants: gender, age, area of origin, home language, department of study, and year of study. In accordance with the structure of the adapted PEN-model (see above), the remainder of the questionnaire included questions about beliefs that were positively related to effective HIV/AIDS-education (P), beliefs that were negatively related to effective HIV/AIDS-education (N), and multifaceted beliefs (M).

In some cases, the respondents were presented with an *assertion* that they were invited to express their feelings about, for instance, 'Condoms harm men in that they don't get rid of their sperms in a natural way. [Yes / No / Do not know]'. In other cases, the respondents were asked a *question*, such as 'Do you think a person can get infected with HIV through supernatural means (such as witchcraft)? [Yes / No / Do not know]'.

Procedure

Students from each of the three faculties (Sciences, Health and Agriculture, Humanities, and Management and Law) of the University of Limpopo (Turffloep Campus) were asked to participate in this study. In these three faculties, courses were chosen in which most of the first year students of that faculty were enrolled. All students enrolled in said courses, including students who had begun to study at the University of Limpopo in an earlier year were asked to fill out the questionnaire.

For practical reasons, it was decided to use a group-administered questionnaire, with respondents in each group completing the questionnaire on their own without discussion with other members of the group. Classes were visited in October, 2007. The lecturers were contacted and informed about the purpose of the study. In each of the classes, the first author of this article shortly introduced himself and mentioned the purpose of the study. The students were then asked to respond to the questions in the questionnaire. It was stressed how important the students' co-operation would be for improving HIV/AIDS-education at the University of Limpopo.

It appeared that most respondents understood quite well what they were expected to do. In 29 cases, however, questionnaires which were

returned turned out to be useless because the respondents had skipped or evidently misunderstood a large part of the questions. In total, data from 325 respondents could be analysed.

Sample profile

The large majority of the respondents (83.1%) were first year students from the University of Limpopo (Turfloop Campus). More female students (57.1%) participated than male students (42.9%). These percentages more or less reflect the situation at Turfloop campus, with 52.8% of all students being female and 47.2 % being male. The average age of the respondents was 20.1 years; the standard deviation was 2.3 years. Of the respondents, 63.4% came from a rural area; 36.6% came from a semi-rural or urban area. The home language of most students was Northern Sotho (60.7%), followed by XiTsonga (18.7%), IsiVenda (5.6%), Southern Sotho (4.7%) and IsiSwati (4.4%).

Analysis of the data

For all statements presented and questions asked, the percentages of respondents' reactions in the different categories were calculated. Possible effects of gender and area of origin were investigated and tested for statistical significance, χ^2 -tests. In view of the large number of statements and questions – which could lead to a relatively high risk of type-I errors – it was decided to set the alpha level at .01.

Results

The space available for this article does not allow for a discussion of all results that were found. A complete overview of the results can be found in the MA-thesis by the first author (Verheij 2008). The results reported there suggest that there is a wide range of positive, negative and multifaceted HIV/AIDS-related beliefs and behaviours adhered to by young black students in South Africa. Table 1, Table 2 and Table 3, and the sections following these tables¹³ present findings that might be of special interest for HIV/AIDS-education aimed at this target group

13 For reasons of space availability, most questions and statements in the tables are shortened versions of the statements in the questionnaire.

and possibly also for other target groups in South Africa. Whenever differences between subgroups are mentioned, those differences are always statistically significant (χ^2 -tests; $p < .01$).

Table 1. Positive HIV/AIDS-related beliefs and behaviours

Belief or behaviour	Percentage of respondents giving an affirmative reaction	(Only if effect of gender is statistically significant)	
		Males	Females
Abstinence is best option in HIV-prevention.	48.3%		
For unmarried women virginity is important.	74.1%		
For a man it is important to marry a virgin.	48.9%	61.8%	39.5%
Ever practiced non-penetrative intercourse?	18.0%		
Still a virgin?	64.6%	26.6%	42.0%
Use a condom when having sex? (answers from respondents who had already had sex)	always: 63.1% often: 25.7%		

As Table 1 shows, abstinence is a popular concept among young students at the University of Limpopo; nearly half the group of respondents (48.3%) claimed that it was their first option with regard to different HIV-prevention practices. Moreover, a majority of the students (74.1% in total; no statistically significant difference between male and female students) stated that it is important for a woman to remain a virgin until marriage. Almost half the group of respondents (48.9%) found it important for a man to marry a virgin. The difference between male and female respondents was significant here: of the male students, 61.8% felt that for the groom, the virginal state of the bride is of importance; in the group of female students this percentage was 39.5%.

A relatively small part of the respondents (18%) gave a positive answer to the question if they had ever practised 'thigh sex' or other forms of non-penetrative intercourse. No significant difference was

found here between male and female students.

Condom use appeared to be quite a common practice at Turfloop Campus, though not for all respondents. When asked 'Do you use a condom when you have sex?', of the respondents who stated that they had already had sex (64.6% of all respondents), 63.1% answered 'always', 25.7% said 'often', 7.1% said 'seldom' and 4.0% answered 'never'. Further analysis of the answers revealed a statistically significant effect of gender on virginal state: more female students (42.0%) than male students (26.6%) stated that they had never had sex yet.

Table 2. Negative HIV/AIDS-related beliefs and behaviours

Belief or behaviour	Percentage of respondents giving an affirmative reaction	(Only if effect of gender is statistically significant)	
		Males	Females
For a man it is important to have more than one girlfriend.	14.8%	25.4%	7.2%
For a man it is acceptable to have more than one girlfriend.	24.6%	36.8%	14.8%
For a woman it is acceptable to have more than one boyfriend.	7.8%		
One can be infected with HIV through supernatural means.	10.9%		
Witch doctors can infect someone with HIV.	17.4%		
Traditional healers can cure STI's.	30.4 %	45.9%	19.5%
Some traditional healers can cure AIDS.	3.8%		
It is a good idea to combine conventional and traditional health care.	38.3%	49.6%	30.3%
AIDS can be cured by having sex with a young child or a virgin.	3.1%		

Belief or behaviour	Percentage of respondents giving an affirmative reaction	(Only if effect of gender is statistically significant)	
		Males	Females
Infertile women should sleep with a healer to be able to conceive.	7.1%		
By using a condom, one might get a disease that is inside the condom.	12.2%		
Condoms harm men in that they do not get rid of their sperms in a natural way.	13.4%	24.3%	5.5%
People who use condoms get thinner.	6.6%		
Condoms prevent the transmission of necessary body fluids.	50.9%		
Some ethnic groups are resistant to HIV-infection.	29.9%		
HIV only develops into AIDS when one sleeps around.	44.1%		
Promoting ABC is a waste of time; ultimately one will get HIV/AIDS anyway.	17.7%		

As Table 2 shows, not all respondents attach great importance to a monogamous relation. When asked if they considered it as *important for a man* to have more than one girlfriend, 14.8% of the respondents said 'yes' (25.4% of the male students and 7.2% of the female students; a statistically significant difference). When asked if they considered it acceptable for a man to have more than one girlfriend, almost one fourth of the students (24.6%) agreed: 36.8% of the male students and 14.8% of the female students; again, this reflects a statistically significant difference. However, when the question was asked if it was *acceptable for a woman* to have more than one boyfriend, the results were clearly different. Now only 7.8% agreed, and this time no significant

difference was found between male and female respondents.

With regard to the supernatural powers, 10.9% of the students proved to believe that one can become infected with HIV through supernatural means, whereas 25.3% answered they did not know. Of the respondents, 17.4% believed that one can ask a witch doctor to infect someone else with HIV; 34.5% of the students stated that they did not know whether or not that is true. Of the respondents 30.4% (45.9% of the male students and 19.5% of the female students; a statistically significant difference) believed that traditional healers are able to cure sexually transmitted infections (STIs); 3.8% believed that some traditional healers can cure AIDS; 57.0% stated that they did not think so; 39.2% were not certain here (no significant difference between males and females). When asked if it is a good idea to combine conventional and traditional health care, 38.3% agreed, 49.1% did not agree, and 12.7% said they did not know.¹⁴ Gender had a statistically significant effect here: while 49.6% of the male respondents were in favour of combining conventional and traditional health care, only 30.3% of the female students shared this opinion.

The belief that AIDS can be cured by having sex with a young child or a virgin proved to be held by 3.1% of the students. Finally, 7.1% of the respondents agreed with the statement that an infertile woman should sleep with a healer to be able to conceive; 25.8% were unsure.

When asked if they had ever practised 'dry sex', 8.8% of the respondents said 'yes' (no significant difference between male and female respondents).

When asked about possible negative effects of condom use, 12.2% of the respondents stated that they believed that by using a condom, one might get certain diseases that are inside the condom (no significant difference between male and female respondents). An almost equal percentage of the respondents (13. %) believed that condoms harm men in that they do not get rid of their sperms in a natural way (24.3% of the male students and 5.5% of the female students; a statistically significant difference), and 6.6% believed that people who use condoms get thinner

14 It must be noted here that there may be serious risks involved in combining herbal medicines and ARVs (see the detailed overview of possible drug-metabolism interactions of medicinal herbs with antiretrovirals in Van den Bout *et al.*, 2006).

because they lose fluids and do not have anything to compensate (no significant difference between male and female respondents). More than half of the group of students (50.9%) agreed with the statement ‘By using a condom, there is no transmission of body fluids which are necessary for the fluid levels in both partners’ (no significant difference between male and female respondents).

Furthermore, 29.9% of the students believed that there are ethnic groups who are resistant to HIV-infection; 35.8% of the group did not know if that was true or not. More than forty percent of the students (44.1%) believed that HIV only develops into AIDS when one sleeps around. Finally, 17.7% of the students felt that promoting ABC is a waste of time, because ultimately one will get HIV/AIDS anyway.

Table 3 Multifaceted HIV/AIDS-related beliefs and behaviours

Belief or behaviour	Percentage of respondents giving an affirmative reaction	(Only if effect of gender is statistically significant)	
		Males	Females
Circumcised?	36.9%	74.6%	8.6%
Circumcised a part of culture? (answers from respondents who were circumcised)	62.4%		
Male circumcision reduces the risk of HIV-infection.	20.6%		

Table 3 shows that more than one third of the respondents (36.9%) were circumcised. The difference between male and female respondents was statistically significant here. More than seventy percent (74.6%) of the male respondents were circumcised, and less than ten percent (8.6%) of the female respondents. A statistically significant interaction effect of gender and area of origin was also found here. In the group coming from rural areas, 68.8% of the male respondents were circumcised and 11.6% of the female respondents. In the group coming from semi-rural or urban areas, however, there was a larger difference between the percentages of males and females who were circumcised: 80.4% versus

3.4%. The majority of the respondents (62.4%) who were circumcised indicated that this was done as part of their culture.

Only a minority of the respondents (20.6%) proved to be aware of the beneficial effect of male circumcision on reducing the risk of HIV.

Conclusions and policy implications

The results of this study suggest that there is a wide range of HIV/AIDS-related beliefs and behaviours in young black South Africans that deserve more attention from the developers of educational materials. Other beliefs and behaviours, however, do not necessarily have to be changed. Our results show that these beliefs and behaviours, which are beneficial to the fight against HIV/AIDS, are adhered to by large parts of this target group.

Almost half of the participants proved to regard 'no sex before marriage' as the best way to prevent HIV/AIDS. Indeed, a fair group of male students (more than a quarter) and an even larger group of female students (more than forty percent) stated that they had not had sex yet. Condom use proved to be regarded as quite normal: of those students who had already had sex, almost ninety percent said that they always, or often, used a condom when they had sex. However, not all respondents were positive about the effects that condom use might have. More than ten percent, for instance, proved to believe that there are certain diseases inside a condom that may be passed on to the male wearing it. And almost a quarter of the male students appeared to be afraid that using condoms might harm them, because the condoms would prevent their sperms to leave the body in a natural way.

Sexual infidelity must be considered as a serious risk factor when it comes to the spread of HIV/AIDS. In this light, it is disturbing that almost a quarter of the students felt that it is acceptable for a man to have more than one girlfriend, and that almost fifteen percent even said that for a man having more than one girlfriend is important. Comparing these answers to the response to the question if it is acceptable for a woman to have more than one boyfriend (less than eight percent of the respondents said yes here), it is reasonable to conclude that students at Turfloop Campus sometimes use double standards. Apparently, a group of students disapprove of the same

sexual behaviour in women that they approve of in men.

There proved to be a widespread lack of knowledge about the effectiveness of male circumcision when it comes to reducing the risk of HIV: only twenty percent was aware of this beneficial effect.

Many respondents indicated that they believe in supernatural powers of witch doctors. Almost forty percent appeared to believe that a witch doctor can make someone sick by putting a spell on that person. More than fifteen percent thought that one can ask a witch doctor to infect someone with HIV; more than thirty-five percent were unsure about this.

Many respondents indicated that they have confidence in traditional healers. Almost one third of the students believe that a traditional healer can cure sexually transmitted diseases, of which HIV/AIDS obviously is one. When explicitly asked if they thought that some traditional healers are able to cure this disease, more than forty percent did not say 'no'. From the perspective of conventional Western medicine, this belief in a traditional healer's power to cure AIDS clearly may be questioned. That does not imply, however, that excluding traditional healers from participating in the fight against HIV/AIDS in South Africa would be a wise thing to do. In view of the confidence that many South Africans have in traditional healers, co-opting these healers in the fight against the pandemic may be an effective possibility to reach people that would otherwise be very difficult to persuade into performing health behaviour that reduces their chance of getting infected.¹⁵

The presumption that traditional health care would only be popular with older generations of black South Africans is contradicted by the outcomes of this study. Almost forty percent of the young students in this study had a positive attitude towards combining conventional and traditional health care.

In contrast to what is often suggested in the media, both in South Africa and abroad, only a small group of respondents appeared to share the dangerous belief that having sex with a young child or a virgin can cure AIDS. A disturbing outcome of this study, however, is that almost one third of the respondents think that certain ethnic

15 *cf.* Walker, Reid and Cornell 2004: 104.

groups cannot be infected by HIV, and that another third was not sure about this. Also disturbing is the belief held by more than forty percent of the students that only people who sleep around can get infected; evidently that assumption is not true, and it can lead to both health threatening behaviour and stigmatisation of people living with HIV/AIDS. More than fifteen percent of the students felt that they will inevitably get HIV/AIDS. This kind of fatalism must be due to what these young South Africans have induced from the rather poor results so far of the fight against HIV/AIDS in their country.

An important question now is if and how findings from the present study may be used for the development of more effective materials for HIV/AIDS campaigns. From the IMBP it becomes clear how important it is that health educators concentrate on those beliefs that may be expected to influence on a global perception (attitude, perceived norm, or self-efficacy), which in turn affects the behavioural intentions in the specific target group that need to be changed or possibly reaffirmed. The authors realise the limitations of this study in terms of the selection of the respondents (only students from a single university) and the method used (a printed questionnaire, leaving possibilities for respondents to fill out socially desirable answers). However, the results reported here may contribute to the quality of decisions that developers of educational materials for HIV/AIDS-education have to take when it comes to the issues that they do or do not wish to address when communicating with young black students in South Africa.

Concrete suggestions for HIV/AIDS-education aimed at young black South African students following from this study might be the following.

1. Out of the three general advices in the well known ABC formula, Being faithful to one current sexual partner seems to be the best candidate for more extensive promotion in this target group, specifically for the males. As Epstein (2007), among others, demonstrates, the pattern of long-term concurrent sexual relationships, still widespread in Sub-Sahara Africa, links people in a network of overlapping sexual relationships which form ideal conditions for HIV to spread. In upcoming HIV/AIDS-communication, educators should perhaps consider intensifying

their campaigns on Be faithful as an effective HIV/AIDS-prevention practice, taking into account the double standards that are used by part of this target group when judging male and female sexual infidelity.

2. Promoting the use of condoms in the target group of black South African students seems to be less of a priority. Only slightly more than ten percent of the sexually active students claimed never to use a condom when they have sex. Nevertheless, it might still be wise to address some of the incorrect beliefs and resulting negative attitudes that appeared to be related to condom use, if only to prevent these ideas from gaining popularity, thereby increasing the risks of unprotected sex.
3. Some of the beliefs concerning supernatural powers and witch doctors entail serious health risks and should therefore be explicitly discussed, with all sensitivity to the cultural locale of these beliefs. The belief, for instance, that HIV-infection may be caused by a witch doctor, may prohibit a clear understanding of the physical explanation of HIV-infection and stand in the way of adequate measures to prevent such an infection.
4. Finally, campaign developers may want to consider addressing male circumcision. According to recent medical insights, male circumcision has a beneficial effect on reducing the risk of HIV. On the other hand promoting male circumcision may have undesirable negative effects on the promotion of other prevention measures. At the same time, but on a different level, attention may be drawn to one of the outcomes of this study. We are referring to the finding that almost ten percent of the female students reported to be circumcised, indicating that the practice of female genital mutilation has not yet disappeared in South Africa.

Final remark

This study tried to demonstrate that research into HIV/AIDS-related beliefs in a specific target group may lead to relevant outcomes for the design of educational materials aimed at fighting the spread of

the disease in such a group. So far, to our knowledge, publications about this kind of beliefs in South Africa, such as Van Dyk (2001a; 2001b), Walker *et al.* (2001) and Mulaudzi (2005), as valuable as they have been for offering insight in the antecedents of risk taking or risk averting health behaviour, have not been very specific about the levels of adherence to the various beliefs in different target groups. We hope to have demonstrated the usefulness of having quantitative information available about various beliefs in a specific target group when having to prioritise the health communication efforts to be undertaken.

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