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CARFAX

AIDS-related beliefs, attitudes and intentions among Malawian students in three secondary schools

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Abstract *This preliminary investigation into factors influencing the intention of Malawian secondary school students to engage in low-risk AIDS-related behaviours was based on the Theory of Reasoned Action (Ajzen & Fishbein, 1980). A total of 191 male and female subjects (mean age 19.32) from three secondary schools in Malawi filled in a questionnaire that sought to elicit their intention to use condoms and to stick to the one same sexual partner. The study lent support to the theory that intention can be predicted from attitudes and subjective norms,* $F(2,186) = 31.93$, $p < 0.001$ *for condom use and* $F(2,187) = 15.23$, $p < 0.001$ *for sticking to one sexual partner. The results showed that, for the subjects, the intention to comply with these two behavioural regimens was predominantly under attitudinal control though one sub-sample's intention was under normative influence. The study also provided quantitative data on the sexual behavioural patterns of the subjects and used these data to furnish explanations of the main findings. Behavioural change intevention strategies in the light of the findings are discussed.*

Introduction

Malawi is one of the Southern African countries seriously affected by AIDS. The first case of AIDS in Malawi was diagnosed in 1985. According to the World Health Organization (WHO), recent figures on the spread of AIDS in Southern Africa show that Malawi's reported cumulative cases of AIDS have risen from 12,074 (WHO, 1992) to 29,194 (WHO, 1994) in just 2 years. The actual figures may be higher given that not all cases are diagnosed at hospitals. Since Malawi's economy is predominantly agriculturally based, a loss, due to AIDS, of the productive age group would reduce agricultural productivity especially in the rural areas (Barnett & Blaikie, 1991; Knight, 1992). Other effects include a loss of white collar manpower (Reeve, 1989), an increased number of orphans, loss of breadwinners and increased medical expenses (Whiteside, 1992).

Given this impending disaster, priority has been directed at intervention strategies to curb the spread of the pandemic. Strategies aimed at providing basic information on the pandemic, by educating people on how AIDS is spread, and how chances of its contraction can be reduced, have been implemented in Malawi. However, an increase in the level of

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knowledge about a subject does not necessarily alter the related behaviour (Fishbein, 1990). There is a growing recognition that the combatting of AIDS is as much a behavioural as a medical issue. Behavioural factors have an overriding prominence in controlling the spread of AIDS since "it is the behaviour that puts an individual at risk" (Fishbein & Middlestadt, 1989, p. 94). Phillips (1988) describes AIDS as a behavioural disease.

In Malawi the principal route of transmission of the HIV virus that leads to AIDS is heterosexual intercourse. It would therefore be necessary to maintain low-risk and reduce high-risk sexual behaviours. The implication of this is that the prevention of the spread of the disease will depend upon the ability to influence behaviour. In Malawi the two most propagated low-risk sexual behaviours are condom usage and serial monogamy. It is these behaviours that AIDS intervention strategies seek to influence.

Ajzen and Fishbein (1980) have put forward a systematic, empirically supported social psychological theory of behaviour that provides a framework for understanding and analysing the factors underlying the non-performance or performance of any given behaviour. They argue that the more that is known about the determinants of the behaviour, the greater the probability for successful intervention to be developed to influence the behaviour.

The Theory of Reasoned Action (Ajzen & Fishbein, 1980; Fishbein, 1967; Fishbein & Ajzen, 1975) has been used to predict and explain why people engage in various kinds of behaviour (Fishbein, 1990). It is a cognitive based theory and deals with the relations among beliefs, attitudes, intentions and behaviours (Ajzen & Fishbein, 1980). The theory posits that volitional behaviour, for example, the wearing of a condom whilst engaging in sexual intercourse, is predicted by one's intention to perform the behaviour. Behavioural intention itself is a function of attitude towards the performance of the behaviour and subjective norms. Behavioural change is therefore seen by the theory as altering the cognitive structures underlying single, directly observable, specific and volitional behaviours.

The theory has been used to predict a wide variety of behaviours including AIDS-related behaviours (Fishbein, 1990; Middlestadt & Fishbein, 1990; Goldenberg & Laschinger, 1991). The study by Wilson *et al.* (1992) marks a rare attempt to apply this theory in the African context. Given the rapid spread of AIDS and the empirical evidence in the West to back up the theory, it can be argued that an attempt to try and apply the theory to the Malawi situation would be timely. The study therefore tested the evaluative efficacy of the theory in a different cultural context with regard to condom usage and serial monogamy. If the theory was found to be applicable then the relative weightings of subjective and normative factors would be explored. Since this constitutes one of the first studies in this geographical region, other questions pertaining to other aspects of sexuality and sexual behaviour among the Malawi's youth were also asked. Given the diversity of Malawi's population, this study also set out to contrast (1) gender and (2) urban and semi-urban geographical regions.

Method

Subjects

A total of 191 students from three secondary schools in Malawi filled in the questionnaire on a voluntary basis. Of these 79 subjects were females with a mean age of 17.87 years and 112 were males with a mean age of 19.32 years. Age range of the 191 subjects was from 15 years to 23. The subject sample is a reflection of the gender ratios of student enrolment in secondary schools in Malawi. Subjects from the city school in Blantyre accounted for 43% of the sample whilst subjects from two schools in a semi-urban area (Zomba) comprised 57%. Apart from this consideration of city and semi-urban, particular schools were chosen

on grounds of convenience, mainly transport and limited resources. However, in being co-educational and government-run schools, these schools may be regarded as quite typical of secondary schools in Malawi.

Pilot study

The Theory of Reasoned Action requires that beliefs and referents in particular populations of interest be elicited so as to understand and change behaviour. A pilot study was thus used to identify the salient beliefs and salient referents.

A small sample of 15 male and female Malawian secondary school students in city and semi-urban areas were asked to list advantages and disadvantages of (1) condom use during sexual intercourse and (2) sticking 'to the one same sexual partner'. From a list of responses, the most frequently mentioned were then incorporated into the final questionnaire under both behavioural belief and outcome evaluation sections. The same procedure was applied to the normative component of the questionnaire. The most salient referents with regard to both condom usage and 'my sticking to the one same sexual partner each time I have sex' were put into the 'normative belief' and 'motivation to comply' sections of the questionnaire.

Questionnaire

The contents of the questionnaire covered a wide range of areas. These included demographic aspects as well as the key components of the Theory of Reasoned Action: behavioural beliefs, outcome evaluations, subjective norms and motivation to comply.

Additional questions attempted to assess subjects' general background on AIDS-related issues in terms of sources of knowledge, perceived susceptibility, worry about AIDS and perceived extent of sexual activity in the community as well as information on subject's personal sexual histories and current sexual behavioural patterns. Responses were elicited on a seven-point bipolar semantic-differential type scale as is the conventional use in Reasoned Action theory research. Throughout this study higher scores (maximum 7) indicate positive (low-risk) subjective states or actions, that is, positive actions from an AIDS preventative perspective, whereas lower scores (minimum 1) indicate high-risk behaviours.

In terms of sub-components of the questionnaire, 'behavioural beliefs' and 'outcome evaluation' were assessed by means of a 10-item scale each, while 'normative beliefs' and 'motivation to comply' were measured by nine items each. (Normative referent figures are listed in Table 2 under Results).

The attitude component was assessed in terms of a three-item bipolar scale separately for condom use and a single partner, as follows:

Q: My using/my telling my partner to use a condom whenever I have sex is:
Very good . . . . Very bad;
Very pleasant . . . . Very unpleasant;
Very important to me . . . Not important to me at all.

Q: My sticking to the one same sexual partner is:
Very good . . . very bad
Very important to me . . . . Not important at all
Very wise . . . . Very foolish

Subjective norm was assessed following the suggested procedure of Ajzen and Fishbein (1980, p. 57) by a single question for condom use and single partner respectively as follows:

Table 1. *Cronbach's Coefficient Alphas for internal consistent of scores*

Section of questionnaire	Condom use	One partner
Attitude	0.753	0.670
Behavioural belief	0.496	0.419
Outcome evaluations	0.325	0.374
Normative belief	0.819	0.850
Motivation to comply	0.822	0.841

Q: Most people who are important to me think I should . . . . . should not use a condom whenever I have sex.

Q: Most people who are important to me think I should . . . . . should not stick to the one same sexual partner.

The reliability of the questionnaire was assessed in terms of internal consistency of scores using Cronbach's alpha coefficient: see Table 1 for results.

Procedure

The questionnaire was administered under classroom conditions to students at three secondary schools in different locations of Southern Malawi. This was done to explore potential differences in response between a city and a semi-urban area. One of the schools was located in Malawi's largest commercial centre, Blantyre, and the remaining two schools were in the small municipal town of Zomba.

Results

Results showed a sexually active group. Overall 82% responded positively to "have you ever had a sexual partner?", ranging from a high of 89% (semi-urban males) to a low of 73% (city females). Average age of first sexual experience was 16 years, with no gender difference. Most subjects perceived others around them as sexually active ($M = 2.64$, SD = 1.46, $n = 186$) where a score of one on the 7-point response format was worded as "very sexually active". Of the sexually active, 58% claimed to have had sex with one partner only, ranging from 82% among semi-urban females to only 41% of semi-urban males. By contrast, 68% of city males claimed only one past sexual partner. In general those who claimed only one partner indicated a strong intention to continue with that mode of sexual activity.

Regarding condom usage, 60% of the sexually active subjects claimed to have used (or their partners use) condoms. Females reported higher incidence of condom use by their partners (70%) than males (52%). Reported condom usage among city males was far lower (44%) than semi-urban males (59%).

Regarding AIDS, most subjects appeared highly aware of the problem as well as concerned about it. For example the mean score in answer to "how much do you worry about AIDS?" was 6.0 (SD = 1.94). Semi-urban males indicated the highest "worry" score: mean 6.34. Despite this awareness and concern, subjects indicated that they did not perceive themselves to be at risk of contracting AIDS, $M = 3.64$, SD = 2.30, $n = 185$ where a score of seven indicated a "very high" perceived chance of being "personally infected with HIV".

Turning to the Theory of Reasoned Action, the main finding was that intentions (for both condom usage and intention to stick to the one same sexual partner) were under attitudinal rather than normative influence. Multiple linear regression equations to predict

Table 2. *Normative beliefs and motivation to comply: summary of mean scores for total sample (n = 191)*

	Condom use		Sex with same partner	
	Normative beliefs	Motivation to comply	Normative beliefs	Motivation to comply
Doctor	6.08	6.09	6.42	6.09
Sibling	5.49	5.26	6.11	5.26
Uncle/aunt	5.45	4.81	6.22	5.74
Parents	5.35	4.87	6.44	4.86
Friends	5.16	4.28	5.33	4.28
Temporary partner	4.95	3.91	5.02	3.91
Religious leader	4.67	5.41	5.29	5.12
Grandparents	4.56	5.74	5.82	5.41
Sexual partner	4.55	5.61	6.37	5.61

intentions were both significant $F(2, 186) = 31.93$, $p < 0.001$ (for condom use) and $F(2, 187) = 15.23$, $p < 0.001$ (for one sexual partner). The findings do thus support the theory with regard to the prediction of intention. Intention predictions were also significant for all sub-samples with only one exception: intentions of females to "stick to the one same sexual partner".

Regarding a subsection of results, those pertaining to normative beliefs (for example "my parents think I/my partner should . . . should not use a condom whenever I have sex") and motivation to comply with such referents (for example "generally speaking how much to you want to do what your parents think you should do?") main patterns of results are given in Table 2 as mean scores for the sample as a whole ($n = 191$). Higher scores indicate positive, that is low-risk, beliefs or a stronger motivation to comply with significant others.

Doctors rated highest regarding normative beliefs and potential compliance, followed by various family members, while "temporary/short-term partners" on average rated lowest. "Sexual partners" also rated relatively poorly as normative referents, particularly regarding condom use. Gender differences in these patterns were minimal.

Results for behavioural beliefs and evaluation of such beliefs indicated positive (low-risk) views that condom use would "prevent sexually transmitted diseases" ($M = 5.92$), prevent pregnancy ($M = 5.68$) and "protect me from AIDS" ($M = 5.24$). However, results also suggested that condoms are believed to some extent to "reduce my pleasure" ($M = 3.91$) and to "reduce my partner's pleasure" ($M = 4.03$) where a score of one read as "very likely" and seven as "very unlikely". For the overall sample males ($M = 4.00$; $M = 4.09$ for behavioural beliefs and outcome evaluation respectively) did not differ significantly from females ($M = 3.78$; $M = 3.93$) in these respects.

Beliefs and evaluations regarding "same sexual partner" also tended towards the positive, low-risk, end of the scale. Respondents reported mean beliefs that one sexual partner would "prevent spread of STDs" ($M = 6.29$), would "save money" ($M = 5.57$), would help to "know the source of STDs" ($M = 6.10$) and, less strongly, would "help to control the population" ($M = 4.97$). Gender and regional differences were not substantial.

The overall pattern of relationships proposed by the model of the Theory of Reasoned Action for the whole sample are presented graphically first for condom use (Figure 1) then for "sticking to the one same sexual partner" (Figure 2).

For condom usage the pattern of relationships was broadly similar for males and females, with both showing less normative influence. For example the weighting for subjective norms

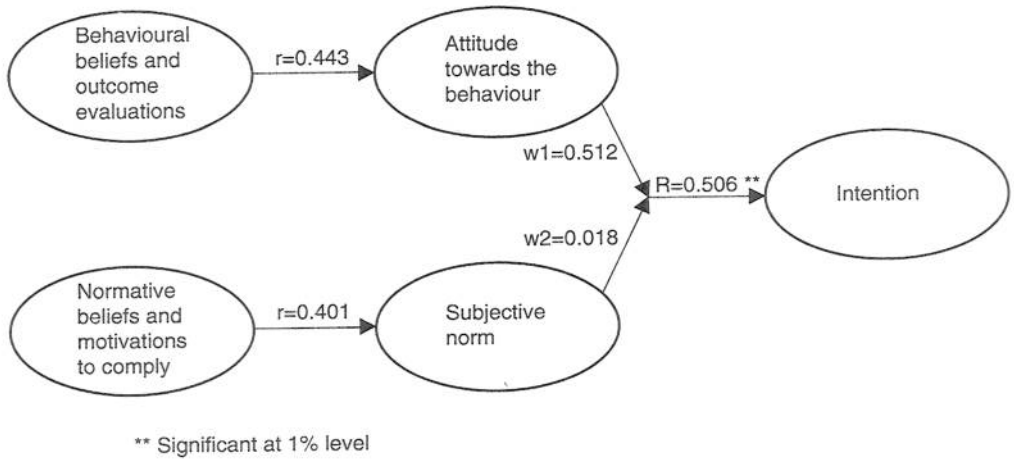

FIG. 1. *Relationships among attitudes, subjective norms and intentions to use condoms among Malawian secondary school students (n = 191).*

for males ($n = 112$) was 0.08 and for females ($n = 79$) was 0.09, while for attitudes it was 0.50 for males and 0.65 for females.

Males and females showed different patternings regarding components of intention to stick to one partner, with the attitudinal component weightings for males ($w = 0.47$) higher than that of females ($w = 0.14$). Multiple correlations for intentions among males was $R = 0.45$ while for females it was only $R = 0.28$.

Discussion

On the basis of this study it appears that the intentions of Malawian secondary school students to use condoms and to stick to one same sexual partner are predominantly under attitudinal influence.

The investigation confirmed the Theory of Reasoned Action as far as the prediction of intention was concerned. The multiple correlation coefficients (R) were relatively strong for all the different constituent samples of the study, indicating that intention was adequately predicted from attitude and subjective norm for both condom usage and one partner. However, correlations between components that determine intention were not as strong as those reported by earlier research.

In the case of one partner, the correlation between scores for attitude and its predictors was rather low ($r = 0.272$) with the semi-urban female sample showing no correlation ($r = 0.018$). This means that the salient belief strengths and their evaluations do not bear much correspondence with the direct measure of attitudes used to predict intentions to stick to one partner. Caution is therefore required in trying to account for intention regarding one partner.

It could well be, however, that procedures laid down in the theory itself may contribute towards these modest correlations. The theory posits that each set of predictors of both attitudes and subjective norms needs to be multiplied in order to make the prediction. There is thus no assessment of the relative contribution of each of the components of attitude and subjective norms (Vallerand *et al.*, 1992). Hence whilst there may have been a lack of adequate correlation concerning the predictors of attitudes, it is difficult to say which of the

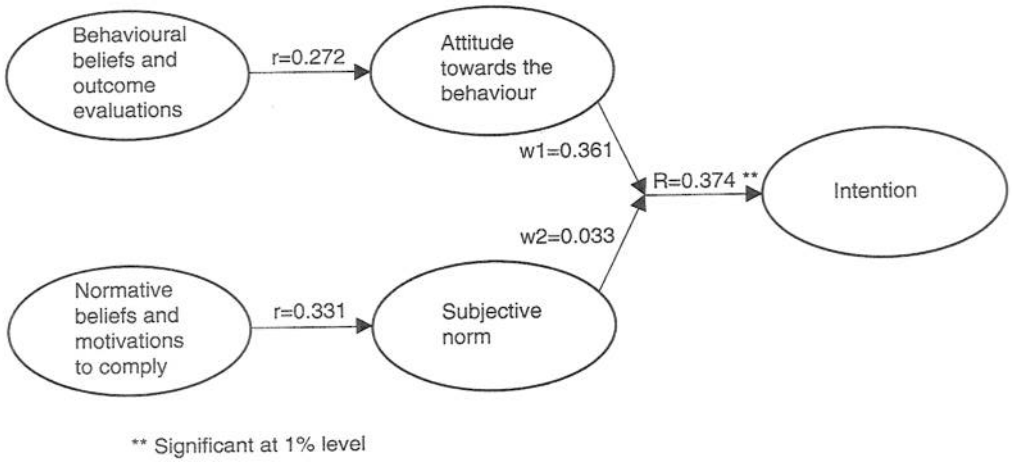

FIG. 2. *Relationships among attitudes, subjective norms and intentions of all the subjects to stick to the one same sexual partner (n = 191).*

two components, belief strengths or their evaluations (in the case of attitudes), played a greater role in this finding.

The normative component of sticking to one sexual partner, on the other hand, did support the theory. With the exception of city females, correlations of the determinants of subjective norms were reasonably high. The relatively high correlations of sub-samples regarding subjective norms give credence to findings that subjective norms do not contribute much to the combined weightings of intentions. The main findings, that intentions are predominantly under attitudinal control, cannot therefore be attributed to a weak correlation of the underlying determinants of subjective norms.

The purpose of AIDS prevention is to influence decisions (in this case intentions) that promote low-risk sexual behaviour. There are several factors that could be deduced from the results that would show support for intention to comply with low-risk behaviours under investigation—condom usage and sticking to one sexual partner.

These factors begin right at the knowledge base. Malawian students demonstrated fairly sound knowledge of AIDS-related issues, especially as they apply to condom usage. AIDS awareness campaigns appear to have had an impact in creating a pro-AIDS prevention attitude as reflected in the high mean scores of various items generally leaning in the low-risk sexual behaviour direction. Subjects also exhibited a high degree of personal worry about AIDS. This could be a factor in low-risk AIDS-related behaviours.

However, despite worry and apparent preoccupation with AIDS-related issues, subjects demonstrated a personal distancing from the possibility of contracting HIV. City males demonstrated the greatest distancing while semi-urban males perceived themselves to be more vulnerable to HIV. Other sub-samples, however, did not perceive themselves as being at risk even though they reported being sexually active. It could well be that a degree of compliance with some recommended ways of preventing AIDS could create a sense of false security among students. They may feel that if they partly follow the regimens of safety they are guaranteed some exemption from contracting AIDS. City males who perceived themselves as least at risk reported lowest condom use among sub-samples. As many as 56% of sexually active city males claimed no use of condoms, yet perceived themselves as being at little risk. This would suggest the use of defence mechanisms. By distancing themselves from personal risk despite risky behaviour, subjects are possibly manifesting the mechanism of

denial. This is also a reflection of the denial that is seen in the discourses among young Malawians, the typical one being that the acronym AIDS stands for "American Ideas of Discouraging Sex". Such a defence would contribute towards intentions to engage in high-risk behaviour and reduce intentions to use condoms and stick to one partner.

Another factor that may contribute to high-risk sexual behaviour relates to practical issues. Condoms, while generally perceived to be available, are in practice frequently not. In addition, several students provided comments indicating non-availability of condoms as well as difficulties in obtaining them; for example embarrassment in asking for them over the counter.

Results showed other contradictions. Despite the extent (among semi-urban males) of sex with multiple partners (59%) they nevertheless claimed a strong possibility of sticking to one partner ($M = 6.17$). Practice and ideal or intentional actions are contradictory. It suggests that these students may be employing a defence mechanism of intellectualization, serving to increase the likelihood of high-risk behaviour. They intellectually perceive the possibility of one partner but do not do so in practice. Behavioural change is concerned with practice and not theory.

Subjects perceive little normative pressures from sexual partners to comply with low-risk behaviours. This finding is relevant because, whilst salient referents may be important to subjects, they are nevertheless distant when it comes to the behaviour itself. One may perceive the parents, for example, as wanting them to behave in a particular way but the bottom line is that the behaviour is carried out with the sexual partner and in this respect the sexual partner is perhaps the most salient referent. Sexual intercourse is usually the product of social negotiation and if the partner is perceived as putting little or no pressure then high-risk behaviour is likely to occur.

Group influences

The study has indicated that persons are more under attitudinal than normative influence. There were some other findings, however. The female sample and particularly the semi-urban female sample were primarily under normative control for intention to stick to one partner. Close examination of behavioural beliefs, outcome evaluations, normative beliefs and motivations to comply of this particular sub-sample showed no distinct trends in the mean scores to account for this finding. Additional questions on patterns of sexual behaviour do not shed any light either. Further qualitative research may indicate why this may be the case.

Since sexual behaviour is the major route of HIV transmission, further qualitative research would be required to understand community values and norms about sexuality and how these influence sexual behaviour among the youth.

Recommended interventions

Since findings indicate predominantly attitudinal influence, the most effective intervention strategy would be to work on changing belief-related attitudes. Subjects believe that condoms deprive them and their partners of pleasure. There are few gender or demographic differences. Pleasure during sex is quite an important factor and the significance attached to the component of erotic pleasure is shown in what one respondent wrote on her questionnaire: "I firstly heard about sex from my friends whom I was chatting with at primary school that sex is *sweet*" (emphasis ours). Informal discussions confirmed the value attached to erotic pleasure. Most students indicated that using condoms was associated with deprivation of

sexual pleasure. A popular saying in Malawi is that "you cannot eat a sweet with a wrapper on".

Emphasis of any intervention would have to persuade people that condoms are erotically pleasurable. There are indications of a firm knowledge base regarding AIDS-risk behaviours. Intervention priorities should build on this knowledge base and focus on the pleasurable aspects of condom use.

The source of intervention messages is also a relevant factor. Medical personnel scored highest in terms of motivation to comply. Family members: parents, uncles and aunts and grandparents scored second highest right across the board for all subjects. In view of the general taboo on family discussion of sex-related matters it appears difficult for the family to be a significant promoter of condom use.

Clearly multiple partners constitute high-risk actions. Semi-urban males would need to be particularly targeted since 59% reported multiple partners. It is encouraging that the remainder of the sample reported tendencies to restrict sexual activity to a single partner.

As is the case regarding condom use, medical personnel are rated highest in terms of normative motivation to comply ($M = 6.09$) in terms of one partner. They are closely followed by family members whose combined mean value for family referents is 5.27. Subjects indicate "temporary partners" as those with whom they are least likely to comply.

Medical personnel would thus appear to be the best source of communication regarding both condom promotion and the need to stick to one partner. This is supported by the earlier finding of Tembo (1991) who reported that among 391 Malawian college students the medical doctor and nurse were perceived as the most trustworthy and credible source of AIDS messages. Since mass media, especially radio, are important tools in communications about the AIDS message, the media should be used to supplement the work of medical personnel. Such messages should be directed at attitude change.

Conclusion

This study has provided on the one hand some support for the Theory of Reasoned Action in accounting for AIDS-related issues as well as its applicability in the Malawian context, and on the other a few pointers towards intervention strategies.

Support to some extent for the Fishbein model suggests that parts of the chain of factors leading to AIDS-risk behaviours are reasoned and logical, therefore open to reasoned strategies of change. While supportive in the main with correlations greater than $r = 0.30$, results were nevertheless only modest and certainly not as powerful as earlier work (Fishbein, 1990; Middlestadt & Fishbein, 1990).

Results showing that intentions were primarily guided by attitudinal rather than normative influence suggest that informational and educational strategies should continue to be regarded as important. Results also suggested certain content areas, particularly the pleasure-related associations of condoms that would seem worthy of attention in attempts to change attitudes. Medical personnel and extended family members seem to be potentially relevant referent figures in conveying such information.

The study also brought to light a number of contradictions which indicate the limitations of a purely linear model of reasoning associated with AIDS-related actions. In particular, contradictions between the lack of personal vulnerability and ongoing high-risk actions point to a need for models, and interventions, beyond a narrowly conceived reasoned-action chain. Furthermore, the apparent lack of normative influence of sexual partners suggests an arena of power relations which warrants further exploration if interventions are to be successful.

These two aspects indicate further research of a qualitative nature to supplement the present approach.

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