CHAPTER 6

Promoting VCT among South African students

Are we missing the message?*

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Mass media campaigns promoting VCT (Voluntary Counselling and Testing) form a cornerstone of the efforts to curb the spread of HIV in South Africa. In this chapter the focus falls on determinants of South African students' VCT uptake and on the efficacy of a brochure that aims to persuade them to go for VCT. Empirical support was found for the predicted role of some of the theory-derived determinants of students' intentions to go for VCT. Significant differences appeared to exist between various groups of students with regard to their intention to go for VCT and the determinants of this intention. Questionnaire data indicate that students fear that if they were to test HIV positive, they would not be able to cope with the negative emotional, physical and social consequences. In as much as the tested brochure does not adequately address the determinants of students' VCT uptake nor the available measures to cope with the negative consequences of testing HIV positive, the brochure had, as could be predicted, no impact on students' intentions to go for VCT. The experimental data suggest that message designers should differentiate between segments of student audiences when designing messages to persuade them to go for VCT.

Introduction

In South Africa mass media campaigns promoting VCT (Voluntary Counselling and Testing) form a corner stone of the efforts to combat HIV/AIDS. VCT is

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considered to be important because people who are unaware of their HIV status are major drivers of new infections, and because early detection of HIV-infection gives those affected access to a wide range of support systems to help them cope with the negative consequences of the disease.

Although few of the VCT campaigns have been thoroughly tested for their impact on the uptake of VCT, behavioral indicators suggest that they have not been very successful: nearly half of the respondents that tested HIV-positive in a national household survey in 2005 were not aware that they had been at risk of contracting HIV, and despite the high HIV prevalence rate in the general population, only an estimated 30.5% of the population had tested by 2005 and were thus conscious of their HIV status (Shisana et al. 2005). This underlines the need for research to determine why VCT campaigns succeed or fail and what could be done to increase their efficacy in achieving their behavior change goals.

In analyzing the successes and failures of VCT campaigns in South Africa, the focus has mainly fallen on problems with the support of the campaigns at the level of policies, infrastructure and provisions (cf., for example, Doherty et al. 2003; Magongo 2002; Masuku 2001; Skinner et al. 2002). However, very little research has been forthcoming on how the processes followed in the design of these campaigns and the choice of the design features of campaign messages (i.e. choice of their content, structure, style, presentation, persuasive strategies, etc.) have an impact on the success or failure of VCT campaigns.

From the little available research (cf., for example, Swanepoel 2005a) it is evident that campaign designers seldom utilize one or more of the large stock of general models available for the systematic and comprehensive planning and delivery of campaigns and their materials (such as, for example, the Intervention Mapping design protocol discussed by Bertens et al. (this volume)). Furthermore, campaign designers seldom adhere to best practice design principles, for example, that the design of the messaging should be informed by theory-driven empirical research on the determinants/beliefs of people's decision whether or not to go for VCT, be tailored to the information needs of the target audience, and be culturally and gender sensitive (cf. Cappella 2006; Slater 2006; Swanepoel 2005a, 2005b, 2006; Yzer this volume).

Content-wise, one of the major problems with the design of the messages in most VCT campaign materials is that they primarily focus on the VCT test procedure and on a few general advantages and disadvantages of VCT. Very little attention is given to the concerns prospective testers may have with the wide range of negative psychological, physical, social and economic consequences of testing HIV positive – consequences with which they would have to cope once they leave the confines of an HIV testing site (Burger 2007; Loohuis 2007; Swanepoel 2006).

Much of the foregoing applies to current attempts to persuade students to go for VCT. Tertiary students (i.e. university and college level-students) form a subgroup within the 15–29 year old group of South Africans – the group with the highest HIV-prevalence and also the group in which (i) females are disproportionately infected compared to males (Shisana et al. 2005: 34), and (ii) Africans are disproportionately infected compared to Whites, Coloureds and Indians (Shisana et al. 2005: 36). However, little research has been forthcoming on the HIV prevalence and incidence rate of South African students as a group, their risk behaviors, the determinants of their VCT behavior, and the way gender and ethnicity interacts with these variables. The few available studies (cf., for example, Giles, Liddell and Bydawell 2005; Kaaya et al. 2002; Peltzer, Nzewi and Mohan 2004) touch on some of these aspects, but do not provide a thorough analysis of these issues.

Very few campaigns exist that specifically target tertiary students. The major national initiative is the brochure *Get tested for HIV*, which is distributed by the Higher Education HIV/AIDS Programme on most campuses in South Africa. However, as reported by the designers of the brochure (personal communication), no extensive testing was done of the impact of this brochure on students' actual uptake of VCT, on their intentions to do so, or on the determinants of these intentions. In this chapter we discuss the results of an empirical study on a number of variables that according to the literature may influence these intentions and on the effect of this brochure on students' intentions to go for VCT. This chapter therefore aims to contribute to the development of guidelines on the content that should be included in brochures which aim to persuade students to go for VCT.

Theoretical framework

Fishbein's Integrative Model of Behavioral Prediction (IBM) makes a number of clear predictions about the variables that could be of importance in students' decisions whether or not to go for VCT. In the discussion below, we rely on Yzer's explication of the IBM in Yzer in this volume (see also Fishbein and Yzer 2003).

According to the IBM, the most immediate determinant of the uptake of VCT will be a student's intention to go for VCT. Intention to go for VCT will translate into the uptake of VCT if a student possesses the skills required to go for VCT (making an appointment, interacting with health counsellors, etc.) and if there are no practical barriers that make it impossible to do so, for example, if a VCT facility is not accessible or the student does not have transport to such a facility (cf. also Awad et al. 2004). The intention to go for VCT, in turn, is viewed as influenced by three determinants: attitude, perceived norm, and self-efficacy.

Attitude towards VCT is someone's general evaluation of how favorable or unfavorable the uptake of VCT would be. Perceived norm refers to someone's perception of the pressure put on him (or her) by people who he or she regards as important to act in a certain way – in this case to go or not to go for VCT. Self-efficacy is the extent to which someone feels capable of going for VCT, irrespective of the possible negative consequences of doing so. Attitude, perceived norm and self-efficacy are for a large part global perceptions which are motivated by very specific beliefs which, in this case, students have about the uptake of VCT.

Attitude towards the uptake of VCT is a function of beliefs about the likelihood that the uptake of VCT would result in certain outcomes (*behavioral beliefs*) and an evaluation of these outcomes in terms of good or bad and important or unimportant (*outcome evaluations*). Available studies on the determinants of students' decision-making about VCT suggest that they often hold the belief that in their case an HIV-test would be no more than a redundant inconvenience: despite high-levels of unprotected sex, many students seem optimistic of not having been exposed to HIV. Peltzer et al. (2002), for example, indicate that the perceived unlikelihood of being exposed to HIV (despite unsafe sex behavior) is one of the main reasons that students from four African countries mention for not having had an HIV test. This is in line with findings of Hou and Wisenbaker (2005) and Boswell and Baggaley (2002), who show that a low risk perception has a negative influence on the testing behavior of students.

Other research indicates that people see very few advantages of going for VCT, but hold a range of negative beliefs about the physical, emotional, mental, social and economic consequences of testing HIV positive (or merely being suspected of being HIV positive) and also about the difficulties they might meet when trying to cope with these consequences (cf., for example, Awad et al. 2004; Birdsall et al. 2005a, 2005b; Boshamer and Bruce 1999; Day et al. 2003; Kalichman and Simbayi 2003; Kellerman et al. 2002; Peltzer et al. 2002; Pettifor et al. 2004; Van Dyk and Van Dyk 2003).

If the beliefs about the negative outcomes of testing HIV-positive outweigh the beliefs about the positive outcomes, the IBM predicts that students will have a negative attitude towards the uptake of VCT. Conversely, should the advantages outweigh the disadvantages of going for VCT, the IBM predicts that students will have a positive attitude towards the uptake of VCT.

Perceived norm is a function of the level of expected support from, and the behavior of members of relevant social networks (*normative beliefs*) and the importance attached to opinions of these referents (*motivation to comply*). For example, if a student thinks that his parents would want him to go for VCT, and he is highly motivated to comply with what his parents want him to do, then that will contribute positively to his perceived norm concerning going for VCT.

Lastly, self-efficacy is a function of the beliefs one has about one's capability of going for VCT in specific challenging or facilitating circumstances (*efficacy beliefs*). For example, a student may think that she will be able to go for VCT, despite having difficulties getting to an HIV testing facility or being able to cope with the negative consequences she may encounter should she test HIV-positive.

As Yzer (this volume) notes, behavior change is ultimately the result of changes in beliefs about performing the behavior. Messages to promote the uptake of VCT amongst students would, therefore, have to be designed (1) to change the beliefs underlying attitudinal, normative or efficacy perceptions which may act as psychological barriers to the uptake of VCT, and (2) to strengthen those beliefs and evaluations which would facilitate the uptake of VCT.

A central assumption of the IBM is that the relative importance of attitude, perceived norm and self-efficacy as predictors of, for example, the uptake of VCT, may vary among different populations. Furthermore, the IBM suggests that ethnic/cultural differences may have an impact on student's beliefs and evaluations, and via these on their attitudinal, normative and self-efficacy perceptions. Following the IBM in this respect, differences between students with regard to ethnic, cultural and other so-called 'distal variables', such as gender, previous experiences with VCT, risky behavior related to condom use, and other personal characteristics, might explain why students have different attitudinal, normative and efficacy perceptions, which, in turn, would be related to their intention of going for VCT. Van Dyk (2005: 115–128), for example, discusses a number of culture-specific African beliefs, and demonstrates their possible impact on HIV/AIDS-related behaviors, including the uptake of VCT.

The research on which we report in this chapter aimed at finding answers to the following questions:

(1) What is the influence of various determinants on students' intentions to go for VCT?

(2) How is this influence related to personal characteristics such as *ethnical background, gender*, and *earlier experiences with VCT*?

(3) What is the effect of reading the brochure *Get tested for HIV* on students' intentions to go for VCT, and on the determinants of these intentions?

The ultimate goal of this study was to contribute to research- and theory-based heuristics for the design of effective VCT campaign texts which target South African students. To provide the designers of these documents with information that may help them in deciding which topics should or should not be addressed in communicating with various ethnical student groups, it was decided to also investigate:

(4) which specific consequences of going for VCT and of possibly testing positive African and White students fear most.

Method

Design

In this study 75 South African students were invited to fill out a questionnaire including a set of items intended to measure variables which might influence their intentions to go for VCT. A random selection of 50 students were asked to first read the brochure *Get tested for HIV* before filling out the questionnaire; the other 25 students were not presented with this brochure nor with any other document before answering the questions.

Respondents

All respondents were students from the University of Pretoria. Their ages varied from 18 to 30 years ($M = 21.4$; $SD = 2.19$). Students from three ethnicities participated (one missing value): 32 African (13 males, 19 females), 39 White (25 males, 14 females) and 3 Asiatic (2 males, 1 female). For 22 respondents, their first language was Afrikaans, 21 respondents indicated that English was their first language, and 31 respondents had an African language, such as Sepedi or Zulu as their mother tongue (1 missing value). For 47 respondents their second language was English, for 16 respondents this was Afrikaans, for 9 students it was another language, such as German or Sotho (3 missing values).

A majority of the respondents (60 out of 74; 81%) stated that they personally know someone who had taken an HIV test. The effect of ethnical background on this variable was statistically significant:[1] χ^2 (1) = 6.81; $p < .01$. More African respondents answered this question in an affirmative way (31 out of 32; 97%) than White respondents (29 out of 39 respondents: 74%). There was no statistically significant effect of ethnical background on other personal characteristics, such as, for example, earlier experiences with VCT, or risk behavior related to condom use.

1. In all cases where possible effects of ethnical background were measured, the data from the relatively small group of Asians (3) were left out of consideration. In these cases only the data from the two largest groups of participants (32 Africans and 39 Whites) were taken into account.

Materials

Questionnaire. The questionnaire that the respondents were asked to fill out consisted of two sections. Section A included 10 questions about personal characteristics and past experiences of the respondents. Section B included 46 questions about intentions towards VCT and possible determinants for these intentions (see 2. Theoretical framework). These 46 questions were formulated as short statements (such as 'I will consider going for Voluntary Counselling and Testing' and 'If I go for Voluntary Counselling and Testing, my test results will be treated as confidential') followed by five point Likert scales (strongly disagree, disagree, neutral, agree, strongly agree). Appendix 1 presents the variables that these questions referred to, and the outcomes of the reliability analyses for these variables.[2] Included in section B were also 2 questions about fears related to VCT and testing positive for HIV, presented as introductory sentences followed by 4, respectively 9, statements with tick boxes (e.g. 'Should I test HIV positive, I fear that ☒ the clinic staff will give my HIV-test result to other people; ☒ [..]' and 'Should I test HIV positive, I fear that: ☒ I will be stigmatised and discriminated against by society ☒ [..]').

Brochure. The VCT brochure that 50 students were presented with, is entitled *Get tested for HIV*. It is one of the few South African VCT brochures which specifically focuses on students; to our knowledge it is the only one on VCT which is distributed nationwide to university and college campuses.

The main topics about VCT which are addressed in the brochure are signaled in the questions and phrases used as subheadings. These are presented in the order in which they appear in the brochure, numbered here for ease of reference:

1. What is Voluntary Confidential Counselling and Testing (VCCT)?
2. What happens during an HIV test?
   - 2.1 Pre-test counselling
   - 2.2 The HIV test
   - 2.3 Post-test counselling
     - 2.3.1 If your result is positive
     - 2.3.2 If your result is negative

2. The statistical reliability of a variable was considered to be acceptable if for the set of items that it consisted of, Cronbach's alpha exceeded .60 (in cases where a variable consisted of two items, apart from Cronbach's alpha, also Pearson correlation coefficients were calculated). When the score for Cronbach's alpha was too low, but an acceptable score could be obtained by leaving one or more items out, these items were not included in the analysis. When an acceptable score for Cronbach's alpha could not be reached by taking such a measure, each item was treated separately.

3. Why is it important to know your HIV-status?
   3.1 If the result of your test is negative
   3.2 If the result of your test is positive
4. Are there disadvantages to knowing your HIV status?
5. Who should get tested?
6. How do you get tested?

From an analysis of a corpus of 15 VCT brochures that were distributed in South-Africa during the period 1996–2006 (Burger 2006; Loohuis 2007), it was concluded that the topics that are dealt with in *Get tested for HIV* (such as the VCT procedure, the importance of knowing your HIV status, and the advantages and possible disadvantages of VCT) can be regarded as typical for South African VCT brochures.

As indicated in the discussion above, the available literature suggests that the major fears people in South Africa have about testing HIV positive is that they will not be able to cope with the negative physical, mental, social and economic consequences of the illness. The question thus arises if and how the brochure addresses these fears in the attempt to persuade students to go for VCT.

The brochure pays scant attention to these issues. Furthemore, it does not come up with convincing arguments to assure its readers that they will get access to and be able to use a number of effective measures to cope with the negative consequences of a positive HIV-test. More specifically, the consequences that students probably fear the most about a positive HIV-test are not adequately addressed. For example, they are provided with very little explicit help as to how best to approach the disclosure of their HIV status, or how to cope with stigma and rejection once one encounters it. Readers are merely advised to discuss all possible outcomes of being tested with a counselor.[3] In discussing the disadvantages of HIV-testing readers are in fact warned that "In many families and communities it is difficult to disclose your status because of stigma and discrimination" – a sentence that probably reinforces students' fear that they could be subjected to

3. With regard to the readers' fear that they might not be able to handle the psychological turmoil should they test positive, the brochure gives students the assurance that "The counselor will help you work through some of your feelings of shock, fear and anger." (Section 2.3.1). However, the brochure does not elaborate further on which of these feelings and emotions the counselor will help students with (given that only some of the feelings and emotions will get attention), or what form this help may take on. The brochure does note – and this may be of solace – that one's counselor "will refer you for further supportive counselling and medical help whenever you need it" (paragraph 2.3.1). However, this suggests that some form of continued counselling will be available to students who test positive once they leave the counselling room after their HIV-test – a suggestion which is, however, not elaborated on.

such practices should they test HIV positive. Healthy nutrition and medical attention to opportunistic infections are mentioned as measures to cope with the physical consequences of HIV, but nothing is said about access to and the effects of antiretroviral therapy. In the final sections of the brochure, the vulnerability of the intended readers for HIV/AIDS is discussed very shortly, and a telephone number is presented that can be used to ask for a testing site nearby. In summary, given the content of this brochure, one would predict that it will have little to no impact on students' beliefs related to VCT, and ultimately on their intention to go for a test.

Procedure

Each of the 75 respondents was approached individually by a researcher on the campus of the University of Pretoria and was asked to cooperate in a study on opinions about HIV/AIDS. In selecting possible respondents, it was taken into account that the sample should include both male and female students from various ethnical backgrounds. If a student was willing to take part in the study (about 80% agreed to cooperate), a short instruction about the experiment was given by the researcher. The researcher stayed around to answer possible questions and to receive the questionnaire when the respondent was finished. 50 respondents first filled out the 10 questions about their personal characteristics and their past experiences, and then read the brochure *Get tested for HIV*. Having read the brochure, these respondents filled out the rest of the questionnaire. The other 25 respondents were not presented with any brochure, and were asked to fill out the questionnaire without being interrupted.

Results

Students' intentions to go for VCT, determinants for these intentions and personal characteristics

To answer the first two research questions (*What is the influence of various determinants on students' intentions to go for VCT*, and *How is this influence related to personal characteristics such as ethnical background, gender, and earlier experiences with VCT?*) the following analyses were carried out. First an ANOVA was conducted to find possible effects of personal characteristics such as ethnical background, gender, and earlier experiences with VCT on VCT intention. A regression analysis was then performed for the whole group of respondents to

find possible effects of the determinants which were measured (see Appendix 1). Finally, separate regression analyses were performed for groups that had proved to differ significantly in their VCT intentions.

In the ANOVA that was carried out with *intention for VCT uptake* as dependent variable, five independent variables were used: *ethnical background* (African; N = 39, or White; N = 32), *gender* (male; N = 40; female; N = 34; 1 missing value), *risky behavior related to condom use* (yes, if the respondent stated that he or she always, often or sometimes had sex without a condom; N = 25, or no, if the respondent stated that he or she never had had sex, or always used a condom; N = 46; 4 missing values), *having considered going for VCT* (yes, but never went; N = 26; yes, and had a test; N = 27, or no; N = 21; 1 missing value), and *personally knowing people living with HIV/AIDS* (yes; N = 24, or no; N = 50; 1 missing value). Statistically significant main effects were found for the variables: *ethnical background*; $F(1,33) = 4,33$; $p < .05$; $eta^2 = .12$, and *having considered going for VCT*; $F(2,33) = 3,52$; $p < .05$; $eta^2 = .178$. No significant two-way interaction effects were found.[4]

Further analysis of the main effects revealed a significantly stronger VCT intention for African respondents (M = 3.62; SD = 0.84) than for White respondents (M = 2.99; SD = 0.72). Also, a significantly stronger VCT intention was found for both (A) respondents who had already considered going for VCT but never went (M = 3.42; SD = 0.73) and (B) respondents who had already had a test (M = 3.49; SD = 0.83), compared to (C) respondents who had never considered going for VCT (M = 2.80; SD = 0.78). No significant difference was found between group (A) and group (B).

The stepwise regression analysis that was performed for the whole group of respondents with *intention for VCT* as dependent variable, revealed significant and positive contributions of: *perceived efficacy of VCT uptake* (beta = .387; $p < .001$); *perceived susceptibility for HIV/AIDS* (beta = .375; $p < .001$); *self-efficacy of dealing with stigma – expectation of being able to handle negative responses* (beta = .273; $p < .01$); *self-efficacy of dealing with stigma – expectation of being able to live a normal life* (beta = .221; $p < .05$); and *knowing where to find a testing site nearby* (beta = .214; $p < .05$).

Separate stepwise regression analyses for groups that had proved to differ significantly in their VCT intentions revealed the following. For the African respondents the only independent variable that contributed significantly and positively to the variance in VCT intention was *self-efficacy of VCT uptake* (beta = .603; $p < .001$). For the White respondents, significant and positive contributions were

4. In view of the difficulty of interpreting possible higher-order interactions, it was decided to leave such interactions out of consideration.

found for *self-efficacy of dealing with stigma – expectation of being able to live a normal life* (beta = .396; $p < .01$); *self-efficacy of dealing with stigma – expectation of being able to handle negative responses* (beta = .346; $p = .05$); and *perceived severity of negative economic consequences after test* (beta = .294; $p < .05$).

For the respondents who had already considered going for VCT, significant and positive contributions were found for *perceived efficacy of VCT uptake* (beta = .463; $p < .001$) and *knowing where to find a testing site nearby* (beta = .275; $p = .020$). For the respondents who had never considered going for VCT, significant and positive contributions were found for *perceived susceptibility for HIV/AIDS* (beta = .710; $p < .001$); *self-efficacy of dealing with stigma – expectation of being able to handle negative responses* (beta = .486; $p = .005$); *trust that medical staff will treat outcome as confidential* (beta = .439; $p = .006$); and *self-efficacy of taking ART – expectation to be able to take ART for the rest of one's life* (beta = .333; $p = .023$).

Effects of reading the brochure

To find possible effects of reading the brochure *Get tested for HIV* on *intention for VCT uptake* an ANOVA was performed with six independent variables: the same five independent variables which are mentioned in section 4.2, plus *having read the brochure* (yes; N = 50; no; N = 25). There was no significant main effect of *having read the brochure*, nor were there any interaction effects of this variable with other independent variables.

To find possible effects of reading the brochure on determinants for VCT uptake, a MANOVA was carried out with *having read the brochure* as independent variable and all determinants in Appendix 1 as dependent variables. Multivariate tests revealed no significant effect of reading the brochure: $F(22,52) = 0.78$; $p = .74$. To find possible effects of reading the brochure on those beliefs that according to the regression analysis for the whole group of respondents contributed significantly and positively to the variance in VCT intention (see above), a second MANOVA was carried out. Again, multivariate tests revealed no significant effect of reading the brochure: $F(5,69) = 0.59$; $p = .70$.

Fears related to VCT and testing positive

Table 1 shows the distribution (in percentages) of the answers to the questions about specific fears related to VCT and to testing positive for HIV; χ^2 tests (for the answers to the first question) and t-tests (for the answers to the second question) revealed no statistically significant effects of ethnicity.

Table 1. Specific fears related to VCT and testing positive for HIV (from most frequent to least frequent)

Should I go for Voluntary Counselling and Testing, I fear that	[*only one option to be chosen by the respondent, that best reflected his/her opinion*]
I will not be able to cope with the emotional stress of a positive result	60%
the HIV-test will give a wrong result	24%
counsellors will force me to have an HIV-test	10%
the clinic staff will give my HIV-result to other people	6%
Should I test positive I fear that:	[*three options to be chosen by the respondent, that best reflected his/her fears of becoming HIV positive*]
I will be stigmatised and discriminated against	69%
I will not be able to take care of myself once I become ill	63%
I will not be able to get anti-retroviral treatment when I need it	52%
I will be rejected by loved ones, should they find out that I am HIV positive	48%
I will lose my insurance	18%
the hospital staff will have very negative attitudes towards me should I go for medical help	14%
I will not be able to provide for myself financially should I become very ill	14%
I will lose my job	6%
I will lose my house	0%

Table 1 shows that the respondents' most prominent fear with regard to VCT was that they would not be able to cope with the emotional stress of a positive result. Should they test positive, their most prominent fear was that they would be stigmatised and discriminated against, that they would not be able to take care of themselves and get access to the antiretroviral therapy to do so, and that they would be rejected by loved ones, should these be informed about their positive status.

Conclusions and discussion

This study ultimately aimed at providing text designers and campaign developers with insights and knowledge which may help them to develop effective documents for communicating with South African students about VCT. From this perspective, perhaps the most important conclusion from the present study is that African students showed a stronger intention to go for VCT uptake than White students did, and that students who had already considered going for VCT,

appeared to be more willing to get themselves tested (again) than were students who had not yet considered going for VCT. These results may assist text designers and campaign developers in prioritising their efforts concerning the promotion of VCT uptake.

Another useful outcome of this study may be that the set of determinants for VCT uptake differed for various subgroups in the student population from which a sample was taken. For African students, the belief that they would be able to go for VCT despite perceived possibly challenging circumstances appeared to be an important predictor of intention for VCT uptake. For White students, other beliefs turned out to be related to this intention: their expectations about being able to live a normal life and about being able to handle negative responses should they test positive, and also their expectations about negative economic consequences if they would turn out to be infected.

There was also a clear difference in beliefs that appeared to be relevant predictors between students who had already considered to get tested (or even had done so in the past) on the one hand, and students who so far had never done so, on the other hand. For the first group, practical considerations appeared to be important determinants for their intentions: the extent to which they expected VCT to be an effective means in determining their status and in protecting their health and the health of others, and also their knowledge (or lack thereof) of a site where they could get tested. For the second group of students, however, the determinants of their VCT intentions were of a more personal nature: the extent to which they considered themselves to be at risk for HIV/AIDS, their trust in the confidentiality with which the medical staff would treat the outcome of a test, and in case they would test positive, their expectations about being able to handle negative responses and about being able to take ART for the rest of their lives.

For the group as a whole, the set of relevant determinants appeared to be a combination of beliefs of a practical nature and beliefs of a more personal nature: the extent to which they expected VCT to be an effective means in determining their status and in protecting their health and the health of others, and their knowledge (or lack thereof) of a site where they could get tested, but also the extent to which they considered themselves to be at risk for HIV/AIDS, and in case they would test positive, their expectations about being able to handle negative responses and about being able to live a normal life.

Given these outcomes, it is not difficult to explain why reading the brochure that was tested appeared to have no effect on the VCT intentions of the students. As far as practical information is concerned, the brochure does include a telephone number where information is given on the availability of a testing site nearby, but it does not explicitly go into enough detail on the effectiveness of VCT in

determining one's HIV-status. As for important issues of a more personal nature, the brochure clearly is inadequate. It hardly pays attention to the vulnerability of the intended readers for HIV/AIDS, and it does not go into the measures that people who test positive can take to cope with negative consequences.

The present study also revealed that the students regarded coping with the emotional stress of a possible positive HIV test result as a very difficult issue, and that the physical consequences of the illness and stigma and discrimination were felt as realistic threats should they test positive.

In view of these results, HIV/AIDS document designers and campaign developers aiming to persuade South African students to go for VCT might want to consider differentiating between the various groups of students on the basis of their VCT intentions. They might also wish to consider paying more attention to the determinants that were identified as predictors of their VCT intentions, for the group of students as a whole and for the various subgroups. The students' apparent fear that they would not be able to cope with the emotional stress of a positive test result should also perhaps be taken into account more explicitly when designing VCT communication materials, just as the students' anxiety that they would be stigmatised and discriminated against should they test HIV positive.

To conclude: given the severity of the consequences of testing HIV positive, one must assume that the decision to go for VCT is not taken lightly. Giving concrete and correct information about possibilities for people infected with HIV to live as healthily as possible and even more perhaps on how to cope with stigma, seems to be an important way to reduce this fear. It would be even better, of course, if the level of stigmatization of South Africans living with HIV/AIDS could be substantially reduced. However, expecting that such a development will take place in the near future would seem too optimistic – regrettably.

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Appendix 1

Variables referring to intentions towards VCT and possible determinants for these intentions, and outcomes of reliability analyses for these variables (where possible and relevant)

Behavioral intentions

- intention for VCT uptake (4 items) Cronbach's alpha = .80

Behavioral beliefs (including beliefs about coping with possible negative outcome of VCT)

- perceived efficacy of VCT uptake (6 items) Cronbach's alpha = .73
- fear of learning test outcome (3 items) Cronbach's alpha = .68
- perceived susceptibility for HIV/AIDS (4 items) Cronbach's alpha = .64

- perceived severity of HIV/AIDS (1 item)
- trust that medical staff will treat outcome as confidential (2 items) Cronbach's alpha = .67; r = .51 ($p < .001$)
- trust that medical staff will provide adequate care (2 items) Cronbach's alpha = .65; r = .48 ($p < .001$)
- perceived susceptibility for stigma after test (3 items); Cronbach's alpha = .78
- perceived severity of stigma after test (1 item)
- self-efficacy of dealing with stigma
  - expectation of being able to live a normal life (1 item)
  - expectation of being able to cope with stigma and discrimination (1 item)
  - expectation of being able to handle negative responses (1 item)
- perceived severity of negative mental consequences after test (1 item)
- perceived severity of negative economic consequences after test (1 item)
- perceived severity of negative physical consequences after test (1 item)
- perceived susceptibility for negative physical consequences after test (2 items); Cronbach's alpha = .64; r = .48 ($p < .001$)
- perceived efficacy of taking ART (3 items) Cronbach's alpha = .65
- self-efficacy of taking ART
  - expectation to have access to ART (1 item)
  - expectation to be able to take ART for the rest of one's life (1 item)
  - expectation to be able to cope with side effects of ART (1 item)
- perceived efficacy of positive living (3 items) Cronbach's alpha = .74

Self-efficacy of VCT uptake

- self-efficacy of VCT uptake (2 items) Cronbach's alpha .65; r = .49 ($p < .001$)

Efficacy beliefs

- knowing where to find a testing site nearby (1 item)