

Reasons for Not Taking an HIV-Test Among Untested Men Who Have Sex with Men: An Internet Study

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The present paper focuses on reasons for not taking an HIV-test among untested men who have sex with men (MSM). From an MSM web-based survey, 1627 MSM who had never tested for HIV were selected for the reported analyses. Results show that fear of a positive test result and the perceived consequences thereof, are reported as the most important reasons for not taking an HIV-test among at-risk respondents. The most important reasons for not taking an HIV-test among no-risk respondents are related to perception of low risk for HIV-infection. Implications for future interventions to promote HIV-testing are discussed.

KEY WORDS: HIV-testing; men who have sex with men (MSM); internet; risk perception; fear.

INTRODUCTION

Throughout the course of the AIDS epidemic, MSM have been one of the groups at highest risk for HIV-infection in Western countries (UNAIDS, 2003). The current availability of more effective Highly Active Antiretroviral Therapy (HAART) for HIV-infected individuals provides strong arguments in favor of active promotion of HIV-testing among risk groups, including MSM. Early detection of HIV-infection allows adequate monitoring of an individual's health status, proper treatment initiation, and creates opportunities for education of newly diagnosed individuals with respect to treatment, care, and support. Also, early detection allows HIV-infected individuals to better prepare for treatment (Chadborn *et al.*, 2005).

In addition to treatment benefits, a meta-analysis on the effects of HIV-testing and counseling on sexual risk behavior showed that finding out being HIV-infected was associated with a significant reduction in subsequent sexual risk behavior. Finding out

being HIV-negative on the other hand was not associated with such a reduction. Fortunately, no increase in subsequent sexual risk behavior was found either (Weinhardt *et al.*, 1999).

With respect to the uptake of HIV-testing, there is great variation in the proportion of MSM ever tested for HIV in Western countries. In some countries like Switzerland (Dubois-Arber *et al.*, 2002) and Spain (Pérez *et al.*, 2002) HIV-testing rates among MSM of approximately 80% have been reported. In MSM samples in Australia (National Centre in HIV Social Research, 2003) and the USA (Webster *et al.*, 2003) rates of over 90% have been observed. In other Western countries, such as the Netherlands and Scotland, HIV-testing rates among MSM are substantially lower. In a recently conducted Scottish survey, an HIV-testing percentage of 50% among MSM was found (Sigma Research, 2005). In the Netherlands, MSM HIV-testing rates have traditionally been the lowest in Europe. In 1994, only 33% of MSM were ever tested (Bochow *et al.*, 1994). More recent studies among MSM in the Netherlands show that this number has somewhat increased since 1994, with approximately 55% of Dutch MSM now reporting ever having taken an HIV-test (Hospers *et al.*, 2003, 2005). Thus, a significant proportion of MSM in the Netherlands remain unaware of their serostatus, thereby not only missing out on the

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abovementioned benefits in the case of HIV-infection but also continue to place others at risk for HIV-infection through unprotected sex. With respect to the latter, a recent Dutch sex study showed that among MSM who were unaware of their HIV-status, 13% reported Unprotected Anal Intercourse (UAI) with their last casual partner (Hospers *et al.*, 2005).

Given the low HIV-testing rates among MSM in the Netherlands and a recent change in the Dutch HIV-testing policy—from a strategy that discourages HIV-testing to active promotion of HIV-testing among risk groups—interventions are needed that aim at motivating untested MSM to take an HIV-test. The development of such preventive interventions is ideally a planned activity, based on theory and empirical evidence (Kok *et al.*, 2004).

A recent interview study among 33 Dutch untested MSM provided insight regarding factors that contribute to not taking an HIV-test (Mikolajczak *et al.*, 2004). Adequate knowledge about the current Dutch HIV-testing policy (i.e., that testing is now encouraged), HIV-testing procedures, and specific aspects of taking an HIV-test (i.e., costs for taking a test) appeared to be limited among respondents. Also, perceived risk of being HIV-infected was low, although a vast majority of respondents did report sexual risk behavior. Fear for detrimental consequences for their life and their future after finding out being HIV-infected was also reported by many respondents as a reason for not taking an HIV-test. In addition, it also became clear that HIV-testing was usually not openly supported or encouraged in respondents' social environment and that it was hardly ever talked about with others (i.e., friends).

The present paper reports on the findings of a large-scale quantitative Internet-based survey among Dutch MSM, which was set up to corroborate our previous qualitative findings and seek quantitative confirmation thereof. The present paper focuses specifically on reasons for not taking an HIV-test among untested Dutch MSM and differences between at-risk and no-risk respondents.

METHOD

For the purpose of the present study, an interactive online questionnaire was developed and hosted on the website of the largest, free of charge and most popular Dutch MSM chatsite (www.chatboy.nl). All visitors of the Chatboy-website were invited to complete our questionnaire.

Measures

The interactive online questionnaire asked for demographics, sexual risk behavior in the AIDS era, and reasons for not taking an HIV-test. Demographic variables of interest were age, educational level, cultural background, sexual orientation (gay versus bisexual), HIV-testing, HIV-status, and (steady) partner status of respondents. Sexual risk behavior in the AIDS era was measured by identifying respondents' estimated total number of casual and/or steady partners in the previous 20 years, engagement in anal intercourse with these partners, and engagement in UAI with these partners. Reasons for not taking an HIV-test were presented to untested respondents only, who were asked to rate the importance of 15 reasons in their decision not to take an HIV-test. Example: "I have never taken an HIV-test because a positive result would turn my life upside down", rated on a 5-point scale (1 = *very unimportant* to 5 = *very important*).

Participants and Procedures

Uploaded to a secure website, the interactive online questionnaire was only accessible via three links located on the Chatboy-website: a button placed on the homepage, a profile of a chat box visitor nicknamed *Chatboy^study*, and a click-on banner in the chat box itself. Statistics logged by our Internet server showed that the opening page of the online questionnaire was visited 10,804 times during the enrolment period of 29 days. The opening page contained information about the purpose and the background of the study, and invited chatters to complete the questionnaire. Chatters could proceed to the introduction page of the questionnaire by clicking the "enter"-button, which 70% (7513) of the initial visitors did. On this page, participants were provided with answering instructions as well as a "continue"-button that led to the first question. Nearly 95% (7127) of the participants who arrived at the introduction page continued to the first question. Of these, 4319 chatters completed the questionnaire and submitted their answers. Thus, the response rate was 57% of all chatters that continued to the introduction page (4319/7513), or 61% of the chatters who continued to the first question (4319/7127). These figures are comparable to the response rates of other paper-and-pencil and Internet-based MSM surveys in the Netherlands (Hospers *et al.*, 2003, 2005).

Data Quality

The dataset, containing 4319 completed and submitted questionnaires, was subjected to a profound cleaning process. This consisted of checking for multiple submissions from the same IP-address, submissions with an unrealistically short completion time relative to the number of questions that had to be answered, and logical inconsistencies in answers that participants provided on different questions (for example, reporting a *smaller* total number of casual partners than the number of casual partners with whom they practiced anal intercourse; reporting an age which is *lower* than the reported age at which they became sexually active). These checks resulted in exclusion of 126 cases. Due to an error in the programming code, the answer of the first 162 respondents on one item was not saved to the data file, which led to deletion of these records. A routing error led to the loss of critical information of another 199 respondents, which were also deleted, from the data file. After performing the above-described procedures, the cleaned data file contained unique records of 3832 respondents (89%). Of these, 2205 respondents (57%) indicated that they had ever taken an HIV-test (171 HIV-positive; 2034 HIV-negative). The remaining 1627 untested respondents (43%) comprised the final sample for the statistical analyses in the present paper.

Data Analysis

Given the large sample size in all analyses, differences were tested using a p -value of .01.

RESULTS

Mean age of the sample ($N = 1627$) was 33 years ($SD: 10.72$; range 14–76). A majority of the respondents (78%) indicated that they were either exclusively or mostly attracted to other men (referred to as gay men in the remainder of this article), while a substantial group (22%) indicated that they were also attracted to women (referred to as bisexual men in the remainder of this article). Of respondents, 48% had completed some form of higher education (university, college, or high school at a higher level), whereas 52% had completed some form of lower ed-

ucation (elementary school, vocational training, or lower-level high school). Most respondents (90%) had a Dutch cultural background, 4% a Dutch/non-Dutch background (e.g., Dutch/Antillean), and 6% a non-Dutch background. A majority of the respondents (56%) reported UAI with another man since becoming sexually active with men. Of these, 31% with casual partners, 28% with steady partners, and 41% with both casual and steady partners. Respondents reporting UAI make up the at-risk group for HIV-infection ($N = 908$). The remaining 719 respondents (44%) reported no UAI and make up the no-risk group for HIV-infection. Both risk groups did not differ on demographics. However, with respect to sex-related variables, a higher proportion of respondents in the at-risk group indicated being gay, 89% versus 65%, $X^2(1, N = 1627) = 134.75, p < .01$, and to have a steady relationship with a man, 60% versus 40%, $X^2(1, N = 1037) = 35.54, p < .01$, compared to respondents in the no-risk group. Also, a higher number of reported lifetime casual partners was significantly associated with a higher likelihood to be classified in the at-risk group, $OR = 1.02, 99\% CI 1.01–1.03$ for each additional 10 casual partners. No such association was found with respect to lifetime steady partners.

Next, the importance of reasons underlying the decision not to take an HIV-test, and differences in importance between the at-risk group and the no-risk group were assessed. As can be seen in Table I, only the top 4 of 15 reasons for not taking an HIV-test yielded a score above the midpoint on the response scale (3 = *not important/not unimportant*), indicating relevance in respondents' decision not to test for HIV. Interestingly, these four reasons were also the ones that discriminated between both risk groups. Respondents in the no-risk group appraise the fact that they "... have never been at risk for HIV-infection" and they "... never had unprotected sex" as the most important reasons for not taking an HIV-test. Respondents in the at-risk group considered "... because a positive result would turn my life upside down," and "... because I am afraid of the consequences of a positive test result" as the most important reasons for not taking an HIV-test. Two additional reasons (reason 6 and 12) also discriminated between respondents in both risk groups (see Table I). However, since the mean score of both items was below the midpoint on the response scale, they can be considered to be of limited concern in respondents' decision not to take an HIV-test.

Table 1. Mean Scores of the Importance of 15 Reasons for Not Taking an HIV-Test, Comparing Untested At-Risk and No-Risk Respondents

	Total (<i>N</i> = 1465)	Low-risk (<i>N</i> = 652)	High-risk (<i>N</i> = 813)	<i>F</i>
I have never taken an HIV-test. . .				
1. Because I think I have never been at risk for infection	3.45	3.80	3.16	85.86**
2. Because a positive result would turn my life upside down	3.39	3.14	3.60	34.36**
3. Because I have never had unprotected sex	3.29	3.94	2.78	279.04**
4. Because I am afraid of the consequences of a positive test result	3.01	2.75	3.22	35.31**
5. Because I don't like talking about my sex life with a doctor or nurse	2.78	2.71	2.83	2.10
6. Because I would rather not know whether I am infected	2.56	2.28	2.77	39.13**
7. Because I would rather not have counseling before and after the test	2.50	2.48	2.51	.14
8. Because I don't expect a lot of support and understanding of my friends if I would do it	2.44	2.43	2.45	.03
9. Because I don't expect a lot of support and understanding of my friends when I turn out HIV-positive	2.35	2.38	2.33	.57
10. Because I would rather not talk about it with my partner	2.16	2.21	2.11	1.89
11. Because I am sure that the current medicines still have too many side effects	2.13	2.11	2.15	.35
12. Because I have not yet met the "right guy"	2.08	2.25	1.95	15.80**
13. Because I do not know where I can get tested	2.07	2.13	2.02	2.21
14. Because there are no good medicines and you can't do anything about it	2.06	2.02	2.09	.93
15. Because I am afraid of blood and needles	1.81	1.82	1.81	.00

Note. Only respondents who had no missing data on all 15 reasons were included in this analysis (*N* = 1465). Items were measured on a 5-point scale: 1 = *very unimportant*, 5 = *very important*.

***p* < .001.

DISCUSSION

In the present Internet-sample of MSM, 43% of respondents had never taken an HIV-test. This figure is comparable with what is found in other recent surveys among MSM in the Netherlands (Hospers *et al.*, 2003, 2005). Among untested respondents, 4 out of 15 reasons for not taking an HIV-test were found to be relevant in their decision not to take an HIV-test. Of these, two reasons (1 and 3) can be related to risk perception whereas the remaining two reasons (2 and 4) can be considered a reflection of fear. Reasons related to risk perception are the most important ones in no-risk respondents' decision not to take an HIV-test. Given the absence of reported past sexual risk behavior among this group of respondents, this finding makes sense. Their relatively high score on the two fear-related reasons may indicate a lack of adequate knowledge concerning the consequences of taking an HIV-test. However, the latter remains hypothetical and should be subject to future research. On the other hand, respondents who did report sexual risk behavior in the past rated fear-related reasons to be the most important in their decision not to take an HIV-test. Interestingly, these (at-risk) respondents also have a relatively high score on the two reasons that are related to low

perception of risk for HIV-infection. Although this seems contradictory at first, the latter might well be the outcome of a process of cognitive dissonance reduction through which at-risk respondents try to minimize the risk they ran for HIV-infection (Offir *et al.*, 1993). Future research should focus on the role of cognitive dissonance reduction in establishing low perceived risk for HIV-infection among at-risk individuals for HIV-infection.

The reported findings have implications for future prevention and educational activities aimed at promoting HIV-testing among Dutch MSM. The finding that at-risk respondents are mainly not taking an HIV-test because of the fear they associate with taking an HIV-test, implies that considerable effort should be devoted to fear reduction. One way of doing so might be to increase communication on the benefits that are associated with HIV-testing and early detection of HIV-infection. Previous research among untested Dutch MSM has shown that such aspects are not well known (Mikolajczak *et al.*, 2004).

The present study has limitations, which should be carefully considered. As a consequence of the Internet-based nature of our study, only a subgroup of Dutch MSM may have been reached which might pose limitations to generalizing our findings to the total MSM population. Also, the response in the

present study was self-selected and no differences between responders, chatters who returned a completed questionnaire, and nonresponders, chatters who quit filling in the questionnaire, could be calculated. However, the same limitations hold for traditional paper-and-pencil surveys. Finally, all our data are based on self-reports.

Keeping these limitations in mind, we believe that the present findings contribute to a better understanding of HIV-testing among Dutch MSM. We are convinced that this will contribute to the efficiency of future prevention and education activities aimed at motivating Dutch MSM to take an HIV-test.

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