Sexuality and Sexual Risk Behavior in HIV-Positive Men Who Have Sex With Men

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The purpose of this study was to examine the psychological processes pertaining to sexuality and sexual risk behavior among HIV-positive men who have sex with men (MSM). The authors analyzed transcripts of 30 semistructured interviews. Findings suggest that sexual problems in HIV-positive MSM might be primarily caused by the perceived risk of transmitting HIV to others. Furthermore, safer sexual behavior seems to be related to feelings of personal responsibility for safer sex. This study illustrates that although some men might have a clear notion of personal responsibility for safer sex, contextual factors can influence whether behavior is consistent with their norms of personal responsibility. The implications of the study are discussed for the practice of HIV prevention for HIV-positive MSM.

Keywords: *HIV-positive; sexuality; sexual risk behavior; personal responsibility*

In attempts to prevent the further spread of HIV, HIV/AIDS prevention programs have targeted people with higher risk for HIV/AIDS, such as men having sex with men (MSM) (Flowers, Sheeran, Beail, & Smith, 1997; Hospers & Kok, 1995), adolescents, and heterosexuals (Sheeran, Abraham, & Orbell, 1999). In contrast, people with HIV and AIDS (PWHA) have rarely been the specific target of prevention activities. This has been the case for many years, despite evidence suggesting that adoption of protected sexual practices among people who are HIV positive leads to a significant reduction in the number of HIV infections (King-Spooner, 1999).

The reluctance to choose PWHA as a specific HIV prevention target group seems in part to be the result of concerns about focusing on the responsibility of PWHA to protect the health of others. Critics note that preventive campaigns that incorporate responsibility issues might lead to unintended negative side effects, such as placing an undue burden on the shoulders of PWHA, stigmatization, and "blaming the victim" (Bayer, 1996; King-Spooner, 1999). At worst, PWHA are held responsible by society for the health outcomes of practicing unprotected sex, and

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prosecution and punishment might be the consequence (Guttman, 2000; Lupton, 1995). The idea of emphasizing personal responsibility of PWHA for others has also been criticized on a more practical level. It has been argued that focusing on the responsibility of PWHA would lead to a further spread of the epidemic, because people who are HIV negative or do not know their status would rely on PWHA to take responsibility for safer sex and would, therefore, fail to protect themselves. As a result, personal responsibility for one's own health has been the underlying value promoted in most HIV prevention campaigns (Bayer, 1996; Schiltz & Sandfort, 2000).

The introduction of combination therapy in 1996, also known as highly active antiretroviral therapy (HAART), has altered this perspective. HAART has led to beneficial results, such as a prolonged life expectancy and increased quality of life among HIV-infected individuals. Consequently, PWHA not only experience greater clinical improvement but are also likely to feel healthier and be more sexually active for more years (Blower, Gershengorn, & Grant, 2000; Cameron et al., 1998). Although individuals who are HIV positive report lower levels of risk-taking behavior than individuals who are HIV negative or do not know their status, unprotected sex is prevalent among PWHA. Studies on sexual behavior of PWHA suggest that approximately one third have engaged in risky sexual practices in the previous 2 to 6 months (Kalichman, 2000; Kok, 1999). These findings confirm that promotion of safer sex methods among PWHA is an important public health challenge in reducing further transmission of HIV. Although HIV prevention aimed at PWHA is still fraught with controversy, HAART has shifted the balance of benefit in favor of prevention aimed at PWHA who continue to practice HIV transmission risk behaviors.

MSM are an important subgroup among the HIV-positive population for HIV prevention. Several recent studies have shown that sexual risk behavior is prevalent among HIV-positive MSM (Parsons, Halkitis, Wolitski, & Gómez, 2001; Semple, Patterson, & Grant, 2000, 2003). For example, Dukers, Goudsmit, et al. (2001) reported an increase in unprotected sex among HIV-negative and HIV-positive MSM participating in the Amsterdam Cohort Studies after HAART became available in 1996. Among HIV-positive MSM, a higher level of unprotected sex with casual partners was observed after viral load levels became undetectable, and CD4 cell counts increased as a result of HAART. In addition, M. Miller et al. (2000) compared sexual risk behavior before and 6 months after the start of combination HIV therapies in a French prospective cohort study. Although they did not find an increase in overall risk behavior, there was a significant increase in sexual risk behavior among HIV-positive gay and bisexual men with partners who had a negative or unknown serostatus. Furthermore, recent figures from STD clinics in Amsterdam showed an increase in syphilis and gonorrhea in both HIV-negative and HIV-positive MSM, which might suggest a rise in unprotected sex (Cairo, Fennema, & Maruanaya, 2001). Similar findings are reported among gay and bisexual men in London and Manchester (Browning, Blackwell, & Joynson, 2000; Donovan, Bodsworth, Rohrheim, McNulty, & Tapsall, 2000; Higgens, Sukthankar, Mahto, Jarvis, & Lacey, 2000).

The reasons that HIV-positive MSM engage in unprotected sex are often very complex. A growing number of studies have been conducted better to understand the psychological determinants of sexual risk behavior among PWHA (Crepaz &

Marks, 2002; Kalichman, 2000; Kok, 1999). Although some of these determinants are similar to those found among people with a negative or unknown status, other determinants are specific to PWHA. First, their distinguishing situation has been linked to the striking mental health implications of HIV and its treatment, such as high levels of strain, stress, and depression (Alonzo & Reynolds, 1995; Kalichman & Ramachandran, 1999). Moreover, various studies have shown that a diagnosis of HIV negatively affects sexual expression and can even interrupt the infected man's sex life. In addition, a number of researchers have called attention to the sexual dysfunction problems resulting from combination therapies, such as erectile dysfunction and delayed or premature orgasm (e.g., Catalán, Burgess, & Klimes, 1995). Second, an important difference between HIV-positive MSM and MSM who are HIV negative or do not know their status is their motivation for safer sex. Whereas MSM who are HIV negative or are not aware of their serostatus are motivated to practice safer sex primarily for "self-protection," for most HIV-positive MSM, other-oriented motives play an important role (King-Spooner, 1999; Marks, Burris, & Peterman, 1999). Several studies have demonstrated that safer sexual behavior in PWHA is related to the norm of perceived personal responsibility to protect the health of sex partners (Fisher, Willcuts, Misovich, & Weinstein, 1998; Godin, Savard, Kok, Fortin, & Boyer, 1996; Keogh, Weatherburn, & Stephens, 1999; Nimmons & Folkman, 1999; Rhodes & Cusick, 2002; Rosengarten, Race, & Kippax, 2000; Wolitski, Bailey, O'Leary, Gómez, & Parsons, 2003). A third issue specific to PWHA is whether they disclose their serostatus to others. Some authors have regarded disclosure to be a fundamental aspect of reducing the risk of HIV transmission (e.g., Cusick & Rhodes, 1999; Serovich, 2001). However, many people do not tell their sex partners about their positive status, predominantly out of fear of rejection or a negative reaction from the partners (Kalichman & Nachimson, 1999; Marks, Richardson, & Maldonado, 1991; Perry et al., 1994; Stein & Samet, 1999; Wenger, Kusseling, Beck, & Shapiro, 1994). Moreover, in these studies, conflicting results have been found concerning the relationship between disclosure and safer sexual behavior.

Although the field of HIV prevention has been slow to recognize the specific need for research on sexuality and sexual risk behavior among HIV-infected individuals, this is gradually changing. The past couple of years have seen an increase in the number of quantitative studies on sexuality in HIV-positive individuals in an attempt to identify key factors that predict sexual risk behavior in HIV-positive MSM (e.g., Crepaz & Marks, 2002). However, those studies usually do not address how HIV-infected MSM conceptualize the complex issues involved in sexuality and sexual decision making after being diagnosed HIV positive.

In this article, we attempt to contribute to a better understanding of the psychological processes pertaining to sexuality in cases in which an individual is confronted with a diagnosis of HIV. We chose qualitative research techniques, because they allow the researcher to investigate complex issues (Snape & Spencer, 2003), as is the case in sexuality in HIV-positive MSM. A qualitative research approach enables a detailed exploration of the reasons behind men's thoughts, beliefs, and behaviors regarding sexuality and being at risk. This is important, because a better understanding of sexuality issues of HIV-positive MSM is needed for the development of effective behavioral interventions for this target group.

This study addressed the following issues: (a) the influence of an HIV-positive diagnosis on participants' life and sexual behavior, (b) conceptualizations of HIV

risk and infectiousness, (c) the norm of perceived responsibility for safer sex and its relationship to sexual behavior, (d) factors influencing the practice of protected and unprotected sex, and (e) reasons for HIV disclosure to sex partners.

METHOD

Ethics Approval

The study was reviewed and approved by the Ethics Committee of Maastricht University Hospital.

Procedure

To ensure representation of HIV-positive MSM living in urbanized and suburbanized areas in the Netherlands, we recruited participants in Amsterdam and Rotterdam (urbanized, $n = 15$) and in the Maastricht area (suburbanized, $n = 15$) between May and August 2001. Several channels were used to recruit participants for the interviews. In Maastricht and the surrounding area, recruitment took place through HIV/AIDS consultants at Maastricht University Hospital. HIV/AIDS consultants selected participants among their patient population who met the entry criteria. We subsequently approached respondents by telephone in alphabetical order and invited them to participate. This process continued until the target number had been reached. In Amsterdam and Rotterdam, we selected respondents by the so-called snowball sampling technique. Outreach workers of the Dutch Gay and Lesbian Association in Amsterdam and the municipal health service in Rotterdam approached HIV-positive MSM and asked them to participate. At our request, these men contacted their friends and acquaintances for participation in the study.

Eligibility for participation in the study was restricted to men who (a) had tested positive for HIV antibodies, (b) identified themselves as homosexual or bisexual, (c) were between the ages of 20 and 65, and (d) were Dutch nationals or spoke Dutch fluently.

At the beginning of each interview, the interviewees were provided with information about the purpose of the study, the established conditions for anonymity and confidentiality, and aftercare options. We asked the respondents whether they understood the information and if they were still willing to participate. If so, we asked them to sign an informed consent agreement to verify that they were knowingly participating in the study and were doing so of their own volition. Although Netherlands law does not compel disclosure of one's HIV status to sexual partners, there have been a limited number of prosecutions of HIV-positive people for exposing others to the risk of HIV transmission (Smit, 2002). To preserve the anonymity of the respondents, we asked them to sign only the informed consent agreement, so there would be no written record of the respondents' names. Additional measures were taken to ensure confidentiality, including (a) the respondent's name being systematically replaced with a case number on the tapes and in the transcripts; (b) names, places, and other identifying characteristics being removed from the transcripts; (c) tapes being erased after transcription; and (d) the interviewers signing an informed consent agreement to keep in strict confidence everything they discussed with the interviewees.

Participants were paid 50 Dutch guilders (approximately €23). The first author conducted 14 interviews, and three trained interviewers who have been working in the field of HIV prevention for several years conducted the other 16. All interviewers were women; this was decided to avoid potential gender-of-interviewer effects (Catania, Gibson, Chitwood, & Coates, 1990).

Participants

In total, 30 HIV-positive MSM took part in the study. The participants had a mean age of 44 years (range 28 to 59). The majority were Dutch nationals; one man was Scottish, and another was American. Of the 30 men, 3 had not completed secondary school, 11 had a medium education level, and 16 had a higher education level. Ten participants were no longer employed because of their HIV infection. All participants described themselves as gay. The mean length of time these men had known they were HIV positive was 8 years (range 1 to 19). Six participants were diagnosed with AIDS. All reported having had laboratory investigations of CD4 cells and viral load in the past 3 months. The most recent self-reported CD4 count ranged from 53 to 1,400 cells/mm^3. Three participants could not remember their most recent CD4 count. The most recent viral load result, if detectable, ranged from 100 to 60,000 copies/ml. Twelve participants reported that their viral load was undetectable; 4 could not remember their most recent viral load test results.

The Interview

The interviews were semistructured and conducted face-to-face. We used an interview schedule to introduce participants to the different subject areas that we had specified in advance but followed up and probed further areas that arose spontaneously. The following areas were covered in each interview: impact of HIV infection on life in general and sexuality in specific, impact on steady relationships and casual sex partners, perception of HIV-related risks, feelings of personal responsibility for safer sex, disclosure of HIV-positive status to sex partners, sexual techniques, condom use, and occurrence of unprotected sex. Interviews ranged from 90 to 120 minutes. Most of the interviews were conducted at Maastricht University, the Dutch Gay and Lesbian Association in Amsterdam, and the municipal health service in Rotterdam; 4 participants preferred to be interviewed in their homes.

Analysis

All interviews were tape-recorded and transcribed verbatim. We analyzed the transcripts using the qualitative analysis package QRS NUD*IST 4.0 following the guidelines of Baarda, De Goede, and Teunissen (2000). In the first phase of data analysis, we grouped data into broad categories based on our research questions. In the second phase, we selected concepts, variables, and classifications using keywords that identified the most important topics in the study. Initially, we analyzed only 15 interviews, which provided the foundation for a provisional codebook. We then examined and verified the provisional codebook by analyzing the remaining 15 interviews. After all interviews were entered and coded, we began a third phase in the data analysis process, in which we implemented selective cod-

ing. We returned to transcripts to distinguish relevant, less relevant, and irrelevant issues. This procedure was followed until a definitive database was created containing all relevant information. The final interpretations and conclusions are based on this database.

Following the Dutch national guidelines (Hospers & Blom, 1998), protected sex was defined as anal sex with the use of a condom and oral sex with the use of a condom or without ejaculation in the mouth. Unprotected sex was defined as anal sex without the use of a condom and oral sex with ejaculation in the mouth. Because we were interested in the ways the participants defined their sexual activities as protected or unprotected, the interviewers did not give any definition of protected or unprotected sex during the interviews.

RESULTS

Sexual Activity

At the time of the interviews, almost all participants reported that they were sexually active. Two participants reported that they had not had sex since their positive test results 5 and 8 years ago, respectively. Fifteen participants reported that they were in a steady relationship. Of these participants, 8 reported having an HIV-negative partner, 6 an HIV-positive partner, and 1 a steady partner with unknown HIV status. Of the participants who were involved in a serodiscordant relationship, 6 stated that they always practiced protected sex with their steady partner, 1 participant mentioned the occurrence of unintended unprotected sex, and 1 participant reported that he and his partner never take any precautions. Of the participants who were involved in a seroconcordant relationship, 2 reported having unprotected sex with their steady partner, 2 reported that they had agreed with their partners to have protected sex but mentioned the occasional incidence of unprotected sex, and 2 reported that they had discontinued sexual intercourse with their steady partners. The participant who had a steady partner with an unknown HIV status reported unprotected sex with his steady partner on a regular basis. Twenty-six participants reported sexual intercourse with casual sex partners. Eight reported that they always had protected sex with casual sex partners; 15 reported occasional occurrences of unprotected sex, 3 mentioned frequent occurrences of unprotected sex with casual sex partners.

Impact of HIV-Positive Diagnosis

From the interviews, it was clear that an HIV-positive diagnosis had a significant impact on well-being for the majority of the participants. Most participants reported that they were shocked at the news of their HIV-positive status. For instance, one man said, "I had a sinking feeling. Really, it was if my whole world collapsed." Some respondents said that they experienced total panic and started making arrangements for all kinds of practical issues, such as taking care of health insurance, writing wills, and planning funerals. One participant noted,

> I thought, this is it, I am dying. I went home and started to cry, to cry, this is it. I phoned the priest immediately, because I thought I would die within a week, and I

> felt really, really bad. So I phoned the priest and took care of my funeral and the lunch, the flowers I wanted and all kinds of stuff, and I collected addresses. And then, everything was arranged and then you realize you are still around, so now what? Yeah, well, and then the whole process starts. And then slowly, very slowly, you start to recover, bit by bit. (Participant aware of status for 6 years, HIV-negative partner)

Other reactions that were frequently reported in the first period after the positive test result were guilt and self-blame, anger, and depression. For example,

> I was so tired the first year, really deadly tired. I couldn't take out the dog, or go upstairs. Now that I look back, I think I was so tired because I had lived a great deal. You have to tell all kinds of people that you are HIV positive, and I always felt very guilty. I mean, you feel guilty for the pain you cause everybody. And everybody was scared out of their wits, over and over again. (Participant aware of status for 12 years, no steady partner)

Some reported that they tried to deny their HIV infection by working overtime or by using drugs or alcohol. Not all participants, however, experienced their HIV-positive test result as a total shock. Some considered it a relief. They had suspected that they were HIV positive, mostly because they either had a partner who was HIV positive or because they had suffered from HIV/AIDS-related symptoms for a long time. Those men noted that this suspicion had a negative impact on their emotional well-being, as they spent a lot of time thinking about the possible consequences. At last, their suspicions proved to be correct, and the positive test result meant the end of uncertainty.

To determine whether the availability of HAART had an influence on the reactions to an HIV-positive diagnosis, we compared participants who were diagnosed before HAART with those who were diagnosed after HAART. The only difference we found was that those who were diagnosed before HAART experienced stress, because they thought for a long time that they would die from HIV and had to find their way in life again.

Sexuality. Whether or not the positive test result was a shock to the participants, most reported that they needed some time to rethink or restructure several aspects of their lives. This "re-construction of life" (see Barosso, 1997; Brashers et al., 1999) was related to issues such as personal relationships, work status, financial issues, and long-term plans. The HIV-positive diagnosis had an impact not only on the lives of the participants in general but also on their sexuality. Most HIV-positive MSM described a diminished sexual interest in the months following diagnosis of HIV, which generally led to a break in their sex lives. For most participants, this diminished sexual interest was rooted in the knowledge that HIV is an infectious disease. The idea that they might place their sex partners at risk by means of (unprotected) sexual intercourse suppressed their sexual desire and led to a change in sexual satisfaction. Many participants who were in a steady relationship when they learned of their HIV-positive status reported that HIV had strongly influenced their sex lives with their steady partners. For instance,

> In the beginning, sex was very limited. I didn't dare anything anymore. I even didn't dare to kiss my partner. I wasn't informed at all because I didn't want to know anything about the disease. I thought, I am going to kick the bucket anyhow. At a certain

> point, my partner thought there should be more. So we started having sex again, and we always had very safe sex. But it wasn't good anymore. I stopped enjoying it. One has to pay attention to it continuously and it keeps running through my mind. (Participant aware of status for 9 years, HIV-negative partner)

The possibility of infecting a sex partner was also mentioned by most participants as the reason for avoiding new sexual encounters in the first phase after the HIV-positive diagnosis. One participant, who had learned his positive test result only a year earlier, stated,

> I haven't got any casual sex partners anymore. I mean, I have kissed once in a while, but absolutely nothing further. I mean, just because of the fact that you know that you are HIV positive, and what if you infect someone? I just can't accept it. Since I know I am HIV positive, I find, you just cannot do that to another. (Participant aware of status for 1 year, HIV-negative partner)

The decline in sexual interest that the participants faced after the diagnosis of HIV was influenced not only by anxiety about transmitting HIV to their sexual partners but also by negative physical effects resulting their HIV infection and treatment. Although some participants reported that they did not experience significant sexual problems, most of them suffered from symptoms such as fatigue, headache, stomachache, sickness, and diarrhea. In addition, some reported erectile problems:

> I didn't feel like having sex the first months. It had also to do with problems with potency. It stiffens somewhat more nowadays. But the fact is, I'm on antidepressants, and those inhibit the libido also. (Participant aware of status for 1 year, no steady partner)

> The last year I have known no sexual awareness due to HIV and its treatment. Then they tested my testosterone, and it appeared to be extremely low. They prescribed me testosterone and my sexual desire has returned. So at first, you think it is due to stress, but then it appears to have a clear physical cause. (Participant aware of status for 6 years, no steady partner)

In addition, some participants complained about altered body image as a result of lipodistrophy and skin rash, which had a negative influence on their sexual desire and feelings of sexual attractiveness:

> I have lost a lot of weight. For a long time, I did not consider my own body attractive. That doesn't help. I don't mean to say that I'm such an attractive person at this moment. I mean, but I am used to it now, that my body fat is disappearing. I have not got no behind anymore. I used to be a very attractive man, well, yeah, you need a while to get used to that. (Participant aware of status for 5 years, no steady partner)

A minority of the participants reported an increase in sexual activity after their HIV-positive diagnosis. Typically, those men reported primarily unprotected anal sex in this time period.

> Sex didn't become safer. I mean, I had a lot of friends who didn't practice safe sex. We all thought, well we are all infected and those that aren't infected yet will become infected anyhow. So we were very aware of what we were doing. I think they call it bare-backing these days. At a certain point, I really got a kick out of it. (Participant aware of status for 6 years, no steady partner)

Resuming sexual activity. Most participants who reported a break in their sexual activity after receiving a diagnosis of HIV said that their sexual interests returned during the course of their illness and that they started having sex again. Nevertheless, compared to the period before the HIV diagnosis, most participants reported differences in sexuality. In general, participants indicated that they experienced sexuality as emotionally charged. Contributing factors were concerns about infecting others, the pressing need to use condoms, and being constantly confronted with their illness. For instance, one participant noted,

> I have fewer sexual contacts. Significantly fewer. I believe my mentality has changed. It has become less important. I have no urgent needs anymore, only when there is a clear response. I used to have sex only to have sex often. But now, it is such a big confrontation with yourself all the time. (Participant aware of status for 5 years, no steady partner)

Although the abovementioned issues played a role in regard to both steady partners and casual sex partners, during the interviews it became clear that the impact depended on partner type. In particular, participants who had a steady relationship at the time of their diagnosis reported poor sexual activity with their steady partner in the long term. Certainly, when both partners worried a lot about the potential danger of sexuality, it seemed very difficult to continue an enjoyable sex life:

> At a certain point, I felt like having sex again. But fear still has the upper hand. I'm afraid of infecting him. We had to ease slowly into the whole thing, but still, even though our relationship is quite good, there is a big wall standing between us. The wall has come between us, and I can't sweep it away, and it's like iron. I mean, the fact stays that I'm infected and he isn't. (Participant aware of status for 6 years, HIV-negative partner)

One of the concerns of participants who were not in a steady relationship at the time of the interview was the potential of meeting someone with whom they could develop a serious relationship. Despite their need for the intimacy and security of a steady relationship, they feared the impact that their HIV-positive status would have on intimate relationships and the potential for infecting their partners. To avoid placing themselves in what they considered a vulnerable and uncomfortable position, some respondents reported that they preferred the "security" of casual or anonymous sex contacts.

> Nearly from the start, I feared a relationship with someone who is HIV negative. On the one hand, I'm very afraid of making love and the need to protect each other. I'm afraid that sooner or later it will go wrong anyway. And that means that you are responsible for him entering the relationship HIV negative and quitting the relationship HIV positive. (Participant aware of status for 5 years, no steady partner)

Risks to Self: HIV Superinfection and STDs

As the previous sections indicate, participants worried about the risk of transmitting HIV to sexual partners. However, when the participants were asked to what extent they worried about the risks of HIV superinfection and other STDs for their health, half of the participants reported that it was a concern. For these participants,

the motivation to protect themselves was an important factor underlying the decision-making process concerning protected sex.

> All the time I hear HIV-positive people catching all kinds of sexually transmitted diseases due to unprotected sex—rectal gonorrhea and stuff like that. I'm really not waiting for that. Precisely because I am not on treatments, I think I can easily become ill. So that choice is not mine. (Participant aware of status for 3 years, no steady partner)

The other half of the participants hardly seemed concerned about superinfection or STDs. In general, this finding could not be attributed to a lack of awareness of the possible risks. Those participants typically argued that they did not feel the need for protecting themselves for several reasons. First, they believed that they were already ill, which could not get worse by superinfection or contracting a STD, something they considered beyond their control.

> In general, I worry less about catching something. I mean, the worst thing I could catch is gonorrhea and that is treatable. And with regard to superinfection, I do not worry at all. Maybe that sounds crazy, but I can't control it anyhow. So "Who cares?" I mean, if I never had sex again, and if I stayed home to watch television all the time, my viral load could increase. And if I were to fuck my brains out, then my viral load could increase as well. So to abstain from everything is a theoretical possibility but not human at all. (Participant aware of status for 2 years, no steady partner)

Second, participants reported that practicing sex was already difficult enough because of their HIV infection. They argued that it would be easier to quit sex than to take the risk of HIV superinfection or STDs into account. Finally, some participants mentioned the lack of empirical evidence on HIV superinfection, so they did not perceive this risk as severe enough to avoid unprotected sex for their or their partners' health. For instance, one participant in a seroconcordant relationship discussed how the medical debate on HIV superinfection had influenced their decision to practice unprotected sex:

> We don't believe in HIV superinfection or other senseless terms. I think one is HIV-infected or not and I don't make a distinction any further. It's a very medical debate to me, which doesn't mean much to me in daily life. (Participant aware of status for 5 years, HIV-positive partner)

Although the effect of an undetectable viral load on the infectiousness of an HIV-infected person is still under investigation, there is some evidence that the transmission rate of HIV decreases significantly in relation to an undetectable viral load (Fideli et al., 2001; Quinn et al., 2000). When the participants were asked about this issue, it appeared that all participants had heard about the relationship between successful treatment with HAART and a decreased transmission rate of HIV. Contrary to what is generally found (Ostrow, 1999), there was consensus that a low or undetectable HIV RNA level does not mean that the risk of either transmitting HIV to a sex partner or becoming (super)infected from an HIV-positive sex partner with HIV therapy is negligible. Most interviewees argued that an undetectable viral load HIV should not be used as an indicator of decreased or nonexistent infectiousness, because the virus might still be present in the body. In their opinion, a low or

undetectable viral load was no reason for not using condoms when having sexual intercourse.

Personal Norms: Feeling Responsible

Awareness of the risk of transmitting the virus to sex partners seemed to be closely related to feelings of personal responsibility for safer sex among the participants. Following Rosengarten et al. (2000), we could identify two types of responsibility: sole and shared. In addition to these two types of responsibility, we found a third type, which can be defined as no responsibility. Participants who adhered to the first type of responsibility were very explicit about their responsibility for protecting their sex partners from infection. In general, these participants believe that they bear 100% responsibility for safer sex behavior. That does not necessarily imply that they do not consider their sex partners' role in safer sex behavior. However, rather than focusing on their partners' role in preventing HIV transmission, they tended to focus on the key role they themselves play in the possible health consequences of unprotected sex for their sex partners. Some participants compared being HIV positive with carrying a poisoned needle or a rifle:

> In my opinion it is the primary responsibility of the HIV-positive person to ensure that safe practices are followed. The person who is HIV positive has the weapon in his hands. Of course, the partner should make the effort to protect himself, but the HIV-infected person has the weapon. I think that he is, therefore, responsible for protecting his partner. (Participant aware of status for 11 years, no steady partner)

Typically, most participants who thought they had the sole responsibility for safer sex reported that they would have qualms about practicing unprotected sex and spoke in terms of moral conflicts with the possibility of infecting a sex partner. For example, one participant stated, "Suppose I would infect someone . . . that would definitively imply the end of my quality of life. It would make me sick in my head." In general, these men were highly motivated to practice safer sex.

The second type of responsibility was a type of shared responsibility. According to the participants who adhered to this type of responsibility, both sex partners are equally responsible for having safer sex, and as a consequence, both sex partners should shoulder the responsibility for not infecting others. Some participants mentioned that sex partners are equally informed about HIV-related risks. Others pointed out that they also accepted responsibility for their own illness and that they never blamed anyone else for their infection. In addition, a couple of respondents said that as there are also risks related to unsafe sex for PWHA, sex partners should also accept responsibility for safer sex. Several participants explicitly opposed the idea that they alone are accountable for unsafe sex. One participant pointed out that an extra responsibility for HIV-infected people could easily be interpreted as victim blaming and expressed his surprise about this viewpoint:

> Suppose I had sex with you. I mean we meet and you want to fuck me. I pull off the condom and you fuck me. Who is responsible? I'm responsible, because I'm HIV positive. However, suppose I fuck you. You pull off the condom, I put on the condom, and you pull of the condom again and I think, okay, let it be. Who is responsible? Again the answer is the HIV positive. And I personally think that is weird. In

> my view the HIV-negative person was responsible. But the contrary is true; the HIV-positive is considered guilty, because he is expected to be the strongest in all circumstances. I think that is astonishing, because two people were involved. (Participant aware of status for 5 years, HIV-positive partner)

Finally, a small number of participants adhered to a type that can be identified as no responsibility. Those men denied any responsibility for protected sex, and in sexual encounters, they typically leave it to their sex partners to take the initiative for protected sex. They reasoned that everybody is responsible for his own deeds. According to them, having sex goes hand in hand with accepting HIV-related risks. As a consequence, that absolves them from protecting their sex partners.

> Responsibility for safe sex is always everybody's own responsibility. It has nothing to do with the fact that you are HIV positive or not, nor if you are being fucked by someone or that you fuck somebody else. You can't blame somebody else. You are responsible for your own deeds and in that case it is sex, lust. (Participant aware of status for 19 years, no steady partner)

Responsibility and Behavior: The Role of Contextual Influences

From the data it was clear that a distinction needed to be made between feelings of responsibility and actual behavior. When the interviewees spoke about the way they handled the issue of responsibility for safer sex in sexual interactions, it appeared that they did not always act according to their beliefs of responsibility for safer sex. For example, several respondents held the opinion that both partners share responsibility for safer sex. However, in sexual encounters, they were more likely to take sole responsibility for safer sexual practices. This was expressed in changing risk behavior and the practice of protected sex (at least most of the time). One participant explained,

> In theory I'm not responsible for the HIV status of others. Others are completely responsible for their own status. But in practice, actually the fact is that I wouldn't want to have that on my conscience. And I wouldn't want someone to think he would get it from me. So I practice safe sex, at least safe for the other. So apparently in practice, I feel quite responsible for the HIV status of others. Yeah, I think there is quite a big difference between theory and practice. (Participant aware of status for 12 years, no steady partner)

Other participants behaved in precisely the opposite way. Although they claimed to believe that sex partners share responsibility for safer sex, they also described some situations in which they were inclined toward a practice of taking no responsibility.

> Most of the time I feel very responsible for protecting sex partners, but sometimes not. Sometimes it just wears me out. I have practiced unprotected sex a couple of times. At that time the deal was not to come. In my opinion that was okay, but I thought why don't you bring up the subject; why do I always have to be the first? I mean it's also their responsibility. Of course I know the right answers, but it all happens within a few seconds. (Participant aware of status for 5 years, HIV-positive partner)

This discrepancy between feelings of personal responsibility and actual behavior is influenced by interpersonal and situational factors. Based on the interviews, we were able to identify three factors that affected feelings of personal responsibility for safer sex and its relationship with actual behavior: partner type, social norms, and sex partner characteristics.

Partner type. As previously noted, most participants who were in a steady relationship reported that HIV had a major impact on their sexual relationships. Awareness of the danger of transmitting the virus to their steady partners caused substantial stress. Consequently, most participants reported that they were highly motivated to practice protected sex. Although participants reported that HIV also had influenced their sex lives with casual partners because they might transmit the virus, the stress associated with having sex and the issue of responsibility appeared to be reduced:

> It's typical, but I don't feel as responsible to casual partners as to my boyfriend. I do feel responsible and I would behave identically, but I know that it is not the same as with my boyfriend. It's not that frustrating. (Participant aware of status for 6 years, HIV-positive partner)

The findings might be related to the sexual culture of casual and anonymous sex partners; it seemed that the anonymity of sexual encounters influenced perceptions of personal responsibility for safer sex. Casual or anonymous sex contacts were described in terms of sexual desire and enjoyment, and less in terms of the commitment and emotional involvement they described when discussing steady partners. According to the participants, they regularly had sex with men with whom they did not exchange a single word. Moreover, participants argued that everybody who is intentionally looking for casual sex contacts should be aware that those encounters are lust or sex oriented and that some risks might be involved. As a consequence, they argued, they should not bear the responsibility alone for curtailing the epidemic:

> Well, for casual partners I don't feel responsible. That's probably also because of the places I visit when I search for partners, as they are there specifically for sex. At a party, for instance—well, those are specifically for sex. I mean, somebody has also his own responsibility for dealing with sex then. (Participant aware of status for 3 years, no steady partner)

Social norms. The influence of social norms and rules appeared to be especially important in the context of casual and anonymous sex contacts. For many of the men who took part in the study, their views on personal responsibility were framed by the norms of the gay culture in which they have sex:

> Suppose someone says that he couldn't care less if someone else uses condoms. Subsequently, I think, well, I'm not the only one. I mean, you search for confirmation of your own norm. And the social context creates the norm. If you see that people have unsafe sex all the time, why would you have safe sex then? (Participant aware of status for 2 years, no steady partner)

According to the participants, perceptions of responsibility for safer sex were shaped not only by their perceptions of others' behavior but also, as described below, by pressures exerted by their sex partners to participate in unprotected sex.

> It is not my intention to ejaculate in the mouth of my partner, but some men insist on it. In the beginning, I was very careful, but then I thought, why should I be so concerned? I mean, if you see what is going on, people should determine for themselves whether or not they are willing to run the risk. After all, it is their own risk. (Participant aware of status for 19 years, no steady partner)

Sex partner characteristics. Perceptions of responsibility among study participants were also influenced by partner characteristics. For instance, it appeared that a partner's physical attractiveness (i.e., how "gorgeous" he is) could influence perceptions of responsibility in two directions. First, when a man feels attracted to a person, and there is a possibility that a relationship could develop, he might be very keen to ensure protected sex to avoid being blamed afterward. Second, feeling attracted to a person might also increase his willingness to participate in unprotected sex, if he is "desperate" for sex (and is afraid to go home alone).

> Suppose, he's really stunning, and you would have told it [HIV-positive status] to him. And he says, I don't give a damn. And you would only see him once; then you're really put to the test. (Participant aware of status for 14 years, HIV-positive partner)

In addition, some participants reported that they searched for clues to handle the issue of responsibility for safer sex. Assuming responsibility for safer sex might be less obvious when a sex partner seems to be able to make his own informed consent decisions concerning sexual risk behavior. Examples of such indications were age and risk-taking behavior. One participant said that he would be more willing to protect a younger partner than an older one; at the same time, he said that he would feel less personal responsibility for protecting a partner "who should have known better":

> You will check it on the most absurd things. For example, if he is a very nice boy of 18, you don't want to spoil that. So I protect him, because he is such a nice boy. But suppose it's a tourist in Amsterdam who fucks without a condom? I think, he should have known better. Suppose he is good-looking and he is interested in me? Then maybe after all I would fuck him without a condom because I might think, he travels by air tomorrow and will be gone anyhow. (Participant aware of status for 17 years, no steady partner)

Negotiating Safety and Sexual Risk Behavior

Within steady relationships. Most participants who had a steady partner at the time of the interview reported that after the HIV-positive diagnosis, they moved from unprotected sex to protected sexual behavior within their steady relationships. Having protected sex, however, included several strategies. Some participants reported that they practiced protected sex by using condoms for anal intercourse and avoiding oral sex with ejaculation. Others reported that they engaged in

oral sex without ejaculation and refrained from having anal sex. Three participants (in both serodiscordant and seroconcordant relationships) described occurrences of unintended unprotected sex. Negotiating safety seemed especially difficult when they experienced pressure from their partners to engage in unprotected sex. Reasons mentioned for engaging in unprotected because of pressure from the partner were not wanting to reject the sex partner and a reduced quality of the sexual experience. For example,

> He gives me a blow job once in a while. And then he never uses a condom. For me that's frustrating, but I don't want to reject him. I mean, I don't want to hurt him. Even before, when I knew he was HIV positive, I didn't want to reject him. And now, I have become resistant to all kind of drugs, and his therapy is very successful. . . . It's always in the back of my mind, suppose it happens anyway [HIV-superinfection]? I try to put it out of my mind. (Participant aware of status for 6 years, HIV-positive partner)

In general, participants noted that unprotected sex was more likely to occur with the passage of time. For example, one participant expressed his concerns about this and said that as a result of instances of unintended unprotected sex, he recently came to an agreement with his partner about not engaging in anal sex. He noted, however, that this was very difficult for him, because he likes anal sex very much:

> Let me tell you, several incidents have happened, so there have been situations in which we had sex without condoms, and I felt very uncomfortable about that. We just have talked that over and ever since we use other sex techniques that are also nice and pleasurable. But it [anal sex] is an issue that I want to bring up again because I miss it myself. I do miss it. (Participant aware of status for 16 years, HIV-negative partner)

Some participants reported that they continued to practice unprotected anal and oral intercourse. One participant reported that he and his partner decided to engage in protected sex immediately following notification of his HIV infection. However, eventually this developed into a pattern of inconsistent condom use.

> It is actually very odd. In the beginning we really had safe sex, but at a certain moment we started having unprotected sex. I participated too. I must say that I'm the one who is penetrated and that is not as unsafe as when I would fuck him. But actually, it is all some kind of excuse. I began to feel really uncomfortable about that. But we have spoken about it and without a condom you have more intimacy, for sure. Within a relationship you want to be close. (Participant aware of status for 16 years, HIV-negative partner)

When both partners are HIV positive, other reasons might lead to the practice of unprotected sex. For example, two participants reported that they had chosen to practice unprotected sex within their steady relationships because they did not consider HIV superinfection to be a serious risk to their health.

With casual or anonymous sex contacts. Eight respondents reported that they always practiced protected sex with casual partners. Most of these men said that they were concerned that they might infect their partners and that they just could not have sex without using condoms. Some of them, however, reported that they

avoided the risk of HIV transmission by engaging in oral sex without ejaculation or that they just kissed with casual partners or engaged in mutual masturbation. Several participants reported that they "negotiated safety" by selecting seroconcordant partners. Having sex with a person who is also HIV positive results in less worry about the risk of transmitting the virus. Interviewees reported that as a consequence, they felt more comfortable and could enjoy sex more, regardless of whether they practiced safer sex during those sexual encounters. Some used this strategy specifically to facilitate unprotected sex. For example,

> I don't want a relationship with somebody who is HIV negative, partly out of fear of having sex and the need to protect him . . . I mean it is very practical if the other is infected too. You don't have to deal with the fact that you can transmit the virus to the other person—and then condoms are no longer an issue. (Participant aware of status for 6 years, no steady partner)

In general, however, incidents of unprotected sex within the context of casual and anonymous sex were described as accidents rather than as calculated risk taking and were attributed primarily to willingness of the sex partner not to use condoms.

> It has happened, although not very often, that someone insists on doing it without using a condom. I was very horny at that time. And I thought if it doesn't happen right now, I go home alone. So at that time I did it without a condom and hoped for the best. (Participant aware of status for 14 years, HIV-positive partner)

Other accounts of unprotected sex were attributed to intense feelings of falling in love, feelings of desire, or "change of a lifetime." Not having condoms on hand and embarrassment about proposing condom use were also mentioned. For example, one participant explained that he feared that he would immediately be labeled as having HIV and would be rejected:

> It's easier for me when the other person proposes condom use. Because if it depends on me . . . I have more difficulties doing so. Because once someone said to me, "Oh I hope you don't have AIDS." So, for me, it's very hard to bring up the issue of condom use. (Participant aware of status for 7 years, HIV-positive partner)

Disclosure

To gain further insight into the ways in which participants coped with the issue of disclosure, we asked them if they shared their serostatus with sexual partners. The responses suggested that a distinction should be made between disclosure to a steady sex partner or someone with whom a long-term relationship might develop and, on the other hand, casual or anonymous sex contacts. With regard to casual and anonymous sex contacts, most participants reported that they avoided disclosure of their HIV status because they feared rejection. In addition, participants reported a concern for their anonymity if they were to disclose their HIV status, because PWHA are still stigmatized. Arguments for nondisclosure were also linked to the typical culture of casual and anonymous sex. First, communication about HIV-related risks and condom use rarely occurs. Second, because most of those contacts

are once only or short term, they often lack trust and emotional intimacy. Both aspects make disclosure more problematic, as is illustrated by the citations below.

> Yeah, well, you know what it is—anonymity has its own character. It's so odd, I mean . . . it's about sexuality and it's a very open atmosphere, but there is a code. It would be a letdown if I met someone and I think, oh gee, he looks gorgeous and he thinks the same of me and something happens. You know? What if I said, listen, we have to watch out a little, because I'm HIV-infected . . . lust will go out totally. (Participant aware of status for 1 year, HIV-negative partner)

> When you meet someone you're interested in, for sex I mean, and you would mention that you're HIV positive, lust will soon come to an end. (Participant aware of status for 12 years, no steady partner)

Some participants reported that they had disclosed their HIV-positive status to casual sex contacts a couple of times. However, because they had been rejected after disclosure of their status, they decided to stop disclosing. Other participants argued that disclosure was unnecessary because they made sure of safer sex practices:

> I used to mention that I'm HIV positive, but now I look after protected sex. (Participant aware of status for 7 years, HIV-positive partner)

Exceptions were made for sexual contacts with whom participants might become closely attached (for example, when having sex repeatedly with the same partner or when feelings of friendship begin to develop). Particularly in these encounters, it seems to be important not to delay disclosure too long, because it might be perceived as dishonest and might also raise the risk of rejection by a partner.

> Sometimes I have one-night stands; sometimes I have sex with them more often. And when I have sex with them more often, I have to tell them that I'm HIV positive. Because when it's the second or third time, there's more confidentiality, the anonymity is gone. Then I think it should be clear; it should be transparent. (Participant aware of status for 5 years, no steady partner)

All participants agreed that they would disclose their HIV-positive status as soon as possible to a new steady partner. Informing a steady partner of their serostatus was unanimously seen as necessary for developing a trusting and satisfying relationship.

Only a few participants reported that they (nearly) always disclosed their serostatus to casual or anonymous sex partners. For these men, disclosure offered the opportunity to negotiate safer sex with their sex partners. Typically, it gave them a feeling of greater control over the situation. In addition, disclosure provided the opportunity to shift the responsibility for practicing safer sex to the partner. After disclosing HIV status to sexual partners, it was easier to argue that it is the responsibility of the potential sex partner to practice safer sex.

> When I meet an attractive person, I always try to communicate in one way or the other that I am HIV positive. Then he knows immediately what is going on. When he is sure that he can handle the situation, then he can make his first move. (Participant aware of status for 8 years, no steady partner)

DISCUSSION

This study shows that confrontation with an HIV-positive diagnosis had far-reaching implications for general well-being and sexual functioning. The initial diagnosis of HIV was often met with shock and denial. Participants reported feelings of shame, self-blame, and depression, emotions that are well documented in the literature (e.g., Alonzo & Reynolds, 1995). In addition, most HIV-positive MSM reported significant changes in sexual behavior, such as curtailing sexual activity and having fewer sex partners, for several reasons. First, most participants struggled with the altered meaning and consequences of unprotected sex. Whereas unprotected sex before diagnosis was directly related to risks to their own health, after diagnosis unprotected sex is mainly associated with the risk of transmitting the virus during sexual intercourse. This realization diminished the enjoyment of sex for most participants and left them feeling anxious and tense. Second, many participants suffered from sexual problems because of physical complaints brought on by the treatment regime or HIV itself. Third, some participants reported that sexual problems were related to negative feelings about their physical appearance (see also Catalán, Klimes, Bond, & Day, 1992; Dukers, Stolte, Albrecht, Coutinho, & De Wit, 2001; Gochros, 1992; Quadland, 1992; Sherr, 1995). Personal HIV-related risk seemed to play a less important role in sexual problems experienced by the study participants. Although most were aware of the risk of HIV superinfection and STDs for their own health, only half of the respondents reported that they were motivated to practice safer sex to protect themselves. The other half did not consider HIV superinfection and STDs a serious risk to their own health. It should be noted that at the time of the interviews, there was little evidence concerning the possibility of HIV superinfection. However, this has changed recently, as several studies have been published indicating that HIV superinfection is, in fact, possible (e.g., Jost et al., 2002; Ramos et al., 2002). Future researchers should investigate the relationship between concerns about HIV superinfection and sexual risk behavior among HIV-positive MSM.

Despite the impact of HIV on life in general and sexual life in particular, over time most participants found a way to express their sexuality. Nevertheless, it was found that HIV still has a significant impact on sexuality and intimacy in the long run and can generate all kinds of emotional difficulties. Coping with the negative impact of HIV on sexuality seemed to be especially difficult within steady relationships, in which both partners are insecure about the dangers implicit in sex.

The results of this study confirm previous research findings that feelings of personal responsibility are central to the impact of HIV on sexuality and the decline in sexual risk behavior (e.g., Fisher et al., 1998; Godin et al., 1996; Keogh, Weatherburn, et al., 1999; Nimmons & Folkman, 1999; Rhodes & Cusick, 2002; Rosengarten et al., 2000; Wolitski, Bailey, et al., 2003). It was glaringly apparent that the majority of participants not only worried about the possibility of transmitting the virus to their sex partners but also felt responsible for the health of their sex partners. It seemed that both moral concerns ("unprotected sex is wrong") and social concerns (avoidance of blame by others) played a key role in their resolve to practice safer sex with both steady and casual or anonymous sex partners. Only a small minority of participants claimed to take no personal responsibility for safer sex and reported that engaging in safer sex practices depended on what a sex partner wanted.

The relationship between feelings of responsibility and engaging in safer sexual practices documented in this study warrants further investigation. Although feelings of personal responsibility and safer sex seem to be closely related, in some situations there appeared to be a discrepancy between feelings of personal responsibility and behavior. First, it was found that partner type influenced feelings of personal responsibility. In general, the strain of sexuality and feelings of personal responsibility were found to be less burdensome within the context of casual or anonymous sex partners than within steady relationships. This finding can be explained by feelings of closeness and the recognition of common interests. In research on prosocial behavior, both factors have been found to induce feelings of social or personal responsibility (De Cremer & Van Dijk, 2002; Messick & Brewer, 1983; Schroeder, Penner, Dovidio, & Piliavin, 1995). The results suggest that with casual or anonymous sex partners, the feelings of responsibility are influenced by the nature of sexual encounters. The men who took part in this study described a shared understanding of sex with casual or anonymous partners as primarily lust oriented. Casual and anonymous sex partners were perceived to be aware of the risks they might be taking, which diminished feelings of personal responsibility for safer sex. A second factor that influences the relationship between feelings of personal responsibility and behavior is the perception of the behavior of others. When others are not using condoms, this provides a standard for the participants' behavior. Moreover, direct pressure from sex partners to engage in unprotected sex was viewed as a barrier that affects their decisions regarding protected sex. Third, the results suggest that partner characteristics also affect feelings of responsibility and the likeliness that protected sex might occur. For example, attractiveness might both enhance long-term ("we might develop a steady relationship") and inhibit short-term ("I don't want to risk this sexy person walking out on me") feelings of personal responsibility. Furthermore, respondents seem to negotiate feelings of personal responsibility by searching for clues that indicate the level of equivalence between the two. The more similar the sex partner is with regard to appearance and background, for example, the less likely one is to assume responsibility for practicing safer sex. Recently, Wolitski, Bailey, et al. (2003) found comparable factors that influenced beliefs about personal responsibility for safer sex among HIV-positive MSM.

In addition, our data show that the majority of the participants have adopted safer sex practices since their HIV diagnosis. Nevertheless, many reported the occasional occurrence of unprotected sex. In some cases, unprotected sex within steady relationships might be a deliberate choice when both partners are HIV positive. In addition, this study suggests that the occurrence of unprotected sex within the context of steady relationships might increase over time and could be attributed to emotional arguments, such as feeling the need to be intimate with each other and not wanting to reject the partner. Moreover, because of the reduced quality of sexuality within a steady relationship, the ability to negotiate condom use might decline (Hankins, Gendron, Tran, Lamping, & Lapointe, 1997).

The most frequently cited reason for the occurrence of unprotected sex within casual or anonymous sex contacts was the willingness of the sex partner to engage in unprotected sex. Other reasons mentioned were feelings of passion and desire. Similar reasons for the incidence of unprotected sex have frequently been reported in research on sexual risk behavior among MSM (Offir, Fisher, Williams, & Fisher,

1993). Yet another explanation for the occurrence of unprotected sex with casual or anonymous sex contacts was "serosorting." Some respondents reported that they "negotiated safety" by selecting partners who are also HIV positive. Moreover, in accordance with other studies (Kalichman & Nachimson, 1999; Marks, Richardson, et al., 1991; Perry et al., 1994; Stein & Samet, 1999; Wenger et al., 1994), it was found that most participants were reluctant to disclose their HIV-positive status to casual or anonymous sex partners. Reasons for not disclosing their serostatus were fear of and actual stigmatizing and rejection by sex partners. Only a few participants reported that they informed their sex partners about their positive status or that they asked their sex partners about their status. Based on this strategy, they avoided unprotected sex or shifted the responsibility for safer sex to the sex partner.

Although this study offers valuable information on sexual risk behavior among HIV-positive MSM, it should be noted that there are limitations to our sampling method. The study sample was self-selected, which might have led to a bias in the presentation of the study results. However, by using several sampling methods supplementary to each other, we have attempted to reduce the possible bias arising from selecting a sample on the basis of convenience (Ritchie, Lewis, & Elam, 2003). Nevertheless, generalizations to the total population of Dutch HIV-positive MSM and other HIV-positive populations should be treated with caution.

IMPLICATIONS FOR PRACTICE

The results of this study offer several important implications for HIV-preventive activities for HIV-positive MSM. First, because many participants reported sexual problems after diagnosis with HIV, it is crucial that HIV-preventive interventions for HIV-positive MSM not only target the health-promoting behavior of using a condom every time during anal intercourse but also address the broader area of sexual health. In this respect, more attention should be given to assessing and treating sexual dysfunction in HIV-positive MSM (Catalán, Burgess, et al., 1995). Moreover, HIV prevention programs should include clear and specific information about the medical findings regarding the risk of HIV superinfection and the relationship between undetectable viral load and HIV transmissibility. Failure to meet the information needs of HIV-positive MSM might result in continued confusion about HIV-related risk and might lead some people to discount the relevance of prevention messages (Wolitski & Branson, 2002). In addition, specific attention should be paid to the issue of personal responsibility for safer sex. Several researchers have argued that prevention programs should incorporate methods that promote feelings of responsibility for safer sex. However, overemphasizing personal responsibility might increase feelings of guilt and shame, and could interfere with the well-being of HIV-positive MSM (see also Guttman & Ressler, 2001; Tangney & Dearing, 2002). Moreover, this study shows that most respondents feel personally responsible but are faced with several complex challenges. HIV-preventive interventions should provide HIV-positive MSM with support to face the dilemma of personal responsibility and to cope with these challenges. It seems essential to enhance skills and self-efficacy to handle risk pressure and to negotiate condom use by means of, for example, instruction and modeling (Bandura, 1997). A possible way to address sexuality and safer sexual behavior in practice are brief counseling techniques that have been effective in improving sexual functioning in cancer patients. Typically those inter-

ventions focus on (a) assessing sexual problems; (b) providing information on the impact of the illness on sexual drive, behavior, body functioning, and body image; and (c) giving reassurance to the participant (and his partner), improving their communication and finding alternative ways of expressing affection (Tan, Waldman, & Bostick, 2002). The techniques of motivational interviewing described by W. R. Miller and Rollnick (2002) can be useful to target safer sexual practices of HIV-positive MSM.

In addition, it seems imperative to make protected sex practices (e.g., condom use) more acceptable within the gay community. Recently, Flowers, Marriott, and Hart (2000) demonstrated the importance of locale and location on gay men's sexual behavior. In accordance with this finding, Prieur (1990) reported that the lack of a social network and supportive environment were the most important factors underlying the continued practice of unsafe sex. Stimulating the development of social networks by encouraging helpful relationships that enhance safer sex norms might be a very powerful tool in promoting safer sexual behavior (Prochaska, DiClemente, & Norcoss, 1997). For example, Kelly et al. (1992) showed that trained patrons of gay bars can be effective in changing behavior and norms.

In conclusion, the current study provides a valuable basis for future research by offering new insights that clearly distinguish HIV-positive MSM from other at-risk groups for HIV prevention. In addition, to gain more profound knowledge on the factors that influence sexual behavior, the results of this study deserve further investigation.

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