

THOUGHTS ASSOCIATED WITH UNPROTECTED ANAL INTERCOURSE AMONG MEN AT HIGH RISK IN SAN FRANCISCO 1997–1999

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Men who had high-risk sex with men in the previous year ($N = 124$) were asked to recall their thought processes at the time they last had unprotected anal sex with a man who was HIV-positive or of unknown serostatus. Self-justifications for non-condom use were examined individually and in internally validated scales. The most common single self-justification was *I want to have unprotected sex because it feels good*, endorsed by 76%. Other common thoughts included the notion that it is only human to slip up occasionally (59%) and the resolution to withdraw before ejaculation (59%). For scaled items, the most strongly endorsed themes were: (1) that condoms reduce sexual pleasure (any of 6 items endorsed at least slightly by 90%); (2) fatalism or leaving it to chance (11 items, 81%); and (3) loss of control (9 items, 77%). The thoughts and themes identified may be useful in planning individual and community prevention messages.

Keywords: HIV/AIDS; High-risk sex; Gay men; Self-justification; Behavioral intervention; Condom use

INTRODUCTION

After years of vigorous AIDS prevention efforts and marked behavior change among men who have sex with men (MSM), the incidence of HIV infection in San Francisco had fallen substantially by the mid to late 1980s (Katz, 1997). As a result, HIV infection is now an endemic condition in San Francisco with the incidence of new infections remaining essentially stable over the past nine or ten years (Schwarcz *et al.*, Submitted). However, the grip that the threat of HIV infection has had on the behavior of MSM in San Francisco appears to be weakening. Recent increases in rates of rectal gonorrhoea have been reported (Page-Shafer *et al.*, 1999), and cross-sectional and longitudinal behavioral studies (Ekstrand *et al.*, 1999; Page-Shafer *et al.*, 1999) as well as clinical experience certify that unprotected anal sex is resurfacing at an increased rate.

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These data not only suggest that HIV prevention efforts aimed at MSM must continue, but also highlight the need for new strategies. One prevention strategy that may offer benefit is an HIV risk reduction counseling approach based on a cognitive understanding of risk behavior. This approach is based on identifying and modifying an individual's "self-justifications," that is an individual's thoughts, beliefs, and attitudes toward risk-taking in specific situations. These self-justifications are seen as the mediators of the "decision" to engage in unprotected anal intercourse—a behavior known by those who engaged in it as a high-risk behavior (Gold *et al.*, 1991, 1994; Gold and Skinner, 1996). These "self-justifications" are thought of as similar to the "self-statements" or "internal dialogue" that cognitive therapists have long described as being causally related to unwanted symptoms and behaviors (Ellis, 1962; Beck, 1976).

Ron Gold *et al.* have been the primary researchers in this area and have reported the most common self-justifications endorsed by MSM in Melbourne and Sydney. For example, Gold reported that among a sample of 219 Australian men recruited in 1988, the most common self-justification endorsed by the sample who had unprotected anal intercourse was the resolution to withdraw before ejaculating (Gold *et al.*, 1991). Later, Gold reported that among young MSM, aged 15–21, the most common self-justification was the idea that, "He looks so healthy, he can't possibly be infected" and "If I (or he) withdraws before ejaculation the risk is minimal" (Gold *et al.*, 1994; Gold and Skinner, 1997). The presence of these ideas among men who had engaged in unprotected intercourse (both insertive and receptive) was investigated at the moment of sexual tension, the penultimate thought or idea present in the participant's mind before the actual unsafe sex act. Gold's work attempted to isolate the thoughts that "allowed" the unsafe act to occur. Gold described these ideas as examples of "on-line" or "heat of the moment" thinking: thinking influenced by the rush of desire. The theory further suggests that because of the individual's level of arousal, insufficient information-processing capacity was available for the individual to be fully rational, thereby allowing the desired, though known dangerous activity, to occur.

If true that the presence of certain self-justifications are related to unsafe behavior, it should follow that modifying or arresting these ideas would reduce the incidence of this behavior. To test this construct, Gold further hypothesized it may be possible to influence "on-line" thinking by working with men to identify and evaluate these thoughts in the "off-line" state – thinking away from the "heat of the moment" and "in the cold light of day." He conducted a study in which he asked men to identify retrospectively the self-justifications present at the time of their decision to have unsafe sex and reevaluate the self-justification in an "off-line" setting. He recruited a group of 109 men who had broken their own safe sex rules by having unprotected anal intercourse and asked them to keep diaries of their behavior for 16 weeks. After 4 weeks, the men were assigned to one of 3 conditions: an intervention aimed at identifying the participant's self-justifications, a standard AIDS prevention approach that involved observing posters used in AIDS education, and a control or diary only group. Self-report follow up was conducted at 8 and 16 weeks. The self-justification intervention asked men to recall their thoughts at the time they decided to have unsafe sex and to identify the self-justification used. Then they were asked to indicate how reasonable each justification seemed looking back on it, and to justify their responses. Those in the poster condition were sent AIDS education posters exhorting the reader in various ways to

have safe sex. The control group received no educational intervention. A brief questionnaire was then completed by the participants and returned. After the intervention period, the three groups did not differ in the incidence of sexual activity or in the proportion who “slipped up” at least once, but the self-justification intervention group was less likely to have had multiple slip-ups (Gold and Rosenthal, 1995).

We wondered if extending this work to include an individual, face to face counseling session designed to focus on the individuals’ self-justifications would be effective in reducing high-risk behavior. To address this question, we conducted a longitudinal, randomized, controlled study of a face to face counseling intervention for HIV negative MSM in a high incidence AIDS area (San Francisco, CA) between 1997 and 1999. Gold’s questionnaire was used during baseline interviews to identify cognitions of men randomly assigned to receive the study counseling intervention. We report here on the baseline data, focusing on the self-justifications we found among our cohort.

METHODS

Participants

The target population for the intervention was high-risk, HIV-negative MSM. High-risk was defined as any unprotected anal intercourse (either receptive or insertive) in the past 12 months with a man whose HIV-status was either positive or unknown. To be eligible, a man had to be between 18 and 49 years of age, and have a history of at least one prior HIV-negative antibody test (6 months ago or more). Men were recruited into the study when they called to schedule an anonymous HIV antibody test between May 1997 and January 1999. Those who reported intravenous drug use during the previous twelve months were excluded since the physiological imperative of drug use itself, especially in those who are addicted, seemed to us to make this behavior less amenable to influence by cognitive processes at the time of needle use. In addition, the measures validated by Gold and used in our study focus entirely on sexual behavior and no similar measures exist that address thoughts associated with injection drug use. Of 3721 calls to schedule an anonymous HIV antibody test during the study period from self-identified men who have sex with men (MSM), 573 or 15 percent were from MSM initially determined to be eligible for the study. Of these, 248 (43%) consented to participate. Those eligible who refused participation did not differ from those who agreed to participate in terms of race or age.

Consistent with the enrollment criterion, all subjects reported unprotected anal sex with a man known to be HIV-positive or of unknown serostatus in the preceding year. The median number of anal sex partners in the last year was 5 (mean: 8.7). The median number of unprotected anal sex episodes in the last 90 days for all types of partners was two. Having a primary partner who was known to be HIV-positive was reported by 13.3% of participants; 30.6% had other HIV-positive partners within the last 90 days. A total of seven MSM (2.8%) tested HIV-positive at enrollment; their data are included in this baseline data. No risk behavior variables were significantly different across four treatment groups. Somewhat more participants with a history of gonorrhea (chi-square test, 2.79; $p=0.095$) or any STD (chi-square, 3.11; $p=0.078$) in the last year, however, were randomized to receive the counseling intervention.

Measures

Demographic characteristics and HIV-risk-related behaviors were assessed in a structured face-to-face interview. (See Table I) Age, race, income, and education for participants, as well as testing history and history of lifetime and recent anal sex partners and STD history was collected. Data is shown by comparing those randomized to the counseling intervention ($N=124$) and those not receiving the counseling intervention ($N=124$).

A self-justification questionnaire was constructed based on an instrument developed and field-tested by Gold (Gold, 1996, personal communication). The original instrument presented a list of possible self-justifications for having anal sex without a condom. For each self-justification presented, the participant recorded how strongly the thought had occurred to him the last time he had unprotected anal sex using a Likert scale where 1 equaled "very true" or "had thought strongly" and 4 equaled "not at all true" or "didn't have thought." The response, "Can't remember at all" was also offered as a response to each self-justification. Examples of self-justifications are provided in Tables II and IV. We modified the self-justifications to reflect American English and incorporated terms in common usage by the local gay community. Additional questions were included to address current issues. For example, the availability of new anti-retroviral treatments were offered as self-justifications, e.g., "I'm not too concerned about being infected with HIV because the new treatments (protease inhibitors, the "cocktail") make HIV a manageable disease." After pilot-testing the adapted instrument among 40 MSM seeking anonymous counseling and testing, a few items were added and further revisions were made to the wording of a few questions. The final questionnaire offered 102 potential self-justifications for unprotected anal sex.

Using a Varimax rotation factor analysis, Gold identified 4 scales, or factors, (Gold *et al.*, 1991) from his original 56 items that were the most commonly endorsed. Factor 1 consisted of items having to do with inferring whether the partner is likely to be infected with HIV from characteristics, or the manner in which he looks, speaks, or behaves. Factor 2 had to do with bargaining or special pleading, with the apparent implication that the participant "deserves" to be protected from the infection because of past efforts to behave safely. The third factor or scale involved items that denote a fear of making a negative impression on the partner. Factor 4 involved items that suggested that the participant was somehow "naturally" protected from infection.

Procedures

Participants were screened when they called to schedule an appointment for anonymous or confidential HIV antibody counseling and testing. Callers meeting criteria and expressing interest in the study were scheduled to meet study personnel at the testing site. Before HIV antibody testing was conducted, participants provided informed consent, completed the baseline interviews, and were randomized to one of four groups: (1) standard HIV risk assessment and disclosure counseling; (2) standard counseling plus a 90-day diary on sexual activity, (3) standard counseling plus intervention counseling, and (4) standard counseling plus intervention counseling plus a 90-day diary on sexual activity.

The study interview consisted of a face to face interview to assess risk behaviors, testing history, and demographic characteristics. All subjects completed questionnaires on

sexual behavior and risk, social support, drug and alcohol use, and attitudes toward condom use. Only participants randomized to the counseling intervention groups (groups 3 and 4) completed the self-justifications questionnaire.

Analysis

Analysis of self-justifications at last unprotected anal sex encounter followed several approaches. First, we examined which individual self-justifications were the most frequently endorsed. Second, we hypothesized a priori scales consisting of items related to identified themes. We tested the internal reliability of the hypothesized scales using Cronbach's alpha. Scales with alpha's greater than 0.70 were considered reliable. Third, we conducted a Principal Factor Analysis with Varimax Rotation to confirm whether our data distinguished the same four principal themes originally identified by Gold. Finally, we constructed the same four principal self-justification scales identified by Gold and assessed their internal reliability using Cronbach's alpha and their level of endorsement in our study population.

The level of endorsement of the self-justification scales is expressed in two ways. First, we present the proportion of subjects who ranked any item in the questionnaire with a value of 3 or less (i.e., had the thought "at least slightly" or was "at least slightly true"). Second, we calculated a mean response score for all items in the scale. Using Likert scale scores, lower mean score corresponds to higher level of endorsement (i.e., 1 = thought strongly and 4 = did not think at all). When respondents answered "can't remember" on a particular item in the scale or the value was missing, we imputed the mean response from the other items in the scale. We included those who reported that the cognitions were present "slightly" at the time of high-risk activity because it seemed the most conservative approach. It is likely that other factors were at play at the time of the high-risk activity. If the particular thought were in someone's mind even "slightly," however, its presence may have been all that was needed to "tip the scale" in the direction of taking a risk.

RESULTS

Table I displays demographic and HIV risk behaviors of participants, comparing those randomized to the counseling intervention ($N=124$) and those not receiving the counseling intervention ($N=124$). There were no significant differences in demographic characteristics, nor were there any significant differences in HIV risk behaviors noted between groups. Overall, the majority of the sample was White, had an annual income above \$30,000, and held a college degree. The median age was 33 years. The cohort had been tested a median six times before and reported a median of five anal sex partners in the previous 12 months, two of whom were partners within the previous 90 days.

Each of the 102 self-justifications was ranked as a 3 (i.e., "slightly") or less by at least one participant. The most commonly reported self-justification, "I want to have unprotected sex because it feels good," was ranked a 3 or less by 75.8% (Table II). The second item most commonly endorsed, "Most of the time I am careful, but I can't be perfect – it's only human to slip up occasionally," was ranked 3 or less by 58.5%. The third most common reported self-justification was the resolution not to ejaculate (58.1%).

TABLE I Demographic characteristics and HIV risk related factors at enrollment, received counseling intervention ($N=124$) vs. did not receive counseling intervention ($N=124$), men who have high-risk sex with men seeking HIV testing, San Francisco, 1997–1999

<i>Variable</i>	<i>Received Counseling Intervention N (%) or median</i>	<i>Did Not Receive Counseling Intervention N (%) or median</i>	<i>p-value*</i>
Age in years	32.7	32.6	0.912
Race/ethnicity			0.503
White	94 (75.8)	90 (72.6)	
API	8 (6.5)	7 (5.6)	
African American	4 (3.2)	4 (3.2)	
Latino	14 (11.3)	13 (10.5)	
Bi-racial	4 (3.2)	6 (4.8)	
Other	0 (0)	4 (3.2)	
Annual income:			0.769
< \$15,000	17 (13.8)	13 (10.6)	
\$15,000–29,999	36 (29.3)	32 (26.0)	
\$30,000–44,999	34 (27.6)	46 (37.4)	
\$45,000–59,999	15 (12.2)	18 (14.6)	
\$60,000–74,999	8 (6.5)	6 (4.9)	
\$75,000–89,999	6 (4.9)	3 (2.4)	
≥ \$90,000	7 (5.7)	5 (4.1)	
Education:			0.748
No degree	0 (0)	1 (0.8)	
High school/GED	31 (25.0)	26 (21.1)	
Associate	17 (13.7)	18 (14.6)	
Bachelors	52 (41.9)	54 (43.9)	
Masters	22 (17.7)	22 (17.9)	
Doctoral	2 (1.6)	2 (1.6)	
HIV-positive	4 (3.2)	3 (2.4)	1.000
No. times tested previously	6	6	0.684
No. lifetime anal sex partners	25	25	0.958
No. anal sex partners, last 12 months	5	5	0.409
No. unprotected anal sex acts, last 90 days			
All partners	2	2	0.646
Primary Partner	0	0	0.469
Other partners	1	1	0.075
Primary partner HIV-positive	13 (10.5)	20 (16.1)	0.191
Other partner HIV-positive	42 (33.4)	34 (27.4)	0.271
History of gonorrhoea			
Ever	36 (29.5)	31 (25.0)	0.427
Last 12 months	13 (10.8)	6 (4.8)	0.095
History of any STD			
Ever	59 (47.6)	56 (45.2)	0.702
Last 12 months	24 (19.4)	14 (11.3)	0.078

*Chi-square test for differences in proportions; Wilcoxon rank sum test for continuous variables and ordered categories. Totals for categories do not always add up to 124 due to missing data.

More than half (53.2%) of respondents indicated that being the insertive rather than receptive partner featured into their “on-line” decision to have unprotected sex. The item least endorsed was, “Somehow gays must be doing something morally wrong, something against God or Nature. That’s why we’re being punished with AIDS,” receiving the fewest rankings of 3 or less (2.8%).

Of the 16 a priori scales we created, 12 had high internal reliability (Cronbach’s alpha > 0.70). Table III lists the twelve scales ranked from most endorsed to least endorsed based on the percent of the sample endorsing the scale. Table IV presents

TABLE II Most frequently endorsed self-justifications ($N = 124$)

<i>Rank</i>	<i>At the time I decided to fuck without a condom, I thought to myself something like...</i>	<i>% Agreeing at least slightly</i>
1	I want to have unprotected sex because it feels good.	75.8
2	Most of the time I am careful, but I can't be perfect – it's only human to slip up occasionally.	58.5
3	It'll be safe to fuck without a condom, so long as we don't cum in the ass. So, we'll just fuck without cumming.	58.1
4	We take chances every day – after all, it's even taking a chance to cross a road. Taking a risk is a part of life.	57.3
5	I didn't want to fuck without a condom but I was so horny I couldn't think properly."	57.3
6	If I'm on top – the one doing the fucking – my chances of getting infected are low. He's the one at risk, so that's his problem, not mine.	53.2
7	Condoms destroy the magic of sex. How can we suddenly interrupt everything just to put on a condom?	46.0
8	I want to feel what it was like when you could do what you liked sexually, as it was before AIDS.	43.1
9	If this guy was really infected, he'd be a lot more careful about taking a risk than he's being now. The fact that he is willing to fuck without a condom means he can't be infected.	42.7
10	This guy looks so healthy, he can't possibly be infected.	42.7

TABLE III A Priori self-justification scales ($N = 124$)

<i>Scale</i>	<i>Number of items</i>	<i>Cronbach's Alpha</i>	<i>% Endorsing any item at least slightly</i>	<i>Mean score</i>
1. Items relating to condoms reducing sexual pleasure	6	0.70	89.5	3.33
2. Items relating to fatalism or leaving it to chance	11	0.83	80.6	3.60
3. Items relating to loss of control	9	0.76	76.6	3.64
4. Items inferring that the partner is not infected based on looks, speech, or behavior	7	0.81	69.4	3.63
5. Items relating to low self-esteem	7	0.76	53.2	3.74
6. Items relating to non-prescribed safe sex methods or beliefs	8	0.76	51.6	3.80
7. Items inferring that the partner is not likely to be HIV-infected based on information	5	0.76	50.0	3.53
8. Items relating to interpersonal effects of condoms	3	0.89	46.8	3.38
9. Items expressing exhaustion in maintaining safe sex	3	0.70	42.7	3.67
10. Items relating intimacy and emotional need for unprotected sex	5	0.84	37.9	3.72
11. Items relating to new HIV treatments	3	0.82	35.5	3.74
12. Items expressing a favorable attitude to being HIV infected	3	0.91	8.9	3.92

Note: Scale scores: 1 = thought strongly, 2 = moderately, 3 = slightly, 4 = not at all.

the wording of the four most commonly endorsed items in each of the four most endorsed scales. The self-justification scale that was most often endorsed by the sample also contained the lowest mean score (Scale 1), and was constructed of six items relating to "condoms reducing sexual pleasure." The single most commonly endorsed individual item was included in this scale (Table II). The vast majority of subjects (89.5%) endorsed slightly or more at least one item in Scale 1. The scale with the second highest endorsement (Scale 2) related to "fatalism, or leaving it to chance."

TABLE IV Sample Items from the four most commonly endorsed a priori scales

<i>Scale</i>	<i>% Endorsing item at least slightly</i>
<i>Scale 1: Items relating to condoms reducing sexual pleasure</i>	
1. I want to have unprotected sex because it feels good.	75.8
2. Condoms destroy the magic of sex. How can we suddenly interrupt everything just to put on a condom?	46.0
3. I just have to have good sex and I can't have good sex without fucking and I can't enjoy fucking if I use a condom – condoms take all the feeling away.	41.1
4. If I put on (or he puts on) a condom, I (or he) won't be able to get an erection, and the sex will be spoiled.	41.1
<i>Scale 2: Items relating to fatalism or leaving it to chance</i>	
1. We take chances every day – after all, it's even taking a chance to cross a road. Taking a risk is a part of life.	57.3
2. I'll be alright. I've always been a lucky guy and my luck will hold.	40.3
3. The two of us have fucked without a condom before, not so long ago, so there is no point in stopping now.	40.3
4. I'll have one last fling and do only safe sex from then on. I'll be good starting tomorrow – I won't fuck without a condom after this time.	37.4 (123)
<i>Scale 3: Items relating to loss of control</i>	
1. I didn't want to fuck without a condom but I was <i>so horny</i> I couldn't think properly.	57.3
2. When I have sex, I don't want to think about anything at all. I want to enter another world, like a dream, where I can switch off completely. I refuse to think about anything during sex.	35.0 (123)
3. My (or his) cock was rubbing up against his (or my) ass, and it just slipped in by accident. Neither of us really meant to fuck without a condom.	29.8
4. I didn't want to fuck without a condom, but I was <i>too drunk/stoned</i> to be able to stop him from doing it.	17.7
<i>Scale 4: Items inferring partner is not infected by how he looks/speaks/behaves.</i>	
1. This guy looks so healthy, he can't possibly be infected.	42.7
2. If this guy were really infected, he'd be a lot more careful about taking a risk than he's being now. The fact that he's willing to fuck without a condom means he can't be infected.	42.7
3. This guy seems intelligent/well-educated, so I'm sure he's been careful. So he can't possibly be infected.	28.2
4. This guy doesn't seem to be on the scene much (he told me he doesn't get around much/I've never seen him before/he told me he hates the scene, etc.), so he's probably not infected.	27.4

Three scales (4, 6 and 7) involve information, assumptions, or beliefs that minimize the likelihood of HIV transmission in the “on-line” thinking of the participant. Items in Scale 4 infer that the partner is not likely to be infected, based on appearances or assumptions about the partner’s behavior (e.g., “This guy looks so healthy, he can’t possibly be infected” and “I know this guy well and he doesn’t screw around much/at all, so he’s probably not infected”). Scale 6 consists of views that are not upheld by conventional HIV prevention messages or educators, including some items that, at best, have minimal supportive evidence (e.g., “Some people seem to be immune to the virus. I’ve done lots of risky things in the past and have never gotten infected, so I must be one of those people who is immune.”); also in scale 6 are other items not held by the majority of the scientific, public health, or gay activist communities (e.g., “Some scientists say that HIV doesn’t really cause AIDS so I don’t really have to worry about getting infected”). Scale 7 includes items relating to knowledge of the partner’s past HIV-negative antibody test (“This guy told me he

had the AIDS antibody test a while ago, and it was negative. So he's not infected."'). Of note, the notion that HIV does not cause AIDS was one of the least endorsed individual items (6.5%), though this might be expected from a group of men seeking HIV antibody testing.

Several scales (5, 8, 9 and 10) include moderately endorsed self-justifications relating to thought processes that do not try to minimize the likelihood of HIV transmission, but rather describe psychosocial factors that impact the subjects' willingness to take a risk, based on knowing or believing that HIV transmission is possible or likely. Items in Scale 5 relate to low self-esteem (e.g., "I deserve to be infected" and "I'm not very sexually attractive and it's really great that I've managed to get this guy. I just can't afford to be very choosy about what I do. I don't get many opportunities"). Items in Scale 8 refer to the interpersonal impact of condom use (e.g., "I didn't want to fuck without a condom but I was too embarrassed to tell him"). Scale 9 items express a sense of exhaustion in holding one's self to a standard of safe sex (e.g., "I was prepared to give up fucking without a condom for a while because I thought it would be just a temporary thing. But now there seems no end to AIDS in sight – it seems as though it's going to go on forever. I just can't hold out that long; I can't hold out indefinitely"). In Scale 10, non-condom use is attributed to demonstrating trust, commitment, love or intimacy.

Scale 11 asked participants to consider whether ideas about advances in medical treatment for HIV had featured in their "on-line" thinking. These items were: that protease inhibitors or the antiretroviral cocktail make HIV a "manageable disease" (endorsed at least slightly by 23.4%), that the subject could take the new treatments as post-exposure prophylaxis to prevent infection (21.8%), and that a cure for AIDS is imminent (19.4%). More than one-third of participants endorsed at least one of these three items slightly or more. The least endorsed scale (Scale 12) included items that expressed favorable attitudes toward being HIV infected (e.g., "I want to become infected so that I'll feel more a part of the community"). Participants consistently replied negatively to these items.

Finally, we were not successful in replicating or confirming Gold's original analysis and scales. Using the factor analysis procedure on our data did not provide robust scales. When assessing the four scales that Gold's factor analysis rendered, none had alphas greater than .70. Furthermore, Gold's sample, in general, reported stronger endorsements of items than we found in our sample.

DISCUSSION

Men who have sex with men in San Francisco comprise not only the largest group of people with AIDS but also the largest group of new seroconverters each year (SF Department of Public Health, 2000a, 2000b). With the majority of new HIV infections, estimated to be 500 per year in San Francisco, occurring among MSM, the development of HIV prevention interventions for this high-risk group must remain a priority.

Our sample was drawn from high-risk MSM who had been tested for HIV antibodies on average at least six times previously (lifetime) and reported a median of 5 different anal sex partners in the last 12 months. All reported at least one episode of unprotected anal intercourse during the preceding year with a partner known to be HIV positive or of unknown serostatus. Moreover, 13% of the sample reported having a primary

partner (defined as the partner who that participant “most often” had sex with) who was HIV infected. An additional 31% of the sample reported having had an HIV positive partner who was not “primary” within the last 90 days. Given the known risk taking of this group, we were particularly interested in investigating their thinking patterns.

Our goal was to gain a better understanding of the role that particular thought processes may have played in the decision of these high-risk men to have unsafe sex. In addition, we hoped to identify specific thoughts that could be used by AIDS prevention programs as the basis for developing targeted prevention messages.

Our results shed some light on the thinking associated with the decision to have unsafe sex, yet we did not find a particularly strong endorsement of any of the self-justifications presented. Rather, we found a diffuse endorsement of items and that the ideas or self-justifications that we asked about were widely, but weakly, endorsed. For example, while each of the 102 items listed in the self-justifications questionnaire were endorsed by at least one participant, even the most commonly endorsed item (“I want to have unprotected sex because it feels good”), endorsed by three-quarters of the sample, was not endorsed very strongly (mean of 2.63 on a four point scale with 2 being “moderately present and 3 being “slightly present”). Nevertheless, because the presence of one or more of these ideas, even “slightly,” may have added a sufficient justification for the unsafe act to occur, being alert to their presence may offer an avenue for intervention. Further, since self-justifications that have personal relevance to the individual have been shown to be more important than a general discussion of the relationship between these kinds of ideas and high-risk behavior (Gold and Rosenthal, 1998), uncovering and working with these “on-line” or “heat of the moment” thoughts may offer an important counseling intervention.

The highest level of endorsement (89.5%) was for items relating to condoms reducing sexual pleasure. In fact, this group of items not only was the most commonly endorsed, but it was also the most strongly held (mean 3.33). Negative attitudes toward condoms are not new and efforts to change them have been difficult (Sacco and Rickman, 1996; Dilley *et al.*, 1998). However, seeking ways to eroticize the use of condoms, or at least continuing to work with gay men individually on ways to make their use less aversive, appears to be an important prevention strategy.

Another of the goals of our study was to compare our findings to those of Australian researcher Ron Gold’s original paper (Gold *et al.*, 1991). It is not surprising that our data do not match Gold’s findings exactly; yet, despite the obvious differences in our samples, our findings are not too dissimilar. In his original paper, Gold reported that the most common self-justification endorsed by his sample of gay men was the resolution to withdraw before ejaculation. This item was the third most common item endorsed by our sample. Furthermore, Gold found two factors that most differentiated between a safe and an unsafe encounter, “bargaining” or “special pleading,” and inferring the partner’s antibody status from observable characteristics. Though his two factors did not hold together for our sample, two of our a priori scales (the second and the fourth) were comprised of many of these same items. Also of note was that Gold found that consumption of alcohol or drugs did not differentiate between safe and unsafe encounters in his study. Interestingly, only 18% of our sample endorsed an item (“I didn’t want to fuck without a condom, but I was too drunk/stoned to be able to stop him from doing it”) that suggested that drug or alcohol use

was responsible for an unprotected anal sex act. The possible reasons for differences between our samples are many: cultural issues, the changing environment of HIV prevention and care, and the passage of time may have played a role. Furthermore, Gold's sample was comprised of men "who had broken their own safe sex rules" when they reported an episode of unsafe sex. In our sample, we recruited men who were coming in for HIV antibody testing and had engaged in high-risk sex. The extent to which this high-risk behavior was in accord with or opposed to the participants' own "rules" is not known. Finally, changes in treatment and prognosis are dramatically different than they were in 1988 when Gold collected his data.

We were also interested in the question of whether, and to what extent, advances in treatment may have had an effect on sexual risk taking. In this paper, we update our previous report (Dilley *et al.*, 1997) suggesting this relationship. Reporting on roughly twice the number of participants, slightly more than one third (35.5%) of our sample endorsed one or more items relating to new treatments (see scale 11). These findings have also been found elsewhere (Kelly *et al.*, 1998; Kravcik *et al.*, 1998) in conjunction with increases in high-risk sexual behavior (Ekstrand *et al.*, 1999) and therefore merit monitoring over time.

Several limitations of this study need to be noted. First, because only 43% of the men who were eligible enrolled in the study, we may have recruited a sample that does not accurately reflect the group of high-risk MSM accessing services from an anonymous HIV counseling and testing program. It is also possible that these findings are not applicable to MSM who are either not testing at all, or are testing in other venues. Secondly, as mentioned above, the self-justifications were on the whole endorsed only slightly or moderately. It is also possible that participants endorsed items that were retrospectively suggested to them by our questionnaire. However, to the extent that these ideas may have "permitted" an individual to "take a chance" and engage in known high-risk behavior, we believe they may offer an avenue for intervention. Lastly, endorsement of these items in a cross-sectional study suggests only an association, not necessarily a causal relationship, with the high-risk behavior.

Continuing to obtain a better understanding of the attitudes and motivations of this group of high-risk men can only help improve prevention efforts. The challenges to AIDS prevention providers remains daunting, especially as sexually active MSM must continue to bear the burden of safer sex over time and must come to terms with the tantalizing prospect that HIV infection is now a "chronic, manageable disease." Gone are the days when the sick and infirm could regularly be seen shuffling down the street in high incidence AIDS areas like San Francisco—by itself, a powerful AIDS prevention message. The effect of losing this daily reminder of the devastation of HIV on the behavior of MSM is unclear, yet the more general sense that the epidemic "is over" has undoubtedly affected, at least slightly, the thinking and the behavior of these men.

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