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## Misunderstanding of 'Safer Sex' by Heterosexually Active Adults

### SYNOPSIS

TO ASSESS THE understanding of safer sex among heterosexual adults, people enrolled in human immunodeficiency virus (HIV) education trials at a sexually transmitted disease (STD) clinic and a university student health service were surveyed concerning sexual behavior with their latest reported partner.

Of 646 sexually active persons enrolled in the trials, 233 (36 percent) reported having had safer sex with their latest partner; 124 of them (53 percent) also reported having vaginal or anal intercourse without a condom during that sexual encounter. Among the 124 who reported safer sex despite having intercourse without a condom, only 23 percent reported asking partners about their HIV status, 46 percent had asked about intravenous drug use, and 47 percent had asked about the number of prior sexual partners.

For 34 percent of those surveyed, the length of the sexual relationship with their latest partner was 1 month or less, and 18 percent estimated that this partner had had 11 or more prior sexual partners. STD clinic participants characterized intercourse without a condom as safer sex more often than student health service enrollees (76 percent versus 39 percent,  $P < 0.001$ ).

The concept of safer sex is often misunderstood by persons engaging in behavior at risk for HIV transmission, and the level of misunderstanding differs among samples. Interventions to reduce transmission of HIV must confront misconceptions about the risk of sexual intercourse without condoms and include specific instructions understood by the targeted group.

**A**n important part of public health efforts to stop the spread of the human immunodeficiency virus (HIV) is the reduction of behaviors that place people at risk of becoming infected. To reduce the chance of sexual transmission of HIV, public health interventions promote "safer" sexual behavior among persons who are sexually active. Consistent use of a condom and an accurate evaluation of a partner's risk of infection with HIV are important aspects of the public health strategy to reduce sexually transmitted disease transmission (1) and are the principal components of safer sex (2).

Interview and focus group evaluations of people's understanding of safer sex in a theoretical context suggest, however, that many persons do not understand the concept (3,4). This might seriously hamper the effectiveness of prevention efforts encouraging behavioral changes. We examined the understanding of safer sex in the context of their latest sexual encounter among persons enrolled in two trials of HIV education and testing.

## Methods

There were 691 English speaking heterosexual adults enrolled in these trials—256 at an urban sexually transmitted disease (STD) clinic and 435 at a university student health service (SHS) clinic. Detailed descriptions of subject enrollment and the trials are available elsewhere (5,6). Of the total, 646 (93 percent) responded to our questions about sexual behavior with their most recent sexual partner including whether they had safer sex with that partner. Our questionnaire contained questions about demographics, history of sexual behavior, and understanding of a most recent sexual partner's risk factors for HIV infection.

We compared responses about specific sexual activities during an encounter with the person's latest partner and about questions that they asked of that partner with their opinion on whether or not they had practiced safer sex. We defined safer sex to be any sexual activity other than vaginal or anal intercourse without a condom. Anyone who had vaginal or anal intercourse without a condom and reported safer sex was classified as inaccurate; all other safer sex assessments were considered to be accurate.

The proportion of those with inaccurate safer sex assessments was compared between the two study samples using a chi square test. For people with inaccurate safer sex assessments, we evaluated their understanding of their partner's risk factors for HIV infection to determine whether they might have believed the behavior was "safer" because of the partner's reported low risk profile. Partners' risk factors for HIV infection were compared between the two study samples with chi-square tests.

## Results

The 646 sexually active persons who responded to the question about whether they had safer sex during their latest sexual encounter had a mean age of 25 years; 44 percent were male, 83 percent had never married, 39 percent were white, 38 percent black, 11 percent hispanic, 9 percent Asian, and 3 percent of other ethnicity. The median number of sexual partners lifetime was 8. The demographics and sexual histories of the two study samples were different with those in the SHS sample more likely to be white and Asian, female, never married, and younger. Those in the STD sample had sex at an earlier age, were more likely to have had an STD, and had more lifetime sexual partners (table 1).

Of the total, 36 percent said they had safer sex with their latest sexual partner; 53 percent reported having vaginal or anal intercourse without a condom during that sexual encounter. Of the 413 who used a condom or had only oral sex, 91 percent reported having safer sex; the other 9 percent (who reported not having safer sex) all had oral sex without using a condom.

Among the 124 persons who said that they had safer sex but had intercourse without a condom, 23 percent reported

that they had asked their sexual partner about his or her HIV status (10 percent indicated that their partner was HIV-negative), 46 percent asked their sexual partner about intravenous drug use, and 47 percent asked about their partner's number of prior partners. People estimated that their latest sexual partner had a median of 5 previous partners and that 18 percent of sexual partners had 11 or more prior partners. For 34 percent of these, the length of the sexual relationship with the latest partner was 1 month or less (table 2).

Those from the STD clinic were more likely to report that intercourse without a condom was safer sex than SHS subjects (76 percent versus 39 percent,  $P < 0.001$ ), even though STD clinic subjects also were less likely to have asked sexual partners about their prior sexual partners ( $P < 0.0001$ ), and there was a trend toward shorter relationships with these sexual partners for STD clinic enrollees than for those from the SHS clinic (table 2).

## Discussion

Although it is an important goal in preventing the spread of HIV, safer sex was often misunderstood among people in this study engaging in behavior at risk for HIV transmission. Despite the fact that this finding was suggested in previous studies asking about safer sex in a theoretical context, we believe that this is the first demonstration

**Table 1. Demographic characteristics and sexual history of people in the two samples—STD and SHS—surveyed on safer sex**

Characteristics	Total N=646	STD N=256	SHS N=390	P value for group comparison
Mean age (years) and standard deviation .....	25 ± 6	27 ± 8	23 ± 4	0.0001
Male (percent) .....	44	66	29	0.0001
Never married (percent) .....	83	67	94	0.0001
Race (percent):				
White .....	39	7	61	0.0001
Black .....	38	84	8	...
Hispanic .....	11	7	13	...
Asian .....	9	0	15	...
Other .....	3	1	4	...
Mean schooling (years) and standard deviation .....	14 ± 3	13 ± 2	15 ± 2	0.0001
Monthly income less than \$1,000 (percent) .....	78	73	82	0.01
Lifetime number of STDs (median) .....	0	2	0	0.0001
Lifetime number of sexual partners (median) .....	8	12	4	0.0001
Mean age (years) at first sexual intercourse and standard deviation .....	17 ± 3	15 ± 3	18 ± 2	0.0001

**Table 2. Characteristics of partners of survey sample members who were inaccurate about safer sex**

	Total N=124 (Percent)	STD N=66 (Percent)	SHS N=58 (Percent)
<i>Information about most recent sexual partner</i>			
Questions asked most recent sexual partner:			
About HIV status.....	23	20	28
Partner was HIV-negative.....	10	11	10
About intravenous drug use.....	46	52	40
About past sexual experience <sup>1</sup> .....	47	27	69
Estimate of most recent partner's previous sexual experience:			
Never had sex before.....	8	3	14
1-3 partners.....	38	37	40
4-6 partners.....	18	23	12
7-10 partners.....	18	15	21
11 partners or more.....	18	22	14
Length of relationship with most recent sexual partner:			
First time.....	22	26	17
1 week to 1 month.....	12	14	9
1-6 months.....	20	14	26
More than 6 months.....	43	38	49

<sup>1</sup>P < 0.0001 for comparison between STD and SHS samples.

of misunderstanding safer sex concerning a recent sexual partner. Of all those who had vaginal or anal intercourse without a condom, 19 percent stated that they had safer sex. These persons either did not understand the risk involved in their latest sexual encounter or did not understand the meaning of safer sex. In either case, the misunderstanding likely places them at increased risk of contracting a STD—including HIV—and makes it unlikely that public health messages promoting safer sex would succeed in achieving a desired change in behavior.

If both the people in this study and their partners had none or very low risk of infection with HIV, then sexual intercourse without a condom might be considered safer sex (2,7), but fewer than a quarter of them had ever asked about their sexual partner's HIV status, and only 10 percent stated that they knew their partner was not HIV-infected. Less than half of the total sample had asked their sexual partner about intravenous drug use and past sexual experience. For 22 percent of them, this sexual encounter was the first with this partner, and they estimated that 18 percent of these partners had had more than 10 prior sexual partners. On the other hand, public health recommendations would consider oral sex with a possibly HIV-infected partner as potentially unsafe (8). Thus, our estimates of misunderstanding may be conservative.

A more elaborate classification of HIV risk (9) is beyond the scope of these data. Furthermore, the study enrollees themselves may have been at risk of carrying HIV and of infecting their partner; more than half presented to a STD clinic with a presumed sexually transmitted disease. Thus, for the majority of them, the latest sexual encounter should not have been considered safer sex from a HIV prevention point of view. These people did not understand the concept of safer sex.

Interventions to decrease sexual behavior at risk of HIV transmission using the "safer sex" terminology would be unlikely to elicit the desired response among people who misunderstand the subject. More importantly, this finding might indicate that people consider factors other than the mutual chance of transmitting HIV in weighing the safety of a sexual encounter. Adequate pregnancy protection without condom use (10) or the belief that a partner's lack of risk factors made it very unlikely that the partner would transmit an infection (regardless of whether the person could infect the partner) might have been the basis on which people stated that intercourse without a condom was safer sex.

Although these hypotheses merit further exploration, including qualitative evaluation of people's perceptions of HIV risks and prevention strategies, the findings in this study suggest a number of caveats for HIV prevention interventions:

First, the term "safer sex" should not be used alone but always should be explained in terminology understood by the targeted sample. Second, the perceptions of risk associated with sexual intercourse should be explored so that the intervention can focus on correcting misunderstandings and sending messages to change behavior that are congruent with the sample's understanding of risky sexual behavior. Thirdly, these data show that samples differ in their understanding of the meaning of safer sex.

People from the STD clinic were much more likely to misunderstand safer sex than those from the SHS clinic. In addition, differences in sexual partner characteristics suggest that people at the SHS clinic may have believed that their latest sexual encounter was safer sex because their partner was extremely low-risk (14 percent had no prior sex, an additional 40 percent had an estimated three or fewer sexual partners, and 75 percent had had a sexual relationship with this partner for at least 6 months). STD clinic attenders may have misinterpreted safer sex for other reasons. Effective interventions to decrease HIV-risk behavior would need to be different for these two samples.

In conclusion, safer sex was commonly misinterpreted by persons engaging in behavior at risk for HIV transmission, and the degree of misunderstanding was different in two samples in need of HIV prevention interventions. Interventions to reduce transmission of HIV must include specific information targeted to the sample and should avoid such jargon as "safer sex."

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## What Is the Addicts' Grapevine When There's 'Bad Dope'?

### *An Investigation in New Jersey*

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#### SYNOPSIS

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AFTER A RASH of fatal overdoses among drug users that was attributed to the synthetic narcotic analgesic fentanyl, the New Jersey Department of Health conducted street interviews with 160 injection drug users in an attempt to identify the channels through which this population had heard about the outbreak and to gauge drug addicts' responses to the incident.

The results of the investigation suggest that the drug users learn about such severe threats to health from a variety of sources. The frequency with which some of these sources are reported differs significantly according to the sex of the drug user and, even when sex is controlled, the frequency may vary substantially from city to city in a relatively limited geographic area.

Although television was, for this population, a more important source of information about the outbreak than was any other formal means of communication, drug users did not regard TV as a reliable source of good information about "bad dope." Moreover, it does not appear that broadcasts of public warning messages about such substances are a guarantee that addicts will not search for the drug.

The data reported in this study point up a need for health officials' greater understanding of the channels through which drug users receive information on threats to their health. The study also provides an understanding of how public health messages are perceived and processed by needle users. The final lesson is the need for close collaboration among drug enforcement personnel, testing laboratories, and health officials in the various affected locales to clarify the public health message.