15-Month Followup of Women Methadone Patients Taught Skills To Reduce Heterosexual HIV Transmission

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Synopsis

Heterosexual contact with intravenous drug users accounts for a growing proportion of cases of acquired immunodeficiency syndrome (AIDS) among women. In an earlier study designed to reduce sexual risk behavior, the authors randomly assigned 91 methadone maintained women to information-only or skills-building conditions. Modest outcomes favored participants in the skills-building group.

In this 15-month followup of 62 remaining study participants, skills-training group members were more likely than controls to use condoms. In comparison with controls, members in the skills-building group felt more comfortable talking about safe sex, perceived themselves as more able to reduce their exposure to AIDS, but were more likely to attribute AIDS risk to luck. No associations were found between group condition and number of sexual partners or frequency of buying and carrying condoms.

Some gains associated with a group intervention tended to be maintained over time, indicating that preventive interventions composed of multiple sessions and conducted in treatment settings may have promise as useful strategies to prevent human immunodeficiency virus (HIV) infection. Nevertheless, decay was evident in other domains, suggesting that prevention specialists should consider booster sessions or other means of maintaining changes in risk behavior.

ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) is the leading cause of death among 20- to 39-year-old women in New York City (*1*). Although most women with AIDS contracted the virus through injection drug use, heterosexual contact—most often with IV drug users—accounts for a growing proportion of cases among women in the United States (*2*). African American women account for 52 percent of all AIDS cases diagnosed among women, and Latino women account for an additional 21 percent of cases among adult women (*3*).

In the general population, only 3–4 percent of women use condoms consistently (*4*), and low rates apply to female IV drug users (*5–7*). Women who use crack, many of whom are either active or recovering IV drug users, are apt to have sexual contacts with multiple high-risk sexual partners (*8,9*). African American and Latino women who attempt to negotiate safe sexual practices with their sexual partners are more likely to encounter resistance anchored in class and cultural attitudes (*10,11*). Moreover, female drug users often lack the interpersonal skills necessary to negotiate safe sex with sexual partners. Given the promise of skills training across many problem areas and populations, and the cognitive and social aspects of addiction and sexuality, skills-building methods merit attention as AIDS prevention strategies (*12*).

In an earlier issue of this journal, we reported on a study testing the efficacy of a skills-based approach to reducing sexual risk behavior among 91 women methadone patients in the Bronx, NY (*13*). Study participants were pretested and randomly assigned to conditions consisting of a single information-only session or five skills-building conditions. Outcomes were modest, but they favored participants in the skills-building condition. Skills-building participants had high rates of group attendance and program retention, suggesting that involvement in such group interventions may have positive effects beyond acquisition of skills. In an

effort to examine the longitudinal effects of this pilot intervention, we conducted a 15-month followup of study participants.

Initial Study

Pretest comparisons. Because current crack use differed significantly between experimental and control group, *t*-tests were performed on each sexual outcome measure (frequency of condom use, sex with IV drug users, buying condoms, carrying condoms, and frequency of sex with a person with an unknown number of sexual partners) with current crack use. The *t*-tests revealed no significant between-group differences on measures of sexual risk-taking or current crack use.

Posttest comparisons. Posttest analyses, reported elsewhere (*13*), revealed significant differences between skills-building and control groups. Sexually active subjects in the skills-training groups, when compared with their control condition counterparts, reported that they initiated discussion of sexual issues more frequently, felt more comfortable talking about safe sex with their partners, and reported obtaining, carrying, and using condoms more frequently. Skills-building subjects were less likely than control participants to attribute AIDS risks to luck, more often perceived themselves as able to reduce their exposure to AIDS, were more interested in learning about AIDS, and were more likely to believe that AIDS can be prevented. Intervention topics focused on sexual behavior, and post-intervention changes did not generalize to risk domains of drug use.

Followup

Retention rate. A total of 62 women (67 percent) were retained from pretest to followup. Sixteen of 48 (33 percent) in the skills-building group and 13 of 43 (30 percent) in the control group dropped out of the study. Of the subjects in the skills-building group who were lost at followup (*a*) two had died, (*b*) four were discharged from the program and could not be traced, (*c*) seven were incarcerated, and (*d*) three refused to participate. Of the controls who dropped out, 10 were discharged from the program and could not be traced, and 3 refused to participate.

Dropouts versus retained subjects. Analyses revealed no significant differences between dropouts and retained subjects in terms of age, ethnicity, marital status, level of education, current job status, household composition, length of time in methadone treatment, or self-reported human immunodeficiency virus (HIV) status (table 1). In addition, there were no significant differences between dropouts and remaining subjects in their current use of heroin, cocaine, crack, speedball, or marijuana. At pretest, however, dropouts were significantly more likely than subjects who were retained to have been injecting drugs (table 1).

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Followup Results

Sexual risk-taking and sexual negotiation. At followup, comparisons of frequency of condom use continued to favor skills-building participants over control participants. Skills-building subjects, however, did not appear to obtain or carry condoms more than did control participants. In comparison with controls, skills-building participants felt more comfortable talking about safe sex with their partners. As at posttest, the number of sexual partners did not differ across groups (table 2).

Attitudes towards AIDS. In comparison with controls, members in the skills-building group were more worried about their children contracting AIDS, perceived themselves as more able to reduce their exposure to AIDS, and more often believed that AIDS can be prevented. Skills-condition subjects, however, were more likely than controls to attribute AIDS risks to luck. No significant difference was found in subjects' interest in learning more about AIDS (table 2).

Discussion

Before discussing the implications of these findings, it is necessary to mention a methodological limitation of this and most other AIDS prevention studies. Sex and drug use are private behaviors, subject to the biases of self-report. Drug users are generally truthful about their use patterns (*2,14*),

Table 1. Pretest comparisons of between dropouts and subjects remaining at 15-month followup

Item	29 dropouts (mean)	62 remaining subjects (mean)	t-value	Chi-square	Degrees of freedom	P-value
Age (years)	34.5	35.6	−0.59	...	...	.55
Household composition (members)	3.0	3.8	−1.92	...	...	.29
Level of education[1]	3.8	3.6	0.57	...	...	.56
Years in methadone program	5.8	5.6	.70	...	...	.48
Ethnicity	...	...	...	0.024	1	.876
HIV status (self-report)	...	...	...	0.939	1	.332
Marital status	...	...	...	4.580	3	.204
Current job status	...	...	...	2.672	1	.102
Using heroin currently	...	...	...	0.171	1	.679
Using cocaine currently	...	...	...	0.501	1	.478
Using crack currently	...	...	...	0.190	1	.662
Using speedball currently	...	...	...	0.343	1	.558
Using marijuana currently	...	...	...	0.685	1	.407
Injecting currently	...	...	...	5.068	1	.024

[1] Likert scale from none, 1, to some graduate school, 9.

Table 2. Comparison of sexual behavior and sexual attitudes between groups of methadone maintained women in the Bronx at 15-month followup

Variables[1]	Intervention (N = 32)	Control (N = 30)	t-value	P-value
Frequency of using condoms	2.8	1.7	2.90	0.01
Taking condoms from the clinics	3.2	3.03	1.30	0.19
Carrying condoms	2.5	2.1	0.62	0.53
Feeling comfortable talking about sex with sexual partners	4.1	2.4	2.29	0.02
Number of sexual partners	1.2	1.0	0.65	0.51
I am worried about my child getting AIDS	2.7	1.9	2.80	0.01
I am interested in learning about AIDS	4.5	4.9	0.89	0.37
AIDS can be prevented	3.4	1.6	2.05	0.05
Luck plays the biggest role in getting AIDS	2.8	1.8	2.08	0.04
I can eliminate the risk of first time or repeated exposure to the AIDS virus	4.1	2.7	1.97	0.06

[1] Four-point Likert scales, from never, 1, to always, 4.

but less is known about the accuracy of self-reported sexual behavior. It is possible that the skills-building participants learned to give desirable answers, and that the interview items reflect a wish to give a socially correct response rather than real changes in attitudes and behavior. The lack of between-condition differences on drug use scales may indicate that subjects in the skills-building condition did not learn simply to give responses that were socially acceptable. Although the focus of the intervention was on sexual transmission of HIV, discussions of drug-related HIV transmission surfaced during the skills-building sessions. If skills-building subjects had learned to give socially approved answers, it would seem likely that they would have given socially desirable responses across drug use as well as sexual risk domains.

A reviewer of controlled studies of small-group approaches to preventing AIDS in substance abuse treatment settings (*15*) reported that our research employed the "hardest" behavioral indicators. Given that our outcomes were based on self-report, this judgment is a commentary on the difficulty of incorporating rigorous outcome indicators into AIDS prevention studies.

Findings indicate that most of the posttest gains associated with a multisession group intervention did not erode over time. These outcomes are encouraging when considered against findings that sustaining safe sexual behavior is often more difficult than initiating these practices (*16,17*).

Some between-group differences faded over the 15 months since posttest—obtaining and carrying condoms, and interest in learning about AIDS—and further decay seems likely in the future. Some of this apparent erosion of between-group differences could be attributed to low statistical power associated with the smaller sample at followup.

More troubling is the finding that in contrast to findings at posttest, skills-building participants believed more strongly than controls that luck plays the biggest role in getting AIDS. Further research is indicated, as a major intent of the approach described in this paper is to increase beliefs that behavior, not chance, determines HIV risk.

A visual examination of attrition over time invites speculation as to the possible effects of the group intervention on retention in program. Two skills-building subjects died during the followup period and are treated as remaining subjects for the purposes of this discussion. Only two (4 percent) of skills participants dropped out of treatment before posttest, whereas five (12 percent) of controls were lost during this period (see figure). After the group sessions ended, an additional nine skills participants (20 percent of those remaining at posttest) dropped out or were discharged from treatment. During this same period, only five controls were lost (13 percent of those remaining at posttest).

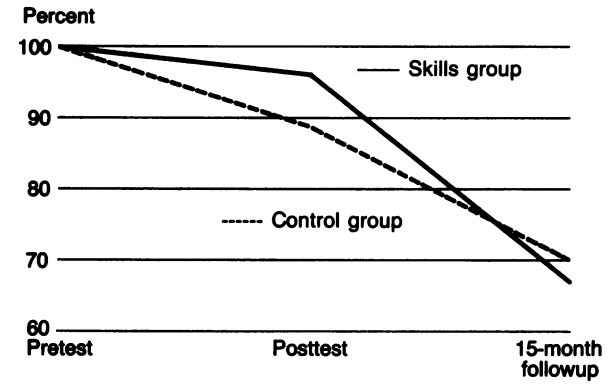
One interpretation of these data is that the skills-building groups enhanced program retention while they were meeting, as the bulk of attrited members dropped out only after the group meetings ended. Further studies are needed to determine whether skills-building groups can enhance program retention, and whether abrupt ending of such groups might unintentionally increase attrition.

Because sexual activity is both a basic biological drive and a learned behavior shaped by powerful sociocultural forces, it may be naive to expect lasting behavior changes without continual or periodic reinforcement. Given the necessity for maintenance of protective behavior over long periods, research efforts should continue to focus on the psychosocial, social, and ecological determinants of relapse to unsafe sexual practices.

Scientists should investigate how cycles of drug abuse recidivism may interact with relapse related to sexual risk taking. Findings of the present longitudinal study suggest that a series of skills-based risk reduction sessions conducted in treatment settings may yield some lasting effects. Yet prevention specialists and treatment professionals planning behavior change programs should consider booster sessions or other means of maintaining risk reduction gains.

Because retention in treatment is critical to abstinence, investigators should design and test theory-driven strategies for concomitantly enhancing retention and building risk-reduction capacities of program participants. Skills-training protocols could be designed for methadone, residential, and outpatient settings.

Retention of program participants at 15-month followup



Needed are studies that determine the most efficient mix of initial intensive strategies and long-term maintenance strategies. The latter might include individual or group booster sessions, case management and crisis intervention models, and mechanisms for determining risk events that signal the need for brief or ongoing relapse prevention services.

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Sexual Practices and AIDS Knowledge Among Women Partners of HIV-Infected Hemophiliacs

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Synopsis

About 12 percent of the women sex partners of hemophilic men who are seropositive for the human immunodeficiency virus (HIV) have themselves become seropositive. Questionnaires were completed in January 1988 by 15 women who were in long-term, monogamous relationships with HIV-positive hemophiliacs; 11 of the women were not HIV seropositive and 4 were. None of the couples was abstaining from sexual intercourse, and during the 4 weeks prior to responding, the couples had intercourse a mean of 6.2 times. Sixty percent always used condoms, 13 percent did so most of the time, and the remaining 27 percent did sometimes. Condom use was not significantly related to either frequency of intercourse, the women's knowledge of acquired immunodeficiency syndrome (AIDS) and AIDS-risk reduction, the actual HIV status of both partners and the women's perceived status of both, the extent of the women's worry about contracting AIDS, their reported degree of negative impact from AIDS, or to their mood, age, or education.

All women who reported not always using condoms had been informed of their own and their partner's HIV status; were counseled repeatedly regarding risk reduction; acknowledged the possibility of heterosexual HIV transmission; said they knew of recommendations for the use of condoms; recognized their risk of HIV infection; claimed some degree of worry about acquiring HIV through sexual activity; had children at home; and were not, with one exception, trying to become pregnant. There were several possible factors influencing the decision by women at high risk for acquiring HIV not to use condoms. Among them were complaints that the women found condoms unpleasant or an unwanted reminder of AIDS, a sense of obligation or a drive to continue unaltered sexual relations, the false reassurance of HIV-negative test results for some of the women who did not always use condoms, a willingness to sacrifice and to share their partner's fate, a desire to avoid communicating rejection and adding to their partner's burdens, and difficulty changing long-standing behavior patterns despite logical understanding of the risks involved.