

Effects of a Health Education Program On HIV-Related Needle and Sex Behaviors Among Injecting Drug Users in Puerto Rico

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Introduction

This report examines the effectiveness of an enhanced health education program in conjunction with a community outreach and referral program. The evaluation of the enhanced intervention focused on three research questions:

- Were there significant differences in reported behavior changes between the IDUs assigned to the enhanced educational sessions and those not assigned to the enhancement?
- Did those completing the enhanced program showed significantly different outcomes from those assigned to the standard outreach and referral intervention?
- Did comparisons among sub-groups of IDUs provide evidence that the enhanced intervention facilitated change in particular sub-groups?

Intervention

The intervention consisted of street outreach and referrals offered to all participants and a three-session educational component offered to a half of the participants.

We randomly selected half the recruits for the enhanced educational program. This component, presented by a trained ex-addict, was composed of three modules.

The first module presented basic information about the HIV, its modes of transmission, and the progression of the disease. Condom use was shown and practiced. Participants were taught needle bleaching.

The second module examined obstacles to risk reduction with a group of alternative reduction strategies.

In the final module, the discussion centered on the meaning of the HIV test results.

Study Subjects

We recruited IDUs between May 1989 and November 1990 for an AIDS community outreach research program. Subjects were eligible to participate if they had injected drugs in the previous six months and had not been registered in a drug treatment program in the last 30 days. A total of 2,144 IDUs entered the program. Post intervention assessments were obtained on 87.0% of them, approximately seven months after the initial interview.

Participants had a mean age of 32.5 years, 79.7% were male, and 61.2% had not finished high school. Mean number of years injecting drugs was 12.9, 89.5% were injecting speedball, and 46.4% were found to be HIV seropositive.

The two intervention groups did not differ in sociodemographic characteristics, drug injection history, injection of speedball, or in self-reported needle and sex risk behaviors.

Participation in the Intervention

Participants assigned to the standard program were significantly more likely to receive their HIV test results (Table 1). This happened as a result of encouraging IDUs in the enhanced program to attend the first two educational sessions before receiving their test results. Table 1 also shows that 69.9% attended the first educational session, 57.1% the second module, and 43.7% completed the educational component.

Table 1. Participation in Health Education Activities by Intervention Assignment (Relocated IDUs, n = 1866).

Intervention Activities	Standard		Standard + Enhanced		p
	N	%	N	%	
Pre/Post Counseling*	853	88.6	726	85.0	.025
Educational Enhancement					
First Session	-	-	614	69.9	
Second Session	-	-	502	57.1	
Third Session	-	-	384	43.7	

* Does not include subjects who refused to be tested; 22 IDUs in the Standard Model, and 25 in the Standard + Enhanced Model.

Table 2. Prospective Discontinuation and Initiation of Risk and Protective Behaviors by Intervention Model.

Risk/Protective Behaviors	Standard			Standard + Enhanced			p of No Difference Between Standard/Enhanced
	Discontinued n	Initiated n	p of No Difference Between Discontinuation/Initiation	Discontinued n	Initiated n	p of No Difference Between Discontinuation/Initiation	
Drug Injection	295	8	<.0005	281	1	<.0005	.032
Use of Shooting Galleries	138	69	<.0005	107	63	.001	.450
Renting of Needles	152	61	<.0005	139	60	<.0005	.736
Borrowing of Needles	185	74	<.0005	186	58	<.0005	.221
Sharing of Cookers	206	64	<.0005	240	44	<.0005	.015
Always Bleaching Needles	25	69	<.0005	20	62	<.0005	.738
Two or More Sex Partners	108	89	.252	101	77	.085	.643
Anal Sex	122	87	.019	112	78	.017	.907
Always Using Condoms	29	101	<.0005	23	62	<.0005	.426

Efficacy Evaluation

Both groups were significantly more likely to report discontinuing than initiating high risk behaviors (Table 2), the only exception being multiple sex partners. This absence of change did not appear to be the result of prostitution among IDUs. Protective measures (bleaching needles and use of condoms) increased significantly in both groups.

The educational enhancement had a small but statistically significant effect on the reported discontinuation of drug injection and on reports of sharing cookers. Differences in all the other behaviors were not significant.

Further analyses failed to find significant outcome differences among participants completing the intervention programs.

Finally, we stratified the samples by gender, years of drug injection, HIV serostatus, and community of recruitment. Males, more recent injectors, and seronegatives in the enhanced model were more likely to report discontinuation of sharing cookers than their counterparts in the standard-only model. The differences were not significant in the other behaviors or in the other sub-groups.

Conclusion

The health education component did not generate a significant and substantive additional effect beyond the outreach/referral program. The evaluation analyses also failed to find an effect among those completing the educational program, or among important sub-groups. Only with respect to reducing the shared use of cookers did the educational enhancement appear to have been effective. During the early stages of the establishment of the PRAPP program, verbal reports from the intervention staff indicated that some participants were surprised to learn of the potential infection risks involved in the shared use of the cookers. Thus, the educational enhancement might have conveyed, in relation to cookers, new and valuable information which participants could use to reduce HIV transmission risks. It has been suggested that educational programs in areas where AIDS awareness is widespread can be effective only in disseminating new information, programs or discoveries. This might have been the case with respect to the use of cookers.