Effectiveness of an Engagement and Embeddedness Model to Reduce HIV Risk Behaviors among Hispanic Drug Using Women

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Introduction

One of the major gaps in the research community is the lack of culturally appropriate science based model to help women deal with their drug use and its health consequences particularly HIV risk behaviors and HIV infection. This paper reports the preliminary findings of a study that aims to develop a science based model to help drug using women to reduce drug use, HIV sexual and needle risks behaviors and HIV infection. Findings reported in this paper are the results of the first phase of the intervention model. (Figure 1). The model was based in two theoretical concepts: engagement and embeddedness. The program comprised seven face-to-face interventions with multiple contacts both in the community and at the assessment center to engage (access and retain) women in the program and to integrate (embedded) them with social support networks and service organizations in an effort to developed a more scientific approach to Hispanic women's needs.(Figure 2)

Methods

This study used preliminary data from a five-year longitudinal HIV/AIDS intervention prevention study. The population was women living in two communities of San Juan's metropolitan area, ages 18 to 65, not in drug treatment, who reported drug use in the past 30 days previous the interviews. Data was collected through face-to-face interview. Some of the measures used were: health utilization- (UCLA Research Center), drug use patterns and HIV -(Risk Behavior Assessment (NIDA)), addiction consequences - (Addiction Severity Index (ASI)), and mental health- (Composite International Diagnostic Interview (CIDI)). The sample of this analysis consists of 133 women who completed the first six-month follow up - 88.1% response rate (second year of the study).

Results

Descriptive profile: The mean age of participants was 36.4 years (SD = 9.7) and less than half of them completed high school (43.6%). Participants reported 71.4% lifetime prevalence of abuse (emotional, physical or sexual) and 18.0% were HIV seropositive. Almost three-quarts of the sample (70.7%) completed the seven interventions and 36.1% reported enter treatment during the last 6 months. See tables 1 - 4.

Conclusion

The model was effective in multiple health and drug use problems. Changes in depression/anxiety symptoms, cocaine and heroin use and injection behavior were obtained through the intervention period. Contrary to what expected the model was not effective in changing injection risk behaviors. The intervention model was effective in changing sexual and HIV sex risk behaviors, especially among those women sexually engaged with a paying partner. It seem that this first phase of our intervention model was effective in helping women in acquiring safe sex behaviors.

References

Miller WR, Rollnick S. Motivational interviewing: Preparing people for change. New York: Guilford Press. 2002.

Robles, R.R., Reyes, J.C., Colón, H.M., Sahai, H., Marrero, C.A., Matos, T.D., Calderón, J.M., & Shepard, E.W. (2004). Effects of combined counseling and case management to reduce HIV risk behaviors among Hispanic drug injectors in Puerto Rico: A randomized controlled study. Journal of Substance Abuse Treatment, 2004:27(2), 145-152.

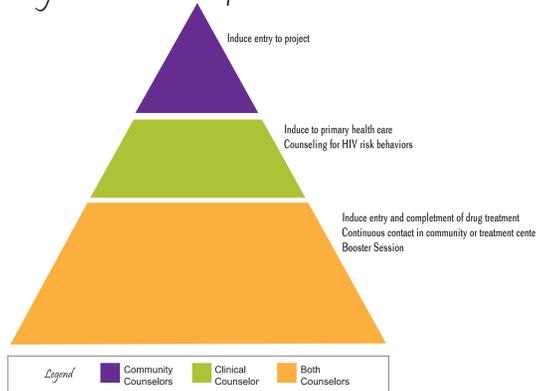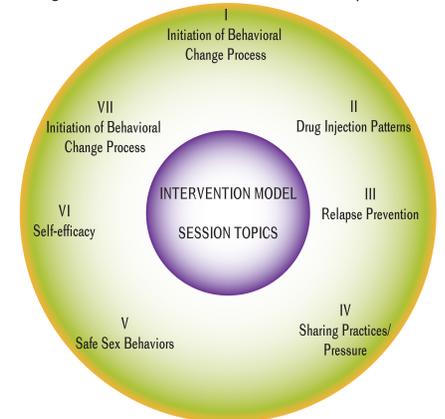### Figure 1: First Phase of the Intervention Model

Induce entry to project

Induce to primary health care Counseling for HIV risk behaviors

Induce entry and completion of drug treatment Continuous contact in community or treatment center Booster Session

Legend: Community Counselors | Clinical Counselor | Both Counselors

Figure 2: Intervention Session Topics

I Initiation of Behavioral Change Process
II Drug Injection Patterns
III Relapse Prevention
IV Sharing Practices/ Pressure
V Safe Sex Behaviors
VI Self-efficacy
VII Initiation of Behavioral Change Process

INTERVENTION MODEL SESSION TOPICS

Table 1 Changes in living arrangements and health variables

Behaviors	Baseline Prevalence (%)	Follow-up Prevalence (%)	p*
Living arrangements			
Homeless	**24.8**	**12.0**	**0.002**
Living alone	27.1	21.1	0.243
Living with children	22.0	24.4	0.607
Health variables			
Emotional-physical-sexual abused	16.7	10.6	0.200
Depression/Anxiety (Probable case CIDI)-	**61.2**	**45.6**	**0.014**
Health Insurance	**43.9**	**86.7**	**<0.001**

* Significance of McNemar's chi-square: p value of no difference between stopping/initiating

Table 1. Significant reduction was reported in homelessness status (living on the streets). Participants reduced living alone and increased their embeddedness with children. Also women reported reduction in their history of abuse relationships. Statistically significant women reported reduction in their mental health conditions: depression/anxiety symptoms and increase had a health insurance.

Table 2 Changes in drug use behaviors (n = 133)

Behaviors	Baseline Prevalence (%)	Follow-up Stopped (%)	Follow-up Initiated (%)	p*
Drug Use				
Alcohol-use	44.4	16.5	12.0	0.418
Alcohol- binge drinking	20.3	14.3	8.3	0.200
Any illicit drug	100.0	15.8		
Marihuana	26.0	11.5	8.4	0.557
Cocaine	**20.5**	**16.7**	**3.8**	**0.002**
Crack	63.6	9.8	5.3	0.263
Heroin	**38.6**	**22.7**	**3.8**	**<0.001**
Speedball	**22.7**	**9.1**	**3.0**	**0.077**

* Significance of McNemar's chi-square: p value of no difference between stopping/initiating.

Table 2. Non significant changes in alcohol use were observed but discontinuation of alcohol behaviors was reported. Overall 15.8% of participants stopped using illicit drugs at follow-up. Significant differences in discontinuation cocaine and heroin use was reported. Also there was some decreased in use of marihuana, crack and speedball (cocaine and heroin mix).

Table 3 Changes in drug injection risk behaviors (n = 36)

Behaviors	Baseline Prevalence (%)	Follow-up Stopped (%)	Follow-up Initiated (%)	p*
Injection	**27.1**	**6.0**	**0.8**	**0.039**
Injection risk behaviors				
Injected with used needle	25.0	16.7	2.8	0.125
Injected with unclean needle	13.9	11.1	0.0	0.125
Shared cooker	36.1	13.9	11.1	1.000
Shared needle	25.0	16.7	2.8	0.125
Shared cotton	16.7	8.3	11.1	1.000
Shared water	16.7	13.9	5.6	0.453

* Significance of McNemar's chi-square: p value of no difference between stopping/initiating.

Table 3. Drug injecting women reported discontinuation of this behavior. Non significant changes in drug injection risk behaviors were observed. However, except sharing cotton, a discontinuation pattern in all other risk behaviors was reported.

Table 4 Changes in sexual behaviors and HIV sexual risk behaviors (n = 102)

Behaviors	Baseline Prevalence (%)	Follow-up Stopped (%)	Follow-up Initiated (%)	p
Sexual Activity	**77.9**	**16.8**	**5.3**	**0.008**
Type of sexual of partner				
Principal partner	61.8	24.5	13.7	0.108
Casual partner	11.8	9.8	2.9	0.092
Paying partner	**48.5**	**21.8**	**8.9**	**0.029**
Sex risk behaviors				
Sex for money/drugs	**53.5**	**23.2**	**8.1**	**0.011**
Multiple Sex Partners	43.6	19.8	11.9	0.215
Unprotected sex	**66.7**	**28.4**	**11.8**	**0.012**
Sex protective behaviors: condom use				
Vaginal sex	45.2	10.8	22.6	0.071
Anal sex	66.7	4.8	14.3	0.625
Oral sex	**45.3**	**9.3**	**24.09**	**0.043**
Sex protective behaviors with paying partner: condom use				
Vaginal sex	**20.0**	**2.9**	**22.9**	**0.039**
Anal sex	40.0	0.0	20.0	0.500
Oral sex	**15.6**	**3.1**	**25.0**	**0.039**

Table 4. Significant reduction in sex activity and HIV sexual risk behaviors was observed. Overall, 16.8% of the women stopped having sexual activity. Discontinuation rates of sex with a paying partner, sex for money or drugs and having unprotected sex was statistically significant. Among protective behaviors, use of condom for vaginal and oral sex was increased twice when compared with the proportion that discontinued the behavior. The only statistically significant changes by type of sexual partner were the increased use of condom for vaginal and oral sex.

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