DEMOGRAPHIC AND BEHAVIORAL FACTORS ASSOCIATED WITH INCONSISTENT CONDOM USE AMONG WOMEN AT SEXUAL RISK IN LOS ANGELES COUNTY

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Extended Abstract

I. INTRODUCTION

Los Angeles County (LAC) has a population of 9.9 million people, making it the most populous county in the United States. Current estimates indicate that LAC has approximately 60,000 people living with HIV/AIDS (PLWH/A). LAC accounts for 35% of AIDS cases in California and 5% of AIDS cases in the US. Although male-to-male sex is the primary behavioral risk category in LAC, some groups of women are also at high risk for sexually transmitted diseases (STDs) and HIV infection.

Women comprise approximately 17% of the 21,079 HIV/AIDS clients served by the LAC Ryan White CARE Act service system between March 2005 and February 2006. Heterosexual contact was reported as the primary exposure method for the majority of these women (80%). The LAC Office of AIDS Programs and Policy (OAPP) has identified women at sexual risk (WSR) as a behavioral risk group including women who are at risk by having unprotected sex with men who have HIV. Of the 267,100 estimated WSR in LAC, black women have the highest HIV seroprevalence rate of 3.8%, which is 6 times the rate for white WSR (0.6%).

Other than abstinence, the consistent and correct use of condoms or other barriers is the most effective method of preventing HIV and STD infection during sexual intercourse. Therefore, a better understanding of demographic, behavioral and psychosocial factors associated with condom use among WSR is important for prevention efforts, service planning and identification of populations at risk for HIV and STDs.

The Transtheoretical Model of behavior change (TTM) provides a useful framework for investigating condom use adoption and continuation. Women who use condoms inconsistently are likely to be in one of the first three stages of change: precontemplation, contemplation or preparation. Those who use condoms consistently for less than six months are in the action stage, while those who do so for more than six months are in the maintenance stage. Previous research using the TTM has highlighted the multidimensional aspects of condom use, indicating the need to distinguish between type of partner (main partner versus other partners), and the type of intercourse (vaginal versus anal). This study examines factors associated with inconsistent condom use among WSR in Los Angeles County during vaginal sex with: (1) a main partner and, (2) other partner(s). It also assesses the role of self-efficacy, which is considered an intervening or outcome variable in the TTM.

II. METHODOLOGY

The 2004 LAC Countywide Risk Assessment Survey (CRAS) was administered by OAPP to evaluate the characteristics, risk behaviors, and service needs of individuals served by LAC-funded HIV prevention programs. A total of 2,276 surveys were collected from 48 of the

51 agencies targeted. The final dataset included 2,117 complete observations, which were weighted to ensure equal representation of the source populations (average clients served by the particular agency). The sample was stratified by agency, based on the number of clients served annually. Each agency used systematic sampling to select the *n*th client participating in interventions between May 3, 2004 and July 30, 2004. The sample used for this study included 510 heterosexual women whose HIV status was negative (1,227 weighted observations).

III. RESULTS

The most prevalent racial and ethnic group in the sample was Hispanic/Latino (39%), followed by African-American/Black (27%) and Caucasian/White (23%). About 9% of the women reported their race/ethnicity as either Asian/Asian American, Native Hawaiian or Other Pacific Islander, or "Other" race. A quarter of the women (26%) were homeless or living in a transitional housing situation and 18% were born in a country other than the US. Women's ages ranged from 12 to 66 years, with an average age of 30 years.

Alcohol use was reported by two-thirds (67%) of the women and at least half (56%) reported using an illegal substance in the previous six months. Less than one-sixth of the women reported using heroin (13%), crystal methamphetamines (15%), and injection drugs (14%), while cocaine use was slightly more prevalent (19%). The use of alcohol or drugs before, during, or after sex was higher for sex with a casual partner (80%) than sex with a main partner (56%).

Women were asked to report on their use of various services during the previous six-month period. At least two-thirds of the women (68%) had received HIV prevention information, and more than half (56%) had received an HIV test. About 46% of the women received an STD test, and 19% were treated for an STD.

Of the 1,227 weighted observations used in analyses, 63% reported vaginal sex with a main partner in the previous six months and 27% reported vaginal sex with a casual partner in the previous six months. Casual partners were defined as: "someone who you did not think of as a main partner (either a friend, more than one significant partner, or someone you exchanged sex with for money, drugs or other things you needed)."

Those who reported having vaginal sex in the specified period were asked whether they used a condom or barrier from start to finish during sex with the partner(s). Response choices were "always," "sometimes" or "never." For these analyses consistent condom use was defined as "always" using a condom while "sometimes" or "never" using a condom was considered inconsistent condom use. The proportion of women reporting inconsistent condom use was similar for sex with a main partner (79%) and sex with a casual partner(80%).

Information on condom use with a main partner was available for 758 weighted observations, of which 23% also reported having had sex with another partner in the previous six months. The average length of the sexual relationship with a main partner was 4 years, ranging from 1 month to 27 years. Almost half of the women (49%) either agreed or strongly agreed with the statement : "There is no need to use condoms with my main partner." Condom use self-efficacy was measured by responses to the statement: "If my partner refuses to use condoms (barriers), I won't have sex." About one-third (36%) of the women either agreed or strongly agreed with this self-efficacy item for sex with a main partner.

A total of 329 weighted cases had information on condom use with a casual partner in the previous six months. The average number of casual sexual partners for these women was nine partners, ranging from 1 to 100. Half (52%) of these women reported that they had one person they considered a main partner. A smaller proportion of this group (14%) reported there is no

need to use condoms with casual partners. Approximately 40% agreed or strongly agreed with the self-efficacy item for sex with a casual partner.

Logistic regression models for each partner type included four demographic variables (race, age, country of birth and living situation), five substance use variables (alcohol, heroin, methamphetamine, cocaine and injection-drug use) and one self-efficacy item. The models controlled for receipt of STD testing, STD treatment, HIV prevention education, and HIV testing in the previous six months. In addition, women's opinion about the need for condom use was used as a control variable. For sex with a main partner, the model also controlled for the length of the relationship in months, and having a casual partner(s). In the casual partner model, additional control variables included the number of sexual partners and having a main partner. Using listwise deletion, the total number of weighted observations used in the model for main partner was 701, while the total number for the casual partner model was 300. Both models appeared to have a good fit based on the Hosmer and Lemeshow Goodness-of-Fit Test. The maximum-rescaled R-Square was 0.7935 for the main partner model and 0.7336 for the casual partner model.

After adjusting for covariates, significant demographic predictors of inconsistent condom use with a main parter were race and living situation. Using white women as the reference variable and three dummy variables (black, Hispanic and other race), women of other races were 9.6 times more likely to be inconsistent users during sex . Those living in a temporary/transitional housing situation were five times more likely to be inconsistent users than those who were living in a stable environment such as renting an apartment, living with parents, or owning a home. For casual partners, black women were at a reduced risk for STDs/HIV; they were more likely to use condoms consistently than white women. Older age seemed to have a marginally significant but protective effect against STD/HIV risk for sex with main partner. Women who were 36 years or older were more likely to use condoms consistently with a casual partner compared to women between the ages of 22 and 35.

The effect of having sex while high (under the influence of alcohol or drugs) differed by partner type. Women who had sex with a casual partner while high were significantly more likely to be inconsistent condom users. For a main partner, women who had sex while high were significantly more likely to use condoms consistently. In the model for casual partners, the effect of heroin use seemed to be modified by age. An interaction term for heroin use and age as a continuous variable was statistically significant in this model. Older heroin users were more likely to use condoms consistently than non-heroin users or younger heroin users. However, heroin use was less prevalent among younger women. For example, only 4% of women below the age of 21 used heroin, compared to 18% between ages 22 and 35, and 35% above the age of 36. Other substance use variables were not significant in both models.

Self-efficacy was a significant predictor in both models, decreasing risk for STDs and HIV. Those who agreed with the self-efficacy item were significantly more likely to use condoms consistently with a main or casual partner.

Opinions about the need for condom use with partners also significantly predicted inconsistent condom use in both models. Those who reported that there is no need for using condoms with a main partner were nine times more likely to be inconsistent users. In the casual-partner model, they were 12 times more likely to be inconsistent users.

Other significant control variables for the main partner model were the length of the relationship measured in months, and having a casual partner. Each additional month that the relationship was maintained was associated with increased odds of being an inconsistent condom

user. Women who had a casual sexual partner in addition to their main partner were six times more likely to be inconsistent users than those who only had a main partner.

For casual partners, the number of sexual partners was not a significant predictor of inconsistent condom use. Significant factors were having a main partner, and receiving either an HIV test, STD test, or HIV education. Women who received an HIV test in the previous six months had were 16 times more likely to be inconsistent users than those who did not receive a test. Conversely, women who receiving an STD test, receiving HIV prevention education, or had a main partner were more likely to use condoms consistently with a casual partner.

IV. CONCLUSIONS

The majority of women who had vaginal sex in the six-month period before the CRAS survey reported inconsistent condom use with their main or casual partner(s). Demographic factors that significantly increased the odds of being an inconsistent condom user with a main partner were: living in transitional housing, and being in the "other" race category. While Latina and Black women were not significantly different from white women, those in the "other" category (Asian/Asian American, Native Hawaiian or Other Pacific Islander, or other) were more likely to be inconsistent condom users as compared to white women.

After adjusting for covariates in multivariate analyses, only two findings were similar in both models predicting inconsistent condom use. Regardless of partner type, women who reported that there is no need for using condoms with their partner were at least nine times more likely to be inconsistent users. Alternately, high self-efficacy, defined as the ability to refuse sex if a partner refused to use condoms, was associated consistent condom use in both models. These results provide evidence for the role of self-efficacy in the Transtheoretical Model in distinguishing between women at different stages of change. Inconsistent condom users, who would likely be in the first three stages, appear to have lower condom-self efficacy and a more negative attitude towards condom use than those who are in the action or maintenance stages of change (consistent condom users).

The odds of inconsistent condom use with a main partner were significantly greater for women who had a longer sexual relationship with their main partner. Women in a monogamous long-term relationship might perceive themselves at lower risk for HIV or STDs, and might thus be more likely to be in the precontemplation, contemplation or preparation stages of change. This indicates the need for targeted prevention interventions when working with such women, who might be at risk due to the behavior of their partners.

Contradictory findings were found in the two models for having sex while high, and having multiple partners. First, sex while high with a main partner seemed to reduce STD or HIV risk, while sex while high with a casual partner increased the odds of being an inconsistent condom-user. The latter finding is the expected effect based on the literature linking substance use to reduced judgment and risky sexual behavior. The incongruity in results could be an indication of differences in the context of sex with a main partner compared to a casual partner. Second, a woman was more likely to be an inconsistent condom-user with her main partner if she also reported having a casual partner. In contrast, for the casual-partner model, having a main partner was associated with consistent condom use. These findings support the multidimensional aspects of condom use identified in previous research using the TTM. Interventions targeted at these WSRs should therefore address their condom-use intentions with each partner, acknowledging that the women might be at different stages of change in each case.