An Exploration of Geographic Access to Substance Use Treatment Programs, Violence Against Women (VAW), and HIV Risk Behaviors

Noelle M. St. Vil, Ph.D., MSW
Assistant Professor
University at Buffalo
School of Social Work

HPTN
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Background/Rationale

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- 736 million women, globally, experience VAW and 37.9 million people worldwide are living with HIV or AIDS.
- Women with a history of VAW are more likely, than those who do not, to report behaviors known to increase the risk of HIV.
- Studies have found neighborhood level characteristics are associated with increased vulnerability to VAW and HIV risk behaviors.
- Consistent evidence demonstrates that substance use is associated with violence against women and HIV risk behaviors.
- Studies have found that participation in substance use treatment is associated with reduction in substance use related violence and HIV risk behaviors.
- Mounting evidence demonstrates that geographic access to substance use treatment poses a significant barrier to treatment utilization and adherence.

Project Objectives/Aims

Considering the relationship between geographic access to substance use treatment and treatment utilization as well as substance use treatment, VAW and HIV, this study seeks to explore the relationship between geographic access to substance use treatment programs on VAW and HIV. Specifically, the present analysis sought to assess the following:

1. The relationship between geographic access to substance use treatment programs (and neighborhood level characteristics variables) and VAW risk.

2. The relationship between geographic access to substance use treatment programs (and neighborhood level characteristics variables) and HIV risk.

3. The relationship between geographic access to substance use treatment programs (and neighborhood level characteristics variables) and VAW among participants with HIV risk and participants without HIV risk, respectively.

Methods/Analysis Plan

This study uses data from **HPTN 064** (May 2009 to July 2010), The Women's HIV SeroIncidence Study, which was designed to evaluate the HIV seroincidence among U.S. women living in select geographic areas with high ranked prevalence of HIV and poverty.

Measures include:

- ***Outcome Measures***:
  - VAW (operationalized as a self-reported yes response to either physical, sexual, or emotional abuse)
  - HIV risks (consists of 9 items continuous variable as well as a dichotomous variable with HIV risk defined as a score > 0 and without HIV risk defined as a score of = 0).
- ***Social Determinant Variables***:
  - Geographic access to SAMSHA-certified drug and alcohol treatment programs was created by harvesting treatment facility information from the Substance Abuse and Mental Health Administration (SAMSHA) 2010 National Directory of Drug and Alcohol Treatment Programs.
  - Neighborhood level characteristic variables were extracted from the U.S. Census Bureau's American Community Survey (ACS) 2007-2011 5-year estimates which were linked with HPTN 064 baseline census tract or zip code, respectively. These variables include: the percentage of residents affordable housing rate (participants paying 30% or lower of their income), having affordable housing, percentage of less than high school degree, percentage of unemployment, percentage of segregation, and percentage of vacancy.

Methods/Analysis Plan Continued

- ***Covariates***: age in years, race, Hispanic ethnicity (binary), marital status, education, income in the past 12 months, employment, imprisonment in the last 5 years, food insecurity in the last six months, unstable housing, childhood abuse, depression symptomology, PTSD, emotional support, and financial support.

Data Analysis:

- We used longitudinal multilevel models to assess the relationship between SD (primary predictor) and VAW (outcome). We repeated this model for physical abuse, sexual abuse, and emotional abuse respectively. For continuous outcomes (HIV risk), we chose link= identity and provided mean differences in HIV risk, 95% CI and p-values for each SD variable. The same method was used to assess the relationship between social determinants and VAW among participants with HIV risk and participants without HIV risk.

Results

The significant findings to be highlighted in this study are that among women who reside in census tracts or zip codes with high prevalence rates of HIV:

1. VAW decreases as geographic access to substance use treatment programs increases (OR 0.988; CI 0.979 - 0.998, p =0.14).
2. When looking at specific types of VAW, emotional abuse decreases, and physical abuse decreases (although not significant) as geographic access to substance use treatment increases (*OR* 0.988, 95% *CI* 0.978-0.998, *p* =.018 and *OR* 0.989, 95% *CI* 0.978 - 1.000, *p* = 0.054, respectively) .
3. For participants with HIV risk their risk of experiencing VAW decreases as geographic access to substance use treatment programs increases (*OR* 0.987, *CI* 0.978-0.997, *p* =0.012). There was no significant difference for participants without HIV risks.
4. Neighborhood level variables were nonsignificant predictors of VAW and HIV risks.

Discussion

- This longitudinal multilevel analysis found that geographic access to substance use treatment centers were associated with VAW and HIV outcomes.

- To our knowledge, this study is one of the first to assess the relationship between VAW, HIV, and geographic access to substance abuse treatment centers.

- Currently, limited research on geographic access to substance use treatment related variables are assessed in VAW research.

Implications/Future Considerations

- This study highlights the need to expand substance use density variables in VAW research to include additional research on geographic access to substance use treatment.
- The findings highlight the importance of the exploration of policies to increase the geographic access of substance use treatment centers.
- Future studies should aim to integrate more in depth and detailed VAW questions.
- Future studies should look at individual substance use as a moderator between geographic access to substance use treatment programs (and neighborhood level characteristics variables) and VAW and HIV risks

Thank you

Noelle M. St. Vil
Assistant Professor
School of Social Work
University at Buffalo
noellest@buffalo.edu

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/HIVptn

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