

# Prior Homelessness and Rent Burden as Predictors of HIV Risk for Single Room Occupancy Building Residents

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## Statement of the Research Problem

A growing body of research evidence suggests that individuals who are homeless or unstably housed individuals are at an elevated risk for contracting HIV (Beijer, Wolf, & Fazel, 2012). There are several potential pathways linking homelessness with greater HIV risk. For example, several studies have found that individuals who are homeless or unstably housed are more likely than those in stable housing to report illicit drug use, intravenous drug use and needle sharing, trading sex for money, and having more than one sexual partner—all behaviors that can put a person at risk for contracting or transmitting HIV (Andia et al., 2001; Dickson-Gomez, McAuliffe, Convey, Weeks, & Owczarzak, 2011; Elifson, Sterk, & Theall, 2007; Neblett, Davey-Rothwell, Chander, & Latkin, 2011; Weir, Bard, O'Brien, Casciato, & Stark, 2007).

However, how homelessness is defined varies considerably among studies, and little is known about how particular housing conditions, including single room occupancy (SRO) dwellings, may be related to HIV risk. This dissertation study assessed HIV risk behaviors and covariates among a sample of adults living in SRO buildings in Chicago. SROs are hotels or apartment buildings that rent small dormitory-style rooms to single adults. Although past studies on housing and HIV risk have sometimes included SRO residents in their samples, they are often grouped for analysis with participants in other types of housing, such as those who are literally homeless (e.g. Elifson et al., 2007; Jenness et al., 2011), or limited by low statistical power and attrition (e.g. Andia et al., 2001; Dickson-Gomez et al., 2011). Thus, the relationship between SRO housing environments and HIV risk is currently not well understood.

## Research Background and Hypotheses

This study focused on two aspects of housing that may be linked to HIV risk for SRO residents, prior homelessness and rent burden (the proportion of income one pays in rent). Though many of the theoretical frameworks that have been used to understand HIV risk behaviors (e.g. health belief model or theory of reasoned action) focus mainly on intrapersonal-level constructs, research in the area of HIV/AIDS and elsewhere has also shifted increasing attention to environmental and social influences on health. The study's focus was informed by research and theorizing on geographically rooted disparities in

health and risk, in particular the risk environment perspective (Rhodes, 2002). The risk environment framework specifies aspects of place—which can be considered at macro, meso, and micro levels—that are linked to the production of risk, including physical, social, economic, and policy facets. In this study, rent burden represented an economic facet of SRO housing as a residential micro environment.

The study sought to answer the research question, *To what extent do homeless histories and rent burden vary among SRO residents, and how is this variation associated with HIV risk?* Specifically, the study tested two hypotheses: (1) that among SRO residents, prior street homelessness would be associated with increased HIV risk behavior; and (2) that among SRO residents, higher rent burdens would be associated with increased HIV risk behavior. The first hypothesis was based on research documenting associations between indicators of past homelessness and drug and sex-related HIV risk behaviors (e.g. Neblett et al., 2011; Stein, Nyamathi, & Zane, 2009), though few of these studies included SRO residents in their samples. The second hypothesis was based on research linking economic disadvantage with HIV risk for unstably housed populations (e.g. Riley, Moss, Clark, Monk, & Bangsberg, 2005), including a qualitative study finding increased HIV risk behaviors among low-income adults with higher rent burdens (Dickson-Gomez et al., 2009).

## **Methodology**

### **Study design**

The study used a cross-sectional survey design to assess the HIV risk behaviors of SRO residents and examine if these behaviors were associated with prior homelessness and rent burden. The study's hypotheses were tested controlling for six variables that previous research has linked with HIV risk behavior: age, sex, race, HIV status, serious mental illness, and felony conviction.

### **Sample recruitment strategy**

A venue-based approach was used to recruit the sample from 10 privately owned SRO buildings in the Uptown neighborhood of Chicago. Participants were recruited primarily in person at the SROs in the sampling frame. They were then referred to the Uptown office of Community Outreach Intervention Projects, a community-based HIV prevention and service program affiliated with the University of Illinois at Chicago School of Public Health, to complete the study's eligibility screening and survey interview. Participants were eligible if they were at least 18 years old; were currently living (defined as having spent at least the previous night) at one of the SRO buildings where recruitment took place; could communicate verbally in English; and demonstrated ability to provide informed consent via a brief assessment. Participants received \$20 compensation. The target sample size was a minimum of 150 participants, based on a prospective power analysis indicating the minimum  $n$  for power to detect small-to-medium effect sizes.

## **Measurement**

Variables were measured by an interviewer-administered survey that contained questions adapted from other instruments as well as some original questions. The instrument was pilot tested in April 2013 with a sample of four SRO residents. Minor revisions were made prior to its use for data collection. The survey and all study instruments were reviewed and approved by the university's IRB prior to use.

The study's first independent variable, prior homelessness, was measured through several indicators, including number of lifetime homeless episodes, proportion of lifetime spent homeless, and a dichotomous indicator of homelessness in the past 12 months. Rent burden, the second independent variable, was defined as a person's monthly rent divided by monthly income.

Six categories of HIV risk behavior constituted the study's dependent variables: illicit drug use other than marijuana; problem drinking, as measured by a positive score on the FAST assessment (Hodgson et al., 2003); injection drug use; having more than one sexual partner; having sex without a condom; having sex while drunk or high; and exchanging sex for money or drugs. Most of the dependent variables were measured over the past 30 days. However, injection drug use and sex exchange were operationalized as lifetime variables due to their low occurrence. In addition, a composite measure of risk was created by summing the total number of risk behaviors reported over the past 30 days.

Most control variables—sex, HIV status, serious mental illness, and felony conviction—were measured through dichotomous indicators. Race was a three-level variable, consisting of the categories African American, White, and Other Race. Age was a continuous variable.

## **Analysis approach**

Analyses were conducted using Stata software. Univariate statistics were calculated to describe the sample. Bivariate analyses including chi-square and t-tests were conducted to assess relationships between indicators of the independent, control, and dependent variables. These analyses informed the selection of indicators for inclusion in the multivariate analyses. The hypotheses were tested by building a set of models regressing each dependent variable on the two main predictors, prior homelessness and rent burden, and the control variables. Logistic regression was used for dichotomous dependent variables (e.g. any illicit drug use other than marijuana) and negative binomial regression was used for count variables, such as number of sex acts without a condom.

## **Results**

### **Sample description and univariate statistics**

A total 172 people completed the survey interview, representing 77% of all recruited individuals. After applying quality control procedures, 163 cases were retained for analysis. The sample was primarily male (78%) and included African Americans (63%), Whites (27%), and participants of other races (10%). Participants' ages ranged from 21 to 76, with a mean age of 50. Six percent of participants reported HIV positive

status, 68% reported a serious mental illness, and 48% reported a felony history. The majority (83%) had been homeless at least once in their lifetimes, and 18% participants were homeless in the past 12 months. Participants reported an average of 34.9 months living at their current SRO building. Participants' average monthly income was \$722, with the primary source being disability benefits. Mean rent burden was 52%; about one-third of participants received a rental subsidy through various social service organizations that helped them pay the rent. Each HIV risk behavior was reported by 11 to 33% of the sample.

### **Bivariate analysis**

A dichotomous indicator of experiencing homelessness in the past 12 months was significantly associated with three dependent variables and was selected for the multivariate analysis. For the bivariate and multivariate analysis, a three-level categorical indicator of rent burden was created. This indicator included a no rent burden group, containing participants who had no legitimate income and received subsidies covering 100% of their rent ( $n = 16$ ); a moderate group containing participants with rent burdens of 1 to 50% ( $n = 80$ ); and a high rent burden group of participants with rent burdens exceeding 50% ( $n = 66$ ). This indicator was associated with three dependent variables in the bivariate analysis.

### **Multivariate analysis**

The multivariate analyses indicated that prior homelessness and rent burden were associated with some HIV risk behaviors when controlling for the other variables in the models. Participants who had been homeless in the past 12 months were significantly more likely to report illicit drug use other than marijuana ( $OR = 3.57$ ), lifetime injection drug use ( $OR = 4.59$ ), increased incidence of having sex while drunk or high ( $IRR = 7.80$ ), and a greater total number of risk behaviors ( $IRR = 1.58$ ). These outcomes provide partial support for the first hypothesis. The hypothesis that higher rent burdens would be associated with greater HIV risk was not supported. In contrast, participants in the no rent burden category were more likely than participants who had moderate or high rent burdens to engage in some risk behaviors, including using illicit drugs, having more than one sexual partner, and having sex without a condom. For example, there was a 78% reduction in the odds of having multiple sexual partners for participants in the moderate rent burden category compared with the no rent burden category.

## **Utility for Social Work Practice**

This study has several implications for social work, including direct practice and policy. In terms of direct social work practice, the finding that participants who had been homeless in the past 12 months were more likely to engage in some types of risk behavior suggests that it is critical to target prevention interventions and services to individuals transitioning from homelessness to SRO housing. For example, such individuals might benefit from harm-reduction based counseling and linkage to services. Further, the findings on rent burden indicate that interventions to address barriers to income, particularly for individuals who have housing subsidies but no other reliable income sources, may also impact HIV risk behavior. Though rental subsidies are critical in

helping people who have little or no income access housing, the findings suggest that it is also important to consider income more holistically. Considering that nearly half of the participants in this study reported having a felony conviction, it is critical for social workers to understand how a history of involvement in criminal justice system can limit employment prospects and access to benefits, and advocate to reduce these barriers.

In terms of policy, this study comes at a time when SROs in many cities are being torn down or converted into more upscale types of housing. Contrary to assumptions about SROs constituting a type of “transient” housing, participants in the study reported living in their current SRO building for an average of nearly three years, and some reported a residence period of up to 20 years. Given their very low average incomes, the majority of participants were able to afford few other types of housing. These findings suggest that SROs provide an alternative to homelessness for many individuals. Thus, efforts to preserve SRO housing should be included as a key component of affordable housing and homelessness prevention policies. SRO residents may also benefit from policies that aim to better link them with social services (e.g. onsite case managers) to address their health, mental health, and financial needs.

Finally, the study has implications for multi-level social work practice and social justice. Social work has long embraced an ecological perspective, and this study helps to illustrate this paradigm by examining how housing and environmental factors are linked to behaviors typically viewed as individual-level choices. In the area of health, numerous disparities related to characteristics including race, sex, class, geographical factors continue to persist. Socioeconomic disparities in the U.S. HIV/AIDS epidemic are particularly stark. As a profession committed to social justice, social workers have the opportunity and the responsibility to use their skills in practice, policy, and research to move toward a more equitable future in which disparities are eliminated and both good health and stable housing are able to be enjoyed by all.

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