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Neighborhood factors that contribute to alcohol use and loneliness in HIV positive patients

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Background

There are a significant number of HIV positive persons living in the Jacksonville (FL.) area. Failure to adhere to highly active antiretroviral treatment (HAART) regimens can result in poor treatment outcomes and resistance to HAART (Voldberding & Deeks, 2010). Presenting an added threat to successful HIV treatment is alcohol consumption. Heavy drinking has been found to reduce the life expectancy of those infected with HIV by six years (Braithwaite et al., 2008). Alcohol consumption also negatively impacts memory and executive functioning and has been linked to an increase in missed HAART doses (Braithwaite et al., 2005)

Neighborhood factors contribute to substance abuse and increased health risk behavior. Past research has linked rates of sexually transmitted disease to neighborhood factors such as socioeconomic environment, family structure, education, unemployment, community physical disorder, social capital and racial/ethnic income inequalities (Fichtenberg, et al. 2010). Additional research has also linked geographic proximity of alcohol and tobacco retailers to increased alcohol and tobacco use among youths (West, et al. 2010). Neighborhoods with riskier environments of self-reported drug markets have been shown to have higher rates of high-risk sex partners (Jennings, 2012).

Studies have also shown that due to HIV related stigma and self-imposed withdrawal those who are HIV positive have decreased social network size, limited social support, and social isolation as well as decreased treatment adherence (Stutterheim et al., 2012).

Objectives

Purpose

The purpose of this project was to expand current HIV research regarding access to alcohol, alcohol abuse and loneliness that may serve as barriers to treatment success and HIV prevention.

Hypotheses

It is hypothesized that participants who live closer to more alcohol outlets report higher rates of binge drinking and more substance use related problems.

It is hypothesized that social support will moderate the relationship between density of alcohol outlets and binge drinking. Specifically, participants with high neighborhood density of alcohol outlets combined with low social support will be more likely to binge drink compared to those with high support.

Methods

Participants: 85 patients from an HIV treatment clinic in Jacksonville, Florida

Recruitment: Upon check-in to the UF CARES clinic in Jacksonville, Florida, patients were asked by the clinic staff person if they would be willing to speak with a study staff member.

Procedures: After agreeing to speak with a study staff member, a consent form was read to the prospective participant by a study staff member in a private room within the UF CARES clinic. Study staff will address all questions and concerns prior to the participant signing the consent form. The prospective participant was able to consider study enrollment for as long as necessary prior to joining the research study. After study enrollment, we asked all participants to complete a brief interview, which took about 15 minutes to complete.



Measures

Interviewer-administered measures included:

- Alcohol Use Disorders Identification Test (AUDIT)
- UCLA Loneliness Scale.

Geographical Information Systems, ArcGIS, was used to map participant residential area and surrounding neighborhood factors. To protect participant privacy, the closest intersection to the participant's place of residence was used as the reference point to for mapping distance in relation to alcohol outlets.



Analyses

Quantitative Analyses This study collected cross-sectional, retrospective data. Survey data gathered was coded into Statistical Package for the Social Sciences (SPSS), a computer software capable of providing useful descriptive statistics and running various linear regression analyses for numerical data. Multi-linear regression using UCLA scores and geographic alcohol outlets availability were used as predictors of drinking behavior.

Results

UCLA scores ($\beta = 0.088, p = .012$) and number of alcohol outlets ($\beta = 0.040, p = .028$) were significant predictors of AUDIT scores. UCLA scores and number of alcohol outlets accounted for 10.4% ($R^2 = .104$) of variance of AUDIT scores.

There was co-occurrence of alcohol use and self-reported loneliness among patients currently in treatment for HIV. There also appears to be a relationship with neighborhood factors, alcohol use, and loneliness but further research is needed.

Outcomes

The study findings supported the hypothesis that participants that lived closer to more alcohol outlets reported higher rates of binge drinking and alcohol abuse.

The study also found that participants who also reported higher rates of loneliness reported higher rates of binge drinking and alcohol abuse.

Future implications for Public Health and Health Professionals

If a relationship is established between proximity of negative social and geological factors, such as alcohol retailers, then specific target interventions can be established to address medication adherence and social support needs in these vulnerable individuals that encompasses neighborhood outreach and community involvement.



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