# Social Support Moderating the Effects of Discrimination and HIV-Related Stigma on Alcohol Use in People with HIV

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## Background

- Experiences of discrimination and HIV-related stigma can lead to negative health consequences including depression, anxiety, and increased alcohol use in people with HIV (PWH).
- HIV disproportionately affects members of racial and sexual minority groups.
- Alcohol Use Disorders (AUDs) are highly prevalent in PWH, and alcohol use negatively impacts the entire HIV care continuum.
- Social support can protect against hazardous drinking.

## Objective

To examine the effects of interpersonal stressors (e.g., discrimination, HIV-related stigma), negative emotional responses (e.g., anxiety, depression), and social support on alcohol use in PWH

## Methods

- **Design**: Cross-sectional analysis of the New Orleans Alcohol use in HIV (NOAH) Study (n=195)
- **Participants**: Adults living in and receiving HIV care in the Greater New Orleans Area, recruited from the University Medical Center, New Orleans.
- **Data**: Surveys on experiences of discrimination, HIV-related stigma, anxiety, depression, social support, and alcohol use
- **Analysis**: Chi-square, student's t test, correlations, linear and logistic regressions, and mediation modeling
- Analyses were conducted using SAS 9.4

| |
|---|
| **Average Age 55 ± 9.6 years** |
| **62% Male** / **38% Female** |
| **88% Non-White** / 12% White |
| **78% Annual Income ≤ $20,000** / 22% > $20k |
| **76% Attained ≤ High School** / 24% > HS |
| **Average Years with HIV Diagnosis 23 ± 9.7 years** |
| **67% Low-Risk Drinking** (AUDIT < 8) / 33% At-Risk Drinking |

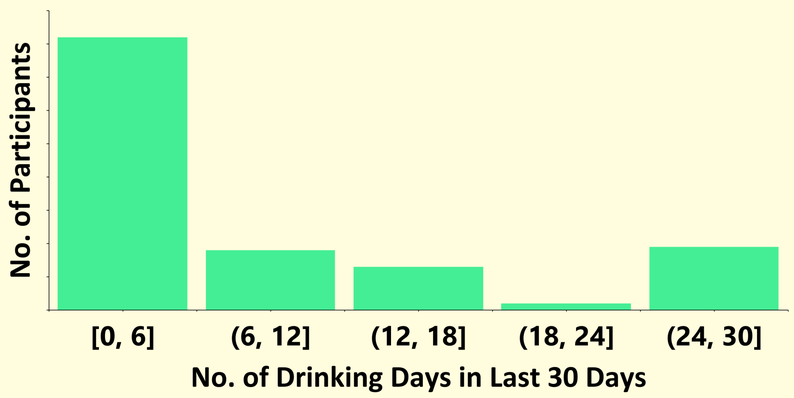



**Figure 1**: Most participants reported drinking on 6 or fewer days of the previous 30 days.

## Results

| | Enacted Stigma | Experiences of Discrimination | Anxiety | Depression | Internalized Stigma | Social Support |
|---|---|---|---|---|---|---|
| Enacted Stigma | | | | | | |
| Experiences of Discrimination | 0.25*** | | | | | |
| Anxiety | 0.26*** | 0.26*** | | | | |
| Depression | 0.24** | 0.16* | 0.52**** | | | |
| Internalized Stigma | 0.50**** | 0.16* | 0.39**** | 0.28**** | | |
| Social Support | -0.18* | -0.11 | -0.27*** | -0.34**** | -0.16* | |

**Figure 2: Correlations Matrix**. Interpersonal stressors, negative emotional responses, and social support. Correlation coefficients given.
* = p ≤ 0.05; ** = p ≤ 0.01; *** = p ≤ 0.001; **** = p ≤ 0.0001

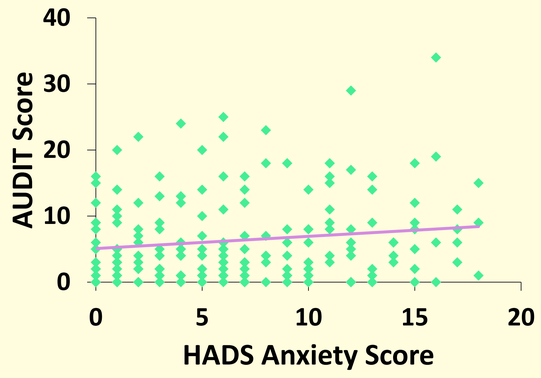



**Figure 3**: Anxiety was associated with greater alcohol use (β = 0.2698, p = 0.020).

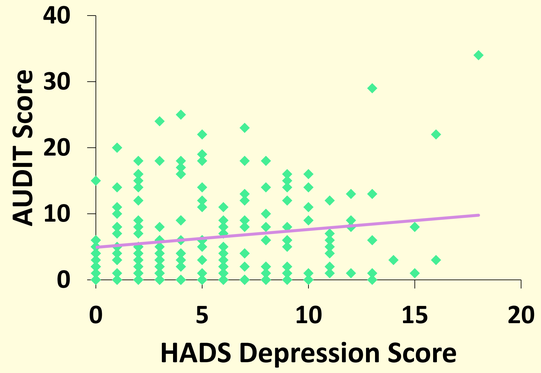



**Figure 4**: Depression was associated with greater alcohol use (β = 0.1846, p = 0.049).

Each **1-point increase in anxiety** was associated with a **9% increased risk of hazardous drinking** (OR = 1.089, p = 0.027).

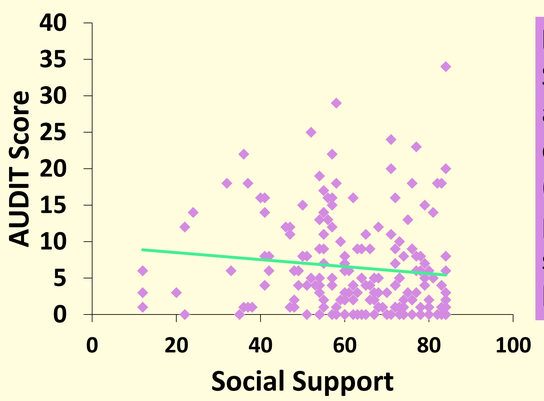
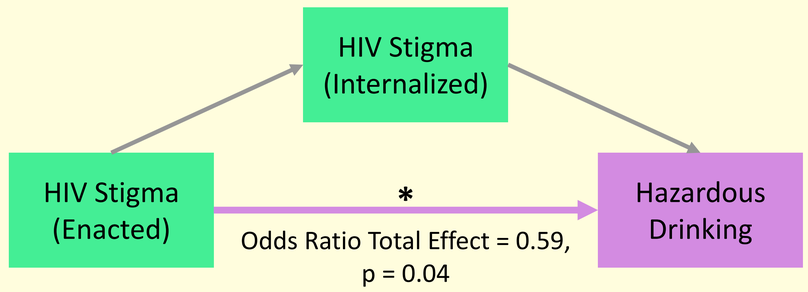



**Figure 5**: Social Support was associated with decreased alcohol use (β = -2.113, p = 0.036), when stigma measures were held constant.

People with **high levels of social support** were **46% less likely** to engage in **hazardous drinking** (p = 0.048).

**Figure 6: Mediation Model: HIV Stigma and Alcohol Use**
Adjusted for Social Support, race, gender, age




Note: This was the opposite direction of the expected effect.

## Discussion

- Anxiety and depression were significantly associated with increased alcohol use.
- Social support showed a protective effect against hazardous alcohol use.
- Contrary to previous research, greater HIV-related stigma was associated with decreased odds of hazardous drinking.
- Findings highlight complex interactions among interpersonal stressors, emotional responses, social support, and alcohol use in PWH.

## Conclusion

- Understanding how these factors contribute to alcohol use can inform future interventions and improve alcohol-related outcomes in this patient population.
- **Future research directions**:
  - Structural equation modeling (SEM) with additional measures of interpersonal stressors and emotional responses (e.g., traumatic events / PTSD)
  - Qualitative studies on lived experiences of stigma, discrimination, anxiety, depression, social support, and motivations for drinking
  - Interventions to enhance social support for PWH and reduce community stigma surrounding HIV

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