

Associations of the Alcohol Environment, Stigma and Alcohol Use among People with HIV

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Introduction

- Alcohol Misuse is common among people with HIV (PWH).¹
- Increasing rates of alcohol use leads to negative health consequences such as progression of the virus and adherence to anti-viral therapy.¹
- Research has shown that HIV stigma is highly associated with alcohol misuse.
- A burden of HIV positive patients are concentrated in disfranchised areas; determinants such as violence and poverty have been linked to alcohol misuse among PWH.²
- Alcohol outlets tend to be in lower income areas, exposing lower income populations to excess alcohol risks associated with alcohol sales.²
- Outlets pose as a situational risk as these outlets play a significant role in the health outcomes in the neighborhood levels irrespective of individual consumption patterns.²

Objective

- The objective of this study to assess if an alcohol environment impacts the association between stigma and alcohol use among people living with HIV (PWH).

Methods

Study Population:

- New Orleans Alcohol Use in HIV (NOAH) Study³
 - N=390 HIV Participants
 - ≥ 18 years-old



Measures:

HIV Stigma	Alcohol Misuse Measure	Alcohol Environment
<ul style="list-style-type: none"> Overall score: 40 item questionnaire Subscales <ul style="list-style-type: none"> Personal Stigma (range: 22-88) Disclosure Stigma (range: 16-64) Negative-Self Image (range: 7-28) 	<ol style="list-style-type: none"> Alcohol Use Disorders Identification Test (AUDIT: ≥ 8 = risk of alcohol misuse) Timeline Followback (TLFB: >3/4 drinks per day or 7/14 drinks per week or women/men in the past 30 days) Blood levels of Phosphatidylethanol (PEth) ng/ml) 	<ol style="list-style-type: none"> Total Number of Alcohol Outlets <ul style="list-style-type: none"> On-site: restaurants and bars Off-site: convenience and liquor stores Census Tract Outlet rates per 1,000 persons

Analysis:

- Student's T-Test, Spearman rank correlations, and logistic regression were used to analyze the effects of stigma and on alcohol misuse and the modification by alcohol outlet density.
- Models were adjusted for the following: sex, age, race, education
- SAS @ 9.4 statistical software was used.

Results

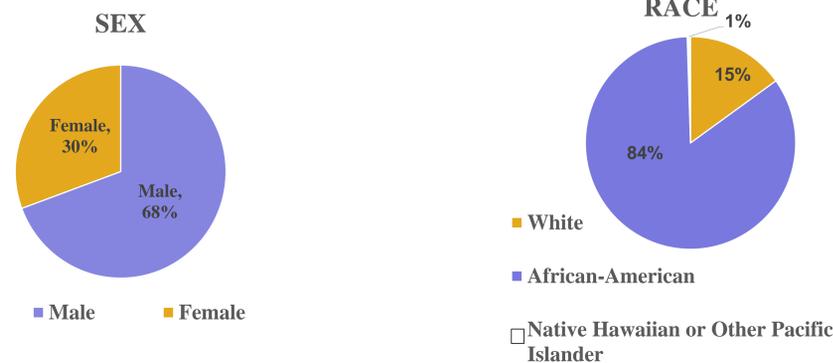


Table 1. Additional demographics and characteristics of study participants

	All N=390	Men N= 269	Women N= 121
Age	% (n)	% (n)	% (n)
20-29	5 (21)	6 (17)	3 (4)
30-39	16 (64)	16 (43)	5 (20)
40-49	23 (92)	20 (55)	31 (37)
50-59	42 (166)	44 (119)	39 (47)
≥60	13.2 (48)	13 (34)	11 (13)
Income			
<\$20,000	0.2 (345)	86 (231)	93 (113)
\$20,000-\$39,999	88 (32)	9 (25)	6 (7)
\$40,000-\$59,999	8 (10)	3 (9)	0.8 (1)
\$60,000-\$84,999	2.5 (1)	0.4 (1)	0 (0)
≥\$85,000	0.25 (2)	0.7 (12)	0 (0)
Housing			
Single Family Dwelling	85 (333)	83 (222)	91 (110)
Group Home	0.7 (3)	0.7 (2)	0.7 (2)
HIV-Specific Group Facility	9.9 (39)	12 (33)	12 (33)
Homeless/Shelter	4 (16)	0 (0)	5 (12)

Table 2. Comparison of mean stigma scores and standard deviations (s.d.) between females and males.

Scores	Females	Males	Difference	p-value
	Mean ± s.d.	Mean ± s.d.		
Personalized Stigma	59.2 ± 10.3	56.2 ± 9.5	3.1 ± 9.8	0.0044
Disclosure Stigma	43.1 ± 7.4	40.2 ± 6.8	3.0 ± 7.0	0.0001
Negative Self-Image Stigma	18.4 ± 3.4	17.2 ± 3.7	1.2 ± 3.6	0.0026
Overall Stigma	105.8 ± 17.0	99.6 ± 17.0	6.2 ± 17.0	0.0009

Onsite and Offsite Alcohol Outlets, Orleans Parish, 2019



Alcohol Outlet Density, Orleans Parish, 2019



Figure 2. On and off-Site Alcohol Outlets in Orleans Parish

Table 3. Odds Ratios and 95% Confidence Intervals (CI) for Stigma and Alcohol Misuse (AUDIT > 8) (n=391) * <0.05

Stigma	Unadjusted OR (95% CI)	Adjusted OR (95% CI)
Personalized	1.03 (1.01, 1.05)*	1.02 (0.99, 1.04)
Disclosure	1.02 (0.99, 1.05)	1.01 (0.98, 1.04)
Negative self-image	1.07 (1.01, 1.13)*	1.04 (0.98, 1.11)
Overall	1.01 (1.00, 1.03)*	1.01 (0.99, 1.02)

Table 4. Stratum specific estimates for high neighborhood outlet density and low density for HIV stigma and alcohol misuse (Total AUDIT >8 Peth >250 ng/mL), adjusted (Odds Ratios OR) and 95% Confidence Intervals (CI)

Stigma	Low Density OR (95% CI)	High Density OR (95% CI)
Personalized	1.04 (1.00, 1.09)	1.04 (1.00, 1.09)
Disclosure	1.06 (0.99, 1.13)	1.05 (0.99, 1.11)
Negative self-image	1.15 (1.01, 1.30)*	1.18 (1.04, 1.33)*
Overall	1.03 (1.00, 1.05)*	1.03 (1.01, 1.06)*

Discussion

- Participants had a rate of 2.3 ± 3.7 total alcohol outlets per 1,000 with a mean of 65.2 ± 81.0 total alcohol outlets within one mile of their home.
- Significant differences by gender in stigma measures and alcohol were prevalent.
- Total stigma and negative self-image stigma were shown to have an increase odds of alcohol misuse.
- Limitations: Conclusions cannot be made because data was self-reported through individuals behaviors. The data was also cross-sectional.

Conclusion

- Social and Environmental factors co-influence the association of HIV stigma and alcohol misuse.
- We are continuing to explore the data to provide additional insight of the interaction and impact of environment measures and alcohol misuse among PWH.

References

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