HAZARDOUS ALCOHOL USE PREDICTS DETECTABLE VIREMIA AMONG UGANDAN WOMEN: A PROSPECTIVE ANALYSIS

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BACKGROUND

- Hazardous alcohol use is associated with poor outcomes throughout the HIV care continuum.
- In Uganda, research has focused on (1) understanding this relationship in men and (2) achievement of viral suppression (VL<1000 is cutoff used by Uganda MOH).
- We explore prospective associations between hazardous alcohol use and detectable viremia (VL>20) among women living with HIV in Uganda using the detective VL, a more clinically meaningful outcome.

METHODS

- Analyzed data from women in the PATH (Providing Access To HIV Care)/ Ekkubo Study (Kiene et al., *BMC Infec Dis*, 2017).
- Cluster RCT: linkage to HIV care intervention vs SOC at achieving HIV viral suppression in rural Uganda.
- Prospective logistic regression models to analyze temporal associations between hazardous alcohol use at 6 months (AUDIT-C, score ≥ 3) and subsequent detectable VL (>20 copies per mL) at 12 months.
- Exploratory mediation analyses using SEM in SPSS AMOS. (see Figures 3 and 4).

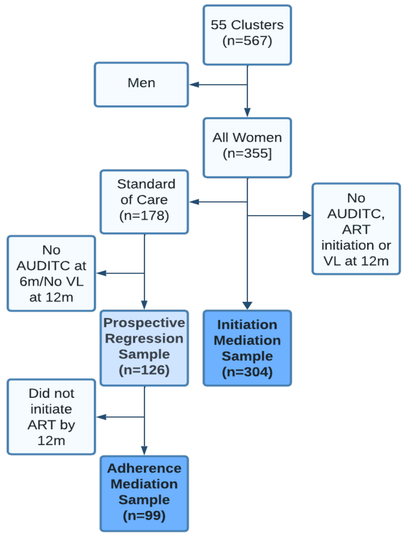


Figure 1. Analytic Sample Criteria

Women engaging in hazardous alcohol use had nearly three times greater odds of having a subsequent detectable viral load.

RESULTS

- Sample: 304 women who were diagnosed with HIV at study enrollment and had alcohol use and VL data available at follow-up. (see figure 1)
- Median age: 27 years [IQR 22,34].
- Enrolled before roll out of universal test and treat (UTT): 32%
- Hazardous alcohol use at 6 months follow-up: 18% | 12 months follow-up: 18%
- Initiated ART by 12 months follow up (self-report & clinic records): 77 %
- ART adherent at 12 months follow-up (self-report): 84%

Figure 2. Multivariable Prospective Association between Hazardous Alcohol Use and Detectable Viral Load

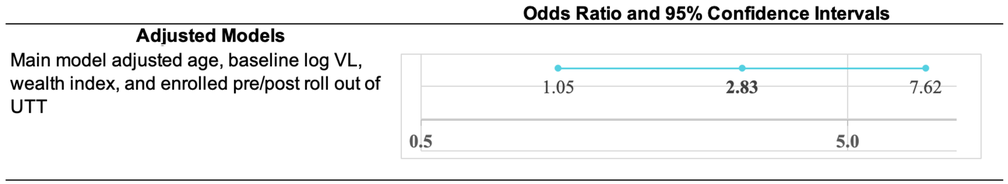
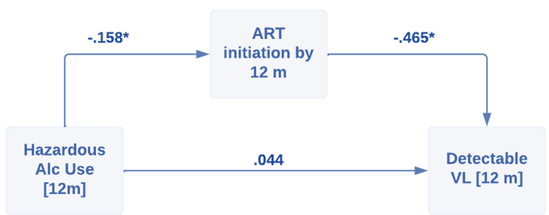


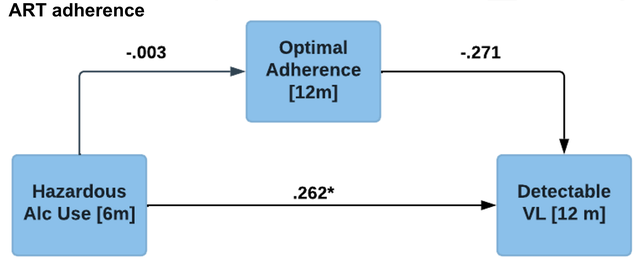
Figure 3. The relationship between hazardous alcohol use and subsequent detectable viral load was substantially mediated by ART initiation



model adjusted for age, baseline VL, wealth index, intervention arm
**signficant pathway*

STE β= -.029, 95% CI -.144, .087, p=.588)
SDE β= .044, 95% CI -.058, .139, p=.451)
SIE β= -.073, 95% CI -.139, -.015, p=.013)

Figure 4. Among those on ART, the relationship between hazardous alcohol use and subsequent detectable viral load was not mediated by ART adherence



model adjusted for age, baseline VL, wealth index, Dx pre/post UTT
**signficant pathway*

STE β= .263, 95% CI .031, .475, p=.029)
SDE β= .262, 95% CI .001, .496, p=.048)
SIE β= .001, 95% CI -.087, .071, p=.949)

CONCLUSIONS

- Women in Uganda engage in hazardous alcohol use and shouldn't be overlooked for alcohol reduction programming.
- Hazardous alcohol use is associated with worse treatment outcomes among WLWH and this relationship was fully mediated by ART initiation.
- We did not observe mediation by ART adherence.
  - May be due to limitations of the measure.
  - May indicate primary effect of hazardous alcohol use on ART in this population is driven by failure to start treatment.
- Use of better measures (longer period of adherence, objective) will improve understanding of the role of adherence in treatment outcomes among WLWH who engage in hazardous alcohol use in this setting.

ADDITIONAL KEY INFORMATION

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