



Examining the effects of an urban gardens and peer nutritional counseling intervention on alcohol consumption and tobacco use among PLHIV in the Dominican Republic

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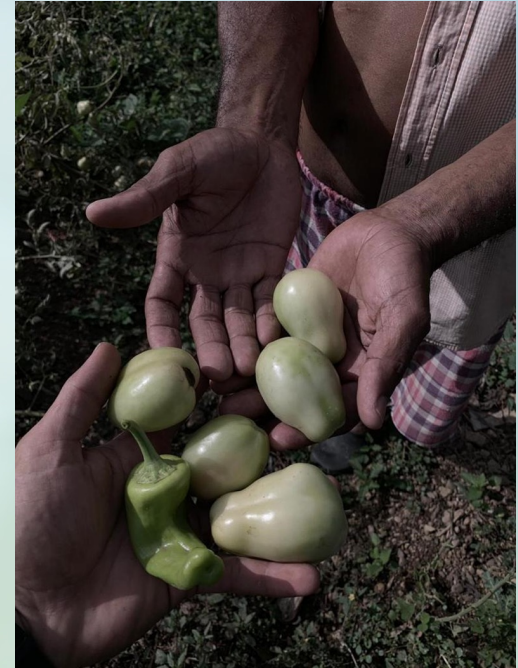
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Food Insecurity is Prevalent Among PLHIV and Associated with Substance Use

- Food insecurity (FI) is associated with substance use among some people living with HIV (PLHIV)
- Alcohol consumption and tobacco use are associated with poor HIV-related outcomes





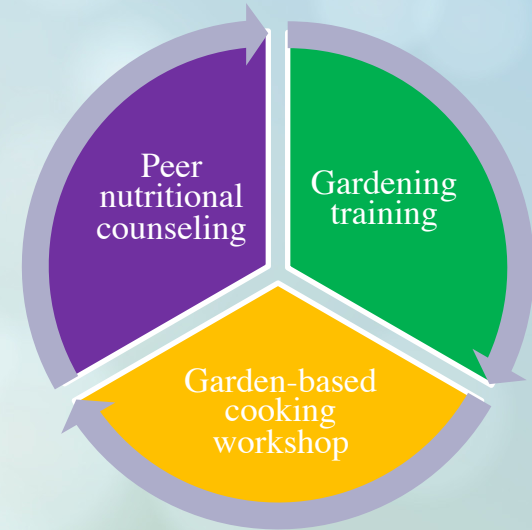
Study Aims

To examine whether a pilot urban gardens and peer nutritional counseling intervention with PLHIV experiencing food insecurity in the Dominican Republic affected participants' alcohol consumption and tobacco use



Overview of ProMeSA Intervention

- Pilot cluster randomized controlled trial with 115 participants from two HIV clinics in the DR
- ProMeSA ('Proyecto para Mejorar la Seguridad Alimentaria' or Project to Improve Food Security)
- 12-month intervention



Derosé et al., An integrated urban gardens and peer nutritional counseling intervention to address food insecurity among people with HIV in the Dominican Republic. *AIDS Educ Prev* 2021 Jun;33(3):187-201.

Derosé et al., Preliminary effects of an urban gardens and peer nutritional counseling intervention on HIV treatment adherence and detectable viral load among people with HIV and food insecurity: Evidence from a pilot cluster randomized controlled trial in the Dominican Republic. *AIDS Behav.* 2023; Mar;27(3):864-874.



Inclusion Criteria

- Moderate or severe food insecurity
- Sub-optimal ART adherence and/or detectable viral load
- Lived in clinic catchment area or resided in urban or peri-urban area
- Capacity to start and maintain a garden





Measures

- Alcohol use / hazardous drinking
 - Alcohol Use Disorders Identification Test (AUDIT-C)
- Smoking status / smoking intensity
 - U.S. Agency for International Development (USAID)'s Demographic and Health Survey (standard items used in the Dominican Republic)



Data Analysis

- Longitudinal multivariate regression accounting for serial cluster correlation
- Difference-in-differences (DID) analyses to assess intervention effects at 6 and 12-month follow-up
- Evaluated results using both 0.05 and 0.20 thresholds for 2-sided p-values



Participant Characteristics

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Characteristics	Control Clinic N=63	Intervention Clinic N=46
Age, Average (SD)	41.7 (12.3)	45.8 (10.7)
Male gender	40%	56%
Haitian background	11%	22%
Education, highest grade (Average)	6.1	4.9
Poverty (Monthly income of <5000 Dominican pesos or ~\$100 USD)	19%	17%
Has health insurance	86%	63%
Number of children < 18 years old at home	1.3	1.8
Food Insecurity (Moderate)	16%	24%
Food Insecurity (Severe)	84%	76%

*Standard deviations in parentheses. Parentheses are also used to represent the percentage of participants in dichotomous variables represented by a value of "1."



Substance Use Outcomes (Baseline)

Characteristics	Control Clinic N=63	Intervention Clinic N=46
Current Smokers	8 (13%)	7 (15%)
Packs Per Day (among current smokers)	0.14 (0.06)	0.28 (0.20)
AUDIT Score	1.87 (2.56)	3.02 (2.99)
Hazardous Drinking	15 (24%)	22 (48%)

*Standard deviations in parentheses. Parentheses are also used to represent the percentage of participants in dichotomous variables represented by a value of "1."



Intervention Effects on Substance Use

Outcome	Effects	
	6 Months Coefficient (p-value)	12 Months Coefficient (p-value)
Smoking Intensity (Packs/Day)	-0.25 (p=0.06)	-0.22 (p=0.09)
AUDIT-C	-0.61 (p=0.16)	0.25 (p=0.57)
Hazardous Drinking (yes/no)	-0.11 (p=0.15)	0.06 (p=0.41)

The intervention reduced smoking intensity, alcohol consumption, and hazardous drinking.

Limitations & Conclusion

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- Preliminary, exploratory
- Pilot intervention that focused on nutrition and was powered on HIV outcomes
- 2 clinics; small sample
- Reductions in alcohol consumption and hazardous drinking at 6 months
- Reduction in tobacco use among smokers at 6 and 12 months



Acknowledgements

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Questions?

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Fully Adjusted Effects on Substance Use

Primary Outcomes	Adjusted for sociodemographics [^]	
	6 Months Coefficient (p-value)	12 Months Coefficient (p-value)
Smoking Intensity (Packs/Day)	-0.24 (p=0.06)	-0.19 (p=0.13)
AUDIT-C	-0.61 (p=0.15)	0.23 (p=0.59)
Hazardous Drinking (Yes/No)	-0.11 (p=0.15)	0.06 (p=0.41)

[^] Controlling for age, gender, nationality, education, poverty, health insurance, and number of children in the home.

The intervention reduced smoking intensity, alcohol consumption, and hazardous drinking.