The Impact of Food Insecurity on Sexual HIV Risk Negotiation with Clients Among Youth Sex Workers Living with and Affected by HIV

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Background

- Food security is one of many social determinants of health that must be present for positive health outcomes.
- A growing body of research from diverse settings globally suggests that hunger and food insecurity are associated with heightened vulnerability to HIV and reduced access to and retention in HIV care.
- Much of this research has been conducted in resource-poor countries, with limited data from resource-rich settings, despite evidence that food insecurity is concentrated among key affected populations, such as youth and sex workers.
- The objective of this research was to examine the independent effect of food insecurity on sexual HIV risk negotiation with clients among youth sex workers (aged 14-29 years) in Vancouver, Canada.

Methods

- Longitudinal data (baseline and six bi-annual follow-up questionnaires) was drawn from An Evaluation of Sex Workers' Health Access ("AESHA"), a prospective community cohort of 723 street and off-street sex workers between January 2010-August 2013. Interviewers, outreach and nursing staff include experiential and non-experiential staff.
- This study was developed based on substantial community collaborations with sex work agencies since 2005 and continues to be monitored by a Community Advisory Board of representatives from more than 15 community agencies.
- Bivariate and multivariable generalized estimating equations (GEE) logistic regression were used to examine the independent relationship between measures of food insecurity derived using a modified version of the Radimer-Cornell Food Insecurity Scale and client condom refusal.
- The food insecurity scale was grouped into three categories, each measure representing a different aspect of food insecurity (Table 1).
- The primary outcome was client condom refusal. This variable was derived using responses of yes (always, usually, sometimes or occasionally, versus never) to client condom refusal with one-time or repeat clients for either vaginal or anal sex.

Results

- Of the 708 sex workers included in this study, 220 (31.1%) were youth, contributing 639 observations over the 3.5- year study period.
- Of the 220 youth sex workers, 34.6% (n=76), reported client condom refusal during the study period. Of our three measures of different aspects of food insecurity, 61.8% (n=136) reported having limited financial ability to afford food, 61.4% (n=135) reported being worried about food running out, and 9.1% (n=20) had exchanged sex directly for food over the study period.
- In bivariate logistic regression using GEE, non-injection drug use and experiencing physical or sexual violence by a client were statistically significantly associated with client condom refusal (on a p<0.10 level).

Table 1. Bivariate and multivariable OR's using GEE for the relationship between food insecurity measures and client condom refusal among 220 youth (<30 years) sex workers in the AESHA Cohort in Metro Vancouver, Canada[1]

Food insecurity measures	Client condom refusal [1]			
	Bivariate Crude Odds Ratios (95% Confidence Intervals)	p-value	Multivariate Adjusted Odds Ratios (95% Confidence Intervals)	p-value
Limited financial ability to afford food	2.83 (1.76-4.53)	<0.000*	2.20 (1.28-3.74)	0.004*
Worried about food running out	1.53 (0.95-2.45)	0.079	1.26 (0.73-2.17)	0.415
Exchanged sex directly for food	1.15 (0.51-2.59)	0.728	0.83 (0.33- 2.11)	0.691

[1]Each food insecurity measure was examined in a separate multivariable model, adjusted for confounders including: Aboriginal/Indigenous ancestry; non-injection drug use in the last six months; injection drug use in the last six months; experienced client violence in the last six months; experienced police harassment in the last six months.

- Of the food insecurity measures, in bivariate logistic regression using GEE, limited financial ability to afford food (OR: 2.83, 95% CI (1.76-4.53)) was statistically significantly associated with client condom refusal, being worried about food running out (OR: 1.53, 95% CI (0.95-2.45)) and exchanging sex directly for food were not statistically significantly associated with client condom refusal (OR:1.15, 95% CI (0.51-2.59)).
- In multivariable GEE analysis, after adjusting for other HIV risk pathways (e.g. injection and non-injection drug use, client sexual/physical violence), financial food insecurity remained statistically significantly associated with client condom refusal (AOR: 2.20, 95% confidence interval: 1.28-3.74).

Conclusions

- More than half of youth (61.8%) were considered to be financially food insecure at least once over the study period despite ready availability of food banks and charitable food sources in Vancouver.
- Because food insecurity can operate as a driver and a result of HIV vulnerability, this research underscores holistic support for youth living with and vulnerable to HIV.
- This study specifically indicates the necessity of ensuring access to nutritious food for marginalized youth, HIV/STI education and services among youth involved in sex work, and food security for youth as a prerequisite to positive health outcomes for those both living with and affected by HIV.
- Food security is directly associated with HIV risk negotiation and access to treatment. There is a demonstrated need for youth-centered programs to address the issue of food security for youth in sex work.

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