Efficacy of a savings-led microfinance intervention to reduce sexual risk for HIV among women engaged in sex work in Mongolia: A randomized clinical trial

Susan Witte, Aira Tolvgoo, Laura Cordisco Tsai, Marion Riedel, Reid Offringa, Mingway Chang, Nabila El-Bassel and Fred Ssewamala

Introduction

Mongolia currently has low, but steadily increasing HIV prevalence. Sixty percent of women living with HIV in Mongolia are women engaged in sex work(1). However, as a country in economic and political transition, it has increasingly high rates of sexually transmitted infections and alcohol dependence, both critical co-factors associated with emerging HIV epidemics in other parts of the world (1-2). Poverty, gender inequality and partner violence are major structural risks that limit the effectiveness of HIV prevention for women (3-5). Women engaged in sex work, who must rely on sexual behavior as a means of economic support, face multiple structural barriers that prevent them from engaging prevention behaviors and contribute to a compromised ability to be concerned with the long term health consequences associated with risk-taking (4-7).

This study tested a savings-led microfinance approach to HIV prevention, building on extant literature and pilot research completed in Mongolia with women engaged in street-based sex work over 5 years (8-10). As a low to middle income country in economic transition, Mongolia offers an important environment in which to test a public health intervention that may offer the secondary benefit of increasing economic independence among highly vulnerable women, and by contributing to an expanding economy.

Methods

From 2011-2012, women were recruited from 10 sex work locations identified through a targeted sampling process. Eligible women (n=107) completed baseline assessments and were randomized to either a 4 session HIV sexual risk reduction intervention (HIVSR) alone (n=50) or to a 34 session HIVSR plus savings-led microfinance condition (n=57) (see Figure 2). Follow-up assessments at 3 and 6 months examined unprotected acts of vaginal intercourse with paying partners and the number of paying partners reported by each participant in the prior 90 days.

Figure 2: Consort Diagram

Excluded (n=73)
• Not meeting inclusion criteria (n=47)
• Did not show up for baseline (n=26)
(N=277)

Results

We hypothesized that increasing HIV knowledge and skills, financial literacy skills, business development knowledge and skills and personal savings would lead to 1) more reductions in the number of paying sexual partners; 2) more reductions in the number of unprotected acts of vaginal sex with paying partners; and 3) higher likelihood of engaging in no risk behaviors in the past 90 days over 6 months compared to increasing sexual risk reduction knowledge and skills alone. Poisson and zero-inflated Poisson model regressions were used to examine the effects of assignment to the treatment versus the control condition on outcomes.

Figure 3a shows that all participants exhibited a 36% decrease in the number of paying sexual partners at each time point. Participants in the microfinance group exhibited a 35% greater decrease, compared to those in the control group, for each time point (IRR=0.65, 95% CI [0.50,0.84], p<.0001).

Figure 3b shows that all participants exhibited a 38% decrease in the number of unprotected vaginal sex acts at each time point (IRR=0.62, 95% CI [0.59,0.66]; p<.0001). We did not find a main effect of the microfinance group, nor did we find a significant group by time interaction.

Women assigned to the microfinance group were more likely to report no unprotected vaginal sex acts at the 6-months (OR=3.72, 95% CI [1.24,11.16]; p=.05). Women assigned to the microfinance group reported 50% fewer paying sexual partners at the 6-month time point (IRR=0.50, 95% CI [0.31,0.78]; p=.01).

Conclusions and Recommendations

This study was the first successful test of a savings-led microfinance intervention in support of HIV prevention among women engaged in sex work. Findings advance the gender-specific HIV and STI prevention repertoire for women by addressing structural level factors influencing the enhanced risk for HIV and other STIs. Findings are consistent with those of others who tested combination microfinance interventions targeting women engaged in sex work in the Baltimore, U.S.(11), Chennai, India(12), and in Nairobi, Kenya (13). Unique to the study, however, was the choice of an asset-based approach due to the high levels of stigma and discrimination the women face, associated with both their engagement in sex work and their harmful alcohol use, which excludes them from opportunities for microloans or increases their vulnerability to be economically exploited. We demonstrated successful outcomes, feasibility and safety of the intervention, opening opportunities for future research to extend this model. Given the multiple forms of marginalization and stigma faced by women engaged in sex work, until and unless there is increased regulation or oversight of micro lending to build in more protections for the stigmatized and more vulnerable there should be more attention paid to asset-based approaches. Further research is needed to identify the best ways to replicate, disseminate and sustain such interventions through the support of collaborations with government, NGO and global partners.

References


Acknowledgements

This study was funded by NIMH. We deeply appreciate the time and efforts of the women who participated in this study.

Photo of women developing their business plans during an Undarga session

Presented at AIDS 2014 - Melbourne, Australia