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Sexual Violence and Overdose among Women at-risk for HIV in Kazakhstan

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• The authors have no conflicts of interest to disclose
Why focus on FSW to address the HIV epidemic in Kazakhstan?

- Sexual transmission makes up 62% of detected cases in 2017
- Female sex workers (FSWs) have been identified as a key population in the global fight against HIV

![Graph showing percentage of HIV transmission modes from 2000 to 2017.]

Republican AIDS Center, 2017
Why focus on violence against women and overdose?

- Bi-directional relationship between violence and opioid use

 Increases opioid use to cope with physical pain, PTSD, depression and anxiety

UNODC. World Drug Report. 2017

Overdose in Central Asia

Mortality Ratios of Drug-related Fatalities in Central Asia

- Kazakhstan, 2011: Men, 3.5; Women, 10.6
- Kyrgyzstan, 2011: Men, 6.6; Women, 11.9
- Uzbekistan, 2010: Women, 1.5

CADAP. 2013 Regional Report on Drug Situation in Central Asia 2013
Overdose in Central Asia

Mortality Ratios of Drug-related Fatalities in Central Asia

- Kazakhstan, 2011: Men, 3.5, Women, 10.6
- Kyrgyzstan, 2011: Men, 1.3, Women, 1.5
- Uzbekistan, 2010: Men, 6.6, Women, 11.9

CADAP. 2013 Regional Report on Drug Situation in Central Asia 2013
Women who engage in sex work and use drugs

- Economic instability in Kazakhstan has forced many women to engage in street-based sex work
- Female sex workers are at an increased risk of sexual violence
- Risk environment of substance use, incarceration, street-based venues, homelessness, being in debt, and low educational attainment increases odds of violence
- Violence and substance use are inter-related, but not much is known about the relationship between violence and overdose
Aims & methods

To examine the efficacy of a combined HIV and economic strengthening program for FSW who use drugs in decreasing:

- Cumulative incidence of biologically confirmed STIs and new incidence of HIV and HCV;
- Reported sexual and drug risk behaviors;
- Monthly income from sex work

Project sites (RAC, 2017):
- **Almaty** (estimated # of FSW 6200; prevalence of HIV among FSW -1.1%)
- **Temirtau** (estimated # of FSW 200; prevalence of HIV among FSW -3.0%)
Study design

Eligibility criteria:
- Traded sex in past 90 days
- Drug use in past year
- Unprotected sex (any partner) in past 90 days
- Speak Russian
- Not planning to move for one year

Study duration: July 2014 – May, 2019

Study design flowchart:

- Screened: n=768
- Eligible: n=409
- Baseline assessment: n=401
- Cluster randomization: N = 354
  - HIV RR: n=179
    - 4 sessions
    - Intervention attendance 154 (86.0%)
    - Mean# of sessions attended 3.5
  - HIV RR + MF: n=175
    - 30 sessions
    - Intervention attendance 152 (86.9%)
    - Mean# of sessions attended 17.1
- Follow-up assessments
  - 3 month 50.4%
  - 6 month 88.1%
  - 12 month 84.5%
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Data Analysis

• To examine the relationship between experiencing multiple forms of economic abuse and/or sexual violence, and:
  – HIV-risk related outcomes:
    • Low frequency of condom use with commercial partners
    • Number of condomless sex acts with a commercial partner in the past 90 days
    • Needle sharing within the past 90 days
  – Lifetime incidence of overdose

• Logistic for binary outcomes; Poisson regression for count outcomes
  – Covariates: age, homelessness in past 90 days, incarceration history, hazardous alcohol use, injection drug use, street-based sex work, and being managed by a boss/pimp/madam
## Sociodemographic characteristics of participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Overall sample (N=400)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>34.1 (8.4)</td>
</tr>
<tr>
<td>History of incarceration, n (%)</td>
<td>130 (32.5)</td>
</tr>
<tr>
<td>Homeless in past 90 days, n (%)</td>
<td>232 (58.0)</td>
</tr>
<tr>
<td>Currently owe money, n (%)</td>
<td>332 (83.0)</td>
</tr>
</tbody>
</table>

*SD: Standard Deviation*
### Sex Work Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Overall sample (N=400)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of condomless sex acts with a commercial partner in past 90 days, median (min-max)</strong></td>
<td>9 (0-180)</td>
</tr>
<tr>
<td>Always used a condom with commercial partners in past 90 days, n(%)</td>
<td>343 (85.8)</td>
</tr>
<tr>
<td>Offered more money to have sex without a condom in past 90 days, n(%)</td>
<td>265 (66.3)</td>
</tr>
<tr>
<td>Street-based, n(%)</td>
<td>118 (29.5)</td>
</tr>
<tr>
<td>Managed by boss/pimp/madam, n(%)</td>
<td>41 (10.3)</td>
</tr>
</tbody>
</table>

*Outcome measures are bolded*
## Substance Use Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared needle/syringe in past 90 days, n (%)</td>
<td>36 (9.0)</td>
</tr>
<tr>
<td>Had a lifetime incidence of overdose, n (%)</td>
<td>150 (37.5)</td>
</tr>
<tr>
<td>Hazardous alcohol use, n (%)</td>
<td>272 (68.0)</td>
</tr>
<tr>
<td>History of injection drug use, n (%)</td>
<td>184 (46.0)</td>
</tr>
</tbody>
</table>

_{Outcome measures are bolded_
Percent of Participants Who Experienced Sexual Violence

- Penetrated your vagina or anus with an object
- Forced you to remove or stripped off your clothing
- Used force or threatened to use force to make you have sex
- Used force or threatened to use force to have sex
- Forced you to have sex without a condom
- Insisted you have sex even though you didn’t want to

Prevalence of experiencing multiple forms of sexual violence

In past 90 days

%
Percent of participants who experienced recent sexual violence by the following perpetrators in the past 90 days

- Current or past intimate partner: 27.5%
- Commercial partner: 24.0%
- Boss/pimp/madam: 7.0%
- Police: 4.0%
- Drug dealer: 3.0%

N=400
Percent of Participants Experiencing Recent Economic Abuse in past 90 days

Keep you from having the money you needed to buy food, clothes, or other necessities
Threaten you to make you leave work
Do things to keep you from going to your job
Make you ask him/her for money
Keep financial information from you
Make important financial decisions without talking with you about it first
Demand to know how money was spent
Build up debt under your name by doing things like use your credit card or run up the phone
Spent the money you needed for rent or other bills

Prevalence of experiencing multiple forms of economic abuse (in past 90 days)

N=400

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Overlap between economic abuse and sexual violence in past 90 days, n(%)
## Association between Multiple Forms of Violence and Condom Use (N= 400)

<table>
<thead>
<tr>
<th># of forms of economic abuse in past 90 days</th>
<th>aRR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.17 (1.15, 1.19)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of forms of SV in past 90 days</th>
<th>aRR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25 (1.21, 1.30)</td>
<td>0.002</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th># of forms of SV (ever)</th>
<th>aRR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.37 (1.31, 1.43)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiencing SV AND economic in past 90 days</th>
<th>aRR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.34 (3.81, 4.95)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

Note: SV does not include ‘forced you to have sex without a condom’ item

Adjusted for age, homelessness in past 90 days, incarceration history, hazardous alcohol use, injection drug use, street-based sex work, and being managed by a boss/pimp/madam
## Violence and Substance Use

<table>
<thead>
<tr>
<th></th>
<th>Needle sharing in past 90 days (N= 184)</th>
<th>Lifetime experience of non-fatal overdose (N= 400)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>aOR (95% CI)</td>
<td>aOR (95% CI)</td>
</tr>
<tr>
<td>Forms of economic abuse in past 90 days</td>
<td>0.95 (0.85, 1.06)</td>
<td>0.337</td>
</tr>
<tr>
<td>Forms of SV in past 90 days</td>
<td>1.44 (1.08, 1.93)</td>
<td><strong>0.013</strong></td>
</tr>
<tr>
<td>Forms of SV (ever)</td>
<td>1.18 (0.94, 1.47)</td>
<td>0.137</td>
</tr>
<tr>
<td>Experiencing SV AND economic abuse in past 90 days</td>
<td><strong>2.45 (1.00, 5.97)</strong></td>
<td><strong>0.050</strong></td>
</tr>
</tbody>
</table>

Adjusted for age, homelessness in past 90 days, incarceration history, hazardous alcohol use, injection drug use, street-based sex work, and being managed by a boss/pimp/madam
Conclusions

• FSW who use drugs in Kazakhstan are subjected to multiple forms of violence and abuse
• Multiple forms of economic abuse and sexual violence are associated with HIV-risk behaviors including increased number of condomless sex acts with commercial partners and needle sharing
• Sexual violence is associated with overdose
Implications

• HIV prevention programs for FSW who use drugs should consider addressing multiple forms of violence

• Overdose prevention programs should consider sexual violence
  – Trauma informed prevention programming and medication assisted treatment programs may better engage FSW who use drugs in care
Acknowledgements:

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