Syndemics Among Cisgender and Transgender Female Sex Workers Living with HIV in the Dominican Republic

Defining and Comparing Typologies of Violence and Associations with Health Outcomes

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Key Findings

Gender identity informs violence severity for cisgender & transgender female sex workers (FSWs)

Police were identified as key perpetrators for both groups

More extreme patterns of violence for each group were significantly associated with poor mental health
Background
## Violence against Female Sex Workers

<table>
<thead>
<tr>
<th>Violence against [Cisgender] FSWs</th>
<th>Violence against Transgender FSWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>● 15-31% of FSWs globally reported work-related sexual violence</td>
<td>● Gender identity is intertwined with transgender FSWs’ vulnerability</td>
</tr>
<tr>
<td>● 19-44% of FSWs globally reported work-related physical violence</td>
<td>● Transgender FSWs have greater odds of experiencing violence</td>
</tr>
</tbody>
</table>
Intersecting Modes of Oppression Experienced by Female Sex Workers

- Sexism
- HIV Stigma
- Transphobia
- Sex Work Stigma
Syndemics Among Female Sex Workers

- Violence
- HIV
- Substance Use
- Mental Illness
Context: Dominican Republic

- Sex work is not illegal
- Has one of the highest femicide rates in the LAC region
- Constitution does not protect against discrimination or violence based on gender identity
- Long history of female sex workers (FSWs) and trans community mobilizing for human rights
Aims, Design & Methods
Research Aims & Hypotheses

To assess the typologies of violence exposure for FSWs in the Dominican Republic.

**H1:** Multiple latent classes of violence exposure exist for FSWs in the Dominican Republic.

To assess the differences between transgender and cisgender FSWs in typologies of violence exposure.

**H2:** Cisgender and transgender FSWs differ in the patterns of violence exposure.
Research Aims & Hypotheses

To assess the correlates of the patterns of violence exposure among FSWs in the Dominican Republic.

**H3:** Socio-demographic and occupation predictors will be associated with typologies of violence.

To assess the typologies of violence exposure in relation to syndemic health outcomes among FSWs in the Dominican Republic.

**H4:** Typologies of violence exposure will be associated with each of the syndemic health outcomes.
Datasets

Cisgender Women

- “Stigma, cohesion and HIV outcomes among vulnerable women across epidemic settings”
- N=211
- December 2018-November 2019
- Wave 2 from longitudinal study

Transgender Women

- “Assessing social dynamics and HIV outcomes to inform interventions with transgender women living with HIV”
- N=100
- January-September 2019
- Cross-sectional study

Eligibility criteria: ≥18 years, living with HIV, exchanged sex for money in previous month

Recruitment: Through peer navigators, key informants, other participants

Data collection: Completed survey, blood draw
Latent Class Analysis

Entire Sample

Subgroup 1

Subgroup 2

Subgroup 3
Predictors of Class Membership

Following model identification, assessed predictors of class membership:

- Ran categorical latent variable multinomial logistic regressions using the 3-Step Procedure in Mplus
- Individual predictors assessed at $p<0.10$ for inclusion in multivariate model
- Predictors assessed at $p<0.05$ in multivariate model
Associations Between Syndemic Health Outcomes & Class Membership

Following model identification, tested relationships between class membership and syndemic health outcomes:

- Ran equality tests of means across latent classes
- Associations with individual health outcomes assessed at p<0.05
Results
## Sample Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Cisgender women (N=211)</th>
<th>Transgender women (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Age ***</td>
<td>40.91 (8.93)</td>
<td>34.08 (9.96)</td>
</tr>
<tr>
<td>**Relationship status *** (partnered)</td>
<td>87 (41.23%)</td>
<td>16 (16%)</td>
</tr>
<tr>
<td>**Average monthly income in DR pesos/1000 ***</td>
<td>9.64 (6.64)</td>
<td>18.73 (17.01)</td>
</tr>
<tr>
<td><strong>Educational attainment by completed school level</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>9 (4.27%)</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Primary</td>
<td>120 (56.87%)</td>
<td>25 (25%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>71 (33.65%)</td>
<td>52 (52%)</td>
</tr>
<tr>
<td>Post-secondary</td>
<td>11 (5.21%)</td>
<td>22 (22%)</td>
</tr>
<tr>
<td>**Born in Santo Domingo, DR *** (yes)</td>
<td>126 (59.7%)</td>
<td>72 (72%)</td>
</tr>
<tr>
<td>**Years as a sex worker **</td>
<td>19.56 (9.30)</td>
<td>16.47 (9.69)</td>
</tr>
</tbody>
</table>

*=p<0.05, **=p<0.01, ***=p<0.001; comparing the two samples based on mean(SD) or frequency(%).
## Violence Exposure

<table>
<thead>
<tr>
<th>Area</th>
<th>Cisgender women (N=211)</th>
<th>Transgender women (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any physical or sexual violence by a steady partner in the past 6 months</td>
<td>10 (4.74%)</td>
<td>10 (10%)</td>
</tr>
<tr>
<td>Any physical or sexual violence by a new client in the past 6 months***</td>
<td>14 (6.64%)</td>
<td>20 (20%)</td>
</tr>
<tr>
<td>Any physical or sexual violence by a regular client in the past 6 months**</td>
<td>10 (4.74%)</td>
<td>15 (15%)</td>
</tr>
<tr>
<td>In the past 6 months, have you been forced to have sex with multiple clients in a group?</td>
<td>7 (3.32%)</td>
<td>7 (7%)</td>
</tr>
<tr>
<td>Any physical or sexual violence by the police in the past 6 months because of exchanging sex for money***</td>
<td>3 (1.42%)</td>
<td>22 (22%)</td>
</tr>
<tr>
<td>Any physical or sexual violence by the police in the past 6 months because of exchanging sex for money***</td>
<td>31 (14.69%)</td>
<td>71 (71%)</td>
</tr>
<tr>
<td>Any physical or sexual harassment from the police because of exchanging sex for money***</td>
<td>22 (10.43%)</td>
<td>57 (57%)</td>
</tr>
</tbody>
</table>

*=p<0.05, **=p<0.01, ***=p<0.001; comparing the two samples based on frequency(%).
Best Fitting Model: Cisgender Sample

Probability for Each Variable in Two-class Model

- Regular partner
- New client
- Regular client
- Group violence
- Police violence
- Police verbal harassment
- Police phys/sex harassment

- Color legend: dark purple for Sex Work-related Police Harassment, light purple for Low Reported Violence Exposure
Best Fitting Model: Transgender Sample

Probability for Each Variable in Three-class Model

- Regular partner
- New client
- Regular client
- Group violence
- Police violence
- Police verbal harassment
- Police phys/sex harassment

Colors:
- Sex Work-related Police Harassment
- Low Reported Violence Exposure
- Sex Work-related Violence & Harassment
## Predictors of Class Membership

<table>
<thead>
<tr>
<th>Predictor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Relationship status</td>
</tr>
<tr>
<td>Educational attainment</td>
</tr>
<tr>
<td>Average monthly income</td>
</tr>
<tr>
<td>Substance use while working</td>
</tr>
<tr>
<td>Sex work-related mobility</td>
</tr>
<tr>
<td>Avg # clients per week</td>
</tr>
<tr>
<td>Place to meet clients</td>
</tr>
<tr>
<td>Place to go on dates</td>
</tr>
</tbody>
</table>
Predictors of Class Membership: Cisgender Sample

- Having *ever been drunk or high* while exchanging sex for money *increased* the odds of being in the Sex Work-related Police Harassment class by 10.11, compared to the Low Reported Violence class (aOR=10.11, 95% CI 1.93, 52.89, p<0.01).
Predictors of Class Membership: Transgender Sample

- For each additional **level of education completed**, the odds of being in the Sex Work-related Police Harassment class **decreased** by roughly 50% (aOR=0.49, 95%CI 0.24, 0.98, p<0.05)

- Increases in **average monthly income** reduced the odds of being in the Sex Work-related Violence and Harassment class by roughly 7% (aOR=0.93, 95%CI 0.88, 0.98, p<0.05)

- **Traveling to exchanged sex for money** increased the odds of being in the Sex Work-related Violence and Harassment class by 5.32 (aOR=5.32, 95% CI 1.18, 23.86, p<0.05)
## Syndemic Health Outcomes

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cisgender women (N=211)</th>
<th>Transgender women (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viral suppression * (&lt;400 copies/mL)</td>
<td>160 (75.83%)</td>
<td>64 (64%)</td>
</tr>
<tr>
<td>ART adherence in past 4 days (perfect)</td>
<td>84 (39.81%)</td>
<td>44 (44%)</td>
</tr>
<tr>
<td>ART disruption * (Ever)</td>
<td>85 (40.28%)</td>
<td>28 (28%)</td>
</tr>
<tr>
<td>Current ART use*** (yes)</td>
<td>203 (96.21%)</td>
<td>84 (84%)</td>
</tr>
<tr>
<td>Received HIV care (ever)</td>
<td>184 (87.20%)</td>
<td>86 (86%)</td>
</tr>
<tr>
<td>Hospital Anxiety and Depression Scale (HADS-A) – Anxiety</td>
<td>85 (40.28%)</td>
<td>34 (34%)</td>
</tr>
<tr>
<td>Patient Health Questionnaire-9 (PHQ-9) – Depression</td>
<td>54 (25.59%)</td>
<td>24 (24%)</td>
</tr>
<tr>
<td>Alcohol Use Disorder (at-risk)</td>
<td>140 (66.35%)</td>
<td>77 (77%)</td>
</tr>
<tr>
<td>Illicit drug use*** (yes)</td>
<td>27 (12.80%)</td>
<td>55 (55%)</td>
</tr>
</tbody>
</table>

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Health Outcomes Associated with Class Membership: Cisgender Sample

Being in the Sex Work-related Police Harassment class:

- **Increased** the odds of **ART disruption** by 3.40 (OR=3.40, 95% CI 1.38, 8.41, p<0.01)

- **Increased** the odds of **Abnormal or Borderline Abnormal Anxiety** by 4.81 (OR=4.81, 95% CI 1.35, 17.13, p<0.01)

- **Increased** the odds of **Moderate to Severe Depression** by 5.41 (OR=5.41, 95% CI 1.82, 16.04, p<0.01)
Health Outcomes Associated with Class Membership: Transgender Sample

Being in the Sex Work-related Police Harassment class:

- **Increased** the odds of **perfect ART adherence** in the past four days by 3.09 (OR=3.09, 95% CI 1.04, 9.18, p<0.05)

Being in the Sex Work-related Violence and Harassment class:

- **Increased** the odds of **Abnormal or Borderline Abnormal Anxiety** by 6.83 (OR=6.83, 95% CI 1.94, 24.03, p<0.01)
- **Increased** the odds of **Moderate to Severe Depression** by 5.83 (OR=5.83, 95% CI 1.64, 20.73, p<0.01)
Limitations

- Datasets are cross-sectional
- Relatively small sample sizes
- Neither study focused on violence exposure
- LCA calculates class membership based on probability
Key Findings

Gender identity informs violence severity for cisgender & transgender FSWs

Police were identified as key perpetrators for both groups

More extreme patterns of violence for each group were significantly associated with poor mental health
Thank you!