Factors Influencing Betel Nut Chewing in People Living with HIV in Myanmar

BoRam Kim, PhD, RN, Postdoctoral Scholar
UCLA School of Nursing

Wei-Ti Chen, PhD, RN, CNM, FAAN, Associate Professor
UCLA School of Nursing

Cheng-Shi Shiu, PhD, MSW, Assistant Professor
Department of Social Work, National Taiwan University
Betel Nuts & People Living with HIV (PLWH)

- Approximately, 600M people consume betel nuts globally\(^1\)
- Chewing betel nuts is common in Myanmar, over 50% of Burmese people routinely use\(^2\)
- Betel Nuts
  - Addictive stimulant effect\(^2,3\)
  - Group 1 carcinogen\(^3\)
- A strong link between betel nut chewing and oral/oropharyngeal cancers\(^4\)
- People who use betel nuts are 2.6 times more likely to report a HIV diagnosis\(^5\)
- Betel nut users are at greater risk of mental health disorders (e.g., anxiety and depression)\(^6\)
Methods

Study Design

• A secondary analysis of data study
• Primary data from PLWH in Myanmar (January – July 2020)

Inclusion Criteria

• Adults who are 18 years old or older
• Confirmed HIV diagnosis
• Currently living in Myanmar

Primary Data Recruitment

• A private Facebook group for PLWH community in Myanmar
Reliability for Independent Variables

- All variables have established high internal consistency

<table>
<thead>
<tr>
<th>Concepts</th>
<th>$M$</th>
<th>$SD$</th>
<th>Observed Range</th>
<th>Number of Items</th>
<th>$\alpha$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiological hyperarousal symptoms</td>
<td>2.13</td>
<td>0.80</td>
<td>1 – 5</td>
<td>28</td>
<td>0.97</td>
</tr>
<tr>
<td>HIV stigma</td>
<td>2.44</td>
<td>0.54</td>
<td>1 – 4</td>
<td>47</td>
<td>0.96</td>
</tr>
<tr>
<td>Loneliness</td>
<td>2.37</td>
<td>0.59</td>
<td>1 – 4</td>
<td>8</td>
<td>0.76</td>
</tr>
<tr>
<td>General stress</td>
<td>2.76</td>
<td>0.67</td>
<td>1 – 5</td>
<td>10</td>
<td>0.90</td>
</tr>
<tr>
<td>Depression</td>
<td>2.57</td>
<td>0.71</td>
<td>1 – 5</td>
<td>20</td>
<td>0.87</td>
</tr>
</tbody>
</table>

Dependent Variables

- Ever used betel nuts? (Yes/No)
Results

PLWH Sample (n=169)

- Age range from 18-55 years old ($M=36$ years; $SD=8.8$)
- Male (60%)
- Heterosexual (66%); Gay/Lesbian (22%)
- High school (44%); College (26%)
- Married (43%); Never married (34%)

Other Characteristics

- AIDS diagnosis (35%)
- On HIV medication (90%)
- Undetectable viral load status (70%)
- No HIV disclose to family (42%)
- No health insurance (85%)

Substance Use

<table>
<thead>
<tr>
<th>Substances</th>
<th>Never Used</th>
<th>Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betel Nuts</td>
<td>76%</td>
<td>24%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>96%</td>
<td>4%</td>
</tr>
<tr>
<td>Illicit drugs</td>
<td>97%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Logistic Regression

- Loneliness remained significant after controlling for covariates (OR= 2.66; 95%CI=1.12-6.33)
Results

Structural Equation Model (SEM) with Betel Nut Use

HIV Stigma → Physical Arousal to Stigma → Betel Nut Use

Indirect Path
\[ \beta = 0.126, \ SE = 0.061, \ p < 0.05 \]

Controlling for Age, Gender, & Socioeconomic Status
Discussion and Future Directions

Discussion

• Loneliness is more prevalent in PLWH due to stigma and discrimination
• Burmese PLWH face stronger stigma and social isolation due to Asian cultural taboo about sex
• Indirect effect on betel nut use through HIV stigma and physical arousal to HIV stigma in Burmese PLWH

Future Research

• Develop an intervention for PLWH in Southeast Asia
  • Reducing HIV stigma and loneliness
  • Reducing Betel nut chewing
  • Increasing awareness of oral cancer risk of betel nut chewing

Limitations

• Small sample size
• Findings cannot be generalizable to PLWH in Myanmar
• Self-reported data – potential biases in recall & social desirability
Thank You!

Acknowledgement
The primary data has been funded by NIH Fogarty International Center
5R21TW011277-02
PI Wei-Ti Chen

More information:
BoRam Kim, PhD, RN, Postdoctoral Scholar
Email: BoramKim@sonnet.ucla.edu