Gender Differences in Depression Among People Living with HIV/AIDS in India

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INTRODUCTION

- India has the third largest population of people living with HIV (PLH) in the world, estimated at 2.3 million
- Depression is one of the most common co-morbidities of HIV
- High prevalence of depression consistently documented among PLH in India, with higher severity among women than men
- We use a sample of PLH (N=362) in a randomized controlled trial of mobile phone support for antiretroviral (ART) medication adherence and self-management:
  - Examine rates of mild, moderate, and severe depression
  - Test gender differences in associations between depression severity and status characteristics, stressors, and coping resources
  - Propose a novel gendered stress process model integrating the theory of gender and power with the stress process model

METHODS

- Research question: Do gender disparities in statuses, exposure to stressors, and access to resources lead to more severe depression among HIV+ women than men?
- Data & sample: N=362 PLH recruited from the Calcutta School of Tropical Medicine ART Clinic and the Mamata Care and Treatment Center in Kolkata, India
- Measures: Depressive level (HADS-D), social support (mMOS-SS), coping strategies (BRIEF-COPRE), stressor (internalized HIV/AIDS stigma), alcohol use (AUDIT-C), and demographic characteristics
- Statistical analysis: Multivariate linear regression of depression level (HADS-D) stratified by gender with interactions to test conditional effects:
  - Social statuses (Age by partner status)
  - Stressors (internalized HIV/AIDS stigma X partner status)
  - Resources (instrumental support X household income)

RESULTS

- More than 75% had moderate or severe depression
- Compared to men, women reported lower income, education, number of dependents, and availability of emotional and instrumental support
- Women were less likely to be partnered than men but more likely to have an HIV+ partner than men
- Overall, depression severity was:
  - Negatively associated with availability of emotional support and self-distraction coping
  - Positively associated with internalized HIV/AIDS stigma, availability of instrumental support, and behavioral disengagement coping
  - Interactions analyses stratified by gender indicated:
    - Drawing on instrumental support was a protective coping strategy for all men, but only for high-income women
    - Having a partner was protective for men as they aged but not for women
- No gender differences in effect of stigma on depression

DISCUSSION

- The findings identify a significant need for mental health services for PLH in India
- Lower social status and access to resources among women compared to men explain gender disparities in depression
- Unequal caregiving responsibilities for women with HIV+ partners likely exacerbate these disparities
- Stigma strongly increases depression severity for both men and women
- Self-distraction reduces depression severity but behavioral disengagement increases depression severity
- Programs and interventions to reduce depression among PLH should be tailored by gender, age, income, and partner status
- Limitations of the study are that HADS-D is not a diagnostic measure of depression and data were cross-sectional
- Future interventions with PLH in India should prioritize reducing stigma, providing social support, and increasing access to material resources, especially among low-income women

TABLE 1: TABLE OF CHARACTERISTICS BY GENDER

| Table 1: Males vs. Females | Mean (SD) | Mean (SD) | t | p
|---------------------------|----------|----------|---|--
| Age                       | 39.2 (9.6) | 36.7 (8.6) | 4.16 | 0.000
| Employment status         | 1,880 (367) | 1,269 (358) | 10.03 | 0.000
| Education                 | 1,161 (12.1) | 1,278 (11.3) | 4.08 | 0.000
| Gender                    | 0.48 (0.47) | 0.50 (0.48) | 0.15 | 0.881
| Internalized HIV/AIDS stigma | 2.5 (1.1) | 2.8 (1.0) | 2.90 | 0.004

TABLE 2: PREDICTORS OF DEPRESSION LEVEL

<table>
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<th>Coef.</th>
<th>t</th>
<th>p</th>
<th>Coef.</th>
<th>t</th>
<th>p</th>
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<td>Constant</td>
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<td>0.076</td>
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<tr>
<td>Frequency of disengagement</td>
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<td>-0.100</td>
<td>0.000</td>
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<tr>
<td>Frequency of instrumental support</td>
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<td>0.000</td>
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<tr>
<td>Frequency of emotional support</td>
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<td>0.000</td>
<td>0.150</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

TABLES 3A & 3B: DEPRESSION LEVEL BY GENDER

| Table 3a: Males vs. Females | Mean (SD) | Mean (SD) | t | p
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FIGURES 1 & 2: SUPPORT BY INCOME

Figure 1: Gendered stress process model

Figure 2a. Instrumental support by income for women

Figure 3a. Age by partner status for women

Figure 3b. Age by partner status for men

FIGURES 2A & 2B: SUPPORT BY INCOME

Figure 2a. Instrumental support by income for women

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CONTACT INFORMATION

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