Mental health diagnoses and behavioral problems among individuals with intellectual disability: Assessing prevalence across levels of services and supports

Kami L. Gallus, Ph.D., LMFT
Jennifer L. Jones, Ph.D.
Clint Broadbent, M.S.
Natalie Richardson, B.S.
Mental Health Among Individuals with ID

- Research suggests a high occurrence of mental health symptoms and behavioral problems among individuals with ID (Emerson et al., 2001; Scott & Havercamp, 2014).

- While the experience of stressful life events (e.g., multiple residential transitions, staff/caregiver turnover) may be associated with increased mental health symptoms and problem behaviors among individuals with ID (Martorel et al., 2009), psychosocial supports (e.g., support services, residential setting, community employment) may serve as potential protective factors among this population (Kerker et al., 2004).
Setting the Stage

• The current study examines mental health diagnoses and behavioral problems among adults with ID receiving Developmental Disabilities Services in Oklahoma.

• Adults receiving waivered services include individuals in two distinct waiver groups:
  ▫ Individuals on the **Community Waiver** live in a variety of residential settings (e.g., group home, agency companion home, daily living supports, independent home)
  ▫ Individuals on the **Homeward Bound Waiver** live primarily in independent homes. Includes all members of the plaintiff class in *Homeward Bound v. The Hissom Memorial Center*, frequently referred to as Class Members.
Differences between Waiver Groups

- Support staff
- Age
- Residence length
- Level of ID
- Work/Day activities
- Life experience
  - Potential stress/trauma unique to institutionalization and de-institutionalization
Research Questions

• Does type (i.e., mood or anxiety disorder) of mental health diagnoses or behavioral problems differ based on waiver group?

• What are potential predictors of mental health outcomes for adults with ID across waiver groups?
Data

- Oklahoma sample of the 2013-2014 National Core Indicators (NCI) Adult Consumer Survey
- Data Collection Procedures
  - Standardized, face-to-face surveys with the individuals receiving services
    - Background Information (Case file/Direct Care Staff)
    - Section I (no proxies allowed)
    - Section II (proxies allowed)
  - Surveys conducted in the individual’s home by trained OSU undergraduate and graduate students
Participants

\( N = 793 \) Adults receiving waiver services

- 235 (29.6%) Community Waiver
- 558 (70.4%) Homeward Bound Waiver

- Gender
  - 60% Male
  - 40% Female

- Race/Ethnicity
  - 78.5% White
  - 13.3% Black
  - 8.6% Native American
Homeward Bound Waiver: \( M = 51.28 \ (SD = 7.5) \)
Community Waiver: \( M = 40.53 \ (SD = 13.94) \)
Severity of Intellectual Disability

- **Mild**: 28.5% (Homeward Bound Waiver), 42.2% (Community Waiver)
- **Moderate**: 18% (Homeward Bound Waiver), 23.5% (Community Waiver)
- **Severe**: 20.4% (Homeward Bound Waiver), 15.2% (Community Waiver)
- **Profound**: 33.2% (Homeward Bound Waiver), 19.1% (Community Waiver)
Co-Occurring Mental Health

- Co-occurring mental health disorders reported for 35.9% of sample
  - 40% of Individuals on Community Waiver
  - 34.2% of Individuals on Homeward Bound Waiver
- Multiple mental health diagnoses reported for 7.3% of total sample
Mental Health Diagnoses & Behavioral Challenges By Waiver Group

- Mood Disorder: 17.0% (Homeward Bound) vs. 23.6% (Community Waiver)
- Anxiety Disorder: 31.7% (Homeward Bound) vs. 17.7% (Community Waiver)
- Behavioral Challenges: 33.0% (Homeward Bound) vs. 38.7% (Community Waiver)
Chi Square Tests of Independence

- Individuals in the Community Waiver group were significantly more likely to have received a Mood Disorder diagnosis than Homeward Bound Waiver group ($\chi^2 = 18.32, p = .000$).

- Individuals in the Homeward Bound Waiver group were significantly more likely to have received an Anxiety Disorder diagnosis than Community Waiver ($\chi^2 = 4.65, p = .031$).

- Although the proportion of the Community Waiver group with reported Behavioral Challenges was slightly higher than the Homeward Bound Waiver group, the difference was not significant, $\chi^2 = 2.35, p = 0.13$. 
Exploring Potential Confounders

- Waiver Group
- Age
- Gender
- Level of ID
- Mental Health Dx
Exploring Potential Predictors

Potential Life Stressors

Waiver Group

Mental Health Dx
Stressful Life Experiences

- Stressful Life Experiences
  - 5 Items from the Adult Consumer Survey
    - Poor Health
    - Requires Frequent Medical Care
    - Lived in Current Home < 1 year
    - Does not receive Services needed
  - Higher scores indicate more stressful life experiences
    - 0 = (no reported experiences)
    - 5 = (5 reported experiences)
Level of Work/Day Activity

- **Work/Day Activities**
  - Paid Community, Unpaid Community, Paid Facility, Unpaid Facility
    - Total number of activities engaged in, ranging from 0 – 4 activities (reverse scored):
      - 4 = No activities to
      - 3 = 1 activity
      - 2 = 2 activities
      - 1 = 3 activities
      - 0 = All 4 activities
Hierarchical Logistic Regression Analysis of Mood Disorder Diagnosis by Waiver Group, Demographics, & Stressors (N = 784).

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiver Group (Community Waiver)</td>
<td>-.59</td>
<td>7.79**</td>
<td>.55</td>
<td>-.58</td>
<td>7.27**</td>
<td>.56</td>
</tr>
<tr>
<td>Level of ID</td>
<td>-.59</td>
<td>50.28***</td>
<td>.55</td>
<td>-.58</td>
<td>46.40***</td>
<td>.56</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>.29</td>
<td>2.48</td>
<td>1.34</td>
<td>.30</td>
<td>2.68</td>
<td>1.36</td>
</tr>
<tr>
<td>Age</td>
<td>.00</td>
<td>.11</td>
<td>1.00</td>
<td>.00</td>
<td>.21</td>
<td>1.00</td>
</tr>
<tr>
<td>Stressors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stressful Life Experiences</td>
<td></td>
<td></td>
<td></td>
<td>.36</td>
<td>4.32*</td>
<td>1.44</td>
</tr>
<tr>
<td>Daily Work/Activities</td>
<td></td>
<td></td>
<td></td>
<td>-.05</td>
<td>.11</td>
<td>.95</td>
</tr>
<tr>
<td>Constant</td>
<td>-.13</td>
<td>.08</td>
<td>.88</td>
<td>-1.73</td>
<td>.08</td>
<td>.84</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.09</td>
<td></td>
<td></td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \chi^2 )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td></td>
<td></td>
<td></td>
<td>( \chi^2 = 77.66*** )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td>( \chi^2 = 4.32 )</td>
<td></td>
<td>( \chi^2 = 81.89*** )</td>
</tr>
</tbody>
</table>
Hierarchical Logistic Regression Analysis of Anxiety Disorder Diagnosis by Waiver Group, Demographics, & Stressors (N = 784)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>b</td>
<td>Wald</td>
<td>OR</td>
<td>b</td>
<td>Wald</td>
</tr>
<tr>
<td>Waiver Group (Community Waiver)</td>
<td></td>
<td>.54</td>
<td>5.47*</td>
<td>1.72</td>
<td>-.58</td>
<td>6.91**</td>
</tr>
<tr>
<td>Level of ID</td>
<td></td>
<td>-.22</td>
<td>8.59**</td>
<td>.81</td>
<td>-.58</td>
<td>3.98*</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td></td>
<td>-.08</td>
<td>.17</td>
<td>1.08</td>
<td>.30</td>
<td>.02</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.00</td>
<td>.11</td>
<td>1.00</td>
<td>.00</td>
<td>.10</td>
</tr>
<tr>
<td>Stressors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stressful Life Experiences</td>
<td></td>
<td>.36</td>
<td>.04</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daily Work/Activities</td>
<td></td>
<td>-1.06</td>
<td>5.47</td>
<td>.35</td>
<td>.26</td>
<td>.19</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>-.05</td>
<td>11.05**</td>
<td>.61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td></td>
<td>.02</td>
<td>.03</td>
<td></td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>Step Model</td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 = 13.31^{**}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td></td>
<td></td>
<td></td>
<td>$\chi^2 = 24.57^{***}$</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Findings

• The two Waiver Groups were significantly different in reported type of Mental Health diagnosis, even after controlling for Level of ID, Gender, and Age.
  ▫ Individuals in the **Community Waiver Group** had 45% greater odds of being diagnosed with a Mood Disorder.
  ▫ Individuals in the **Homeward Bound Waiver Group** had 72% greater odds of being diagnosed with an Anxiety Disorder.
  • Level of ID was also significant, suggesting individuals in the mild ID category have the highest risk of mental health diagnosis.

• A strong, yet unique relationship between stressors and negative mental health outcomes was found, even after controlling for demographics.
  ▫ **Mood Disorders** → every additional stressful life experience increased the odds of diagnosis by 44%.
  ▫ **Anxiety Disorders** → every additional activity increased the odds of diagnosis by 39%.
Limitations

• **Data**
  - Cross-sectional
  - Gathered from state database, program coordinators, house staff
  - Does not represent the voice, feelings, or perspectives of the participants
  - Representative only of those receiving highest level of services
Implications & Future Directions

• Explore patterns of diagnosis in 2014-2015 data cycle
  • Do we see the same pattern of mental health diagnosis across waiver groups?
  • Does inclusion of all individuals transitioned out of 2 state institutions (NORCE/SORC) provide additional information regarding mental health outcomes?
  • Is it level of supports, institutionalization, or something else all together?

• Planned changes for 2015-2016 data collection
  ▫ Gather specific data to answer current questions regarding Mental Health Diagnosis & Medications
  ▫ Focus on gathering data from the individual
OSU NCI Team
For more information, contact:

**Kami L. Gallus, PhD, LMFT**  
Associate Professor  
kami.gallus@okstate.edu  
(405)744-8351

**Jennifer L. Jones, PhD**  
Assistant Professor  
jennifer.jones@okstate.edu  
(405)744-8348

Research funded by  
Oklahoma Department of Human Services  
Developmental Disability Services
Mental Health Diagnosis and Medication

This graph presents the percentage of participants who have mental health diagnoses, in addition to an intellectual disability. The graph only represents the number of “Yes” responses for each mental health diagnosis, as well as the percentage of participants who are taking psychotropic medications. Some participants fall into multiple categories.