Do Young Females Follow A Gendered Pathway Into Crime? Implications for Risk Assessment & Misclassification

Natalie J. Jones
Shelley L. Brown

Carleton University, Ottawa, Canada
The Young Female Offender

- Increase in number of females processed by criminal justice system in both Canada and US
  - Over last 30 years, number of females incarcerated increased at rate double than that of males (Calverley, 2006)

- Justifies increased attention accorded to female offenders by scholars and policy-makers

- Research on female offenders still lacking compared to that on male offenders
Gender-Neutral Perspective
(Andrews & Bonta’s PIC-R)

- Probability of engaging in crime increases as perceived cost: reward decreases

- “Central Eight” predictors of criminal behavior:
  - antisocial attitudes, associates, crim. history, personality, substance abuse, family, education/vocation, leisure
  - apply irrespective of gender, race, social class

- Empirical support for applying gender-neutral tenets to female offenders (e.g., Coulson et al., 1996; Dowden & Andrews, 1999; Lowencamp et al., 2007)

- Weak predictors of criminal behavior: SES, mental health, personal distress
Gender-Specific Perspective (Feminist Paradigms)

- Risk factors for females embedded in patriarchal forces of oppression
- Women require unique assessment tools grounded in gender-specific paradigms

Two perspectives of interest:
- Relational-Cultural Theory
  - Value of relationships/connectedness
- Feminist Pathways
  - Early victimization sets stage for survival-based crime
  - Role of macro-level variables (e.g., economic marginalization)
Limitations of Female Offender Research

- **Gender-Neutral Research**
  - Failure to disaggregate by gender
  - Researcher bias (i.e., guided by premise of gender-neutrality)
  - Potential over-classification of females?

- **Feminist-Based Research**
  - Anecdotal and qualitative
  - No male comparison group or large male-to-female ratio
Current Study

- Quantitative assessment of etiology and offending behavior of young female (w/ male comparison group)
  - Will a gendered pathway theme emerge uniquely for young females?

- Determine:
  1. the predictive validity of a ‘gender-neutral tool’
  2. associated classification errors for females (and subgroups) relative to males
  - Will girls be over-classified relative to boys?
Methodology: Sample

- Archival risk assessment and recidivism data
  - Orbis Partners
  - NY State Division of Probation and Correctional Alternatives (DPCA)

- N = 1,838 (663 female, 1,175 male); 54 counties across New York State

- 14 to 17 years of age at intake ($M = 14.59, SD = 1.66$)

- Processed by DPCA between 2000-2005
Measures

- Youth Assessment Screening Instrument (YASI; Orbis Partners, 2000)
  - Grounded in gender-neutral literature
  - 88 items across 10 domains (Legal history, Family, School, Attitudes, Mental health, etc.)
  - Both risk and protective factors (static and dynamic)

- Recidivism – official convictions within 2-year follow-up period
  - Girls: n = 111 (16.7%)
  - Boys: n = 369 (31.4%)
Analysis 1: Derivation of Themes

 Extraction of 18 variables from YASI based on both gender-neutral and feminist perspectives

 Female and male subsamples examined separately

 Proximity Scaling
   Principle of contiguity: items tied to common theme will co-occur more highly and emerge in closer proximity in a geometric space
Normalized raw stress = .07
Tucker's coef. of congruence = .96

“Gendered Pathways” (Female)
KR-20 = .47

“Traditional Antisocial” (Female)
KR-20 = .56
“Traditional Antisocial”
(Male)
KR-20 = .47

“Mixed Pathways”
(Male)
KR-20 = .52

Normalized raw stress = .07
Tucker’s coef. of congruence = .96
Analysis 2: Predictive Validity of YASI

- Identification of “dominant” offender types based on proportion of items displayed from each theme
  - % items from A > % items from B
  - % items from A > 50%

- Discriminant function analysis and ROC analysis to determine predictive validity of YASI on females, males, and each dominant sub-group, respectively
### YASI: Predictive Validity

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$ (df)</th>
<th>$p$</th>
<th>Wilk’s Lambda ($\lambda$)</th>
<th>Effect size ($\eta^2$)</th>
<th>AUC (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls (n = 663)</td>
<td>18.86 (2)</td>
<td>&lt;.001</td>
<td>.97</td>
<td>.01</td>
<td>.63 (.59 - .69)</td>
</tr>
<tr>
<td>Boys (n = 1175)</td>
<td>56.96 (2)</td>
<td>&lt;.001</td>
<td>.95</td>
<td>.01</td>
<td>.64 (.60 - .67)</td>
</tr>
<tr>
<td>Girls – Gendered (n = 194)</td>
<td>6.79(2)</td>
<td>.05</td>
<td>.97</td>
<td>.01</td>
<td>.59 (.45 - .70)</td>
</tr>
<tr>
<td>Boys – Mixed (n = 103)</td>
<td>10.15(2)</td>
<td>&lt;.001</td>
<td>.90</td>
<td>.04</td>
<td>.68 (.57 - .79)</td>
</tr>
<tr>
<td>Girls – Antisocial (n = 137)</td>
<td>.74 (2)</td>
<td>.69</td>
<td>.99</td>
<td>.003</td>
<td>.53 (.43 - .64)</td>
</tr>
<tr>
<td>Boys – Antisocial (n = 330)</td>
<td>12.73 (2)</td>
<td>&lt;.001</td>
<td>.96</td>
<td>.01</td>
<td>.62 (.55 - .68)</td>
</tr>
</tbody>
</table>
Analysis 3: Does the YASI Over-classify Female Offenders?

- Comparison of YASI risk classification with recidivism base rates (*Risk X Outcome*)

- Independent Samples Chi-Square Tests
  - Over-classification (false positives)
  - Under-classification (false negatives)

- Differences in classification errors between females, males, and thematic subgroups
### YASI – Classification Errors

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Overclassification: % False Positives (95% CI)</th>
<th>Underclassification: % False Negatives (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Girls (n = 663)</strong></td>
<td>26.5 (23.1 – 29.9)</td>
<td>4.1 (2.5 – 5.6)</td>
</tr>
<tr>
<td><strong>Boys (n = 1175)</strong></td>
<td>23.7 (21.3 – 26.1)</td>
<td>6.9 (5.5 – 8.3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subsample</th>
<th>Overclassification: % False Positives (95% CI)</th>
<th>Underclassification: % False Negatives (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls – Gendered (n = 194)</td>
<td>33.0 (26.4 – 39.6)</td>
<td>2.6 (.4 – 4.8)</td>
</tr>
<tr>
<td>Boys – Mixed (n = 103)</td>
<td>29.4 (20.6 – 38.2)</td>
<td>2.9 (0 – 6.2)</td>
</tr>
<tr>
<td>Girls – Antisocial (n = 137)</td>
<td>54.0 (45.7 – 62.3)</td>
<td>2.2 (0 – 4.7)</td>
</tr>
<tr>
<td>Boys – Antisocial (n = 330)</td>
<td>43.9 (38.6 – 49.3)</td>
<td>2.9 (0 – 6.2)</td>
</tr>
</tbody>
</table>
Discussion

• Qualified support for gendered pathway

• Predictive validity of YASI significant but relatively low for both females and males

• High rate of over-classification in both female and male-subsample
  – Why did the YASI perform so poorly with the antisocial subgroups?
    • Youth vs. adult populations
    • Overweighting of “antisocial” items?
Future Research: What’s Next?

• Develop separate versions of the YASI for boys and girls, respectively

• Revisit item weighting

• Revisit cutoffs for classification into risk categories
Thank You!

Please direct questions to:
Natalie J. Jones, M.A., Ph.D. Candidate
njones2@connect.carleton.ca