**Does the Factor Structure of the Aggression Questionnaire Hold for Sexual Offenders?**

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**THE AGGRESSION QUESTIONNAIRE**

- 29 self-report items (total scores from 29-145)
- 5-point Likert type response scale
- Four subscales
  - Physical Aggression (9 items)
  - Verbal Aggression (5 items)
  - Anger (7 items)
  - Hostility (8 items)
- Total scores range from 29-145
- Higher scores indicate greater trait aggressiveness

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“**I have threatened people that I know**”

1 2 3 4 5
Extremely uncharacteristic of me  Extremely characteristic of me

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**CURRENT STUDY**

- Does the AQ measure aggressiveness equivalently in a sample of sexual offenders?
  - Replication
  - Four-factor structure
  - Extension
  - Hierarchical model
  - Risk of recidivism

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1. AGGRESSIVE “ACTION POTENTIAL”

2. Has the AQ been replicated in other populations?

3. Convergent validity (e.g., frequency of fighting)

4. Internal consistency (AQ total score $\alpha = .80 - .92$)

5. Test-retest reliability (e.g., $r = .80$)

6. CFA with Students
  - Four-factor structure replicated

7. CFA with Offenders
  - Unstable factor structure
  - 12-item short form
  - Sexual offenders?
TESTING HIERARCHICAL MODELS

• Do the factors reflect distinct aspects of one superordinate construct?

PARTICIPANTS

• Archival (pre-treatment) data

• 293 adult men enrolled in the Canadian National Sexual Offender Program (1994-2005).
  • 19-77 years of age (M ≈ 44, SD ≈ 13)
  • Victims > 12 years of age ≈ 50%
  • Victims < 12 years of age ≈ 15%
  • Mixed victims ≈ 35%
  • > 70% at moderate risk

RISK MEASURES

• Static-99 (Hanson & Thornton, 2000)
  • actuarial risk appraisal
  • sexual recidivism

• SIR-R1 (Nuffield, 1982)
  • actuarial risk appraisal
  • general (including violent) recidivism

ANALYSES

• CFA with ordinal data
  • Mplus 6 software
  • Estimator (WLSMV)
  • Polychoric correlations

• Model evaluation
  • Global fit
  • Localized fit

RESULTS

• Four-Factor Model (29-items)

Localized Fit Criteria

- All standardized factor loadings ≥ .40
- Standardized residuals > (-.11) and < (+.11)
- Cross loadings < .40

Global Fit Criteria

- 3+ fit indices met a-priori cutoffs
- ≈50% negative/positive residuals
- Latent factor correlations ≥ .40 and < .85

Non-Distinct Latent Factors
(correlations ≥ .85)
**Four-Factor Model with 12-items**

Localized fit
- All standardized factor loadings ≥ .40
- Standardized residuals > (-.11) and < (+.11)
- Cross loadings < .40

Global fit
- 3+ fit indices met a-priori cutoff for adequate fit
- 50% negative/positive residuals
- Estimated latent factor correlations [≥ .40, < .85]

Hierarchical model
- Fit not meaningfully degraded
- All latent factor correlations < .85

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**AQ Scores and Risk of Recidivism**

<table>
<thead>
<tr>
<th>AQ (29 Items)</th>
<th>Mean (SD)</th>
<th>α</th>
<th>Bivariate correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Static-99</td>
</tr>
<tr>
<td>AQ total</td>
<td>65.3 (19.7)</td>
<td>.92</td>
<td>.19**</td>
</tr>
<tr>
<td>Physical</td>
<td>18.6 (6.9)</td>
<td>.79</td>
<td>.35**</td>
</tr>
<tr>
<td>Verbal</td>
<td>12.8 (3.9)</td>
<td>.69</td>
<td>.31**</td>
</tr>
<tr>
<td>Anger</td>
<td>14.8 (5.7)</td>
<td>.80</td>
<td>.18*</td>
</tr>
<tr>
<td>Hostility</td>
<td>19.1 (6.9)</td>
<td>.83</td>
<td>.03 (ns)</td>
</tr>
</tbody>
</table>

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**DISCUSSION**

**Non-distinct latent factors**
- Four dimensions?
  - Methods
- Measurement non-invariance
- “True” group differences
- Anger

**“Normal” men**

**Sexual offenders**

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**ACKNOWLEDGEMENTS**

Correctional Service of Canada

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**More about our research ...**

Aggressive Cognition and Behaviour Research (ACBR) Lab
http://www.carleton.ca/acbrlab/

Presentation reference
### Model Fit Indices

<table>
<thead>
<tr>
<th>Factors (Items)</th>
<th>( \chi^2 ) (df)</th>
<th>RMSEA [95% CI]</th>
<th>CFI</th>
<th>TLI</th>
<th>WRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 (29)</td>
<td>880* (371)</td>
<td>0.068 [0.063, 0.074]</td>
<td>0.915</td>
<td>0.907</td>
<td>1.24</td>
</tr>
<tr>
<td>4 (26)</td>
<td>714* (293)</td>
<td>0.070 [0.064, 0.077]</td>
<td>0.925</td>
<td>0.917</td>
<td>1.18</td>
</tr>
<tr>
<td>4 (12)</td>
<td>113* (48)</td>
<td>0.068 [0.052, 0.084]</td>
<td>0.974</td>
<td>0.964</td>
<td>0.706</td>
</tr>
<tr>
<td>Hierarchical- 5 (12)</td>
<td>117* (50)</td>
<td>0.068 [0.052, 0.084]</td>
<td>0.973</td>
<td>0.965</td>
<td>0.74</td>
</tr>
</tbody>
</table>

✓ = index met cutoff for acceptable model fit. Fit index cutoff values: RMSEA ≤ 0.08; CFI ≥ .95; TLI ≥ 0.95; WRMR < 1.0

### Four-Factor Model of the 12-Item AQ²

![Four-Factor Model of the 12-Item AQ²](image)

### REFERENCES