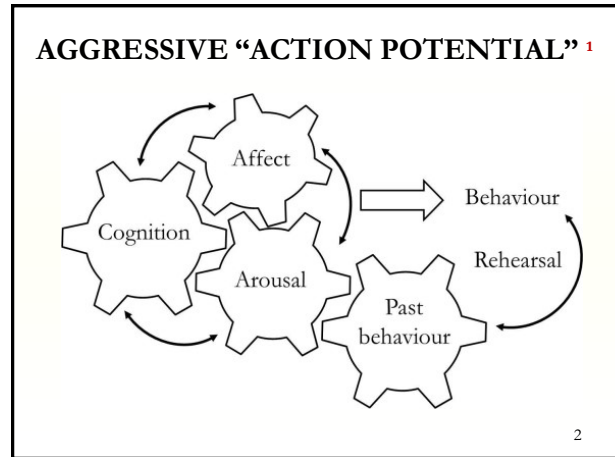


## Does the Factor Structure of the Aggression Questionnaire Hold for Sexual Offenders?

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- ### THE AGGRESSION QUESTIONNAIRE<sup>2</sup>
- 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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- Convergent validity (e.g., frequency of fighting<sup>2</sup>)
  - Internal consistency (AQ total score  $\alpha = .80 - .92$ <sup>2,3</sup>)
  - Test-retest reliability (e.g.,  $r = .80$ )<sup>2,3</sup>
  - **CFA with Students**
    - Four-factor structure replicated<sup>2,4</sup>
  - **CFA with Offenders**
    - Unstable factor structure<sup>3,5,6</sup>
      - 12-item short form<sup>5,6</sup>
        - Sexual offenders?
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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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### TESTING HIERARCHICAL MODELS

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

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### PARTICIPANTS

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

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### RISK MEASURES

- Static-99 (Hanson & Thornton, 2000)**
  - actuarial risk appraisal
  - sexual recidivism
- SIR-R1 (Nuffield, 1982)**
  - actuarial risk appraisal
  - general (including violent) recidivism

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### ANALYSES

- CFA with ordinal data**
  - Mplus 6 software <sup>9</sup>
  - Estimator (WLSMV)
  - Polychoric correlations
- Model evaluation**
  - Global fit
  - Localized fit

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### RESULTS

- Four-Factor Model (29-items)**

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**Localized Fit Criteria**

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

---

**Global Fit Criteria**

- 3+ fit indices met a-priori cutoffs
- $\approx 50\%$  negative/positive residuals
- Latent factor correlations  $\geq .40$  and  $< .85$

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### Non-Distinct Latent Factors (correlations $\geq .85$ )

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• **Four-Factor Model with 12-items**

<b>Localized fit</b>	✓
All standardized factor loadings $\geq .40$	✓
Standardized residuals $> (-.11)$ and $< (+.11)$	✓
Cross loadings $< .40$	✗
<b>Global fit</b>	✓
3+ fit indices met a-priori cutoff for adequate fit	✓
50% negative/positive residuals	✓
Estimated latent factor correlations $[\geq .40, < .85]$	✗
<b>Hierarchical model</b>	✓
Fit not meaningfully degraded	✓
All latent factor correlations $< .85$	✗


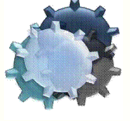
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• **AQ Scores and Risk of Recidivism**

AQ (29 Items)	Mean (SD)	$\alpha$	Bivariate correlations	
			Static-99	SIR-R1
AQ total	65.3 (19.7)	.92	<b>.19**</b>	<b>-.25**</b>
<b>Physical</b>	18.6 (6.9)	.79	<b>.35**</b>	<b>-.41**</b>
Verbal	12.8 (3.9)	.69	<b>.31**</b>	<b>-.09 (ns)</b>
Anger	14.8 (5.7)	.80	<b>.18*</b>	<b>-.22**</b>
Hostility	19.1 (6.9)	.83	<b>.03 (ns)</b>	<b>-.06 (ns)</b>

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### DISCUSSION


<p><b>Non-distinct latent factors</b></p> <ul style="list-style-type: none"> <li>Four dimensions?                     <ul style="list-style-type: none"> <li>Methods</li> </ul> </li> <li>Measurement non-invariance</li> <li>“True” group differences                     <ul style="list-style-type: none"> <li>Anger</li> </ul> </li> </ul>	<p><b>“Normal” men</b></p> 
	<p><b>Sexual offenders</b></p> 

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- **Practical implications**
    - Assessment batteries
    - Other uses
      - AQ with 29 vs. 12 items
  - **Limitations**
    - Sample size and composition
    - Risk vs. actual Recidivism
  - **Future research**
    - Replication and model cross-validation
    - Complementary analyses
      - e.g., Multidimensional Scaling
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### More about our research ...

**Aggressive Cognition and  
Behaviour Research (ACBR) Lab**

<http://www.carleton.ca/acbrlab/>



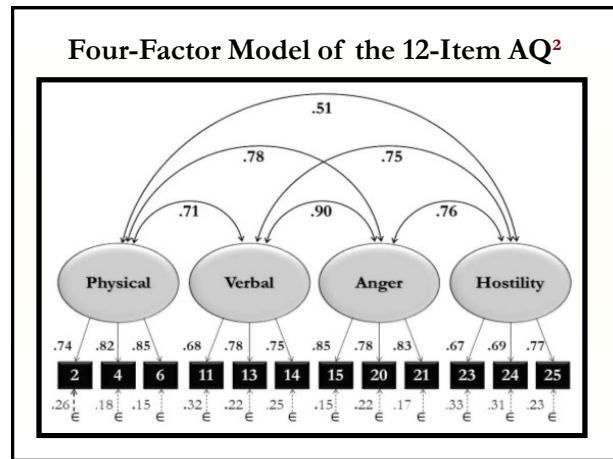
**Presentation reference**

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Model Fit Indices					
Factors (Items)	$\chi^2$ (df)	RMSEA [95% CI]	CFI	TLI	WRMR
4 (29)	880* (371)	0.068✓ [0.063, 0.074]	.915	0.907	1.24
4 (26)	714* (293)	0.070✓ [0.064, 0.077]	.925	0.917	1.18
4 (12)	113* (48)	0.068✓ [0.052, 0.084]	.974✓	0.964✓	0.70✓
Hierarchical- 5 (12)	117* (50)	0.068✓ [0.052, 0.084]	.973✓	0.965✓	0.74✓

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



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