A Cluster Analysis of Juvenile Sexual Offenders
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Introduction

Previous Research
• Few previous attempts to classify juvenile sexual offenders based on standardized psychological instruments.
• Seven offender typologies identified by O'Brien and Bera (1986): naïve experimenter, the unsocialized child sexual exploiter, the pseudo-socialized child exploiter, the sexually aggressive offender, the sexually compulsive offender, the disturbed impulsive offender, and the group influenced offender.
• Using the California Personality Inventory, Worling (2001) established a personality-based typology of juvenile sexual offenders with four distinct subgroups: antisocial/impulsive, overcontrolled/reserved, unusual/isolated, and confident/aggressive.

Goals
• Explore the nature of personality typologies derived from the MACI's personality patterns scales.
• To contribute to personality-based cluster literature and compare results with previous studies.

Methods

Participants
• Juvenile youth-offenders incarcerated at an Alabama Department of Youth Services correctional facility.
• Youth from throughout the state of Alabama were housed within this correctional facility.
• N=429; consecutive admissions from 2000 through 2007. • Mean age of 15.78 (range = 12.8 to 19.16; SD = 1.48).
• Demographic Breakdown: Caucasian (53.8%), African-Americans (43.1%), and “Other” (3.1%).

Instrument
• The Millon Adolescent Clinical Inventory (MACI; Millon, 1993).
• 160-item self-report personality inventory specifically targeted to assess troubled adolescents via true-false responses to items.
• The MACI was developed to measure unique concerns, pressures, and situations adolescents face and was designed with a focused sample including adolescents in a variety of clinical treatment environments.
• Participants completed the MACI after an initial facility orientation period of approximately 10 days.

Data Analysis
• The 12 personality patterns scales of the MACI were entered into a hierarchical cluster analysis using Ward’s cluster method.
• Ward’s method is commonly used for forming hierarchical groups of mutually exclusive subsets as it organizes the data into a proximity matrix before combing groups to derive the least possible within group variance and the highest between-group variance.
• Exploratory analysis resulted in a five-cluster solution (Figure 1).  Once cluster group membership was established for each participant, the groups were compared by their mean scores on each of the personality pattern scales through a series of one-way ANOVAs. Tukey post-hoc t tests were conducted to determine which clusters differed significantly.

Table 1. Mean base rate MACI Personality Patterns scale scores, standard deviations, and ANOVA comparisons by cluster

<table>
<thead>
<tr>
<th></th>
<th>Dramatizing/Unruly</th>
<th>Normal</th>
<th>Submissive</th>
<th>Inhibited</th>
<th>Oppositional/Unruly</th>
<th>ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACI Scale</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>1 Introvertive</td>
<td>25.03 a</td>
<td>9.78</td>
<td>50.92 b</td>
<td>12.51</td>
<td>46.90 b</td>
<td>15.19</td>
</tr>
<tr>
<td>2A Inhibited</td>
<td>22.12 a</td>
<td>7.85</td>
<td>45.48 b</td>
<td>15.50</td>
<td>49.94 a</td>
<td>16.17</td>
</tr>
<tr>
<td>2B Doleful</td>
<td>31.32 a</td>
<td>14.77</td>
<td>47.09 b</td>
<td>20.76</td>
<td>32.60 a</td>
<td>14.3</td>
</tr>
<tr>
<td>3 Submissive</td>
<td>48.44 a</td>
<td>11.52</td>
<td>57.23 b</td>
<td>7.09</td>
<td>73.52 c</td>
<td>10.33</td>
</tr>
<tr>
<td>4 Dramatizing</td>
<td>79.85 a</td>
<td>9.99</td>
<td>57.08 b</td>
<td>5.85</td>
<td>62.83 b</td>
<td>14.89</td>
</tr>
<tr>
<td>5 Egotistic</td>
<td>67.79 a</td>
<td>6.61</td>
<td>55.13 b</td>
<td>9.06</td>
<td>58.46 b</td>
<td>14.02</td>
</tr>
<tr>
<td>6A Unruly</td>
<td>80.76 a</td>
<td>10.91</td>
<td>63.04 b</td>
<td>13.71</td>
<td>40.49 c</td>
<td>12.63</td>
</tr>
<tr>
<td>6B Forceful</td>
<td>44.41 a</td>
<td>21.7</td>
<td>31.68 b</td>
<td>13.48</td>
<td>16.95 c</td>
<td>11.4</td>
</tr>
<tr>
<td>7 Conforming</td>
<td>54.12 a</td>
<td>7.51</td>
<td>54.13 a</td>
<td>7.05</td>
<td>70.88 b</td>
<td>13.35</td>
</tr>
<tr>
<td>8A Oppositional</td>
<td>58.06 a</td>
<td>13.9</td>
<td>57.30 a</td>
<td>12.08</td>
<td>37.28 b</td>
<td>16.29</td>
</tr>
<tr>
<td>8B Self-Demeaning</td>
<td>24.82 a</td>
<td>12.71</td>
<td>32.76 b</td>
<td>12.97</td>
<td>27.61 a</td>
<td>11.33</td>
</tr>
<tr>
<td>9 Borderline</td>
<td>27.79 a</td>
<td>14.42</td>
<td>34.75 b</td>
<td>13.88</td>
<td>19.02 c</td>
<td>9.41</td>
</tr>
</tbody>
</table>

Note. Mean cluster scores that share a common superscript in each row indicate differences were not significant at the p < .05 level on Tukey post hoc tests.

Results

• Analyses indicate a five-cluster solution (see Table 1).
• Mean scale score, subsequent ANOVAs, and post-hoc tests support the distinctive characteristics of the five groups.

Discussion
• These results suggest a five group typology of adolescent sexual offenders.
• The cluster grouping suggest the presence of an irresponsible attention seeking profile type, an interpersonally docile and expressively incompetent typology, an insecure and interpersonally avoidant typology, a hostile and aggressive profile type, and a fifth type that displays few characteristics of significant psychopathology.
• Cluster typologies suggest tailoring treatment interventions aimed at addressing individual deficits and strengths in order to be more efficient and effective in reducing offender recidivism.

Future Directions
• Examining the arresting offense of members within each cluster may provide additional support of this five-cluster solution.

For additional information regarding this study or additional information regarding the Mt. Megis Treatment Facility please contact Patrick Cook at: cookpat@auburn.edu.

Figure 1. Hierarchical cluster analysis; 2-, 3-, 4-, and 5-cluster solutions.