Forensic neuropsychology:
A national survey of practitioner training and experience

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What is forensic neuropsychology?

• Definition
• Rapid development
  – Civil versus criminal
• Next steps
  – Legal questions
  – Training
  – Practice and challenges
Method

• Electronic survey
  – 500 NAN members
  – 672 AACN members

• Two sections
  – Demographics and neuropsychological training
  – Forensic experience, training, and practice

• Since 2005
**Sample**

**Age**
- Range = 33-71 years
- $M_{\text{years}} = 53.53$
- $SD = 9.41$

**Race/ethnicity**
- Caucasian: 57 (97%)
- Hispanic: 2 (3%)
- Other: 2 (3%)

**Area of practice**
- 34 states and DC
- Urban: 37 (63%)
- Suburban: 28 (47%)
- Rural: 11 (19%)

**Practice setting**
- Private practice: 37 (63%)
- Medical: 26 (44%)
- Academic: 13 (22%)
- Other: 6 (10%)
Forensic experience

Forensic caseload
Range = 5-100%
\( M_{\text{percent}} = 43.50 \)
\( SD = 30.75 \)

Criminal experience
\( N = 38 \) (66%)

Forensic experience
Range = 2-35 years
\( M_{\text{years}} = 18.24 \)
\( SD = 9.31 \)

Civil forensic caseload
Range = 1-100%
\( M_{\text{percent}} = 51.25 \)
\( SD = 37.27 \)

Criminal forensic caseload
Range = 1-100%
\( M_{\text{percent}} = 24.39 \)
\( SD = 31.32 \)
# Forensic experience

<table>
<thead>
<tr>
<th>Forensic context</th>
<th>Prevalence (%)</th>
<th>Range</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal injury</td>
<td>Civil</td>
<td>56 (97)</td>
<td>1-100%</td>
<td>55.21</td>
</tr>
<tr>
<td>Civil competency (overall)</td>
<td>Civil</td>
<td>42 (71)</td>
<td>1-100%</td>
<td>12.51</td>
</tr>
<tr>
<td>Criminal competency (overall)</td>
<td>Criminal</td>
<td>25 (42)</td>
<td>1-100%</td>
<td>37.37</td>
</tr>
<tr>
<td>Sentencing</td>
<td>Criminal</td>
<td>19 (32)</td>
<td>1-100%</td>
<td>27.83</td>
</tr>
<tr>
<td>Insanity</td>
<td>Criminal</td>
<td>14 (24)</td>
<td>2-75%</td>
<td>16.15</td>
</tr>
<tr>
<td>Child custody</td>
<td>Civil</td>
<td>4 (7)</td>
<td>1-6%</td>
<td>4.00</td>
</tr>
</tbody>
</table>
Forensic experience groups

Civil experience  
N = 58 (98%)

Criminal experience  
N = 38 (66%)

Both Civil and Criminal
Civil Only
Criminal Only
Training

- Graduate degree: Neuropsychology 80%, Forensic 22%
- Pre-doctoral internship: Neuropsychology 68%, Forensic 24%
- Post-doctoral fellowship: Neuropsychology 54%, Forensic 27%
- CE credits: Neuropsychology 100% (est.), Forensic 85%
- Board certification: Neuropsychology 80%, Forensic 12%
Differences in training

- Neuropsychology BC > Forensic BC

<table>
<thead>
<tr>
<th></th>
<th>ANY Criminal*</th>
<th>Civil ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuropsychology</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>Forensic</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

\[ \chi^2 (1, n = 32) = 12.50, p < .001, \phi = 0.63 \text{ (large effect size)} \]
Differences in training

- Neuropsychology training is not different among groups
  - Neuro: \( t(49) = -0.31, p = 0.759, r^2 < 0.01 \) (small effect size)
  - Forensic: \( t(53) = 0.08, p = 0.470, r^2 < 0.01 \) (small effect size)

- Years of neuropsychology experience > forensic
  - ANY Criminal: \( t(16) = 3.24, p = 0.003, r^2 = 0.40 \) (large effect size)
  - Civil ONLY: \( t(29) = 5.35, p < 0.001, r^2 = 0.50 \) (large effect size)

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<thead>
<tr>
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<th>ANY Criminal</th>
<th>Civil ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuropsychology</td>
<td>23.18 (8.27)</td>
<td>23.07 (8.69)</td>
</tr>
<tr>
<td>Forensic</td>
<td>19.94 (9.97)</td>
<td>18.70 (8.62)</td>
</tr>
</tbody>
</table>
Jurisdictional differences

- ANY Criminal: *Frye > Daubert*

  \[
  \chi^2 (1, \ n = 32) = 4.50, \ p = .034, \ \phi = 0.38 \text{ (medium effect size)}
  \]

- Civil ONLY: *Frye ≈ Daubert*

  \[
  \chi^2 (1, \ n = 17) = .53, \ p = .467, \ \phi = 0.18 \text{ (small effect size)}
  \]
Challenges to admissibility

- 29 participants were aware of challenges to admissibility

<table>
<thead>
<tr>
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<th>Prevalence (%)</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenges (civil)</td>
<td></td>
<td>4.10</td>
<td>4.78</td>
<td>0-20</td>
</tr>
<tr>
<td>Successful</td>
<td></td>
<td>5.35</td>
<td>22.31</td>
<td>0-100</td>
</tr>
<tr>
<td>Challenges (criminal)</td>
<td></td>
<td>3.36</td>
<td>6.02</td>
<td>0-20</td>
</tr>
<tr>
<td>Successful</td>
<td></td>
<td>.50</td>
<td>1.38</td>
<td>0-5</td>
</tr>
</tbody>
</table>

\[ \chi^2 (2, n = 29) = 27.79, p < .001, \phi = 0.98 \text{ (large effect size)} \]
Implications

• Experience
  – Variability in experience
  – Civil vs. Criminal
  – Common practice?

• Training
  – Variability training, but some trends
  – Neuropsychological vs. forensic training
  – No differences between civil vs. criminal experience
  – Board certification

• Practice
  – Jurisdictional differences for criminal forensic experience
  – Challenges to admissibility
Limitations

- Sample size
  - Response rate
  - 5% cutoff

- Generalizability
  - Board certification
  - Racial/ethnic minorities
  - Access issues

- Validity
  - Limited guidance around appropriate questions
Conclusions

• Dramatic growth, and lingering questions

• Importance of common practices and training on admissibility

• Future directions
  – Larger, more representative surveys
  – Development of practice guidelines (and practice standards)
  – Training opportunities
  – Credentialing controversy
  – Jurisdictional differences
  – Incremental utility of neuropsychology in specific legal questions