Apr 15th, 1:00 PM - 3:00 PM

Juror Typologies and DNA Comprehension: Who Benefits from Jury Trial Innovations?

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Repository Citation
https://digitalscholarship.unlv.edu/grad_symposium/2013/april_15/16
**Abstract**

DNA evidence has become more frequently presented at trials over the last 2 decades. However, legal commentators have expressed concerns about jurors’ comprehension and ability to correctly utilize such evidence. The present study uses secondary data to explore the effects of trial innovations on improving comprehension among jurors most likely to have difficulty understanding and applying DNA evidence.

**Current Study**

The current study uses secondary data collected by Dann et al. (2003) to explore whether trial innovations are effective for improving comprehension among specific types of jurors in cases where DNA evidence is presented.

**Methods**

We selected a subsample of 445 jurors likely to have difficulty comprehending mitochondrial DNA evidence (based on Hans et al.’s [2011] typology created from Dann et al.’s [2003] dataset).

Hans et al. (2011) found greatest comprehension of mitochondrial DNA evidence among white women, as well as highly educated jurors, those with a greater history of taking math and science classes, those with fewer reservations about science, and those with fewer concerns about mitochondrial DNA evidence contamination. We excluded participants with these characteristics from Dann et al.’s (2003) sample.

**Results**

**Innovation Support**

Participants indicated their level of support for each innovation. In general, jurors expressed considerable support for the innovations. They had the most favorable reaction to note taking, followed by notebooks, and checklists.

**Support for Innovations**

<table>
<thead>
<tr>
<th>Innovation</th>
<th>Favorability Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Note taking</td>
<td>9.10</td>
</tr>
<tr>
<td>Jury Notebook</td>
<td>8.36</td>
</tr>
<tr>
<td>Checklist</td>
<td>7.83</td>
</tr>
<tr>
<td>Question Asking</td>
<td>6.37</td>
</tr>
</tbody>
</table>

**Juror Comprehension**

The overall pre- and post-deliberation comprehension scores were 5.71 and 5.92, respectively (producing an average difference of 0.21). Greatest comprehension improvement occurred when all innovations were combined (Condition 6).

**General Findings**

- Jurors were generally favorable to most innovations.
- Trial innovations are not effective at improving comprehension rates among jurors likely to have the greatest difficulty understanding mitochondrial DNA evidence.
- Innovations did not impact verdict confidence.

**Limitations and Policy Implication**

- Most innovations were not examined independently—All conditions included note-taking.
- Note-taking may distract jurors from paying attention to testimony, and interfere with the effectiveness of other trial innovations.
- Testimony complexity was not manipulated. Innovations may be more effective if accompanied by simplified evidence presentation.