THE DENVER PRESCHOOL PROGRAM: CHILD OUTCOMES

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What are the goals of our analysis?

• Does the Denver Preschool Program (DPP) increase participants’ cognitive, social-emotional, and executive functioning outcomes?
  • Cognitive: receptive vocabulary, letter word identification, applied problems
  • Executive functioning: working memory and inhibitory control
  • Social skills: protective factors and behavioral concerns

• How can we be sure any observed gains are due to the DPP?
  • Relies on an age criteria (October 1) for eligibility to the DPP
  • Advantage is that we are delaying services, not denying services outright
How does our analysis support causal inferences?

- Black curves represent student scores
- Red line denotes the Oct. 1 cut-point
- Children to the right of the cut-point received a year’s worth of tuition credit (treatment)
- Children to the left of the cut-point are just starting to receive the credit (control)
- Distance between the horizontal bars along the red line represents the DPP effect
How do we interpret the DPP gains?

- **Statistical significance** – the likelihood that the observed differences are not due to chance

- **Effect sizes (ES)** – emphasizes magnitude of the difference
  - ES of 0.20 to 0.25 considered substantively important
  - Typical ES for interventions at the pre-k level are approximately 0.11 for both math and reading
How large are the DPP effects?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Significance</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receptive vocabulary</td>
<td></td>
<td>.27</td>
</tr>
<tr>
<td>Letter word identification</td>
<td></td>
<td>.26</td>
</tr>
<tr>
<td>Applied problems</td>
<td></td>
<td>.09</td>
</tr>
<tr>
<td>Working memory: parents</td>
<td>+</td>
<td>.58</td>
</tr>
<tr>
<td>Working memory: teachers</td>
<td></td>
<td>.34</td>
</tr>
<tr>
<td>Inhibitory control: parents</td>
<td>+</td>
<td>.54</td>
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<tr>
<td>Inhibitory control: teachers</td>
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<td>.03</td>
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<tr>
<td>Protective factors: parents</td>
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<td>.30</td>
</tr>
<tr>
<td>Protective factors: teachers</td>
<td>+</td>
<td>.72</td>
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<tr>
<td>Behavioral concerns: parents</td>
<td></td>
<td>.10</td>
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<tr>
<td>Behavioral concerns: teachers</td>
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<td>.08</td>
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What are the implications of our findings?

DPP is the first known study in the nation that can provide *causal evidence* for the effectiveness of a tuition credit on children’s school readiness outcomes.
What are next steps?

- Communicating Results
- Understanding Subgroups
- Answering the Question: We know it works but why?
Thank You!

Questions? Please email us at: le-vinhuan@norc.org