Stressful childhood environments may enhance cognitive functioning.

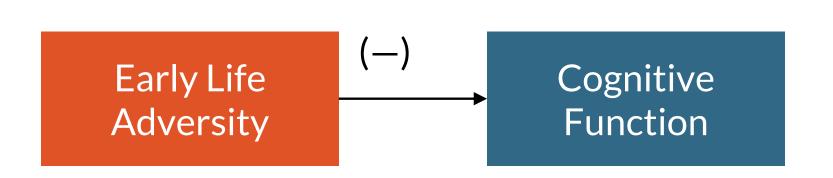
Can an unpredictable childhood environment enhance aspects of executive function and working memory?

Ethan S. Young, Vladas Griskevicius, Jeffry A. Simpson, Chiraag Mittal, & Theodore E. A. Waters

BACKGROUND

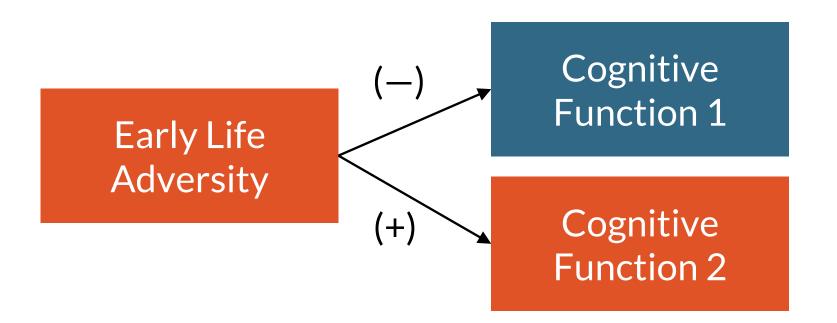
The Deficit Model

• Early adversity *impairs* cognition



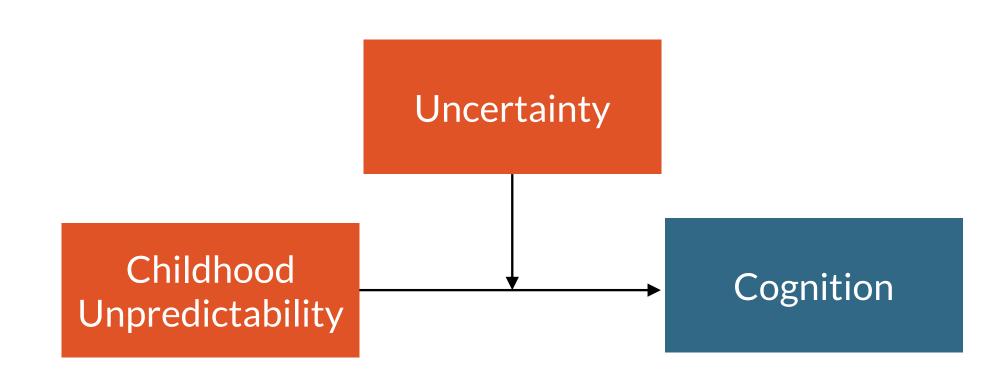
The Adaptation Model

- Early adversity *shapes* cognition
- Some are impaired, others could be enhanced



Sensitization

 Specialized abilities might be sensitized to manifest under particular conditions later in life.

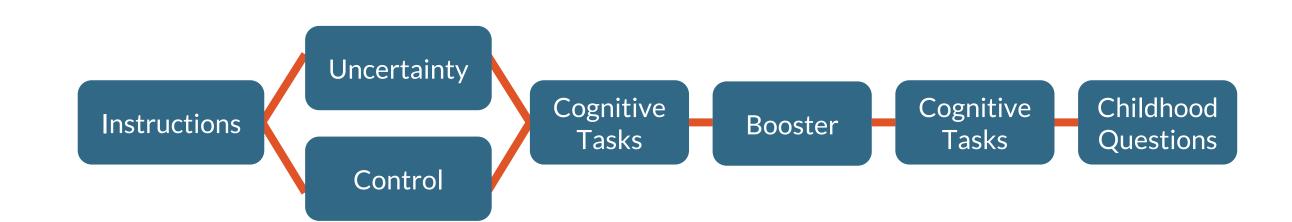


METHODS

Participants

- Executive functions: 4 studies, N = 393
- Working Memory: 3 studies, N = 718

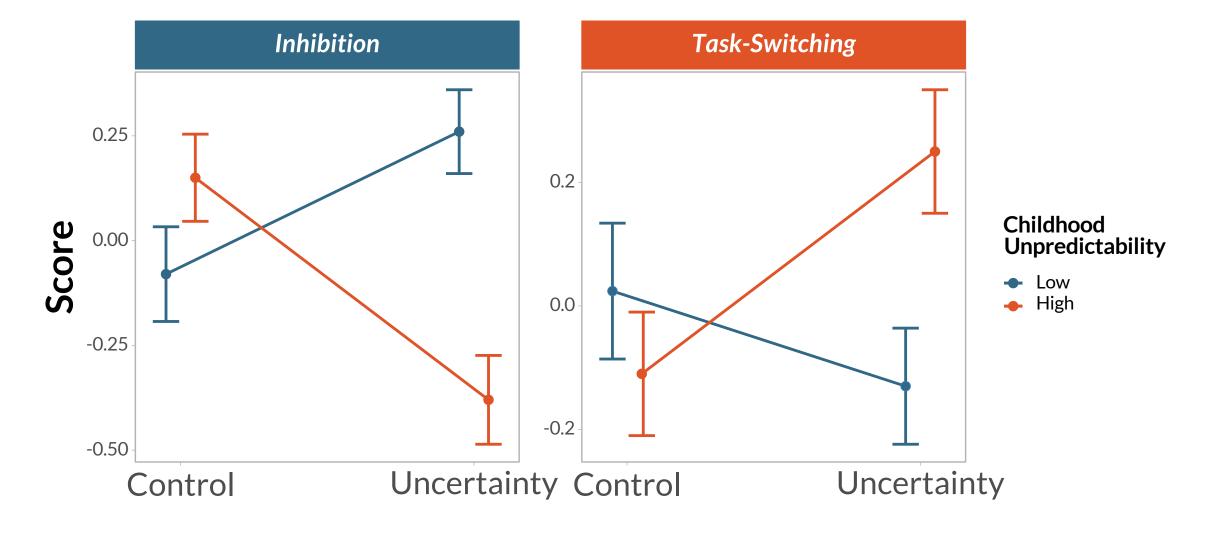
General Study Design



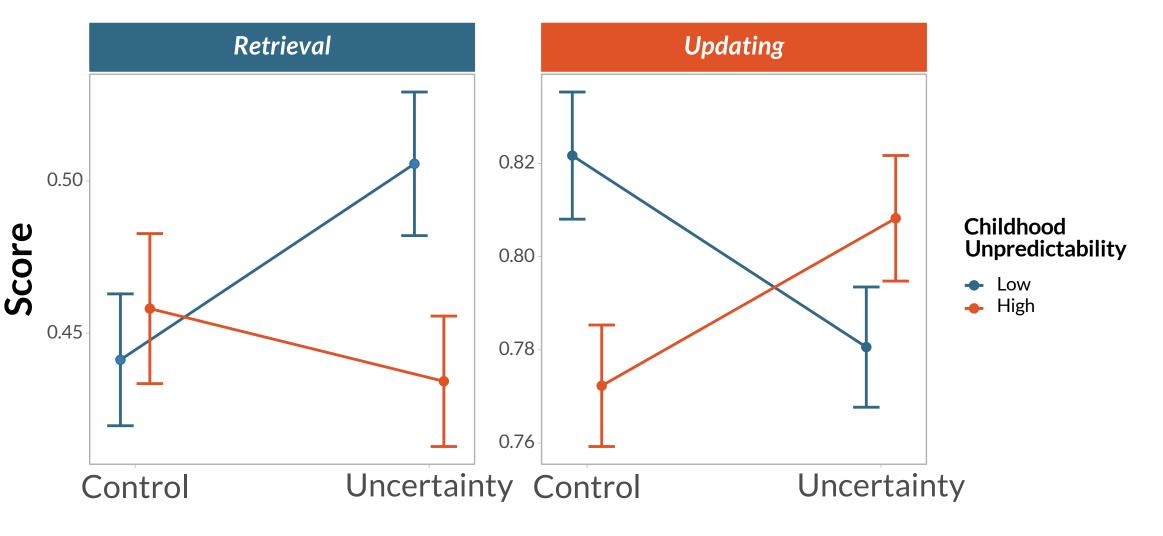
RESULTS

4..........

Unpredictability and Executive Functions



Unpredictability and Working Memory



EXECUTIVE FUNCTIONS

Inhibition Task-Switching

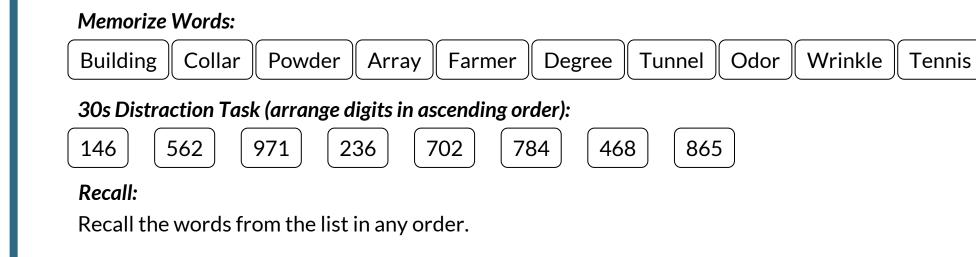
- Control attention Shift attention
- Ignore distractions

 Switch between tasks
- Focus on goals
 Respond to changes



WORKING MEMORY





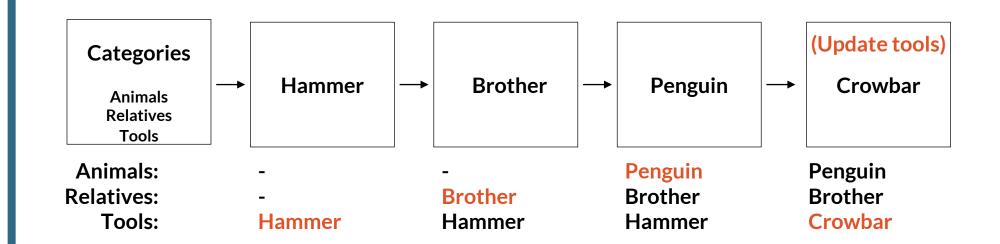


- Track changing information
 Replace old info with new, more relevant info

Keep Track Task:

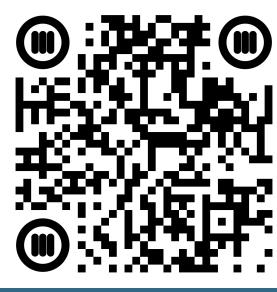
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Retrieval Task:



UNPREDICTABILITY

- 1. My family life was generally inconsistent and unpredictable from day-to-day.
- 2. My parent(s) frequently had arguments or fights with each other or other people in my childhood.
- 3. My parents had a di cult divorce or separation during this time.
- 4. People often moved in and out of my house on a pretty random basis.
- 5. When I woke up, I often didn't know what could happen in my house that day.
- 6. My family environment was often tense and "on edge".
- 7. Things were often chaotic in my house.
- 8. I had a hard time knowing what my parent(s) or other people in my house were going to say.



Attention shifting



Take a picture to download the full papers

Memory Updating

