

Examining How Children's Contexts May Impact Day-To-Day Variability In Persistence

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Introduction

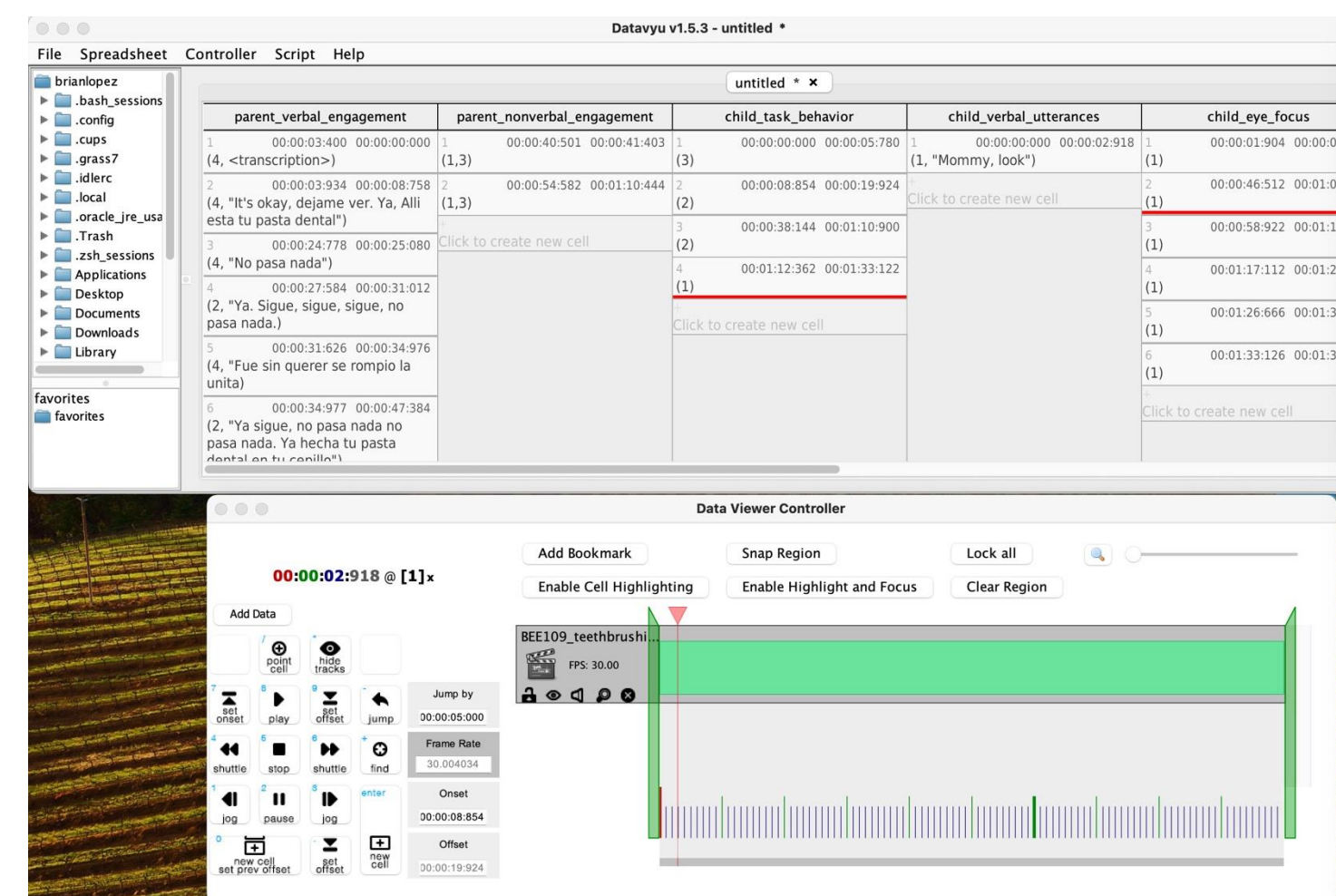
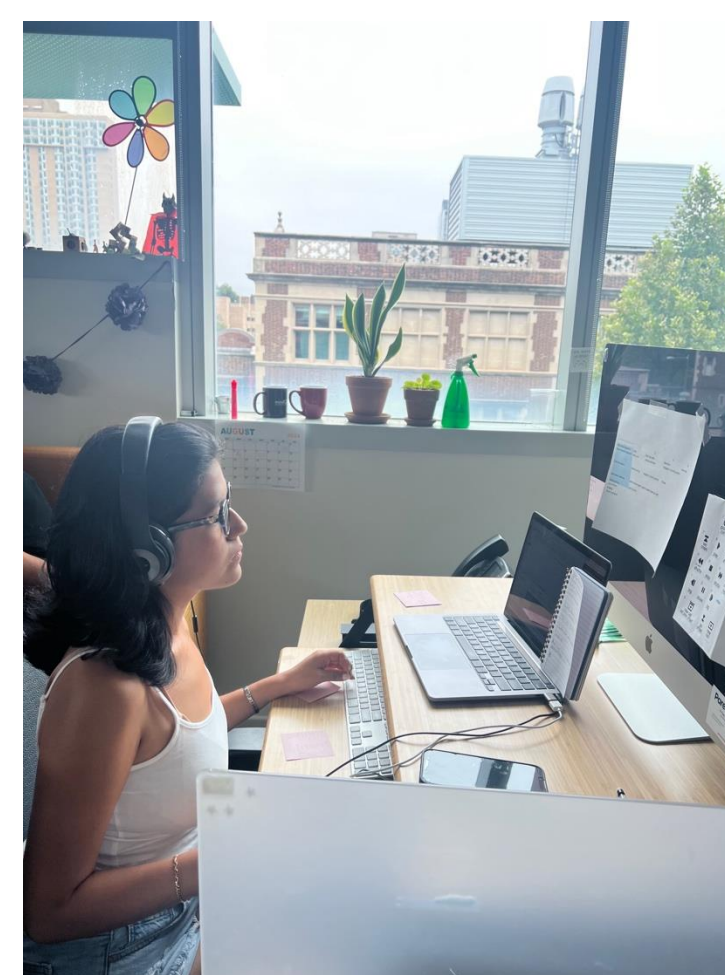
- ❖ Studies have shown that factors like mood, sleep, and parent stress shape an individual child's persistence.¹
- ❖ In a prior toothbrushing study, child variability in toothbrushing time was positively correlated with parent praise. While most of the participants were from a higher SES background, there were lower SES participants as well. SES was negatively correlated with toothbrushing duration.¹
- ❖ Intervention programs that produce more routine can lead to less variability in toothbrushing time. By identifying specific factors that impact a child's persistence, intervention programs can be designed to effectively meet families' needs. For ex. if a child is sensitive to sleep, interventions programs that focus on sleep hygiene could be helpful.¹
- ❖ In our current toothbrushing study, majority of participants are from lower SES backgrounds. I predicted our current participants would show brushing variability.

References

Leonard, J. A., LydonStaley, D. M., Sharp, S. D. S., Liu, H. Z., Park, A. T., Bassett, D. S., Duckworth, A. L., & Mackey, A. P. (2021). Daily fluctuations in young children's persistence. *Child Development*, 00, 1–15. <https://doi.org/10.1111/cdev.13717>

Methods

- ❖ We asked parents to record their child brushing their teeth for as long as possible, and upload ten videos in total. Videos typically lasted for a minute.
- ❖ Once participants upload toothbrushing videos, I watch them and make note of the timeframe in which parent-child interaction occurs. This process is called coding. Certain interactions fall into different categories: parent verbal engagement, parent nonverbal engagement, child task behavior, child verbal utterances, child eye focus, child singing, and child frustration. Although the toothbrushing videos themselves last about a minute, coding a single video can last an hour depending on how much a parent speaks, how long a child brushes their teeth for, task behavior, etc.
- ❖ Additionally, parents fill out questionnaires before and after they complete the toothbrushing study, where they answer questions about their stress level, mental health, relationship with child, and child's behavior.



Results

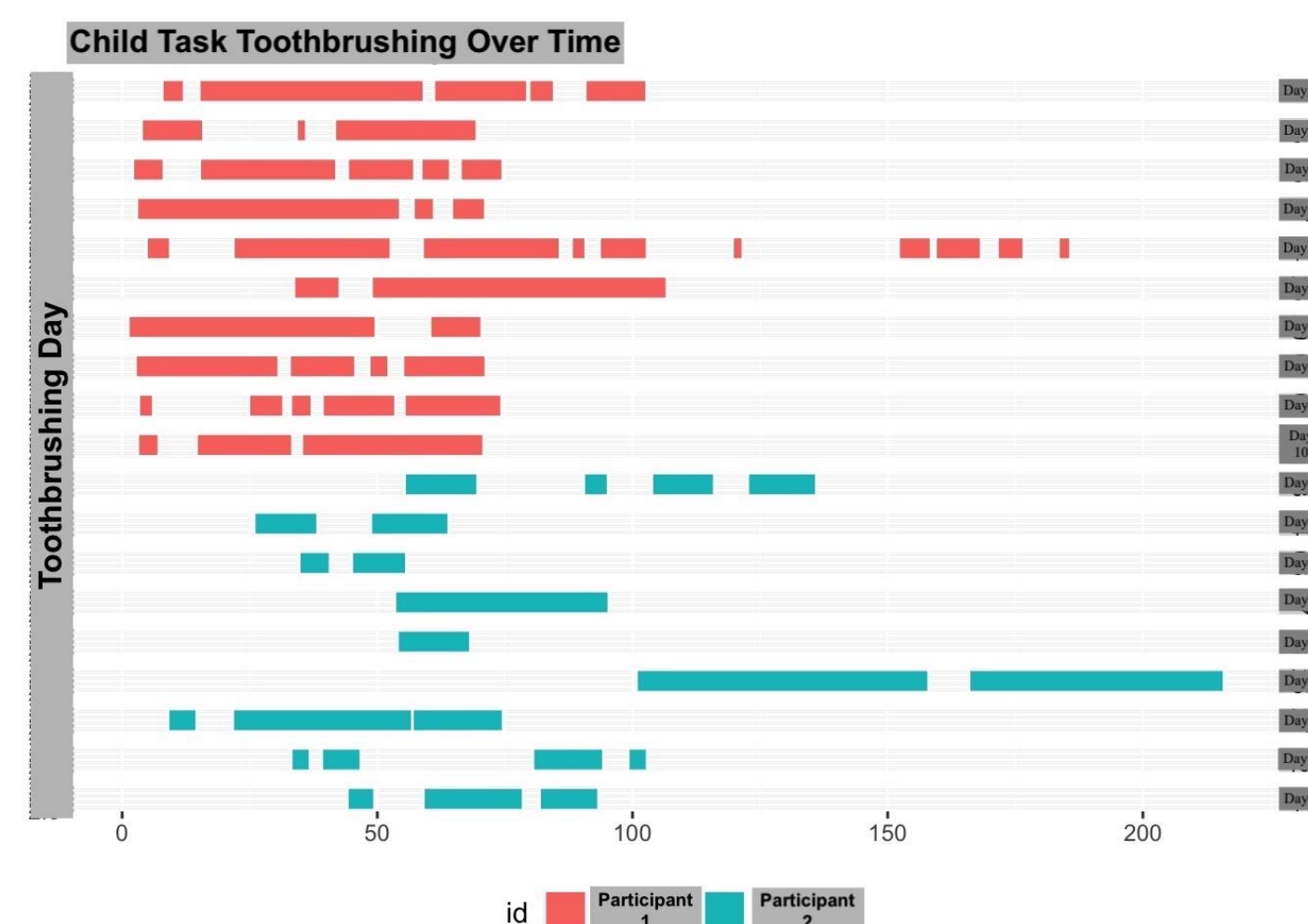


Figure 1: Another way of visualizing said variability for two families from lower SES backgrounds. Every row represents a different toothbrushing day. This gives an in-depth look into the specific moments when children are brushing their teeth. While some days the toothbrushing is over after a couple of seconds into the video recording, on other days, toothbrushing may not occur until the end of the recording.

Summary & Discussion

- ❖ For two of our participants, I coded the videos that they submitted. As shown in Figure 1, there was day-to-day variability in toothbrushing duration.
- ❖ The variability in toothbrushing time for lower SES families raises questions about what potential factors are at play. The questionnaires will provide insights about what could impact within-child brushing variability, like parent stress and mental health.
- ❖ In the previous toothbrushing study, examining how different factors impact could impact child's persistence is work used to design targeted intervention programs. If families in our study continue to show day-to-day variability in toothbrushing duration, I want to know if job-related factors might cause an inconsistent brushing routine.

Future Directions

- ❖ Going forward, I would like to see how job-related factors impact parent stress levels and mental health, and how this might shape a child's toothbrushing routine. If a parent is stressed because of a demanding and irregular work schedule, perhaps designing ways to make toothbrushing a time to both complete a healthy habit and spend time together might be beneficial.

Acknowledgments

Funding was provided by the Penn Undergraduate Research Mentoring Fund (PURM) and Center for Undergraduate Research and Fellowships (CURF).