Introduction

- During early childhood, children undergo drastic changes to their sleep habits as they make the shift from biphasic to monophasic sleep.
- Research has shown negative relations between weekday napping and attention span in preschool-aged children (Lam et al., 2012).
- During this developmental period, children also show age-related improvements in many aspects of memory development, from short-term and working memory (Gathercole, 1999; Ahmed et al., 2022) for precision memory, the ability to distinguish similar items from memory (e.g., Ngo et al., 2018).
- However, the influence of nap habits on memory development in early childhood remains unclear.
- This study seeks to address these gaps by investigating the potential moderating role of nap status on the relation between STM/WM and precision memory.

Methods

- 68 children between 3 and 5 years completed an MST task over Zoom spanning a two-week period.
- 34 participants were designated as nappers (nap ≥ 5 days/week) and 34 as non-nappers (nap ≤ 2 days/week).
- 36 of the 68 participants completed the Short-Term Memory task (21 Nappers) and 34 completed the Working Memory task (15 Nappers).

Results

- T-tests revealed a marginal difference between Nappers and Non-Nappers for the afternoon LDI during the Nap session. There were no significant differences between Nappers and Non-Nappers on the afternoon LDI during the Awake session. 
- Cue Competition or Capacity (array size 4) Score

References


Conclusion

- Virtual testing of precision memory and self-administration of STM and WM was a success!
- Nappers showed worse precision memory than Non-Nappers following a Nap.
- STM and LDI may still be related but this warrants further investigation.

Future Directions

- Complete the study again in-person and run a comparative analysis with the online version.
- Explore the nap transition by investigating semi-nappers (nap 2-5 days/wk) in addition to nappers and non-nappers.
- Run follow-up analyses with nap status as a continuous variable (number of days/week the child naps).

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