

# Predicting sleep duration at school age using early attachment security and previous sleep

Émilie Tétreault, Annie Bernier, & Julie Carrier  
 Department of Psychology, University of Montreal  
 e.tetreault@umontreal.ca



## Introduction

- Mother-child **attachment relationships** have been found to be a **predictor of children's sleep duration** (e.g., Bélanger et al., 2015).
  - ❖ Children involved in secure attachment relationships could have **better self-regulatory abilities**, resulting in longer sleep duration.
- Most studies investigating these associations are cross-sectional and **none seems to have controlled for earlier sleep**.

### Aim of the current study

- To examine the **longitudinal associations between attachment security** in toddlerhood and **sleep duration at school age**
  - ❖ While taking into account earlier sleep duration

## Method

### Participants

- 58 mother-child dyads (27 girls)
- Normative sample

### Measures

#### Attachment security:

- ❖ Measured with the **Attachment Q-Sort** (Waters, 1995)
- ❖ Two assessments (**15 and 24 months**) combined into an average attachment security score

#### Children's sleep duration:

- ❖ Children wore an **actigraph** monitor (Mini-Mitter® Actiwatch), an objective sleep measure based on motor activity
- ❖ For at least three consecutive days
- ❖ Three times during the preschool period and three times during the school-age period

#### Preschool period

- 2 years
- 3 years
- 4 years

#### School age

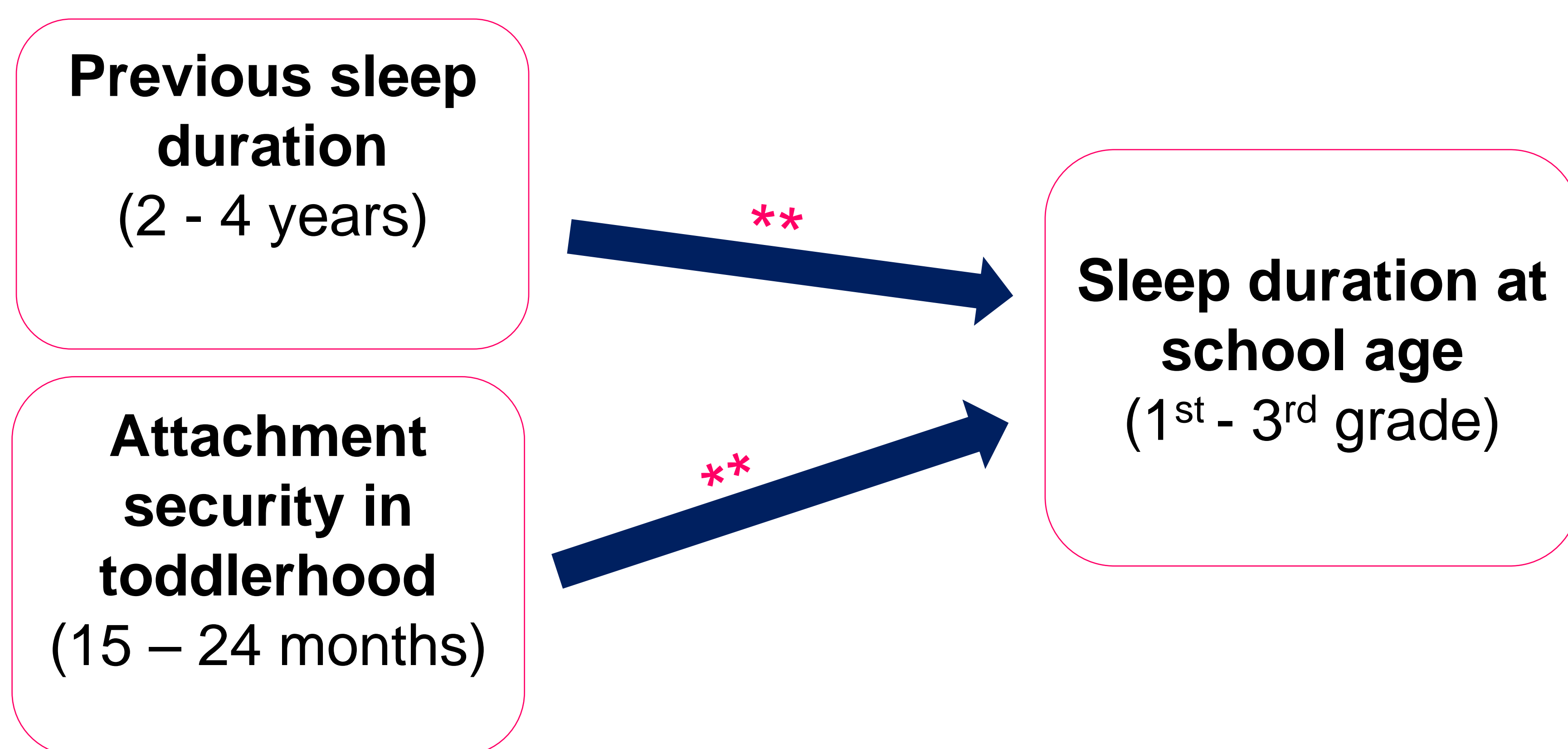
- 1<sup>st</sup> grade
- 2<sup>nd</sup> grade
- 3<sup>rd</sup> grade

- ❖ Leading to a mean score of sleep duration for each period

## Results

### Correlation analyses

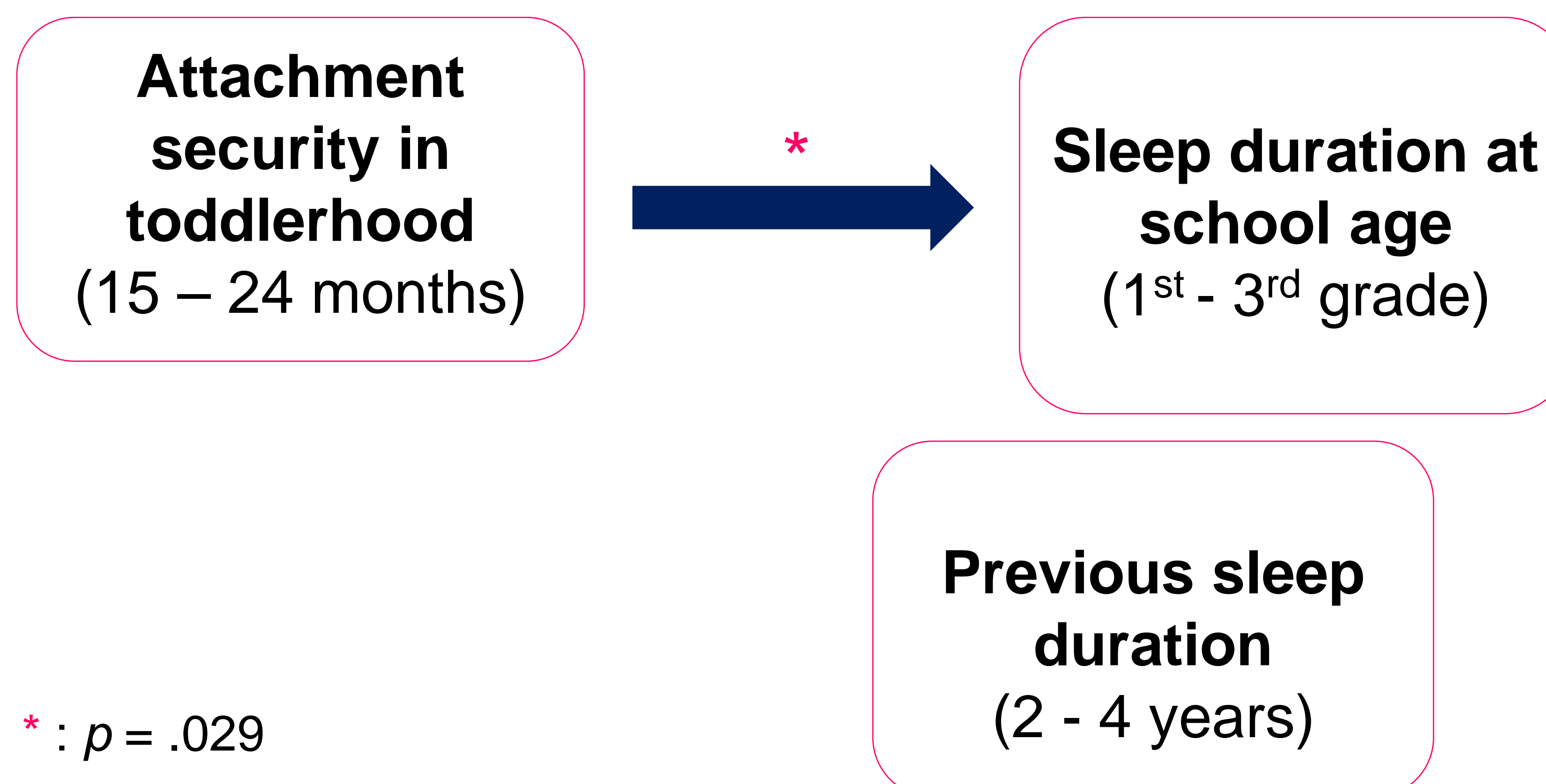
- ❖ Both previous sleep duration ( $r = .37, p = .002$ ) and attachment security ( $r = .32, p = .002$ ) predicted sleep duration at school age.



\*\* :  $p = .002$

### Multiple regression analyses

- ❖ When **controlling for previous sleep**, attachment security still predicted sleep duration at school age ( $\beta = .27, p = .029$ ).



\* :  $p = .029$

## Discussion

- The results suggest that mother-child **attachment security** and **children's sleep duration in early childhood** would be **two important antecedents of sleep duration at school age**.

- ❖ Suggesting that different factors (e.g., individual and environmental) could contribute to school-aged children's sleep.

- **Mother-child attachment security remained associated with sleep at school age even when controlling for previous sleep**, which is also significantly associated with sleep at school age.

- ❖ **Mother-child attachment security** in toddlerhood thus seems to have an **unique contribution** to sleep duration at school age.

- This study also highlights the **longitudinal contribution of mother-child attachment** in relation to child sleep.

### Conclusions

- While this study is correlational, the results obtained with this longitudinal design may indicate **that the putative influence of the mother-child relationship on children's sleep**

- ❖ **persists over time**
- ❖ has an importance that **goes beyond the patterns of sleep** that the child has **established during early childhood**

### References

- Bélanger, M.-E., Bernier, A., Simard, V., Bordeleau, S., & Carrier, J. (2015). Objective and subjective measures of sleep among preschoolers: Disentangling attachment security and dependency. *Monographs of the Society for Research in Child Development*, 80, 125-140. doi:10.1111/mono.12148
- Waters, E. (1995). The Attachment Q-Set version 3.0 (Appendix A). *Monographs of the Society for Research in Child Development*, 60, 234-246. doi: 10.1111/j.1540-5834.1995.tb00214.x