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INFANT SLEEP AND DEVELOPMENT DURING THE FIRST 8 MONTHS OF LIFE

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Introduction

The positive effects of a better sleep quality on cognitive development has been largely documented among preschool and school-aged children, in both cross-sectional and longitudinal research (1). Healthy sleep is generally associated with higher scores in mental development, whereas the reduced quality of sleep can affect learning and cognitive performance (2). Sleep has been shown to have a relevant role also in language development, predicting larger expressive vocabulary (3) and general better language outcomes. However, there is a lack of evidence on the impact of sleeping occurring in early infancy on cognitive and linguistic development. The present study aimed to fill these gaps by examining the concurrent and longitudinal relations between infants' sleep quality and cognitive and linguistic development at 4 and 8 months of age.

Methods

Longitudinal sample of 156 infants (81 boys) at 4 months of age (M = 4.10, SD = .24) (T1) and at 8 months of age (M = 8.04, SD = .30) (T2)

Measures

Measures at T1 and T2

- Brief Infant Sleep Questionnaire (BISQ; 4)
- Developmental Profile 3 (DP3; 5)

Measures only at T1:

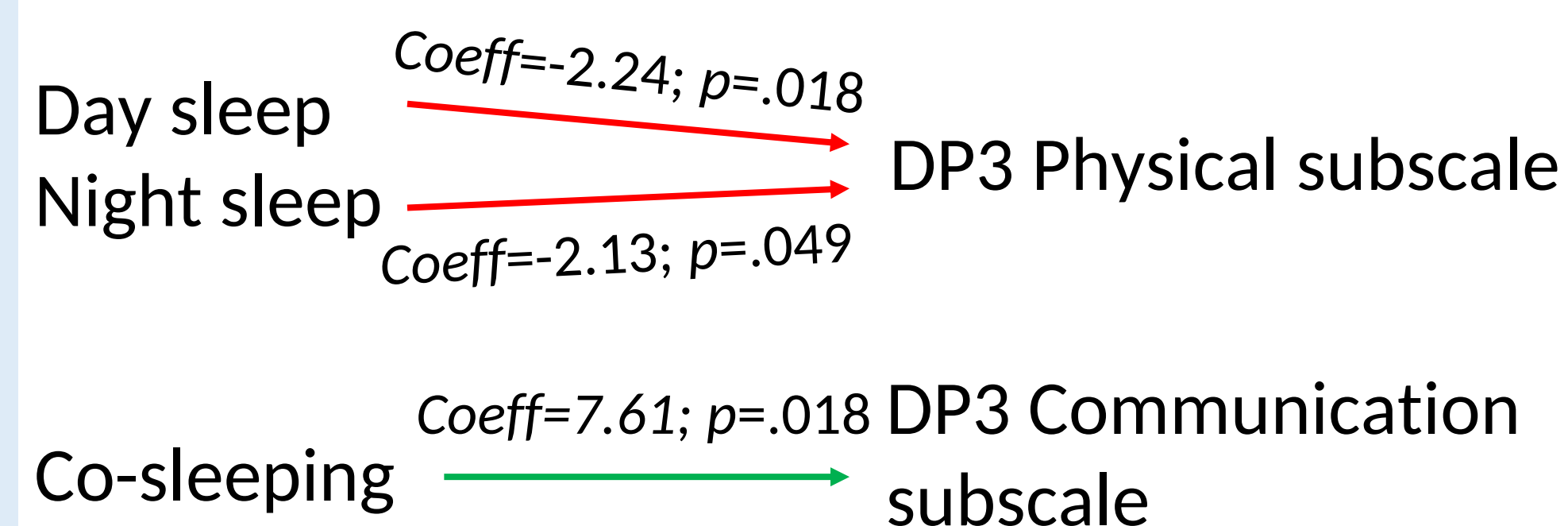
- Infant Behavior Questionnaire Revised – Short Form (IBQ-R-SF; 6)
- Maternal practices (use of a pacifier, co-sleeping and exclusive breastfeeding)

Measures only at T2:

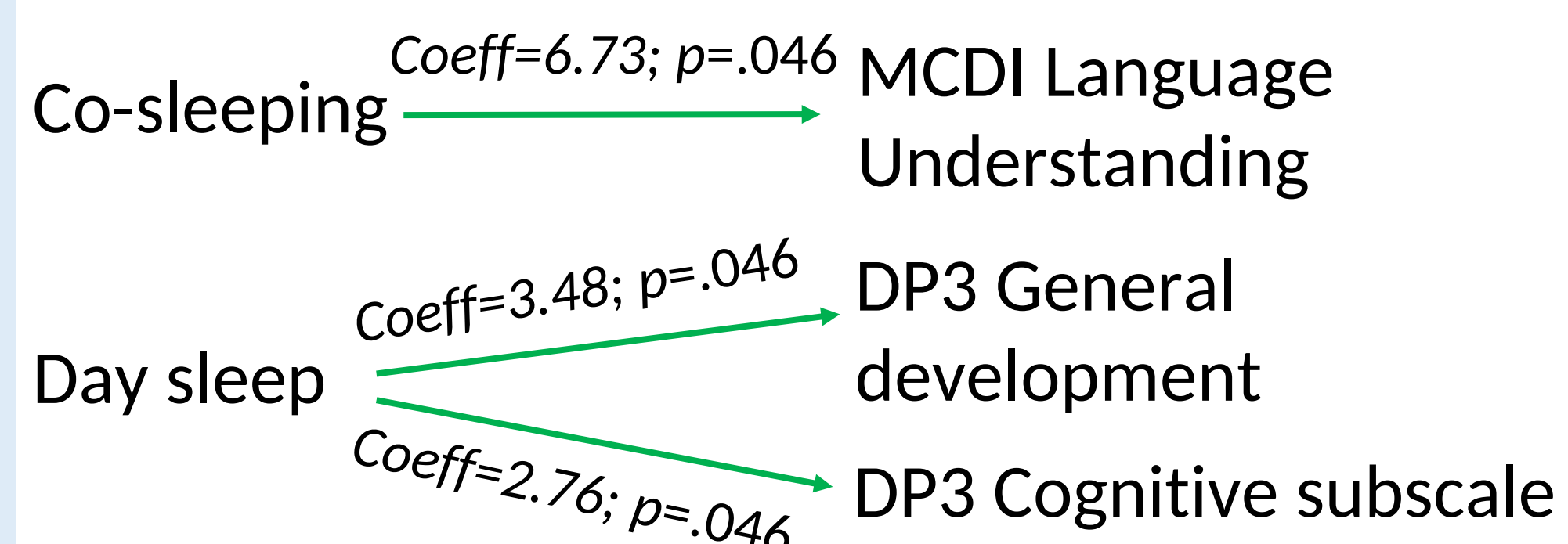
- MacArthur-Bates Communicative Development Inventory (MCDI): Words and Gestures (7)

Results

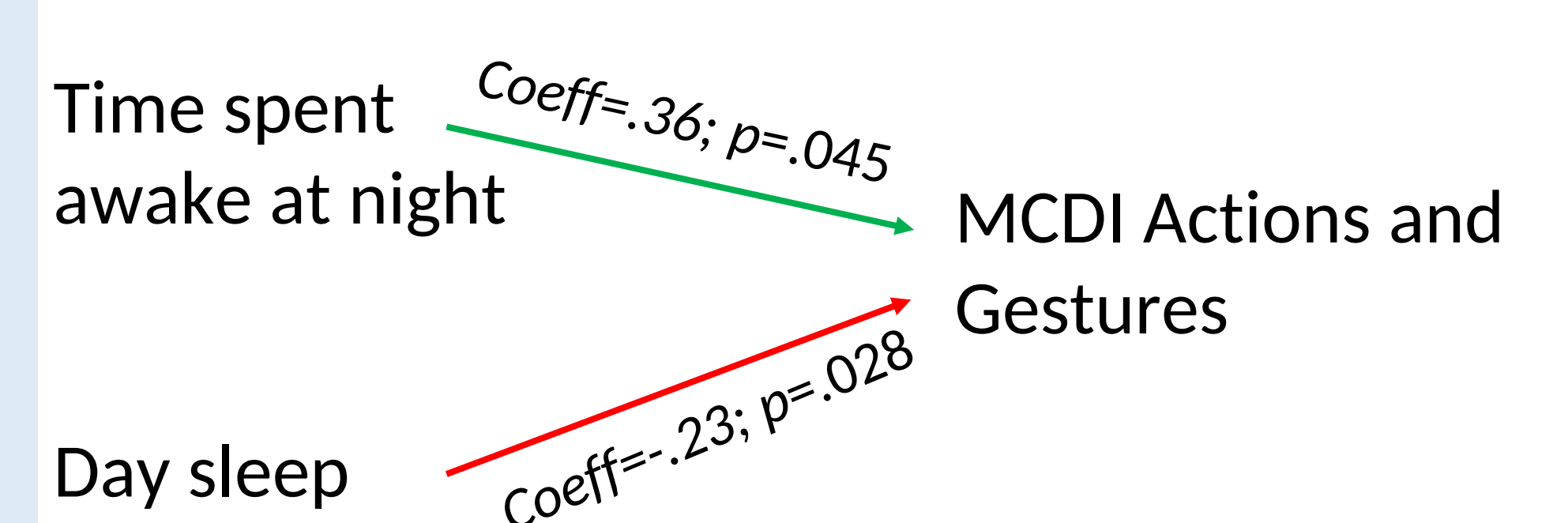
Hierarchical regressions at 4 months of age



Hierarchical regressions at 8 months of age



Hierarchical regressions 4 - 8 months of age



Discussion

Our research reveals that sleep and cognitive development are related from a very early age, but only concurrently, whereas we obtained limited evidence for longitudinal relationships. This may be due to the small developmental window between the two time points. Sleep patterns may need more time to consolidate in order to establish solid relationships with infant development in the long run. Moreover, cognitive and socio-emotional abilities at 8 months of age are also still emerging, so stronger relationships may emerge later, after the first year of life.

Conclusions

Our results support the importance of promoting healthy sleeping for cognitive and language development in infants. In light of the positive effects of daytime sleep on infants' cognition, adequate attention should be paid, by both parents and professionals, in creating beneficial nap schedules in infants' daily routines.

References

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