Results: Results show that amotivation is significantly associated with daytime sleepiness (r=.16, p =.03). The external regulated form of extrinsic motivation score is significantly associated with daytime sleepiness (r=.157, p=.037), chronotype score (r=-.164, p=.03), and bedtimes on weekends (r=.156, p=.042). The intrinsic motivation score is significantly associated with wake times on weekdays (r=-189, p=.012).
Conclusion: These results suggest that eveningness, higher daytime sleepiness, and later bedtimes on weekends are associated with amotivation and external regulation of sport motivation. Research has shown that teens who present those two characteristics are more likely to drop out of sports teams or leagues. This could have important implications when addressing inactivity and sport motivation problems in adolescents.
Support: N/A

0337

ASSOCIATION BETWEEN FREE-LIVING SLEEP AND MEMORY AND ATTENTION IN HEALTHY ADOLESCENTS

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Introduction: Sleep is important for people of all ages, especially children during development. However, adolescents often sleep less than the recommended eight hours per night. Clinical trials have found that even partial sleep deprivation- shorter than the recommended duration- can reduce cognitive function in adolescents. The association between objectively measured free-living sleep and cognition function in adolescents has not been studied.
Methods: Free-living sleep duration and sleep efficiency were measured over one week with wrist actigraphy in 199 healthy normal adolescents (140 girls, mean±SD, 17.7±0.3 years). The day after the sleep measurement concluded, sustained attention was assessed with a validated Posner cue-target task, and working memory was measured with an n-back task. Associations between sleep measures and response times during attention and memory tasks were explored with multiple linear regression adjusted for task accuracy.
Results: Over the entire week, participants' average sleep duration was 6.2±0.7 h/night and average sleep efficiency was 88±4.4% and averages for sleep the night prior to the cognitive testing were similar. Response times on memory (1-back: 420.6±73.9, 2-back: 522.6±101.9, and 3-back: 551.8±137.2 msec) and attention tasks (valid cue: 309±31.2, invalid cue: 365.8±36, and no cue: 393.6±38.9 msec) were similar to previous reports and not associated with average weekly sleep measures. Sleep duration of the night before cognitive testing was negatively associated with response times for the most challenging memory task (3-back; p=0.02). However, sleep measures of the night before did not correlate with any of the attention task scores.
Conclusion: Our data suggests that performance on difficult memory tasks may be negatively impacted by shorter free-living sleep durations the night prior to testing, even in healthy adolescents who average less than the recommended amount of sleep. Future studies should explore whether recovery sleep or other improvements in sleep habit might mitigate such effects on memory.
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0338

INTERACTIONS BETWEEN SLEEP, STRESS REACTIVITY AND COGNITION IN EARLY CHILDHOOD

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Introduction: During early childhood, sleep impacts the development of the cognitive, behavioral and stress systems. Specifically, acute sleep restriction reduces the subsequent cortisol awakening response, predicts self-regulation strategies and moderates correlations between self-regulation strategies and response inhibition. However, little is known about the interaction between sleep, stress reactivity and cognition in early childhood. This preliminary cross over study aimed to determine how acute sleep restriction moderates the relationship between stress reactivity and cognition in 4-year-olds.
Methods: Healthy children (*N*=17; 57.4 months +/- 2.1; 10 female) participated in a sleep restriction protocol that included counterbalanced cognitive and behavioral assessments during baseline and sleep restriction conditions. An age appropriate inhibitory control task was administered and salivary cortisol samples (*N*=6) were collected during the task. Mean processing speed was measured, and stress reactivity was computed as area under the curve with respect to ground (AUCg).
Results: Two tailed correlation analyses were performed to examine the relationship between AUCg and mean processing speed. Under baseline conditions, AUCg and mean processing speed were positively associated (r=0.45; p=0.05). When children were sleep restricted, there was no association between AUCg and mean processing speed (r=0.05; p=0.83). Although not statistically significant, AUCg was predicted by an interaciton between sleep condition and mean processing speed B=-1.92; p=0.06).
Conclusion: These results suggest that healthy sleep may promote the coupling of stress and cognitive systems, which is likely adaptive when facing life's challenges in early childhood. Examining the developmental trajectory of these interactions and incorporating individual difference factors will build upon this model that may eventually be applied in intervention approaches to sleep, stress and behavioral problems in preschool-aged children.
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0339

WHERE DOES THE TIME GO? REPORTED ACTIVITIES AROUND THE DLMO IN OLDER ADOLESCENTS

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Introduction: Older adolescents show heightened alertness in the evening close to the time of their Dim Light Melatonin Onset (DLMO), a time when the circadian system is most responsive to delaying light. We examined reported activities of adolescents around the time of their DLMO.
Methods: Forty-six adolescents (14.2-17.9 years; 24 females) who reported ≤7 h sleep on school nights and late bedtimes (school-night ≥ 23:00; non-school night ≥ midnight) slept at home on their usual school-year sleep schedule for 2 weeks. Participants reported their main activity via text message every hour from 16:00 until