THE ROLE OF CHILDHOOD SLEEP IN MENTAL HEALTH OUTCOMES IN CHILDHOOD AND ADOLESCENCE

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INTRODUCTION

• Sleep in the early years is a dynamic process characterized by a period of transition in which daytime sleep reduces and sleep gradually consolidates into nighttime sleep;
• Some evidence suggests that sleep characteristics during the first few years of life may remain stable throughout childhood and adolescence (Gregory & O’Connor, 2002), but research examining this is limited.
• 10-29% of infants and children under five years of age have difficulties with sleep (e.g., Williamson et al., 2019a); Of children with a probable mental disorder, 76.5% had a sleep problem 3 or more times over the previous 7 nights (Mental Health of Children and Young People Surveys, England 2023);
• Sleep problems negatively impact multiple aspects of children’s cognition (Williamson et al., 2019b), school performance (Dewald et al., 2010), and mental health (Wang et al., 2016);
• Longitudinal studies limited by short-term follow-ups and scarcity of research examining whether sleep difficulties are stable across time and whether preschool sleep predicts later mental health outcomes in adolescence;

STUDY 1: SLEEP STABILITY

RESEARCH QUESTION: Are sleep difficulties stable across childhood?

METHODS

Secondary data analysis using the Avon Longitudinal Study of Parents and Children longitudinal sample
• Sleep questionnaire filled by the mother from 6 months to 4 years;
• Questions such as whether child has sleep routine; whether they refuse to go to bed;
• Sleep characteristics during the first few years of life may remain stable throughout childhood and adolescence (Gregory & O’Connor, 2002), but research examining this is limited.

RESULTS:

1. EFA and CFA were fitted on the sleep data; 2 factors were identified – sleep quality and sleep timings;

Table 1: Factor loadings for sleep quality (factor 1) and sleep timings (factor 2) across time

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2. Secondary data analysis using the ALSPAC dataset
• Sleep questionnaire filled by the mother from 6 months to 4 years;
• Questions such as whether child has sleep routine; whether they refuse to go to bed;
• Sleep difficulties stable across childhood?

REFERENCES

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RESEARCH QUESTIONS AND HYPOTHESES

RQ1: Do children’s initial levels of sleep quality (intercept, 18 months) and change in sleep quality over the early years (18-57 months) predict later mental health?
RQ2: Do children’s initial levels of sleep timings (intercept, 18 months) and change over the early years (18-57 months) predict their mental health at later ages?

METHODS:

Secondary data analysis using the ALSPAC dataset
• Sleep questionnaire filled by the mother from 6 months to 4 years;
• Distal outcomes: Mental health (Strengths and Difficulties Questionnaire and Development and Well-Being Assessment);
• Covariates such as concurrent sleep, nighttime sleep duration and temperament will be included in the models predicting mental health;

RESULTS:

1. Sleep trajectories

Figure 2. Sleep quality trajectories

Figure 3. Sleep timings trajectories

Figure 4. Probability and SE of meeting the diagnostic criteria for anxiety and depression in later childhood and adolescence for each sleep quality trajectory

Figure 5. Mean and SE for the Strength and Difficulties Questionnaire at 6 years and across time for each sleep quality trajectory

2. Sleep quality and later mental health

Figure 6. Probability and SE of meeting the diagnostic criteria for anxiety and depression in later childhood and adolescence for each sleep timing trajectory

Figure 7. Mean and SE for the Strength and Difficulties Questionnaire at 6 years and across time for each sleep timing trajectory

CONCLUSIONS

• Sleep is stable across time at group-level;
• Most children show adequate sleep quality and timings;
• Early sleep is important for later mental health: children with poorer sleep quality (persistently poor sleepers and increasingly poor sleepers) and those with more extreme sleep timings (early or delayed sleep timings) show worse mental health outcomes in late childhood and adolescence;