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# **The interplay between sleep quality and adolescents' psychosocial development: a systematic review and meta-analysis of longitudinal studies**

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**Introduction:** Adolescence is defined as the period of a gradual transition between childhood and adulthood, with conceptually distinct physical changes marking puberty and maturation. Sleep is a critical aspect for overall well-being and healthy development across physical, behavioral, cognitive, academic, and psychosocial domains. This can pave the way to a new frontier for adolescent research, in which the dynamic interplay between sleep and multiple psychosocial aspects of adolescents' life can explain long-term developmental outcomes. Thus, systematizing and assessing longitudinal research on this topic is required to understand both changes of sleep during adolescence and its complex over time relationship with psychosocial development.

**Material and methods:** The first aim of this systematic review and meta-analysis is to identify all studies that evaluated longitudinally sleep quality, with standardized objective and/or subjective measures, in adolescence. The second aim is to evaluate the longitudinal interplay between sleep quality and psychosocial development in adolescents (particularly considering the domains of social experiences in multiple ecological contexts; identity processes and well-being outcomes). This work could lead to a better understanding of both changes in sleep quality during adolescence and its bidirectional link to psychosocial development.

Pubmed; Psychinfo, PsycArticles, Medline, Web of Science, Scopus; ProQuest Dissertations and Theses; ERIC; GreyNet databases were systematically searched without publication period restriction until 23th of September 2021. Eligible studies had to: include adolescents from the general population aged between 10/11 to 18/19 years old; use a longitudinal design; report sleep quality-related outcomes as measured by objective and/or subjective standardized measures for at least two time-points. The corresponding author worked in pairs with another team member and independently screened at first the titles and abstracts and then the full text against the eligibility criteria.

**Results:** A total of 362 full-texts were screened and a final number of 250 studies were included. The inter-rater agreement between the first and other authors of the team that worked in pairs for the selection process was substantial. Of these studies, 163 evaluated the longitudinally sleep quality of

adolescents over time and its connection to physical health; psychological and social wellbeing. 81 studies evaluated longitudinally the interplay between sleep quality and different ecological contexts and identity development of adolescents. Finally, 6 studies evaluated the change over time of sleep quality outcomes and its relationship with wellbeing, context and identity in adolescents before and after the pandemic due to the Covid-19 outbreak.

**Conclusion:** Because of the broad scope of this project, the data can be used to examine a large variety of research questions. From this large selection of literature, different systematic reviews on different specific topics will be obtained. Particularly, our work will focus at first on systematically assessing the development and change over time of the sleep quality during the adolescence period. Furthermore, different works on the longitudinal interplay between sleep quality and physical health, different contexts and identity development will be systematically evaluated and presented.

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