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Correlations of Smartphone Addiction and Sleep Problems in Collegiate Students: A Scoping Review of Cross-sectional Studies

Kumar A¹, Rai A², Aggarwal A²

¹BPT Student, Faculty of Physiotherapy, SGT University Gurugram, Haryana, India, ²Assistant Professor, Faculty of Physiotherapy, SGT University Gurugram, Haryana, India

Abstract

The purpose of this study was to evaluate the correlation between subjective and objective measures of sleep outcome with smartphone addiction among collegiate students. This review will help us in understanding the impact of smartphone addiction on various subjective and objective parameters of sleep outcomes in collegiate students. College going students aged between 18 to 25 years of either gender. The databases PubMed, Google scholar, Pedro, science direct were searched for relevant articles. The articles which were published from 2015 to 2022 were included in the review. The search strategy was developed using the Medical Subject Headings (MeSH) terms, keywords and text words related with “smartphone addiction”, “problematic smartphone use”, “Mobile phone addiction”, “university students”, “college students”, insomnia, “obstructive sleep apnea”, “poor sleep quality” using Boolean operator ‘OR’, ‘AND’. Out of 35153 studies, 9 studies met the inclusion criteria. Out of which, 3 studies had insomnia ($n_{\text{range}} = 506-49,051$, $\text{age}_{\text{range}} = 21-24$ years) which were assessed using Athens Insomnia Scale (AIS) and 6 studies had poor sleep quality ($n_{\text{range}} = 91-1545$, $\text{age}_{\text{range}} = 20-24$ years) which were assessed using Pittsburgh Sleep Quality Index (PSQI). The results show a negative association between time spent on screen-based devices and sleep quality and quantity, and where screen use in bed had more consistent negative associations with sleep. We found a positive association among insomnia, depression, adult ADHD, and smartphone addiction. Smartphone addiction was strongly associated with poor sleep quality and quality of sleep deteriorate further on increasing the screen time. High smartphone usage has been associated with poor academic achievement in addition to poor sleep quality among medical students in previous studies. This data will further help in better management.

Keywords: Sleep quality, College Student, Smartphone Addiction, Insomnia.