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A Systematic Review of Clinical, Cognitive, and Neurodevelopmental Profiles in Tetrasomies and Pentasomies

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Introduction

Sleep and mental health can both have an impact on cognition and academic performance. The purpose of this study was to look into the connections between sleep, mental health, working memory, and academic performance. During the non-academic summer and the academic term, we collected demographic data from university students. Academic performance, sleep, depression, anxiety, and disordered social media use were also assessed. The Cambridge Neuropsychological Test Automated Battery was used to assess working memory. We evaluated 83 students, with a mean age of 21. In the academic term, students had significantly lower sleep and distress scores than in the non-academic summer period. Sleep quality was significantly correlated with anxiety, depression, and distress scores [1].

Description

Students may face difficulties during their university years. Many students struggle to balance academic demands and study-life balance, as well as concerns about finding a job in a competitive market. Such difficulties are especially prevalent in difficult specialties such as medicine or other health-related fields. As a result, this group of young people is at risk of developing mental health problems during their university years. These concerns have sparked a global interest among health, research, and academic professionals in investigating such challenges in the hope of reducing the impact of these stressors on student well-being [2].

Sleep is one factor that has deteriorated in recent years, particularly in this age group, owing to behavioural and social changes. Because of their academic schedules and deadlines, university students often have irregular sleep patterns. Adequate sleep is essential for human survival and plays an important role in an individual's physical and mental health. Furthermore, sleep is critical for optimal cognitive functioning, including attention, working memory, and perception. Working memory is a type of memory that stores information relevant to the task at hand while the brain performs other mental tasks. We concentrated on working memory in particular because it is a critical cognitive function in the learning process [3].

Numerous studies have been conducted around the world to investigate the relationship between academic performance and sleep. These studies' findings generally support a positive relationship between better sleep quality and higher academic performance, though some studies suggest that this relationship may be negative or does not exist. These disparities could be explained by a lack of investigation into the relevant factors that may influence the relationship between sleep and academic performance, such as mental health. Furthermore, many of these studies relied solely on students' reported grade point averages or exam scores as a measure of academic ability. Finally, the majority of these studies used a single cross-sectional design that evaluated only a single record of participant behaviours, primarily during the academic term, limiting our understanding of how participant performance and behaviour change.

We recruited participants for the study by posting messages on social media that briefly explained the study. The study's inclusion and exclusion criteria were used to screen participants. We enrolled male and female university students aged 18 and up, but not those in their final year of study. Participants who had previously been diagnosed with chronic medical or physiological conditions were excluded. The participants were not compensated in any way. The total number of participants enrolled after applying the inclusion and exclusion criteria was 83. All participants signed electronic consent forms and were informed that they could opt out at any time during the study. The researchers explained the study to the participants prior to the start of the study [4,5].

Conclusion

The study's findings identify several factors that could potentially guide preventive and interventional programmes to support university students' physical and mental health. Despite popular belief that sleep has a positive effect on academic performance, our findings showed that high-achieving students could maintain a good GPA, which was correlated with better working memory, despite poor sleep quality. Academic institutions should focus resources on better educating, monitoring, and supporting students' physical and mental health in the face of academic challenges, including those who can maintain good academic performance.

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