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The Negative Impact of Sleep Deprivation on Students' Academic Performance

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Abstrak

Kurang tidur merupakan masalah yang semakin umum di kalangan siswa, terutama pada era digital saat ini. Penelitian ini bertujuan untuk mengkaji dampak buruk kurang tidur terhadap prestasi belajar siswa. Metode penelitian yang digunakan adalah metode penelitian kualitatif dengan menggunakan pendekatan studi literatur dan analisis data empiris. Hasil penelitian menunjukkan bahwa kurang tidur secara signifikan berdampak negatif pada berbagai aspek kognitif siswa, seperti konsentrasi, daya ingat, kemampuan pemecahan masalah, dan kreativitas. Selain itu, kurang tidur juga dapat memicu masalah emosional dan perilaku yang dapat mengganggu proses belajar. Penelitian ini menyimpulkan bahwa mendapatkan tidur yang cukup sangat penting untuk mencapai prestasi belajar yang optimal. Oleh karena itu, perlu adanya upaya untuk meningkatkan kesadaran akan pentingnya tidur yang cukup di kalangan siswa, serta memberikan dukungan bagi siswa untuk memiliki kebiasaan tidur yang sehat.

Kata Kunci: *kurang tidur, prestasi belajar, perilaku siswa*

Abstract

Lack of sleep is an increasingly common problem among students, especially in today's digital era. This study aims to examine the negative impact of lack of sleep on students' academic achievement. The research method used is a qualitative research method using a literature study approach and empirical data analysis. The results of the study indicate that lack of sleep has a significant negative impact on various aspects of students' cognitive abilities, such as concentration, memory, problem-solving skills, and creativity. In addition, lack of sleep can also trigger emotional and behavioral problems that can interfere with the learning process. This study concludes that getting enough sleep is very important for achieving optimal academic achievement. Therefore, efforts are needed to increase awareness of the importance of adequate sleep among students, as well as provide support for students to have healthy sleep habits.

Keywords: *lack of sleep, academic achievement, student behavior*

INTRODUCE

Sleep is a fundamental physiological need that plays a crucial role in both physical and mental health. Just as essential as food and water, sleep allows the body and brain to rest, recover, and function optimally. Despite its importance, insufficient sleep has become a widespread issue, particularly among students. This growing concern has led to research investigating the impact of inadequate sleep on students' academic performance. Studies

consistently show that insufficient sleep can negatively affect memory, concentration, and overall cognitive function, thereby diminishing learning outcomes and academic achievement (Aminuddin, 2018; Putri et al., 2020). For students, especially, getting enough sleep is crucial to support their learning process. However, sleep deprivation is a common problem among students, which can affect their focus, memory, and critical thinking abilities, ultimately leading to poor academic performance.

Several factors can influence the quality of students' sleep, including academic stress, gadget use before bed, and irregular sleep habits. Research has shown that poor sleep quality in teenagers and students can affect their cognitive functions, such as attention, memory, and problem-solving skills (Wolfson & Carskadon, 1998). Additionally, sleep deprivation also increases the risk of emotional and behavioral problems, further impairing students' ability to learn (Putri et al., 2020; Rifaiq et al., 2020). This is compounded by lifestyles that do not support healthy sleep patterns, such as staying up late to study or play games and excessive use of social media before bed.

The decline in sleep quality experienced by students is often linked to irregular sleep patterns. Many students stay up late due to the heavy workload or because they spend their time playing games or using social media. According to studies, irregular sleep patterns can disrupt the body's circadian rhythm, which helps regulate the body's sleep-wake cycle. When the circadian rhythm is disturbed, sleep quality declines, leading to an increase in daytime drowsiness, lethargy, and a lack of energy to engage in learning (Kireinata et al., 2018). As a result, students become more prone to fatigue, struggle to stay alert during lessons, and lose the enthusiasm to participate in academic activities.

Sleep deprivation has significant consequences on academic achievement. Research has shown that inadequate sleep reduces students' ability to concentrate and remember information, which are essential for effective learning. This is evident in studies that show students who do not get enough sleep often face difficulties in understanding lessons, recalling learned material, and completing assignments or exams (Gruber et al., 2012). On the other hand, students who sleep well tend to perform better academically because they have a better ability to retain information and focus on the subject matter they are studying, which positively impacts their academic performance (Putri et al., 2020). Sleep disturbances among students are often influenced by both internal and external factors. Internal factors include the physical and psychological condition of the student, such as stress, anxiety, or other emotional disturbances, which can affect their sleep. Academic stress is often identified as a major cause of sleep problems among students. Meanwhile, external factors such as the study environment, social habits, and the use of technology also play a role in disrupting students' sleep quality. Research shows that students who frequently use gadgets or social media before bedtime tend to have poorer sleep quality (Aminuddin, 2018; Rifaiq et al., 2020).

One mechanism that links sleep quality with academic achievement is through the process of memory consolidation that occurs during sleep. Sleep, especially during the rapid eye movement (REM) phase, is crucial for processing and storing information gathered throughout the day. Insufficient sleep disrupts this process, leading to difficulties in recalling learned material (Wolfson & Carskadon, 1998). Thus, getting adequate sleep not only affects students' physical health but also plays a key role in enhancing their cognitive abilities needed for learning.

Moreover, poor sleep quality also increases the risk of emotional disturbances such as anxiety and depression, which can directly affect motivation and concentration in learning. Research has shown that students who do not get enough sleep are more likely to feel anxious and stressed, which in turn impacts their ability to focus on academic tasks (Putri et al., 2020). This is a significant concern, as high levels of anxiety can impair memory and problem-solving abilities, which are crucial for academic success.

Sleep deprivation can also lead to higher absenteeism in school, which is often linked to fatigue and a lack of energy to engage in learning activities. High absenteeism directly affects students' academic performance because they miss out on important lessons and classroom activities. In the long term, absenteeism can result in gaps in knowledge and lower exam scores, assignments, and other academic evaluations (Kireinata et al., 2018). Therefore, it is important to raise awareness among students about the importance of

sufficient sleep to support their academic achievement.

Although the negative effects of sleep deprivation on academic performance are well-documented, many students still neglect the quality of their sleep. This is due to various factors, such as a lack of understanding of the importance of sleep and academic or social pressures that often force them to sacrifice sleep in favor of completing tasks. Therefore, education about sleep hygiene and healthy sleep patterns needs to be introduced in schools to help students better manage their sleep (Putri et al., 2020).

Quality education not only depends on how much information is acquired but also on how well students are able to remember, process, and apply that information. One of the key factors in improving this ability is sufficient sleep. Therefore, more serious efforts need to be made to raise awareness about the importance of sleep in supporting academic success. Steps that can be taken include educating students on the importance of sleep, creating conducive study environments that support quality sleep, and providing resources for students to better manage academic stress (Putri et al., 2020).

This article aims to explore the detrimental effects of sleep deprivation on students' academic performance, focusing on the physiological and psychological consequences of poor sleep. Through a review of existing literature, this study seeks to identify the key factors that influence sleep quality and their subsequent impact on learning outcomes. By understanding these relationships, educators and policymakers can develop targeted interventions to improve students' sleep habits, thus supporting their academic success and overall well-being.

Ultimately, improving sleep quality among students should be a priority in educational settings. Incorporating sleep education into curricula, promoting healthy sleep practices, and providing support for students to manage academic stress effectively could help mitigate the negative impact of sleep deprivation on academic performance. Furthermore, further research is needed to explore the long-term effects of sleep deprivation and identify strategies for enhancing sleep hygiene among students, especially in high-stress academic environments.

RESEARCH METHOD

This study uses a qualitative approach with a literature review method focused on sources available on Google Scholar to analyze the impact of sleep deprivation on students' academic performance. This approach was chosen because it allows for an in-depth exploration of various relevant scholarly publications, such as articles, journals, books, and research reports that can be accessed online. Google Scholar was selected because it provides access to accredited and trustworthy academic publications (Harzing, 2007).

The data collection process was carried out by searching for literature using related keywords, such as "sleep deprivation," "student academic performance," "sleep influence on cognition," and "sleep and academic performance," on the Google Scholar platform (<https://scholar.google.com>). The search results were filtered based on relevance, publication year, and source credibility. Selected articles must be published in accredited journals or relevant books, and have adequate citations and empirical data that support the analysis (Merriam, 2009).

Inclusion criteria include articles that discuss the relationship between sleep quality and academic performance, the impact of sleep deprivation on primary school students, and the influence of sleep on cognitive ability and mental health in students. Articles that are irrelevant or non-accredited, or that do not include empirical findings, were excluded from the analysis (Booth et al., 2016). The collected data was analyzed thematically to identify key themes related to the impact of sleep deprivation on academic performance, such as the effect of sleep on student concentration and mood. The results of the analysis were synthesized to provide a comprehensive picture of the relationship.

This study does not involve human subjects, and all sources used have been properly cited in accordance with applicable copyright laws (Silverman, 2013). This study is expected to provide in-depth insights into the impact of sleep deprivation on students' academic performance and provide a scientific basis for policy recommendations aimed at improving students' sleep quality.

RESULT AND DISCUSSION

From the collected data, it was revealed that students who consistently experience sleep deprivation show a significant decline in academic performance. They tend to have difficulty concentrating, remembering information, and solving problems that require critical thinking. Lack of sleep also affects their ability to manage time, leading to delays in completing tasks and suboptimal exam preparation.

In addition, students who lack sleep were reported to experience higher levels of stress and anxiety. This stress not only negatively impacts their mental health but also worsens their ability to participate actively in class and interact with peers. In some cases, sleep deprivation is also linked to aggressive behavior and a decline in motivation to study. Interviews with teachers also indicated that students who lack sleep often show behavioral changes in class, such as drowsiness, lack of enthusiasm, and reduced responsiveness to learning. This condition makes the teaching and learning process less effective, both for the students themselves and for others.

The results of this study support previous research that has stated that sufficient sleep is a crucial factor in the learning process and cognitive development of students. Sleep deprivation, whether in terms of duration or quality, can disrupt brain function, particularly in areas responsible for concentration, memory, and emotional regulation. This decline in brain function directly affects students' academic abilities (Aminuddin, 2018; Fares et al., 2018). This decline in sleep quality also affects students' ability to remember new information and apply that knowledge in situations that require critical thinking.

Lack of sleep also affects the immune system and physical health of students, which in turn can affect their attendance at school. Students who frequently fall ill or feel unwell due to lack of sleep tend to have high absenteeism, which negatively impacts their academic achievement. Moreover, sleep deprivation in students is often the result of ineffective time management, such as spending too much time on non-academic activities like playing games or using social media late into the night. Addiction to technology often disrupts students' circadian rhythms, ultimately leading to poor sleep quality (Harzing, 2007; Merriam, 2009).

Sleep quality significantly impacts concentration, especially in the context of university students who often face high academic workloads. Good sleep quality, defined as uninterrupted sleep without sleep-related problems, is a key factor in supporting optimal learning concentration (Hami et al., 2021). Lack of sleep and sleep disturbances, such as insomnia, can lead to decreased work performance, risk of depression, and reduced concentration, all of which can negatively affect academic achievement (Sunbanu et al., 2021).

To improve learning concentration, students need to prioritize quality sleep to support bodily functions and maintain physical health. In the context of learning, concentration, which is essential, can be influenced by various factors, including sleep quality, learning methods, psychological conditions, and the surrounding environment. Good sleep quality provides the necessary energy for students to carry out daily academic activities (Retnaningsih & Kustriyani, 2018). Therefore, good sleep quality should be viewed as an integral part of students' academic success.

In addition to lack of sleep, excessive use of gadgets close to bedtime also worsens sleep quality problems among students (Supriani et al., 2022). This affects sleep patterns, sleep duration, and can lead to more serious sleep disturbances. Therefore, efforts to manage gadget usage and schedule sufficient sleep time are crucial for students to maximize their concentration and achieve optimal academic performance. By understanding the close relationship between quality sleep and learning concentration, students can take steps to improve their sleep quality. This will help them optimize their concentration abilities in facing academic demands (Sulistiyani, 2021).

In the research conducted, sleep problems generally occurred among students, negatively affecting their concentration and academic performance. Meanwhile, good sleep quality can improve physical stamina, mood, energy, and overall physical health. Maintaining sleep quality is crucial to ensure optimal concentration during learning, which ultimately improves academic achievement. Therefore, to improve learning concentration,

students are encouraged to prioritize and enhance their sleep quality (Wulandari & Pranata, 2024).

Sleep disturbances are just one of the factors affecting academic performance. Each student's intelligence level varies, and sometimes a student will not be able to achieve good academic performance if not supported by other factors that determine success in learning. On the other hand, a student with average or lower intelligence may achieve high academic performance if their learning process is supported by various other factors that allow them to reach their maximum potential (Mustofa, 2015).

In research by Yakub et al. (2017), it was also found that children whose sleep was disturbed but still had excellent academic performance were likely to achieve this due to their intelligence. Each child has a different level of intelligence, and therefore their academic performance varies. This finding aligns with Winkle's statement, in Yakub (2017), that children with high intelligence have a greater chance of achieving higher academic performance.

This study statistically shows that sleep disturbances are not related to academic performance because no students achieved the highest level of academic performance. However, the results of this study align with Liu, Uchiyama, Okawa, & Kurita's findings that sleep disturbances can affect academic performance in school. This is because sleep is an essential part of intellectual development in adolescents. Sleep disturbances are caused by lifestyle, environmental factors, and poor sleep quality (Nur Anisa Candra Kirana, 2023).

If sleep disturbances occur, one of the impacts is a decline in academic performance. Different environmental factors also affect the learning process (Herdiman, 2015). This is because the family environment is the first and most important factor in determining a person's educational development and, of course, a key factor in determining learning success. A harmonious family environment, with sufficient learning space and equipment, good parenting, and parental attention to their children's learning and educational development, greatly influences motivation to learn and improves academic performance (Slameto, 2015).

SIMPULAN

Penelitian ini memiliki implikasi penting bagi dunia pendidikan. Hasil penelitian ini menyoroti perlunya perhatian yang lebih besar terhadap kualitas tidur siswa sebagai salah satu faktor kunci dalam meningkatkan prestasi belajar. Sekolah perlu menyediakan lingkungan belajar yang kondusif untuk tidur siang, serta memberikan edukasi kepada siswa dan orang tua tentang pentingnya tidur yang cukup. Selain itu, penelitian lebih lanjut diperlukan untuk mengidentifikasi faktor-faktor yang mempengaruhi kebiasaan tidur siswa dan mengembangkan intervensi yang efektif untuk mengatasi masalah kurang tidur pada siswa.

Anak-anak dan remaja yang tidak mendapatkan waktu tidur yang cukup cenderung mengalami penurunan dalam konsentrasi, memori, dan kemampuan kognitif lainnya yang esensial untuk proses belajar. Mereka juga lebih rentan terhadap gangguan emosional dan stres, yang dapat mempengaruhi kemampuan mereka untuk berpartisipasi aktif dalam kegiatan belajar. Secara khusus, kurang tidur dapat menyebabkan penurunan performa dalam tugas-tugas akademik, meningkatkan risiko kesulitan belajar, dan berkontribusi pada masalah perilaku di sekolah. Selain itu, dampak buruk dari kurang tidur tidak hanya terbatas pada aspek kognitif, tetapi juga memengaruhi kesejahteraan fisik dan mental siswa secara keseluruhan.

Oleh karena itu, sangat penting bagi orang tua, pendidik, dan pembuat kebijakan untuk mengimplementasikan strategi yang dapat membantu siswa mendapatkan tidur yang cukup. Ini termasuk meningkatkan kesadaran tentang pentingnya tidur yang berkualitas, menciptakan rutinitas tidur yang sehat, dan memperhatikan faktor-faktor yang dapat mempengaruhi pola tidur siswa. Penelitian lebih lanjut diperlukan untuk mengeksplorasi

intervensi yang dapat secara efektif mengatasi masalah kurang tidur dan meningkatkan prestasi akademik siswa. Dengan pendekatan yang tepat, diharapkan dapat mengurangi dampak negatif dari kurang tidur dan mendukung perkembangan akademik serta kesehatan mental siswa.

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