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EFFECTS OF SLEEP DEPRIVATION ON MENTAL HEALTH OF UNDERGRADUATE STUDENTS OF NNAMDI AZIKIWE UNIVERSITY AWKA, ANAMBRA STATE NIGERIA

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ABSTRACT

The study was carried out to investigate the effects of sleep deprivation on mental health among undergraduate student of Nnamdi Azikiwe University Awka. Four research questions guided the study. The study employed descriptive survey research design. The population consists of undergraduate student of Nnamdi Azikiwe University Awka. Accidental sampling technique was used to obtain 100 respondents from the population of 28,718 that formed the study. The instrument for data collection was 30 items questionnaire titled: Effects of Sleep Deprivation on Mental Health Questionnaire (ESDMHQ) which was validated by three experts in the Faculty of Education, Nnamdi Azikiwe University, Awka. Alpha coefficient method was used to determine the reliability of the instrument and the overall reliability coefficient was 0.96. Statistics mean was used to analyze the collected data. The results of the study indicated that frequent use of social media and academic workloads are the major causes of sleep deprivation among undergraduate

student of Nnamdi Azikiwe University Awka. The study further indicated that depression and poor concentration among undergraduate students are the major effects of sleep deprivation on mental health among undergraduate students of Nnamdi Azikiwe University, Awka. The findings of the study further indicate that keeping the bedroom quiet, dark and cool, maintaining regular sleep routine and avoiding the use of electronic devices during bed time are major ways to reduce sleep deprivation among undergraduate students of Nnamdi Azikiwe University, Awka. It was recommended that School authority should organize educational programs such seminars that will emphasize the importance of good sleep hygiene, targeting undergraduate students. Faculties and Departments should join in creating awareness campaigns within the university community highlighting the impact of social media use, academic workload, noisy environments, and other factors on sleep quality. Non-Governmental Organisation should join in student support services in by incorporating strategies to address sleep-related issues.

KEYWORDS: MENTAL HEALTH, SLEEP DEPRIVATION, STRESSORS, STUDENTS

INTRODUCTION

A person's life might be negatively impacted for a variety of causes. Sleep deprivation is a significant yet underappreciated contributing factor in that (National Sleep Foundation 2007). The emphasis on active leisure is growing along with the number of working hours. People who work in particular jobs have limited sleep hours. Certain occupations, like medical, security, and transit, necessitate working at night. The impact of acute complete sleep deprivation on performance is critical in several domains. Moreover, people frequently overwork themselves and jeopardize their quality of sleep each night, which leads to chronic sleep deprivation (Alhola and Kantola 2022). Sleep deprivation is the state in which an individual does not get adequate sleep. Medical disorders, environmental factors like stress, extended work hours, and excessive caffeine use can all cause sleep deprivation (Gaudina & Okoshima, 2021). When you don't get the quantity or quality of sleep that you require to sustain your physical, mental, and emotional well-being, you are said to be experiencing sleep deprivation (Endeshaw, 2022). Sleep deprivation (SD) is defined as missing, insufficient, or fragmented sleep. It is directly linked to a decline in work effectiveness, public safety, personal well-being, and a variety of neuropsychiatric illnesses. It has broad neurobehavioral and physiological effects.

Many studies have been conducted to examine the impact of SD on healthy functioning since the first SD study was published more than a century ago (Li Feng et al 2015). Subjects who had not had enough sleep had lower self-rated mood and cognitive function than the 9th percentile of sleep-normal controls. Sleep may reset or recharge the brain to maximize performance, just like our devices need to be charged (Steven & Cameron, 2010). Depending on their age, people require different amounts of sleep. Children and teenagers require more sleep than adults do on average. While the quantity of sleep that each adult need varies undoubtedly on an individual basis. Ramar, Malhotra, Carden, Martin, et al. (2021) recommends that people get at least 7 hours of sleep every night, with most adults needing between 7

and 9 hours, to maintain optimal health and functioning. Adolescents often require 8 to 10 hours, whereas older persons (65 years and above) require 7-8 hours. While quantity of sleep is vital, quality of sleep is equally crucial. Without a doubt, inadequate or poor-quality sleep increases the risk of mental health issues. WHO (2022) defines mental health as a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in. Mental health is a basic human right. And it is crucial to personal, community and socio-economic development. Mental health is critically important for everyone, everywhere, and goes beyond the mere absence of a mental health condition. It is integral to well-being, enabling people to realize their full potential, show resilience amidst adversity, be productive across the various settings of daily life, form meaningful relationships and contribute to their communities. Physical, psychological, social, cultural, spiritual and other interrelated factors contribute to mental health, and there are inseparable links between mental and physical health. Promoting and protecting mental health is also critical to a well-functioning society. It fosters social capital and solidarity, which are essential during times of crisis (WHO, 2023 & Onwurah, Okoye & Ikegulu (2023). Mental health issues like insomnia has been linked to psychiatric diseases such as depression and anxiety, but sleep issues have also been linked to the start and exacerbation of a variety of mental health issues, such as anxiety, depression, and even suicidal thoughts.

Healthy people may experience increased anxiety and distress following a night of insufficient sleep, according to studies on sleep deprivation. Chronic sleep abnormalities are significantly more common in those with mental health illnesses, and these disorders are likely to worsen psychiatric symptoms and potentially raise the risk of suicide. The good news is that there are strategies to enhance both the

quantity and quality of sleep, therefore reducing the severity of psychiatric diseases requires early detection and treatment of sleep issues (Long 2020).

Before COVID-19, Americans had trouble going to sleep. Regretfully, things worsened when the epidemic kept them apart from friends and family, forced the closure of our businesses and schools, and caused economic shockwaves (Steven & Cameron, 2015). A study of 22,330 people from 13 nations found that over 20% of the participants fit the criteria for insomnia disorder, and one-third of the participants showed clinical symptoms of insomnia. These rates are more than twice as high as they were before to the pandemic. Moreover, there was a correlation found between increased psychological discomfort and sleep disruptions. In the same poll, rates of anxiety and depression were also much higher than pre-pandemic levels (Leslie & Clete, 2021). The Sleep in America Poll, conducted by the National Sleep Foundation (NSF, 2023), shows a significant relationship between the general mental health of the population and the quality of their sleep. The findings indicate that a large number of Americans who report having sleep problems also report having mild to severe depression symptoms. Furthermore, almost all-American adults who have excellent overall sleep health do not exhibit any notable symptoms of depression. Of adults who are unhappy with their sleep, nearly seven out of ten (65%) report having mild to severe depression symptoms. Individuals who have trouble falling or staying asleep even two nights a week exhibit more depression symptoms than people who don't have sleep issues. When adults sleep fewer than the prescribed 7-9 hours, 50% of them report having mild to severe depression symptoms. More than 90% of adults who. More than 90% of persons who follow the fundamentals of the NSF sleep recommendation and other healthy sleep practices report having good sleep health and no severe depressive symptoms.

A student is someone who actively engages in learning, typically in a college or university. Numerous variables impede students' ability to obtain the recommended amount of sleep. It could be attributed to early start hours for school, excessive coffee

consumption, a heavy task, or the use of technology. The biggest contributing element is the stress students experience from their rigorous workload and academic expectations, which causes them to push themselves excessively to complete assignments on time or study for tests.

The American Psychological Association reports that research involving more than 3000 high school students showed that students who commonly received Cs, Ds, and Fs generally slept 25 minutes less and went to bed around 40 minutes later than the students who reported obtaining As and Bs. Teens should be getting about nine hours of sleep per day, according to studies. As a result, students who don't obtain 8 to 10 hours of sleep significantly reduce their chances of success. Pupils will struggle with information processing, understanding how to handle stress, and maintaining focus in the classroom. Additionally, studies have indicated that every hour of sleep loss is linked to a 38% increase in feelings of pessimism and hopelessness, according to the Children's Health Council a rise in suicide of 58%. Pupils who don't get enough sleep are frequently more likely to be agitated, easily angered, and easily agitated by everyday irritations like getting out of bed, waiting a few minutes for lectures to begin, or if lecturers stay late past the course ending time.

Statement of the Problem

Undergraduate students in higher institutions often suffer from sleep deprivation. It happens when they can't get enough good sleep because of personal, social, and academic obligations. The purpose of this study is to assess how sleep deprivation affects Nnamdi Azikiwe University, Awka, undergraduate students' mental health. The brain's healthy operation and mental well-being depend on sleep. Thus, a person's psychological, emotional, and cognitive functioning may suffer from sleep deprivation or low-quality sleep. Undergraduate students frequently experience chronic sleep deprivation as a result of their demanding academic schedules, social obligations, and personal obligations. Many detrimental effects on mental health, including diminished academic performance, anxiety, depression, irritability,

difficulty focusing, and memory problems, can result from sleep deprivation. The general wellbeing of undergraduate students may be impacted by these unfavorable effects. Therefore, research into how sleep deprivation affects Nnamdi Azikiwe University, Awka undergraduate students' mental health is necessary. This study shed light on how much sleep deprivation affects mental health and how it affects students' overall wellbeing and academic performance.

Research Questions

The following research questions guided the study:

1. What is the awareness level of good sleep quality among undergraduate students of Nnamdi Azikiwe University, Awka?
2. What are the causes of sleep deprivation among undergraduate students of Nnamdi Azikiwe University, Awka?
3. What are the perceived effects of sleep deprivation on mental health of undergraduate students of Nnamdi Azikiwe University, Awka?
4. What measures can be used to limit sleep deprivation?

METHODOLOGY

Descriptive survey research design was used for this study. The design was used to collect opinion of students of Nnamdi Azikiwe University Awka on the effects of sleep deprivation on mental health among undergraduate student of Nnamdi Azikiwe University Awka. This study was carried out in Nnamdi Azikiwe University Awka, according to office of the Director Academic Planning (DAP) (2023), Nnamdi Azikiwe University, Awka has a population of twenty-eight thousand, seven hundred and eighteen students (28,718). The sample size was 100 respondents selected through accidental sampling technique. The instrument for data collection was a close ended questionnaire titled "Effects of Sleep Deprivation on Mental Health among

Undergraduate students of Nnamdi Azikiwe University Awka (ESDMHQ)"had four clusters containing thirty (30) items aimed at answering the research question. The validation of the instrument was done by three experts in the Faculty of Education Nnamdi Azikiwe University, Awka for content and face validity. Their inputs were taken into consideration in the final production of the questionnaire. The Cronbach Alpha Coefficient method was used to establish the reliability of the instrument and the overall reliability coefficient was 0.96. This indicate that the instrument is high reliable. The data collected were analyzed and interpreted using statistical mean rating. The decision level was arrived at using this mathematical formular. The decision rule is that any item having a mean score of 2.5 and above was considered agreed to have influence on the objective while those below 2.5 was disagreed in relation to the objective.

Presentation of the Results

Research Question One: What is the awareness level of sleep quality among Undergraduate Students of Nnamdi Azikiwe University, Awka?

Table 1: Mean rating of respondents on the awareness level of sleep quality among Undergraduate Students of Nnamdi Azikiwe University, Awka (N=100).

	N	SA	A	D	SD	Mean	REMARK
Good sleep quality is when one wakes up once before morning	100	30	40	20	10	**2.90**	Agree
Goodsleepqualityiswhenonesleeps7-8hoursatnight	100	75	20	5	-	**3.70**	Agree
Good sleep quality enhances my emotional and psychological balance	100	35	40	15	10	**3.00**	Agree
Good sleep quality is when one sleep as when due	100	30	50	10	10	**3.00**	Agree
Good sleep quality is when one does not find it difficult to go back to sleep after waking up at night	100	60	30	10	-	**3.50**	Agree
	TOTAL MEAN					**3.22**	Agree

Data in Table 1 reveals that the respondents agree that good sleep quality is when they wake up once before morning, that good sleep quality is when they sleep 7-8 hours at night, that good sleep quality enhances their emotional and psychological balance, that good sleep quality is when they sleep as when due and that good sleep quality is when they do not find it difficult to go back to sleep after waking up at night. This indicates that they are aware about the good sleep quality and that one should not be waking up multiple times at night, one should not sleep less than 7 hours, good sleep quality can enhance one's emotional and psychological balance, one should sleep at when due and that as one of good sleep quality, one should not find it difficult to go back to sleep after waking up at night. The table further reveals items in 2 and 5 have the highest mean scores of 3.70 and 3.50 respectively. This indicates that they are very much aware that one should sleep 7-8 hours and that one should not find it difficult to go back to sleep after waking up at night. The grand mean of 3.22 which is above the cut off mean 2.50 indicates that they are aware of good sleep quality.

Research Question Two: What are the causes of sleep Deprivation on mental health among Undergraduate Students of Nnamdi Azikiwe University Awka?

Table 2: Mean rating of respondents on the causes of sleep deprivation on mental health among undergraduate students of Nnamdi Azikiwe University, Awka (N=100).

S/N. Items Statements	N	SA	A	D	SD	Mean	REMARK
Frequent use of social media affect sleep schedule	100	85	15	-	-	**3.85**	Agree
Academic workloads cause sleep deprivation	100	70	20	10	-	**3.60**	Agree
Noisy environment can cause sleep deprivation	100	45	35	15	5	**3.20**	Agree
Use of non-prescribed stimulant drugs can lead to sleep deprivation	100	30	50	10	10	**3.00**	Agree
Listening to music can cause of sleep deprivation	100	20	10	20	50	**2.00**	Disagree
Personal hygiene causes sleep deprivation	100	20	15	25	40	**2.15**	Disagree
Psychological stress increases the chances of sleep deprivation	100	47	33	15	5	**3.22**	Agree
Excessive use of alcohol can cause sleep of an individual	100	30	45	20	5	**3.00**	Agree
Taking caffeine drinks at night causes sleep deprivation	100	55	34	5	6	**3.38**	Agree
Unhealthy environment can cause sleep deprivation	100	50	30	10	10	**3.20**	Agree
	TOTAL MEAN					**3.2**	Agree

Data in Table 2 reveals that the respondents agree that frequent use of social media affect sleep schedule, that academic workloads causes sleep deprivation, that noisy environment can cause sleep deprivation, that use of non-prescribed stimulant drugs can lead to sleep deprivation, that psychological stress increases the chance of sleep deprivation, that excessive use of alcohol can cause sleep deprivation, that taking caffeine drinks at night causes sleep deprivation and that unhealthy environment can cause sleep deprivation and they disagree that listening to music can cause sleep deprivation, that personal hygiene causes sleep deprivation. The table further reveals that items 6 and 7 have the highest mean scores of 3.85 and 3.60 respectively. This

indicates that frequent use of social media and academic workloads are the major causes of sleep deprivation among undergraduate student of Nnamdi Azikiwe University Awka. The grand mean of 3.20 which is above the cut off mean of 2.50 indicates that there are causes of sleep deprivation among undergraduate student of Nnamdi Azikiwe University, Awka.

Research Question Three: what are the perceived effects of sleep deprivation on mental health among undergraduate students of Nnamdi Azikiwe University, Awka ?

Table 3: Mean rating of respondents on the perceived effects of sleep deprivation on mental health among undergraduate students of Nnamdi Azikiwe University Awka (N=100).

S/N Items Statement	**N**	**SA**	**A**	**D**	**SD**	**Mean**	**REMARK**
Depression is one of the effects of sleep deprivation	100	60	25	10	5	**3.40**	Agree
Anxiety is caused by sleep deprivation	100	50	20	20	10	**3.10**	Agree
Sleep deprivation can cause poor concentration among undergraduate students	100	75	25	_	_	**3.75**	Agree
Sleep deprivation can lead to stroke	100	30	45	15	10	**2.95**	Agree
Sleep deprivation can cause stress	100	50	30	10	10	**3.20**	Agree
	TOTAL MEAN					**3.28**	Agree

Data in Table 3 reveals that respondents agree that depression is one of the effects of sleep deprivation, that anxiety can be cause by sleep deprivation, that sleep deprivation can cause poor concentration among undergraduate students, that sleep deprivation can lead headache and that sleep deprivation can cause stress. The table further reveals that the items 16 and 18 have the highest mean scores of 3.40 and 3.75 respectively. This indicates that depression and poor concentration among undergraduate students are the major effects of sleep deprivation on mental health among undergraduate students of Nnamdi Azikiwe University, Awka. The grand mean of 3.28 which is above 2.50 indicates that there are perceived effects of sleep

deprivation on mental health among undergraduate students of Nnamdi Azikiwe University, Awka.

Research Question Four: What are the ways to improve sleep deprivation among undergraduate students of Nnamdi Azikiwe University, Awka?

Table 4: Mean rating of respondents on ways to prevent sleep deprivation among undergraduate students of Nnamdi Azikiwe University, Awka (N=100).

	N	**SA**	**A**	**D**	**SD**	**Mean**	**REMARK**
Avoidance of non-prescribed medications helps in curbing Sleep Deprivation	100	40	30	20	10	**3.00**	Agree
Regular exercise during the day is a measure to improve sleep deprivation	100	25	55	10	10	**2.95**	Agree
Keeping the bedroom quiet, dark and cool can improve sleep deprivation	100	70	25	5	_	**3.65**	Agree
Eating 23 hours before bed time can improve sleep deprivation	100	20	45	20	15	**2.70**	Agree
Avoidance of much in-take of alcohol can help improve Sleep deprivation	100	30	50	20	10	**2.90**	Agree
Maintaining regular Sleep routine can improve Sleep deprivation	100	70	20	10	_	**3.60**	Agree
Avoiding the use of electronic devices during bed time	100	66	34	_	_	**3.66**	Agree
Appropriate health Education can help to improve Sleep deprivation	100	30	50	15	5	**3.05**	Agree
Cognitive behavioral therapy (guided meditation) helps to improve Sleep deprivation	100	60	20	10	10	**3.30**	Agree
Relaxation can improve sleep deprivation	100	70	20	5	5	**3.55**	Agree
	TOTAL MEAN					**3.23**	Agree

Data in Table 4 reveals that respondents agree that avoidance of non-prescribed stimulant drugs helps in curbing sleep deprivation, that regular exercise during the day is a measure to improve sleep deprivation, that keeping your bedroom quite, dark and cool helps to improve sleep deprivation, that eating 2-3 hours before bedtime can help improve sleep deprivation, that avoidance of much intake of alcohol helps to improve sleep deprivation, that maintaining regular sleep routine helps to improve sleep deprivation, that avoiding the use of electronic devices during bedtime helps to

improve sleep deprivation, that appropriate health education can help to improve sleep deprivation, that cognitive behavioral therapy like guided meditation helps to improve sleep deprivation and that relaxation can improve sleep deprivation. The table further reveals that items 23 ,26 and 27 have the highest mean of 3.65, 3.60 and 3.66 respectively. This indicates that keeping the bedroom quite, dark and cool, maintaining regular sleep routine and avoiding the use of electronic devices during bedtime are major ways to improve sleep deprivation among undergraduate students of Nnamdi Azikiwe University,Awka. The grand mean of 3.236 which is above the cutoff of 2.50 indicates that there are ways to improve sleep deprivation among undergraduate students of Nnamdi Azikiwe University, Awka.

DISCUSSION

The study's findings showed that undergraduate students at Nnamdi Azikiwe University of Awka have a rudimentary understanding of the advantages of having adequate sleep. They are mostly aware that 7-8 hours of quality sleep is defined as not finding it difficult to fall back asleep after awakening in the middle of the night. Alhola and Kontola (2022) concurred that many undergraduates possess information of the characteristics of a restful night's sleep, which lends credence to these findings. The National Sleep Foundation (2023) confirmed in a related study that students had a high degree of awareness of the characteristics of a good night's sleep.

The second outcome of the study showed that significant academic duties and frequent use of social media are the primary causes of undergraduate students' sleep deprivation at Nnamdi Azikiwe University in Awka. This outcome is consistent with research by Gerry (2020), who suggested that undergraduates' sleep deprivation is largely influenced by their abuse of social media. Similarly, Alhola and Kontola (2022) backed up the idea that students lose sleep due to academic stress brought on by heavy workloads and improper usage of social media. The results of the study

indicated that depression and difficulty focusing are the main effects of sleep deprivation among undergraduate students at Nnamdi Azikiwe University in Awka. These results are consistent with those of WHO (2022), which found that depression is frequently experienced by those who do not get the recommended amount of sleep. Furthermore, Long (2020) provided evidence to support the claims that depression, headaches, and poor focus are the main consequences of sleep deprivation. According to the study's findings, the key strategies for reducing sleep deprivation among undergraduate students at Nnamdi Azikiwe University in Awka are keeping the bedroom cool, dark, and quiet; adhering to a regular sleep schedule; and refraining from using electronic devices right before bed. In line with these conclusions, WHO (2023) suggested that refraining from Utilizing electronics before bed can lessen the lack of sleep.

Conclusion

Based on the findings of the study, it was concluded that sleep deprivation affects the mental health of undergraduate students of Nnamdi Azikiwe University, Awka.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. School authority should organize educational programs such seminars that will emphasize the importance of good sleep hygiene, targeting undergraduate students. These programs should focus on the factors identified in the study that contribute to good sleep quality and the detrimental effects of sleep deprivation on mental health.

2. Faculties and Departments should join in creating awareness campaigns within the university community highlighting the impact of social media use, academic workload, noisy environments, and other factors on sleep quality.

Encourage students to adopt healthier sleep habits and manage stressors effectively.

3. Non-Governmental Organisation should join in student support services in by incorporating strategies to address sleep-related issues. Offer counseling or workshops specifically designed to assist students in managing stress, improving sleep quality, and coping with academic pressures.

4. The Government, Stakeholders, and the University authority should provide modifications to the campus environment to create conducive spaces in their hostels for better sleep, such as implementing quiet zones in libraries or providing resources for stress relief and relaxation on campus.

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