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Sleeping and Study Lifestyle among Medical Students in the University of Port Harcourt (Uniport)

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Abstract

Sleep is a vital physiological function that promotes emotional stability, learning, and mental sharpness. Due to social activities, lifestyle choices, and academic pressure, university students frequently experience unpredictable sleep habits. Academic performance may be impacted by these disruptions, which frequently result in weariness, tension, and poor attention. According to earlier research, getting enough sleep enhances cognitive function, whereas getting too little sleep lowers academic performance and causes psychological suffering. On the other hand, nothing is known about how Nigerian students sleep and study. Thus, this study offers contextual data in the context of Nigerian universities.

The relationship with sleep and study habits was investigated using approach of descriptive cross-sectional methodology. 412 undergraduate students in all were chosen by stratified random sampling from 450 questionnaires. A systematic questionnaire was used to collect the data, and IBM SPSS version 25 was used for analysis. The Chi-square tests results and descriptive statistics were employed to ascertain correlations between variables at 0.05 significance level. According to the results, 53.2% of respondents said their sleep quality was fairly excellent, while the majority of respondents (61.7%) slept for six to seven hours per day. The results of bedtime and sleep duration with ($\chi^2 = 66.278$, $p = 0.000$), the awakening time and sleep period ($\chi^2 = 55.814$, $p = 0.000$), and that of sleep quality and sleeping medication use was ($\chi^2 = 76.806$, $p = 0.000$) significantly correlated for all the variables. Hence, the academic performance and sleep quality did not show significantly correlate with (P-value = 0.244). Stress levels were higher among students who used stimulants like caffeine ($\chi^2 = 45.111$, $p < 0.001$). Sleep quality's impact on stress and mental health suggests an indirect effect on learning efficiency, even if it was not directly linked to academic achievements. The study reveals that maintaining regular sleep patterns, minimizing dependence on stimulants, and employing effective stress management strategies are essential for enhancing student well-being and academic success. Institutional interventions, such as sleep hygiene education and counseling services, are recommended to foster healthy sleep and study behaviors among university students.

Keywords: *Sleep Quality, Study Habits, Stress, Academic Performance, University Students, Sleep Duration.*

I. BACKGROUND TO THE STUDY

It is well known that medical education is one of the hardest academic roads, requiring a lot of mental effort and long hours of study. Therefore, medical students are susceptible to an imbalanced lifestyle, particularly in their sleep and study routines. Sleep is a biological necessity often sacrificed for academic success, but the quality and quantity of sleep have direct effects on cognitive function, memory retention and academic performance [14]. However, the MBBS program at the University of Port Harcourt (Uniport) is so challenging that affect students' habits of sleeping and studying. Students' time management techniques are greatly impacted by elements like clinical postings, night calls, ongoing evaluations, and pressure to perform well on tests. Therefore, it is crucial to comprehend how medical students at Uniport manage their sleep and study schedules in order to handle any health and academic repercussions.

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Despite this, not much research has been done to examine how their sleep cycles and study habits relate to each other. The purpose of this study was to look into how University of Port Harcourt (Uniport) medical students sleep and study.

II. THEORITICAL REVIEW

Sleep is a condition of diminished mental and physical activity during which certain sensory activity is suppressed and consciousness is changed. Muscle activity and interactions with the environment are significantly reduced when we sleep. Sleep is more reactive than a coma or disorders of consciousness because it contains active brain processes, even though it differs from alertness in terms of the capacity to respond to stimuli [23]. The body alternates between two distinct sleep modes during periodic sleep cycles: rapid eye movement sleep (REM) and non-REM sleep. Although REM stands for "rapid eye movement," there are numerous other features of this kind of sleep, such as the body being essentially immobilized.

Dreams are a series of thoughts, feelings, images, and sensations that typically arise in the mind uncontrollably during specific sleep stages. The majority of the body's systems are in an anabolic state while we sleep, which aids in the restoration of the immune, neurological, skeletal, and muscular systems. These systems are essential for maintaining mood, memory, and cognitive function as well as for the endocrine and immune systems ([30]; [20]). Every day, when it is dark, the internal circadian clock encourages sleep. There is a lot of ongoing study on the various functions and mechanics of sleep. Sleep has been a highly conserved activity throughout animal evolution, probably dating back hundreds of millions of years. It began as a way for the brain to rid itself of waste. In a significant discovery, scientists have discovered that one of the main functions of sleep may be cleansing, including the elimination of amyloid. Humans can suffer from a wide range of sleep disorders, including bruxism, parasomnias like sleepwalking and rapid eye movement sleep behavior disorder, circadian rhythm sleep disorders, and dyssomnias including narcolepsy, insomnia, hypersomnia, and sleep apnea ([22]; [9]). Artificial lighting has significantly changed how people sleep.

Outdoor lighting and the displays of digital devices like smartphones and televisions, which release a lot of blue light—a type of light usually associated with daylight—are common sources of artificial light. Melatonin, a hormone that controls the sleep cycle, is not released as a result. The brain undergoes the most noticeable physiological alterations during sleep. Particularly during non-REM sleep, the brain consumes a great deal less energy when it is asleep than when it is awake. The brain replenishes its supply of adenosine triphosphate (ATP), the molecule used for short-term energy storage and transport, in regions with decreased activity. In quiet waking, the brain is responsible for 20% of the body's energy use, thus this reduction has a noticeable effect on overall energy consumption ([35]; [28]; [37])

Sleep duration measures the length of sleep, whereas sleep quality includes factors such as speed in falling asleep and whether sleep is unbroken. Adequate quality sleep is linked with better mood and the abilities to express and quickly process emotion [26]. Sleep quality can be seen as the person's self-contentment towards whole sides of the sleeping experience. Quality of sleep possesses 4 features (continuation of sleep, latency of sleep, sufficiency of sleep, and subsequent wakefulness following starting sleep. Good quality of sleep result in favorable outcomes like sensation of comfort, natural body responses, and favorable social interactions. Two fundamental indicators for achieving good quality of sleep embrace having a latency of sleep of less than or equal to fifteen minutes with night time sleeping characterized by little wakening's of less than or equal to five minutes ([31]; [8]). By providing your body with the renewal that only peaceful sleep can offer, adopting proper sleep hygiene practices can help enhance both your physical and mental health [24]. Some strategies to improve sleep health include sleeping at regular times every night, avoiding electronics like televisions in the bedroom, getting enough exercise throughout the day, and abstaining from caffeine in the hours before bed. Another way to greatly improve sleep hygiene is by creating a peaceful and relaxing sleep environment. Sleeping in a dark and clean room with things like a white noise maker can help facilitate restful sleep [41]. However, noise, with the exception of white noise, may not be good for sleep.

III. CONCEPTUAL FRAMEWORK

It is commonly known that medical education is among the most difficult and demanding academic fields. Medical students must absorb a great deal of knowledge, participate in clinical and practical training, and get ready for regular exams, all of which add to their academic stress [46]. Students are frequently forced to adopt unhealthy lives as a result of these academic pressures, especially when it comes to sleep and study habits. Medical students are increasingly experiencing poor sleep hygiene, irregular sleeping patterns, and sleep deprivation, frequently in an effort to manage their academic responsibilities [14].

Sleep is a biological requirement that is essential for preserving mental clarity, emotional stability, and physical health. For medical students, especially during clinical rotations, getting enough sleep is essential for memory consolidation, concentration, learning capacity, and decision-making [43]. Nonetheless, a lot of students sacrifice their sleep in order to study as much as possible, particularly during test times, thinking that this will boost their grades. Paradoxically, a number of research have shown that academic performance and sleep quality are positively correlated ([11]; [16]).

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Thomas Dekkar has well documented that "Sleep is the golden chain that ties health and our bodies together"[10]. Sleep is defined as a recurring, reversible neuro-behavioral state of relative perceptual disengagement from and unresponsiveness to the environment. Sleep is typically accompanied (in humans) by postural recumbence, behavioral quiescence, and closed eyes. [44] described that main correlates of poor academic performance are self-reported erratic sleep wake schedule, short total sleep time, phase delay, and poor-quality sleep. Good quality sleep is essential for good health and well-being. However, lifestyle and environmental factors are increasingly causing difficulties in sleeping. Sleep disturbance is frequently considered the most serious consequence of environmental noise by WHO. The main effects of sleep deprivation include physical effects (sleepiness, fatigue, hypertension) cognitive impairment and mental health complications. Such inadequate rest impairs the ability to think, to handle stress, to maintain a healthy immune system, and to moderate emotions [45]. Considerably more sleep is required for the teenagers, to perform, optimally than younger children or adults. Low academic performance has been found to be significantly more common in students with insomnia and daytime sleepiness. Academic performance is influenced by four basic aspects of sleep: amount, quality, regularity, and phase scheduling. Medical students are thought to be more vulnerable to sleep deprivation. The main causes being challenges to maintain a high level of academic achievement, trying to acquire adequate medical knowledge, learning clinical skills and adjusting to an ever-changing hospital environment in a limited period. High level of stress may have a negative effect on cognitive functioning and learning of students in the medical school ([33]; [3]; [1]). The majority of studies on stress in medical education focuses on the documentation of stress and information on the correlates of stress. A number of studies have showed a high prevalence of bad quality of sleep among university students varying from 19.17% to 57.5% and being especially high among medical students ([7]; [39]). Physicians and educators must pay attention to the detrimental effects of sleep deprivation on students' physical and emotional well-being, academic performance, and quality of life ([18]; [19]). Sleep is a critical component of human health, occupying about one-third of human life. It is vital for physiological restoration, metabolic regulation, emotional processing, and especially memory consolidation [42]. Both Rapid Eye Movement (REM) and non-REM sleep stages contribute to several areas of cognitive performance, particularly in learning and memory [13]. According to studies, kids who get less than six hours of sleep on average each night typically do poorly on scholastic tests and cognitive tasks [14]. In addition to impairing focus and alertness, sleep loss raises stress and anxiety levels and weakens the immune system [29]. Numerous studies demonstrate how common poor sleep quality is among medical students. For instance, a study conducted in India by [16] discovered that more than 63% of medical students reported having bad sleep, primarily as a result of pre-exam worry, erratic schedules, and academic stress. In a similar vein, [2] found that more than 70% of medical students had sleep problems with severe functioning during the day. Increased screen time before bed, irregular study hours, and the use of stimulants like caffeine can all make sleep deficit worse. These behaviors cause fragmented sleep and delayed sleep initiation by upsetting circadian rhythms and suppressing melatonin synthesis [6].

Achieving academic success requires good study habits, particularly in information-intensive disciplines like medicine. However, students frequently forsake sleep for extended study sessions due to performance pressure, especially before to exams. It has been discovered that poor study techniques including rote memorizing, cramming, and multitasking are ultimately unproductive and detrimental [36]. Unrealistic expectations, performance anxiety, and academic overload are major stressors that affect pupils' capacity to learn. [46] observed that one of the main factors contributing to psychological suffering among Malaysian medical students was academic stress. Numerous detrimental effects, such as cognitive decline, subpar academic performance, irritation, emotional instability, and physical health problems, can result from poor sleep hygiene and ineffective study practices. In severe situations, chronic sleep deprivation has also been connected to suicidal thoughts, sadness, and burnout [14]. Long-term repercussions, such as professional burnout and subpar patient care during clinical practice, might result from a failure to strike a balance between learning and resting. This emphasizes how crucial it is to establish healthy behaviors at an early stage of medical education. Students frequently turn to coping mechanisms like quick naps, coffee, sleeping drugs, and peer support in order to deal with these difficulties. Certain coping strategies, including as exercising and talking with peers, can be helpful, while others, like relying too much on stimulants or sedatives, can be dangerous if used improperly or excessively [27].

Research Design

The Study design a descriptive cross-sectional design with quantitative and qualitative data collection methods was used in the study.

Population of the Study

The study consisted of medical students (male and female) in 200 to 600 levels of the MBBS program at the University of Port Harcourt (Uniport).

Sample Size and Sampling Technique

Stratified random sampling was used to choose a sample of 450 students, guaranteeing representation from all academic levels.

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IV. RESULTS

Data Collection
Both paper and electronic versions of the questionnaires were distributed. Anonymity and confidentiality were ensured.

Data Analysis
IBM Statistical Package for the Social Sciences (SPSS) version 25 was used for both descriptive and inferential statistical analysis of the collected data. The data was summarized using descriptive statistics, such as percentages and frequencies, and displayed in tables and charts. The relationship between the variables was investigated using the Chi-square test of independence. Statistical significance was defined as a p-value of less than 0.05.

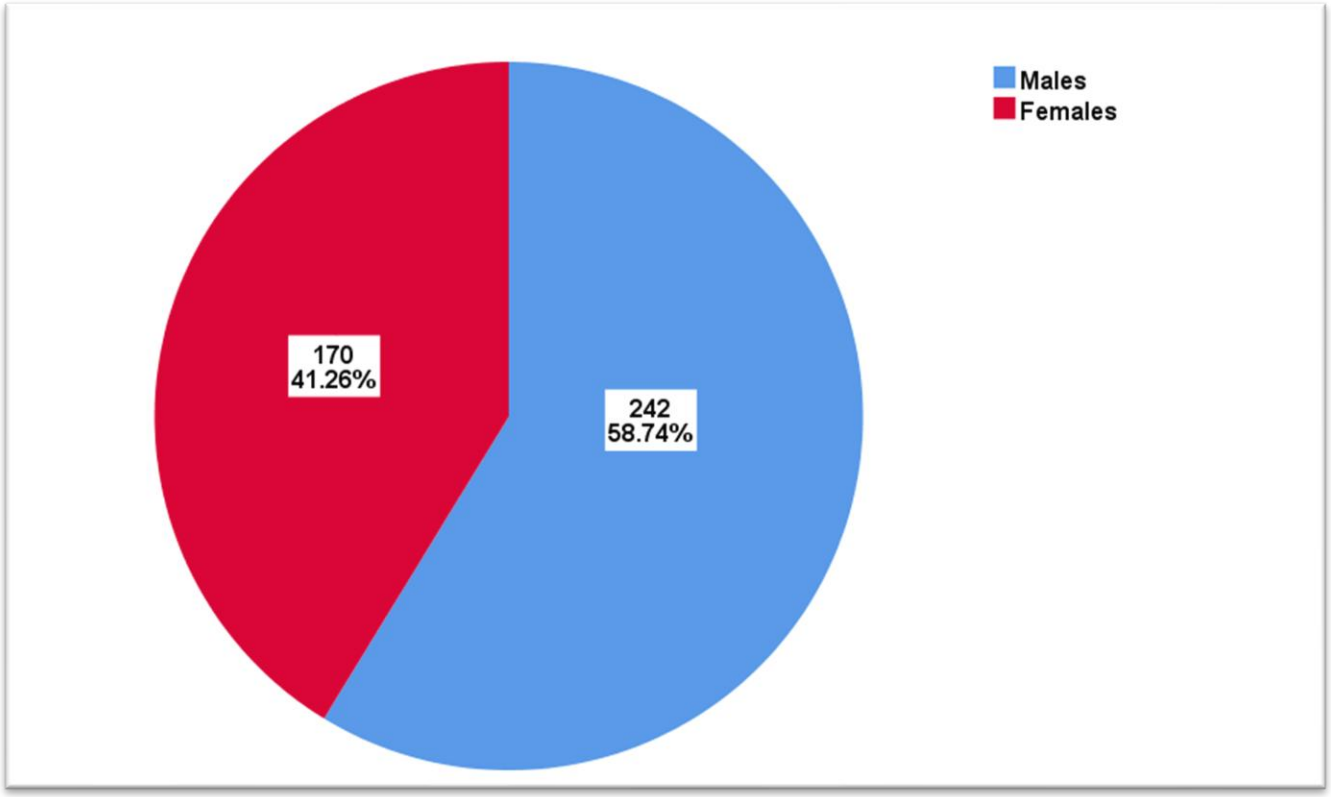


Figure 1: Demographic distribution of study subjects by sex (males and females).

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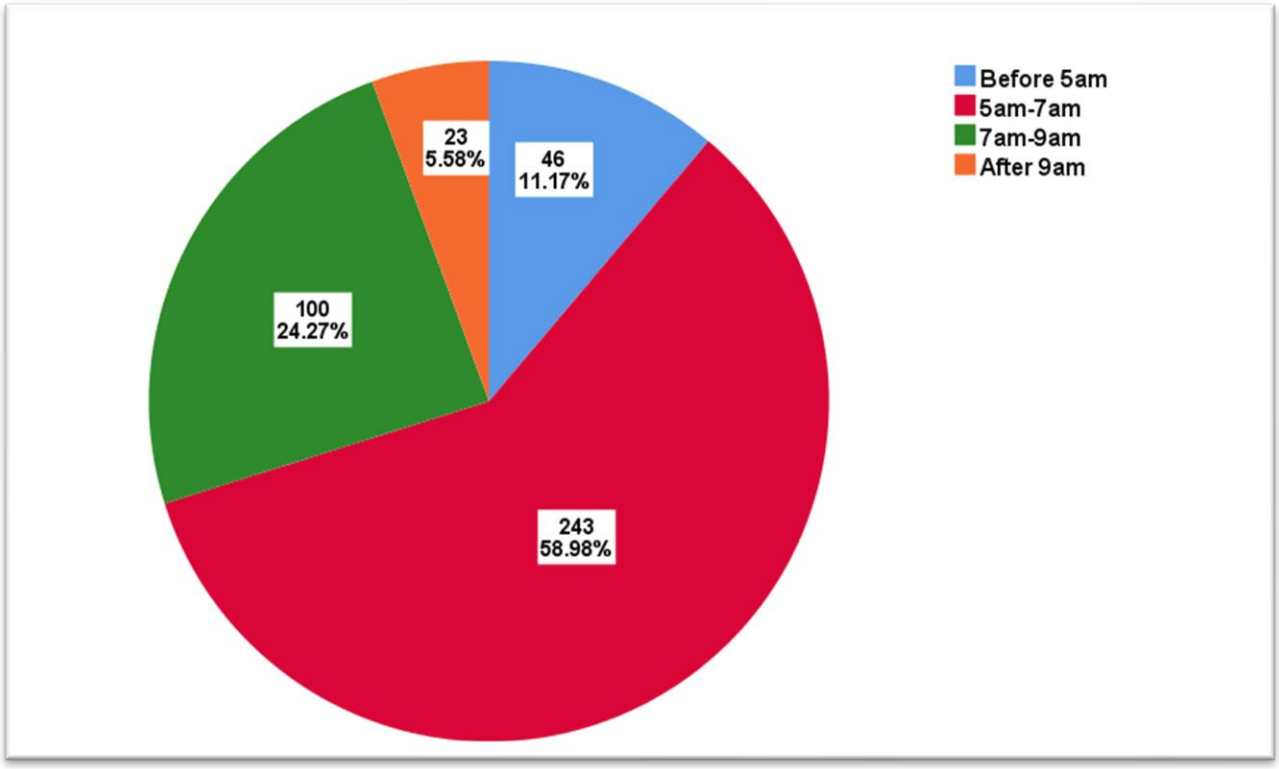


Figure 2: Frequency of the awakening time on class days.

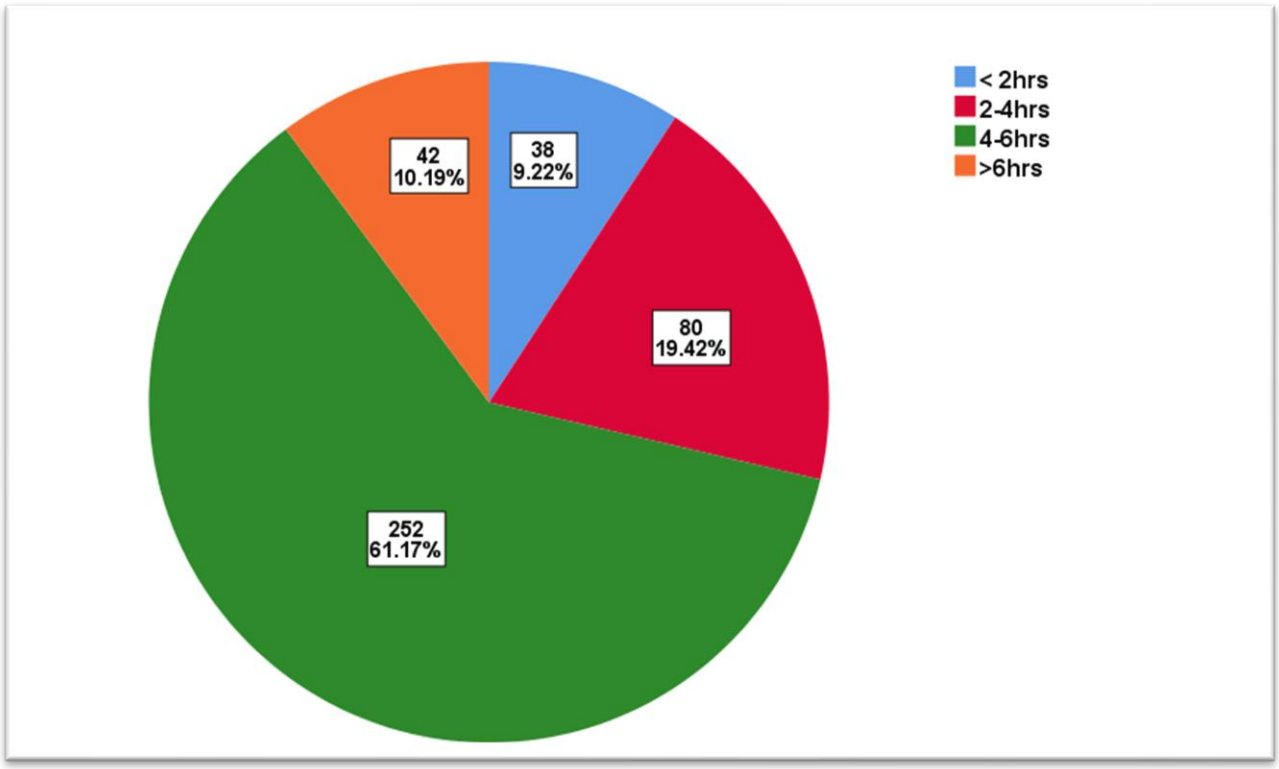


Figure 3: Frequency of the hours of study per day.

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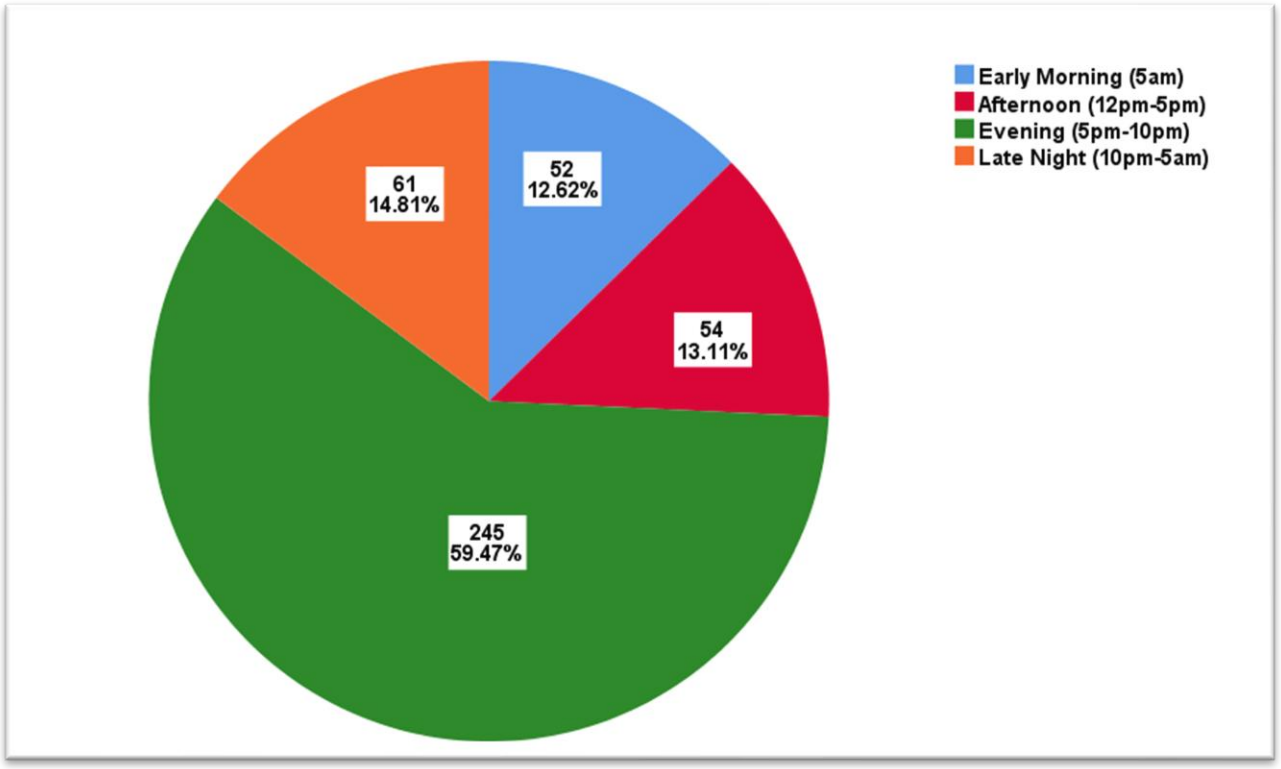


Figure 4: Frequency of the most preferred study time.

Table 1: Frequency distribution of the level of study

Study Level	Frequency	Percent	Cumulative Percent
200 Level	9	2.2	2.2
300 Level	77	18.7	20.9
400 Level	269	65.3	86.2
500 Level	48	11.7	97.8
600 Level	9	2.2	100.0
Total	412	100.0	

Table 2: Frequency distribution of the hours of sleep in 24 hours.

Hours of Sleep	Frequency	Percent	Cumulative Percent
<4 hours	10	2.4	2.4
4-5 hours	71	17.2	19.7
6-7 hours	254	61.7	81.3
7-8 hours	65	15.8	97.1
>8 hours	12	2.9	100.0
Total	412	100.0	

Table 3: Frequency distribution of the bed time of subjects on class days.

Bed Time on Class Days.	Frequency	Percent	Cumulative Percent
Before 10pm	174	42.2	42.2
10pm-12 mid-night	181	43.9	86.2
12am-2am	51	12.4	98.5
After 2am	6	1.5	100.0
Total	412	100.0	

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Table 4: Frequency distribution of the time taken to fall asleep.

Time Taken to Fall Asleep	Frequency	Percent	Cumulative Percent
<15 minutes	119	28.9	28.9
16-30 minutes	221	53.6	82.5
31-60 minutes	61	14.8	97.3
>60 minutes	11	2.7	100.0
Total	412	100	

Table 5: Frequency distribution of the sleep quality of study subjects.

Sleep Quality	Frequency	Percent	Cumulative Percent
Very good	149	36.2	36.2
Fairly good	219	53.2	89.3
Fairly bad	40	9.7	99.0
Very bad	4	1.0	100.0
Total	412	100.0	

Table 6: Frequency distribution of the use of sleeping drug.

Use of Sleeping Drug	Frequency	Percent	Cumulative Percent
Never	159	38.6	38.6
< Once a week	84	20.4	59.0
Once or twice a week	157	38.1	97.1
Three or more times a week	12	2.9	100.0
Total	412	100.0	

Table 7: Frequency distribution of the most preferred study methods.

Study Methods	Frequency	Percent	Cumulative Percent
Reading alone	201	48.8	48.8
Group study	111	26.9	75.7
Using past questions	71	17.2	93.0
Creating and reviewing notes	15	3.6	96.6
Watching video tutorial	14	3.4	100.0
Total	412	100.0	

Table 8: Frequency of the stress felt last month.

Frequency of Stress	Frequency	Percent	Cumulative Percent
Never	119	28.9	28.9
Almost Never	87	21.1	50
Sometimes	141	34.2	84.2
Fairly often	19	4.6	88.8
Very often	46	11.2	100.0
Total	412	100	

Table 9: Frequency of the impact of sleep pattern on academics.

Impact of Sleep Pattern	Frequency	Percent	Cumulative Percent
Yes, a significant negative impact	123	29.9	29.9
Yes, a slight negative impact	101	24.5	54.4
No impact	157	38.1	92.5
Yes, a positive impact	31	7.5	100.0
Total	412	100	

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Table 10: Chi-square test of independence between bed time on class days and hours of sleep in 24 hours

Bed Time	Hours of Sleep in 24 Hours					Total	X^2	df	p-value	Inference
	<4 hrs	4-5 hrs	6-7 hrs	7-8hrs	>8 hrs					
Before 10pm	3	31	110	24	6	174	66.278	12	0.000	S
10pm-12 mid-night	3	26	115	31	6	181				
12am-2am	1	12	28	10	0	51				
after 2am	3	2	1	0	0	6				
Total	10	71	254	65	12	412				

Table 11: Chi-square test of independence between awakening time on class days and hours of sleep in 24 hours

Awakening Time	Hours of Sleep in 24 Hours					Total	X^2	df	p-value	Inference
	<4 hrs	4-5 hrs	6-7 hrs	7-8hrs	>8 hrs					
Before 5am	4	14	22	4	2	46	55.814	12	0.000	S
5am-7am	4	43	160	32	4	243				
7am-9am	2	11	67	16	4	100				
after 9am	0	3	5	13	2	23				
Total	10	71	254	65	12	412				

Table 12: Chi-square test of independence between sleep quality and hours of sleep in 24 hours

Sleep Quality	Hours of Sleep in 24 Hours					Total	X^2	df	p-value	Inference
	<4 hrs	4-5 hrs	6-7 hrs	7-8hrs	>8 hrs					
very good	2	24	88	24	11	149	31.855	12	0.001	S
Fairly good	5	38	138	37	1	219				
Fairly bad	2	7	27	4	0	40				
very bad	1	2	1	0	0	4				
Total	10	71	254	65	12	412				

Table 12: Chi-square test of independence between sleep quality and hours of study per day.

Hours of Study	Sleep Quality				Total	X^2	df	p-value	Inference
	very good	Fairly good	Fairly bad	very bad					
< 2hrs	17	18	2	1	38	12.474	9	0.188	NS
2-4hrs	31	44	5	0	80				
4-6hrs	81	142	27	2	252				
>6hrs	20	15	6	1	42				
Total	149	219	40	4	412				

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Table 13: Chi-square test of independence between sleep quality and use of sleeping drugs.

Use of Drugs	Sleep Quality				Total	X^2	df	p-value	Inference
	very good	Fairly good	Fairly bad	very bad					
Never	87	69	2	1	159	76.806	9	0.000	S
<Once a week	33	45	5	1	84				
Once or twice a week	28	96	32	1	157				
Three or more times a week	1	9	1	1	12				
Total	149	219	40	4	412				

Table 14: Chi-square test of independence between preferred study time and hours of study.

Preferred Study Time	Hours of Study Day				Total	X^2	df	p-value	Inference
	< 2hrs	2-4hrs	4-6hrs	>6hrs					
Early Morning (5am)	12	20	12	8	52	85.099	9	0.000	S
Afternoon (12pm-5pm)	6	19	22	7	54				
Evening (5pm-10pm)	11	28	191	15	245				
Late Night (10pm-5am)	9	13	27	12	61				
Total	38	80	252	42	412				

Table 15: Chi-square test of independence between sleep quality and impacts on academics.

Impact	Sleep Quality				Total	X^2	df	p-value	Inference
	very good	Fairly good	Fairly bad	very bad					
Yes, a significant negative impact	52	58	12	1	123	11.478	9	0.244	NS
Yes, a slight negative impact	31	61	8	1	101				
No impact	50	87	19	1	157				
Yes, a positive impact	15	13	1	1	30				
Yes, a significant negative impact	148	219	40	4	411				

Table 16: Chi-square test of independence between preferred study method and hours of study.

Preferred Study Time	Hours of Study Day				Total	X^2	df	p-value	Inference
	< 2hrs	2-4hrs	4-6hrs	>6hrs					
Reading alone	21	43	114	23	201	25.245[a]	12	0.014	S
Group study	6	22	74	9	111				
using past questions	3	8	52	8	71				
creating and reviewing notes	5	4	5	1	15				
watching video tutorial	3	3	7	1	14				
Total	38	80	252	42	412				

Table 17: Chi-square test of independence between methods to stay awake and Stress last month.

Methods of Staying Awake	Stress Last Month					Total	X^2	p-value	Inference
	Never	Almost Never	Sometimes	Fairly Often	Very Often				
Use of caffeine	12	8	13	2	11	46	45.111	0.001	S
Use of stimulants	4	9	5	2	1	21			
Napping	27	17	21	1	14	80			

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Physical exercise	22	21	39	4	1	87			
Others' music, etc	54	32	62	8	17	173			
Nothing	0	0	1	0	2	3			
Total	119	87	141	17	46	410			

The Chi-square analyses revealed several significant associations among sleep habits, study behaviors, and stress levels. Both earlier bedtime and wake up time were associated with longer sleeping time as the evidenced show from the results (χ^2=66.278, p=0.000), as well as between awakening time and hours of sleep (χ^2=55.814, p=0.000), were significance and linked to longer sleep durations. Sleep quality was associated with hours of sleep (χ^2=31.855, p=0.001), therefore the results finding agreed that individuals who slept longer reported better sleep quality. Conversely, sleep quality showed no significant association with hours of study per day (χ^2=12.474, p=0.188) or academic impact (χ^2=11.478, p=0.244). There was a strong association between sleep quality and sleeping drug use (χ^2=76.806, p=0.000), indicating that poorer sleep quality was associated with more frequent drug use. Hours of study were also significantly affected by preferred study time (χ2=85.099, p=0.000) and preferred study method (χ2=25.245, p=0.014), with evening readers and those studying alone tending to study longer. Finally, the methods used to stay awake were significantly associated with stress levels (χ^2=45.111, p=0.001), with individuals experiencing higher stress more likely to rely on caffeine or similar stimulants.

V. DISCUSSION

Findings of this study point to significant relationships between sleep patterns, study behaviors and stress levels of university students. Most of the respondents (61.7%) reported having slept 6-7 hours daily. 43.9% of the respondents went to bed between 10 p.m. and midnight. 53.2% of the participant agreed that their sleep quality as fairly good. These results are consistent with previous studies that found that most university students do not get the recommended 8 hours of sleep per night due to their academic workload, social activities, and lifestyle habits ([17]; [5]).

Although 54.4% of participants reported that poor sleep affected them academically in some way, chi-square analysis did not find a significant association between sleep quality and academic performance (p = 0.244). This is consistent with the findings of [4], who observed that though sleep deprivation impairs cognitive alertness and concentration, moderate sleep restriction does not necessarily produce measurable academic decline. In contrast, it has been reported that poor sleep has a direct association with lower GPA [15]. Thus, the relationship between sleep and academic performance may be dependent on contextual factors such as study habits and coping mechanisms.

The strong correlation between bedtime and sleep duration (χ2 = 66.278, p = 0.000) and awakening time and hours of sleep (χ2 = 55.814, p = 0.000) is evidence that a regular sleep schedule leads to better sleep. Similar results were reported by [27] who found better sleep efficiency and mood stability in students with regular sleep pattern. Moreover, the present study found a positive correlation between sleep duration and sleep quality (χ^2 = 31.855, p = 0.001), which is consistent with the findings of [32] who proved that sufficient sleep (7–8 h) promotes memory consolidation and learning retention.

However, the relationship between sleep quality and use of sleeping drugs (χ2 = 76.806, p = 0.000) show that those with poor sleep tend to turn to pharmacological aids. This observation is consistent with prior findings by [25] and [35] who noted an increasing reliance on sleep aids in students with irregular schedules, stress or late-night study patterns. But chronic use of these substances may disrupt natural sleep regulation and worsen stress and cognitive fatigue [5].

A significant association was found between the preferred time of study and the duration of study (χ2 = 85.099, p = 0.000) and between the preferred study method and the hours of study (χ2 = 25.245, p = 0.014). These findings show that individual learning strategies have a great influence on academic behaviors. Those students who preferred to study in the evening or alone were more likely to have studied for longer hours. This is in line with the results of [12] , who reported that students with an evening circadian preference compensate for delayed sleep by increasing time devoted to study at nite. Moreover, [34] suggests that self-regulated study approaches enhance the learning focus but lower opportunities for collaborative learning and emotional support.

The bidirectional association between sleep deprivation and psychological stress is highlighted by the substantial correlation (χ^2 = 45.111, p = 0.001) between methods of staying awake and stress. Higher stress levels were reported by participants who relied on caffeine or stimulants, which is consistent with earlier research showing that sleep deprivation increases cortisol secretion and affects emotional regulation ([21]; [40]). A vicious cycle that is harmful to mental health and academic performance is created when chronic stress worsens sleep issues [38].

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VI. CONCLUSION

The results of this work showed that majority of students maintain reasonable sleep durations, irregularities in bedtime, study routines and wake time significantly impair sleep quality. The results of this work also agreed that Poor sleep patterns were linked to higher levels of stress and dependence on stimulants or sleeping medicines, despite the lack of a direct and substantial correlation between sleep quality and academic performance. For the best academic results and general wellbeing, regular sleep schedules, well-rounded study habits, and stress reduction are crucial.

REFERENCES

[1]. AlFakhri, F. M., Al-Shammari, S. A., & Al-Shammari, M. S. (2015). Sleep habits and academic performance among medical students in Saudi Arabia. Journal of Family & Community Medicine, 22(3), 142–146. https://doi.org/10.4103/2230-8229.163034

[2]. Al-Khani, A. M., Sarhandi, M. I., Zaghloul, M. S., Ewis, A. A., & Saquib, N. (2019). Sleep habits among medical students at a Saudi university. Sleep Science, 12(1), 10–15. https://doi.org/10.5935/1984-0063.20190003

[3]. Azad, M. C., Fraser, K., Rumana, N., Abdullah, A. F., Shahana, N., Hanly, P. J., & Turin, T. C. (2015). Sleep disturbances among medical students: A global perspective. Journal of Clinical Sleep Medicine, 11(1), 69–74. https://doi.org/10.5664/jcsm.4370

[4]. Baert, S., Omey, E., Verhaest, D., & Vermeir, A. (2019). The relationship between sleep quality and academic performance: Evidence from university students. Journal of Sleep Research, 28(3), e12709.

[5]. Becker, S. P., Sidol, C. A., Van Dyk, T. R., & Cousins, J. C. (2018). Sleep and academic performance in college students: The moderating role of motivation. Journal of Youth and Adolescence, 47(10), 2158–2172.

[6]. Cain, N., & Gradisar, M. (2010). Electronic media use and sleep in school-aged children and adolescents: A review. Sleep Medicine, 11(8), 735–742. https://doi.org/10.1016/j.sleep.2010.02.006

[7]. Carney, C. E., Edinger, J. D., Meyer, B., Lindman, L., & Istre, T. (2006). Daily activities and sleep quality in college students. Chronobiology International, 23(3), 623–637. https://doi.org/10.1080/07420520600650608

[8]. Chaput, J. P., Gray, C. E., Poitras, V. J., Carson, V., Gruber, R., Olds, T., ... & Tremblay, M. S. (2018). Systematic review of the relationships between sleep duration and health indicators in school-aged children and youth. Applied Physiology, Nutrition, and Metabolism, 41(6), S266–S282. https://doi.org/10.1139/apnm-2015-0627

[9]. Coontz, S. H. (2013). The biology of sleep and dreaming. ABC-CLIO.

[10]. Corlateanu, A., Mendez, Y., Wang, Y., & Culea, V. (2017). Sleep quality and its association with academic performance among medical students. Sleep and Biological Rhythms, 15(3), 219–225. https://doi.org/10.1007/s41105-017-0103-2

[11]. Curcio, G., Ferrara, M., & De Gennaro, L. (2006). Sleep loss, learning capacity and academic performance. Sleep Medicine Reviews, 10(5), 323–337. https://doi.org/10.1016/j.smrv.2005.11.001

[12]. Dewald, J. F., Meijer, A. M., Oort, F. J., Kerkhof, G. A., & Bögels, S. M. (2010). The influence of sleep quality, sleep duration, and sleepiness on school performance in children and adolescents: A meta-analytic review. Sleep Medicine Reviews, 14(3), 179–189.

[13]. Diekelmann, S., & Born, J. (2010). The memory function of sleep. Nature Reviews Neuroscience, 11(2), 114–126. https://doi.org/10.1038/nrn2762

[14]. Dyrbye, L. N., Thomas, M. R., Massie, F. S., Power, D. V., Eacker, A., Harper, W., ... & Shanafelt, T. D. (2006). Burnout and suicidal ideation among U.S. medical students. Annals of Internal Medicine, 149(5), 334–341. https://doi.org/10.7326/0003-4819-149-5-200809020-00008

[15]. Gilbert, S. P., & Weaver, C. C. (2010). Sleep quality and academic performance in university students: A wake-up call for college psychologists. Journal of College Student Psychotherapy, 24(4), 295–306.

[16]. Giri, P. A., Baviskar, M. P., & Phalke, D. B. (2013). Study of sleep habits and sleep problems among medical students of Pravara Institute of Medical Sciences Loni, Western Maharashtra, India. Annals of Medical and Health Sciences Research, 3(1), 51–54. https://doi.org/10.4103/2141-9248.109466

[17]. Hershner, S. D., & Chervin, R. D. (2014). Causes and consequences of sleepiness among college students. Nature and Science of Sleep, 6, 73–84. https://doi.org/10.2147/NSS.S62907

[18]. Hidalgo, M. P., Caumo, W., Posser, M., Coccaro, S. B., Chaves, M. L., & Henz, A. (2002). Relationship between sleep habits and performance in medical students. Sleep, 25(Abstract Supplement), A254.

[19]. Kaneita, Y., Ohida, T., Uchiyama, M., Takemura, S., Kawahara, K., Yokoyama, E., ... & Ohida, T. (2009). The relationship between depression and sleep disturbances: A Japanese nationwide general population survey. Sleep, 32(2), 195–201. https://doi.org/10.1093/sleep/32.2.195

[20]. Keene, A. C. (2018). The expanding treasure trove of sleep genetics. Journal of Experimental Biology, 221(Pt 8), jeb170878. https://doi.org/10.1242/jeb.170878

[21]. Killgore, W. D. S. (2010). Effects of sleep deprivation on cognition. Progress in Brain Research, 185, 105–129.

[22]. Konnikova, M. (2014). The science of sleep: The mysterious work of the sleeping brain. Scientific American.

[23]. Krueger, J. M., Frank, M. G., Wisor, J. P., & Roy, S. (2016). Sleep function: Toward elucidating an enigma. Sleep Medicine Reviews, 28, 46–54. https://doi.org/10.1016/j.smrv.2015.08.005

ISSN :2584-2706 DOI: https://doi.org/10.67317/IJMSRT26NOV039

[24]. Lee-Chiong, T. (2008). Sleep: A comprehensive handbook. Wiley.
[25]. Lemma, S., Gelaye, B., Berhane, Y., Worku, A., & Williams, M. A. (2012). Sleep quality and its psychological correlates among university students in Ethiopia: A cross-sectional study. BMC Psychiatry, 12(1), 237.
[26]. López, R., Micoulaud-Franchi, J. A., & Bioulac, S. (2002). Sleep and emotion: A review. Sleep Medicine Reviews, 16(4), 341–349.
[27]. Lund, H. G., Reider, B. D., Whiting, A. B., & Prichard, J. R. (2010). Sleep patterns and predictors of disturbed sleep in college students. Journal of Adolescent Health, 46(2), 124–132. https://doi.org/10.1016/j.jadohealth.2009.06.016
[28]. Maquet, P., Ruby, P., Maudoux, A., Albouy, G., Sterpenich, V., Dang-Vu, T., ... & Boly, M. (2005). Human cognition during REM sleep and the activity profile within frontal and parietal cortices: A reappraisal of functional neuroimaging data. Progress in Brain Research, 150, 219–227. https://doi.org/10.1016/S0079-6123(05)50016-0
[29]. Medic, G., Wille, M., & Hemels, M. E. (2017). Short- and long-term health consequences of sleep disruption. Nature and Science of Sleep, 9, 151–161. https://doi.org/10.2147/NSS.S134864
[30]. Nelson, M. T., Berg, J. M., & Holtzman, D. M. (2021). The role of sleep in immune function and metabolic health. Annual Review of Physiology, 83, 459–479. https://doi.org/10.1146/annurev-physiol-031620-091838
[31]. Ohayon M (1996). Epidemiological study on insomnia in the general population. Sleep; 19: S7 – S15.
[32]. Okano, K., Kaczmarzyk, J. R., Dave, N., Gabrieli, J. D., & Grossman, J. C. (2019). Sleep quality, duration, and consistency are associated with better academic performance in college students. NPJ Science of Learning, 4(1), 16.
[33]. Pagel, J. F., Forister, N., & Kwiatkowki, C. (2007). Adolescent sleep disturbance and school performance: The confounding variable of socioeconomics. Journal of Clinical Sleep Medicine, 3(1), 19–23.
[34]. Phillips, A. J. K., Clerx, W. M., O'Brien, C. S., et al. (2017). Irregular sleep/wake patterns are associated with poorer academic performance and delayed circadian and sleep/wake timing. Scientific Reports, 7(1), 3216.
[35]. Randall, D. (2013). Animal physiology (3rd ed.). Freeman.
[36]. Sansgiry, S. S., Bhosle, M., & Sail, K. (2006). Factors that affect academic performance among pharmacy students. American Journal of Pharmaceutical Education, 70(5), 104.
[37]. Siegel, J. M. (2008). Do all animals sleep? Trends in Neurosciences, 31(8), 371–377. https://doi.org/10.1016/j.tins.2008.05.001
[38]. Sivertsen, B., Vedaa, Ø., Harvey, A. G., et al. (2020). Sleep patterns and insomnia in young adults: A nationally representative survey of Norwegian university students. Journal of Sleep Research, 29(2), e12840.
[39]. Suen, L. K., Hon, K. L., & Tam, W. W. (2008). Association between sleep behavior and sleep-related factors among university students in Hong Kong. Chronobiology International, 25(5), 760–775. https://doi.org/10.1080/07420520802367968
[40]. Van Dongen, H. P. A., Maislin, G., Mullington, J. M., & Dinges, D. F. (2011). The cumulative cost of additional wakefulness: Dose–response effects on neurobehavioral functions and sleep physiology. Sleep, 26(2), 117–126.
[41]. Turek, F. W., & Czeisler, C. A. (1999). Circadian rhythms. In M. H. Kryger, T. Roth, & W. C. Dement (Eds.), Principles and practice of sleep medicine (3rd ed., pp. 351–361). W.B. Saunders.
[42]. Walker, M. P. (2008). The role of sleep in cognition and emotion. Annals of the New York Academy of Sciences, 1156(1), 168–197.
[43]. Walker, M. P., & Stickgold, R. (2006). Sleep, memory, and plasticity. Annual Review of Psychology, 57, 139–166.
[44]. Wolfson, A. R., & Carskadon, M. A. (2003). Understanding adolescents' sleep patterns and school performance: A critical appraisal. Sleep Medicine Reviews, 7(6), 491–506. https://doi.org/10.1016/S1087-0792(03)90003-7
[45]. World Health Organization. (2004). Guidelines for community noise. WHO.
[46]. Yusoff, M. S. B., Rahim, A. F. A., & Yaacob, M. J. (2013). Prevalence and associated factors of stress, anxiety and depression among prospective medical students. Asian Journal of Psychiatry, 6(2), 128–133.