

Sleeping Disturbances among University Students

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Abstract

Background: Sleep quality is very important than depression for student's academic performance. Sleep problems may be four to six times more prevalent than depression in the college student population.

Objectives: To examine the relationship between sleep deprivation, sleep quality, and academic performance among college students in Qassim University, Saudi Arabia.

Subjects and Methods: This cross-sectional study was conducted among Qassim university students in Kingdom of Saudi Arabia (males and females) in the following colleges; medicine, pharmacy, computer science, preparatory year, and business managing. Data were collected through a questionnaire that contained questions regarding sleep deprivation, sleep quality, and academic performance among students.

Results: The study included 250 students, equally distributed between colleges and gender. It is obvious that 59.7% of those satisfied with sleep had >7 hours of sleeping and 35.1% of those dissatisfied with sleep had <4 hours duration of sleep, $p < 0.001$. There was a statistically significant association between attending all classes and duration of sleeping, $p = 0.009$. More than half of them (55.5%) sleep on the average.

Keywords: Sleep; Disturbance; University; Students

Literature Review

Sleep is essential to the body and its functions, promoting bodily rest and rejuvenation in the neurons and other cells that are replaced or repaired during times of sleep. Sleep has also been proposed to conserve energy, detoxify the brain, and control thermoregulation within the brain [1]. Since sleep is so essential to the human body, scientists recommend approximately eight hours of sleep a night to promote efficient performance and thinking [2]. On the other hand, few people receive the sleep that the body needs, and ultimately sleep deprivation affects a significant portion of the population. Ranging from shift workers, military personnel, or college students [3].

Sleep deprivation refers to a condition of lacking the necessary amount of sleep. It can negatively impact people's health not only physically, but also mentally and socially [4]. Unfortunately, this issue is often neglected due to the high expectations and enormous demands of today's society [5]. When students arrive at college their sleep habits are often one of their first daily routines to change and not usually for the better [6]. College students typically shift to an irregular sleep-wake cycle characterized by short sleep length on weekdays and phase delays on weekends, although this general pattern is influenced by an individual's study and work schedules [7]. Not surprisingly then, both sleep deprivation and poor sleep quality are particularly prominent in young adult and college student populations [8].

Sleep quality may even be more important than depression and psychopathy for academic performance [9]. Taken together these research studies suggest that sleep problems may be four to six times more prevalent than depression in the college student population [10]. To compound matters, many students are themselves unaware that their academic difficulties may be related to their sleep habits [11]. The purpose of the current study is to examine the relationship between sleep deprivation, sleep quality, and academic performance among college students in Qassim University.

Methodology

Setting

This research was conducted among Qassim University students in KSA. Participation was completely voluntary and consent were received

prior to data collection. Qassim University is located in Buraydah city, having about 40000 students and 3500 faculty and staff.

Colleges at Qassim University include Sharia College; the College of Arabic Language and Social Sciences; the College of Agricultural and Veterinary Sciences; a College of Economics; a College of Science; a College of Medicine; a College of Engineering; a College of Computer Science; a College of Applied Medical Sciences; a College of Dentistry and a College of Pharmacy.

Population and sampling

The research population involves Qassim university students, both males and females, in the following colleges; medicine, pharmacy, computer science, preparatory year, and business managing. The questionnaire were distributed among these students in a total number of about 250 students, 50 students from each college as 25 male and 25 female.

Data collection & questionnaire design

The data were collected from student in a questionnaire that containing questions regarding research subject that is to examine the relationship between sleep deprivations, sleep quality, and academic performance among college students in Qassim University. Participation was completely voluntary and consents were received prior to data collection. Information on the participants' sleep quality was collected from the participants' self-evaluation on the amount of average sleep received per night. Participants were also asked if they were satisfied with the amount of sleep they received on average. Demographic questions included gender, grade, age, and smoking habits.

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Questionnaire design

- The questionnaire is designed to obtain proper information from the students. It contain the following questions:
- Demographic information (age, gender, clam, college, smoking habits).
- Level of study and academic performance.
- Personal / psychological amendment.
- Sleeping pattern (time of sleeping, Duration, etc.)
- Social life.

Data analysis

To avoid ambiguity, the directions on the questionnaires are phrased as clearly and directly as possible. However, when asked to give a specific number of hours of sleep per night, some students may provide a range of hours instead of a specific number. In such cases, the midpoint of the range is used in the analyses. (i.e. if the student reported 7-8 hours, 7.5 hours was used instead for the analyses). All analyses were conducted using SPSS program.

The Results

Table 1 shows that there is a different between the samples depending on their specialty, also it shows that most of the samples 55% sleep between 4-7 hours daily,30% sleep more than 7 hours and 15% sleep less than 4 hours a day.it is not statistically significant. Table 2 shows that the female samples sleep lesser hours than the male samples.

Table 3 shows that the most satisfied samples with their sleeping is the samples who sleep more than 7 hours daily, the majority of the samples who sleep from 4-7 hours daily are satisfied with their sleeping to some extent, while more than half of the samples who sleep less than 4 hours are not satisfied. It is not statistically significant

Table 4 shows that the majority of the samples who sleep during night and day time are satisfied with their sleeping to some extent,

Type of specialty	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
college of computer science	3	30	17	50
College of economics and administration	8	24	18	50
college of medicine	7	28	15	50
college of pharmacy	10	28	12	50
Preparatory Year Program	8	29	13	50
Total	36	139	75	250

Table 1: Type of specialty * Hours of sleep.

The gender	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Female	19	72	34	125
Male	17	67	41	125
Total	36	139	75	250

Table 2: The gender * Hours of sleep.

Are you satisfied	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Satisfied	0	25	37	62
to some extent	16	84	31	131
not satisfied	20	30	7	57
Total	36	139	75	250

Table 3: Are you satisfied * Hours of sleep.

and while comparing between the people who are satisfied with their sleeping during night is more than the people who are not, on the other hand the samples who sleep during day time is the opposite. Table 5 shows that most of the samples don't use any drugs for sleeping. Table 6 shows that about 86% of the samples don't change their sleeping pattern while about 14% their sleeping pattern get changed during holidays.

Tables 7 and 8 show that the samples who sleep very late is much more than the samples who sleep early (50.4% of the samples sleep very late). Tables 9-11 show that about 30.4% of samples have insomnia on the other hand, only 11.2% have nightmares. Tables 10-13 show that

Which time do you sleep	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Day	17	46	27	90
Night	45	85	30	160
Total	62	131	57	250

Table 4: Which time do you sleep * Are you satisfied.

Do you use drugs to help you sleep	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
During exams	0	2	0	2
No	27	103	55	185
Often	3	10	6	19
Sometimes	6	24	14	44
Total	36	139	75	250

Table 5: Do you use drugs to help you sleep * Hours of sleep.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	35	14	14	14
Yes	215	86	86	100
Total	250	100	100	
Sometimes	6	24	14	44
Total	36	139	75	250

Table 6: Does your sleep pattern change during holidays.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	232	92.8	92.8	92.8
Yes	18	7.2	7.2	100
Total	250	100	100	

Table 7: Do you sleep very early.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	124	49.6	49.6	49.6
Yes	126	50.4	50.4	100
Total	250	100	100	

Table 8: Do you sleep very late.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	174	69.6	69.6	69.6
Yes	76	30.4	30.4	100
Total	250	100	100	

Table 9: Do you have insomnia.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	164	65.6	65.6	65.6
Yes	86	34.4	34.4	100
Total	250	100	100	

Table 10: Do you feel tired when you wake up.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	222	88.8	88.8	88.8
Yes	28	11.2	11.2	100
Total	250	100	100	

Table 11: Do you have nightmares.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	195	78	78	78
Yes	55	22	22	100
Total	250	100	100	

Table 12: Is your sleep continuous.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
No	163	65.2	65.2	65.2
Yes	87	34.8	34.8	100
Total	250	100	100	

Table 13: Do you have difficulty in waking up in the morning.

34.4% of samples feel tired when they wake up and about 34.8 have difficulty in waking up in the morning. Table 12 shows that 78% of samples can't sleep continually.

Table 14 shows that the majority of samples who have a grade more than 4.5 sleep between 4-7 hours daily which means that there is a relationship between how much hours you sleep and your grade. Table 15 shows that about 76% of samples change their sleeping patterns during exams and most of samples who have more than 4.5 grade change it during exam and the majority of those who don't change it their grades are 3-4.

Table 16 shows that about 41% of samples study only during exams, most of samples who study 2- 4 get grade more than 4. Table 17 shows

What is your grade last year	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
More than 4.5	11	44	15	70
4-4.5	8	27	20	55
03-Apr	14	38	26	78
Less than 3	3	30	14	47
Total	36	139	75	250

Table 14: What is your grade last year * Hours of sleep.

What is your grade last year	What is your grade last year				Total
	More than 4.5	4-4.5	03-Apr	Less than 3	
No	16	9	22	13	60
Yes	54	46	56	34	190
Total	70	55	78	47	250

Table 15: Does your sleep pattern change during exams * What is your grade last year.

How many hours do you spent during studying	What is your grade last year				Total
	More than 4.5	4-4.5	03-Apr	Less than 3	
Less than 2	15	15	25	14	69
02-Apr	17	17	10	10	54
More than 4	8	6	6	3	23
Just during exams	30	17	37	20	104
Total	70	55	78	47	250

Table 16: How many hours do you spent during studying * What is your grade last year.

that 66.4% of samples cannot concentrate during lectures from time to another even though most of them sleep between 4-7 hours. It is not statistically significant. Table 18 shows that 42.8% of samples attend their classes sometimes and most of them sleep from 4-7 hours. While 57.2% attend their classes. Table 19 shows that 33.6% of samples do their homework during college days and more than half of them sleep from 4-7 hours, about 27.6% complete it during the weekends, about 24.8% don't do it and 14% don't care about it.

Table 20 shows that 52.8% of samples use their phones during classes on the base of the lecturer, 36.8% use it from time to another and only 10.4 use it frequently. Table 21 shows that 31.2% of samples do their social visits during holydays only, 46% do them every week, 18% every month (about 33% of them sleep less than 4 hours) and only 4.8% do them every day (about 25% of them sleep less than 4 hours). Table 22 shows that 90.8% of samples live with their families and most

Do you find difficulty in concentration during lectures	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
No	6	17	11	34
Often	9	29	12	50
Sometimes	21	93	52	166
Total	36	139	75	250

Table 17: Do you find difficulty in concentration during lectures * Hours of sleep.

Do you attend all of your classes	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Sometimes	7	64	36	107
Yes	29	75	39	143
Total	36	139	75	250
Total	36	139	75	250

Table 18: Do you attend all of your classes * Hours of sleep.

Do you find enough time to do your homework during college days	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
I dont care	8	16	11	35
No	12	35	15	62
No, but i do it during the weekend	9	40	20	69
Yes	7	48	29	84
Total	36	139	75	250

Table 19: Do you find enough time to do your homework during college days * Hours of sleep.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
A lot	26	10.4	10.4	10.4
Depend on the lecture	132	52.8	52.8	63.2
Sometimes	92	36.8	36.8	100
Total	250	100	100	

Table 20: Do you use your mobile during classes.

When do you do your social visiting	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Everyday	3	7	2	12
Holydays	10	44	24	78
Monthly	15	14	16	45
Weekly	8	74	33	115
Total	36	139	75	250

Table 21: When do you do your social visiting * Hours of sleep.

Do you live with	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
Alone	1	4	7	12
Family	33	131	63	227
Friend	2	4	5	11
Total	36	139	75	250
Total	36	139	75	250

Table 22: Do you live with * Hours of sleep.

Why don't you live with your family	Do you live with			Total
	less than 4	04-Jul	more than 7	
	0	227	0	227
To focus on studying	1	0	0	1
Not from Qassim	9	0	8	17
Others	1	0	0	1
Family problems	1	0	3	4
Total	12	227	11	250

Table 23: Why don't you live with your family * Do you live with.

Do you work outside the university	Hours of sleep			Total
	less than 4	04-Jul	more than 7	
	0	1	0	1
No	34	129	67	230
Yes	2	9	8	19
Total	36	139	75	250

Table 24: Do you work outside the university * Hours of sleep.

of them sleep 4-7 hours, 4.4% live with their friends and about 48% of them sleep more than 7 hours, and 4.8 live alone and 58% of them sleep more than 7 hours. Table 23 shows that most of the student who don't live with their families because they aren't from Qassim region. Table 24 shows that 7.6% of samples work outside the university and 47% of them sleep from 4-7 hours and 42% of them sleep more than 7 hours a day.

Discussion and Conclusion

The study shows that the students of the college of pharmacy are the most who sleep less than 4 hours and the students of economics are the most who sleep more than 7 hours a day. It also shows that, the students who sleep less than 4 hours a day are not satisfied with their sleeping at all. The major sleeping disturbance that students are suffering from is that they can't sleep continually 78%, the second most common is that the students sleep very late 50.4%, the third one is that the students feel tired when they wake up 34.4% and about 34.8 have difficulty in waking up in the morning (this results are the same as study was done

in Qassim University) [12].

The study also shows that the majority of samples who have a grade more than 4.5 sleep between 4-7 hours daily 62%, and shows that about 76% of samples change their sleeping patterns during exams. Which means that there is a big relationship between your sleeping and your study.

The study shows a little relationships between sleeping and social life in which students who do their social visit every month 18% (about 33% of them sleep less than 4 hours) and for those who do them every day 4.8% (about 25% of them sleep less than 4 hours). The sleeping pattern get affected by who do you live with, in which 4.4% of students live with their friends and about 48% of them sleep more than 7 hours, and 4.8 live alone and 58% of them sleep more than 7 hours.

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