

1 **Do Students get the Sleep They Need?: A Study on Sleep and Academics**

2 LITERATURE REVIEW

3 The pressure to do well in college is becoming increasingly prevalent in American
4 students as the job markets demand for degrees and tuition rises. College students are notorious
5 for pulling “all-nighters” or getting limited sleep due to homework assignments and/or studying.
6 Unfortunately, lack of sleep may not be beneficial to students’ academics, and previous research
7 has shown that lack of sleep negatively influences students’ academics. A study will be
8 conducted to determine whether the hours of sleep students get at the University negatively
9 affects their grade point average (GPA) and whether or not students get the sleep they need.

10 *Academic Performance*

11 The average amount of sleep per night a young adult must have in order to function
12 properly is eight hours (Archer 2010). In each study presented, it was discovered in all cases that
13 a lack of sleep for a college student had a negative effect on their academics. Pitcher and Walters
14 tested students before and after a night of sleep deprivation and found that their ability to
15 problem solve and complete simple tasks had dropped after they lacked sleep (1997). The most
16 surprising factor was that the students thought they had performed better on the test than before;
17 students did not realize how their lack of sleep affected their cognitive ability (Pitcher and
18 Walters 1997). Similarly, Thacher found that students who admitted to taking part in one or more
19 nights of total sleep deprivation in their semester had lower GPAs (by .19) than those who did
20 not partake in total nights of sleep deprivation (2008). Nagai-Manellia, Lowden, Roberta de
21 Castro Moreno, Teixeira, Aparecida da Luz, Hurga Mussi, Balian Conceição, and Fischer also
22 discovered that students who slept less were more likely to spend less time in class or skip class

1 all together compared to students who slept well (2012). Although it wasn't stated directly how
2 this information was collected, the studies conducted by Archer (2010) and Orzech, Salafsky,
3 and Hamilton (2008) stated that students who on average do not get a good night's sleep are
4 more likely to do worse in academics and have lower GPAs. With the information provided, I
5 hypothesize that University students do not get the sleep they need and that students who
6 average less sleep will have lower GPAs.

7 METHODS

8 *Sample*

9 The target population for this study was students attending the University. Recording answers for
10 my questionnaire for fellow students who were in my classes or friends of mine, a convenience
11 sample of 30 students was used, with the demographic being 50% male and 50% female.

12 *Measures*

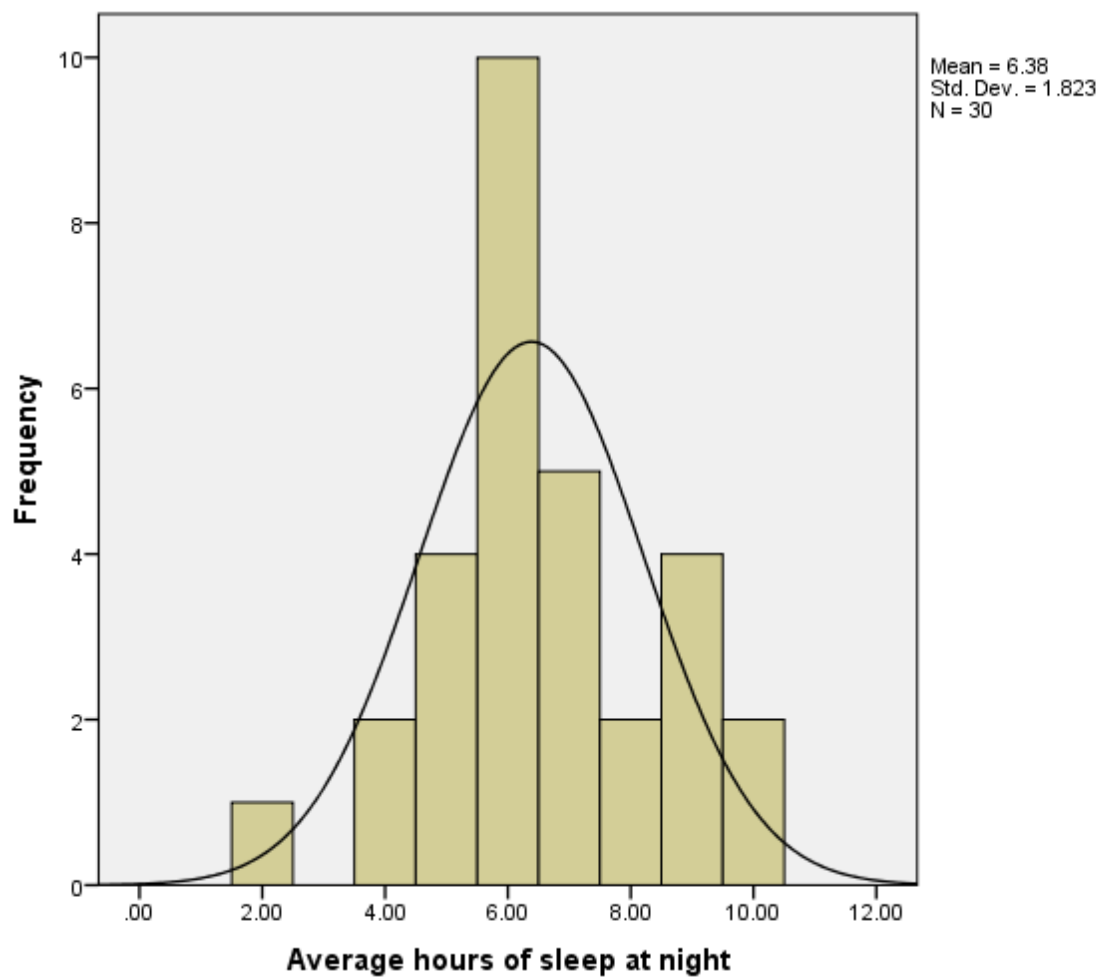
13 The two variables used were the average hours of sleep a student gets per night and their GPA.
14 The independent variable was the average hours of sleep and the dependent variable was the
15 student's GPA.

16 *Procedure*

17 First, it was asked who would like to participate in my study. For those who did, a small
18 questionnaire was used with my friends and fellow students in my classes asking two questions:
19 "on average, how many hours of sleep a night do you get," and "what is your current GPA?" The
20 data will be entered in SPSS, and the variables will be measured on an interval ratio scale using a
21 histogram for each variable and a correlation table comparing both variables.

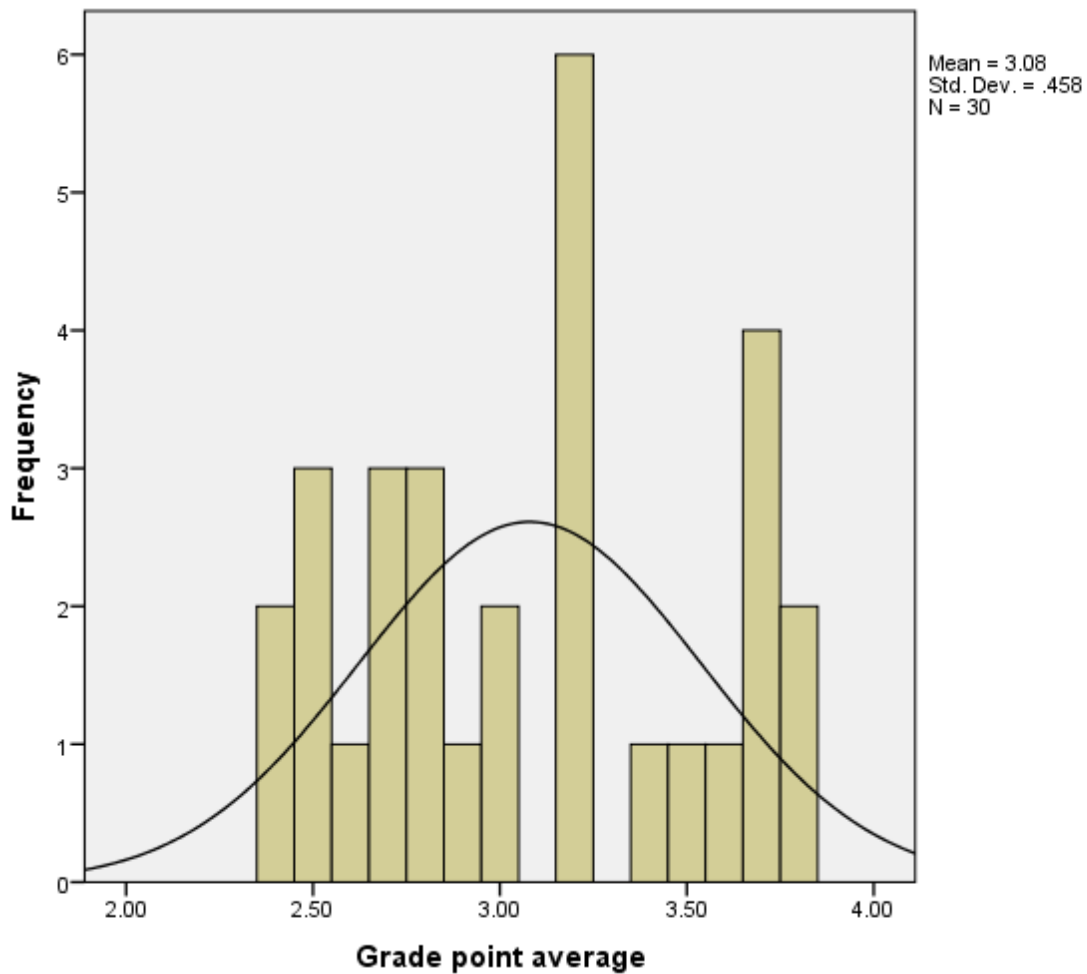
1 **Table 1**

2



3

4 **Table 2**



1
2 **Table 3**

Correlations			
		Average hours of sleep at night	Grade point average
Average hours of sleep at night	Pearson Correlation	1	.117
	Sig. (2-tailed)		.539
	N	30	30
Grade point average	Pearson Correlation	.117	1
	Sig. (2-tailed)	.539	
	N	30	30

3
4
5 **RESULTS**

1 As seen in table 1, the average amount of sleep a student got was 6.38 hours, which is
2 less than the recommended 8 hours of sleep per night. Although it is fairly close to representing a
3 normal curve, there was a single outlier who averaged only 2 hours of sleep per night. In table 2,
4 the average GPA was 3.08, and the most common GPA was 3.2. The distribution for GPA is
5 fairly centered around the mean with no great outliers, although it does not represent a normal
6 curve at all. In table 3, it was found that there is no statistically significant correlation between
7 sleep and GPA, and that the numbers are only significant if at an alpha level of .539, which
8 would mean being wrong over half the time.

9 DISCUSSION & CONCLUSION

10 The results of my findings support my hypothesis that students do not get the sleep they
11 need with the average amount of sleep by students being under 8 hours a night, but rejects my
12 hypothesis that there is a statistically significant difference in GPAs of students who sleep less on
13 average and those who average enough sleep (8 hours minimum). There is not a significant
14 positive correlation between average sleep and GPA, thus the findings of this research are not
15 consistent with the previous research provided. Although there are limitations to this study that
16 may explain why the research conducted does not match the research provided:

17 *Sample Limitations*

18 The sample size was small and the method used was a convenience sample, which could
19 have skewed the data.

20 *Data Collection Limitations*

1 The questionnaire only consisted of two questions, which gave the study a lack of in-
2 depth answers for research, and students answers on GPA could have been incorrect due to the
3 fact that not all students checked their SOLAR to verify what their GPA actually was.

4 *Time-Frame Limitations*

5 This study was done over the course of a few weeks. More time given to work on the
6 study would have made it easier to gather a larger sample and create a larger questionnaire to see
7 any possible factors that may contribute to poorer sleep and poorer academic performance.

8 *Conclusion*

9 For future research to be conducted on this subject, it would be beneficial to have a large sample
10 size of University students and develop an in-depth questionnaire involving sleeping habits as
11 well as academic habits such as studying. It would also be in the best interest of the researcher to
12 examine the student's personal lives and habits such as alcohol and drug use, working hours, etc.
13 over a few weeks or longer. To study this in depth would benefit the researcher to see if sleeping
14 hours in fact does hold a significant effect on a student's academic life.

15

1 REFERENCES

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5 Frida Marina Fischer. 2012. "Sleep length, working hours and socio-demographic
6 variables are associated with time attending evening classes among working college
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10 59(7):612-620.

11 Pitcher, June J. and Amy S. Walters. 1997. "How Sleep Deprivation Affects Psychological
12 Variables Related to College Students' Cognitive Performance." *Journal of American*
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15 students' engagement in a single night of total sleep deprivation." *Behavioral Sleep*
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Work Sample Evaluation

Subject Area: Introduction to Statistics

Task Title: Sleep Deprived

Student Work Sample Title: Do Students Get the Sleep They Need?: A Study on Sleep and Academics

The document was scored using the *CCR Task Bank Rubric for Scientific Research Plans and Reports*. The final scores are indicated in the following chart.

Scoring Criteria	Insufficient Evidence	Developing	Progressing	Accomplished	Exceeds
Hypothesis Development				X	
Research Plan			X		
Results and Interpretation					X
Communication			X		
Organization				X	
Accuracy				X	

Annotations: The following evidence from the work sample and the reviewer’s comments support the scores above. Page and line numbers refer to the original work sample.

Scoring Criteria	Page #	Line #	Commentary about the work sample
Hypothesis Development: <i>Locating resources in order to develop a thesis or hypothesis</i>	7		The work sample includes a collection of relevant, authoritative information sources from academic journals that can be used to effectively address the author’s hypothesis.
	2	4-6	The author includes a clear hypothesis – that a lack of sleep negatively affects college students’ grades.
Research Plan: <i>Planning, conducting, and describing an experiment or study</i>	2	7-21	The work sample presents a basic questionnaire and sampling procedure that can be used to address the hypothesis.
	5-6		The work sample identifies sample, timeframe, and data collection limitations that could affect replicability.
Results and Interpretation: <i>Describing and interpreting results in relation to the hypothesis</i>	1-6		The work sample demonstrates thoughtful analysis and integration of evidence from reading materials to support the hypothesis.
	1-6		The author includes a simple, but effective evaluation of sources and statistical methodology.
	6	8-14	In the conclusion, the author suggests areas for further research and study as a result of the findings from this initial investigation.
Communication: <i>Using subject appropriate language and considering audience</i>	1-6		The work sample uses subject-specific vocabulary and language with few errors (i.e. correctly uses terminology such as convenience sample, positive correlation, statistically significant).
Organization: <i>Structuring main ideas and incorporating supporting information</i>	1-6		The work sample uses a discipline-appropriate structure with a clear introduction, conclusion, transitions, and supporting information that is suitable for the statistical report.
	3-4		The graphics are presented clearly in tables and graphs with accurately labeled axis.
Accuracy: <i>Attending to detail, grammar, spelling, conventions, citations, and formatting</i>	1-6		The work sample demonstrates great attention to detail with almost no errors in spelling, punctuation, and grammar.
	1-6		Citations are included throughout paper, though with some inconsistency.
	7	1-15	All sources cited are included in References section at end of paper.