

Psych sleep deprivation and academic performance in



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PSYCH 240 R e s e a r c h P r o p o s a l PSYCH 240 Lynnette Molitor
11/5/2017

1. The Quality of sleep and the Impact of Academic Performance in College Students 2. In this research proposal, I chose an experimental method since in experimental designs causality can be proved. The goal of this study is to assess the association between sleep deprivation and academic performance in college undergraduate students using registry-based academic grades (letter grades). Due to this research being conducted in an experimental method (effects of the independent variable on the dependent variable are collected and analyzed for a relationship) a quantitative approach will be conducted since final grade for each student will be collected at the end of the semester and assessed.

The quantitative data that will be collected and analyzed are the student's letter grades. 3. This research study will examine whether sleep deprivation affects the academic achievement of undergraduate university students attending NSC and test whether sleep variables emerged as significant predictors of succeeding academic performance.

The goal of this study is to investigate if sleep deprivation will cause low academic performance in undergraduate students. If students are sleep deprived then they will have a lower academic performance compared to students who are not sleep deprived. 4. APA Citation 1 and summary. Sleep impacts mental functioning and therefore correlates to the impact of undergraduate student's performance on exams and consequently the grades they received. The quality of sleep a student's experience in a 24 hour time frame directly correlates with physical health, emotional state, and mental functioning/processing. Cognitive performance is at risk because of <https://assignbuster.com/psych-sleep-deprivation-and-academic-performance-in/>

students failing to receive adequate sleep; cognitive performance decrease when less than 7 hours of sleep is obtained in a day for young adults.

Students receiving inadequate sleep are generally less attentive and cannot concentrate as well; thus resulting in a slowed and sluggish cognitive processing that affects academic performance.

Inadequate sleep also hinders normal functions within brain structures which are vital to cognitive processes. One of the most impacted structures in the brain that is significantly affected is the prefrontal cortex. The prefrontal cortex is responsible for day to day functions that involve speech, recollection, logic, reasoning, and creativity.

This study demonstrated how lack of sleep impacts cognitive performance in a negative way if a student is receiving inadequate amounts of sleep. This information helped me understand what lack of sleep does to the brain and structures in the brain that are vital for performing well on exams. Howard, H. (2016). Sleep and academic performance in later adolescence: Results from a large population-based study. *Journal of Sleep Research*, 25(3), 318-24. doi: 10.

1111/jsr.12373 APA Citation 2 and summary. Few studies have explored sleep habits in populations of students who are pursuing healthcare degrees and careers. Those studies which have been explored found sleep complaints were common in medical students and poor sleep habits were correlated with changes in academic performance. Regardless of a student's academic pursuit, sleep is a vital necessity for people to live a healthy lifestyle in which they can function well and think properly. It helps with memory consolidation,

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learning, decision making, and critical thinking. In this article, among finding sleep deprivation causes cognitive hindrance, they also found that sleep deprivations significantly impact a student's ability to perform successfully in their classes.

This is evident through the students' GPA's. Researchers in this study reported that students that who had slept about 9 hours or more within a 24-hour time frame had higher grade point averages compared to students that only sleep about 6 hours or possibly less within a 24-hour period. Student receiving less amounts of sleep also have a tendency to show signs of nervousness, anxiousness, more neurotic, prone to hallucinate, and displayed less creativity.

The information in this article helped me understand how sleep deprivation impacts the student's grades. Kelly, W., Kelly, K., & Clanton, R. (2001). The relationship between sleep length and grade-point average among college students. *College Student Journal*, 35(1), 84. APA Citation 3 and summary.

This research study included subjects that had some sort of sleep disorder in contrast to subjects that had a depressive disorder. The subjects that constituted with sleep disorders secondary to other potential contributing factors such as mental illness, possible factors contributing to the environment were exempted from this study. Depression is associated with sleep disturbances, not only qualitatively, but also quantitatively. Sleep disturbance arises only after a critical level of depression is reached, and depression of varying severity may selectively affect different sleep parameters. My research proposal is assessing the affects of sleep

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deprived students and their grades, depression was not incorporated. This article suggests that perhaps lack of sleep could be due to depression.

It was something that I had not considered as to why a student may be not sleeping and it is a factor that could be contributing to the low academic performance. This study did emphasize on the importance on the risk of cognitive performance if a student is receiving inadequate amounts of sleep. This information had great research about how sleep does not just affect a clinically diagnosed depressed individual but also on a normal individual who is sleep deprived and how they may feel depressed even though they are not clinically diagnosed. Gupta, R., Dahiya, S.

, & Bhatia, M. S. (2009). Effect of depression on sleep: Qualitative or quantitative? *Indian Journal of Psychiatry*, 51(2), 117-121. <http://doi.org/10.4103/0019-5545.49451>

5. For this research proposal, I chose an experimental method. This research will test whether sleep deprivation causes low academic performance. Sleep deprivation is also a variable that can be easily manipulated in the experiment since there will be a control group receiving normal amounts of sleep and an experiment group that will be receiving less than 6 hours of sleep. The hypothesis of this study is if students are sleep deprived then they will have a lower academic performance compared to students who are not sleep deprived.

The target population will be students whom are randomly selected that attend Nevada State College. Most individuals believe in a patterned lifestyle, in this case how humans should sleep at night and should work or attend <https://assignbuster.com/psych-sleep-deprivation-and-academic-performance-in/>

school in the daytime. This cycle of sleep and activity has been considered the only "normal" pattern for humans especially humans still developing.

However, for a student attending a university in pursuit of further education this is not always the case. Students must work hard at maintaining grades and set strict priorities of their day to day activities. If activities that were meant to be done during the day are not complete then the duration of completing the activity seems into the time frame of when sleep should be obtained. College campuses encompass a lot of social and academic experience sleep and rest are at times a very low priority for students. From demands of classes, not having a parent set a curfew, and stresses that prevent students from getting a full night's rest contribute to sleep deprivation which in turn affects academic performance. 7.

This sample will be randomly selected undergraduate, degree-seeking students that attend Nevada State College. College level education is a very challenging experience since students will sacrifice sleep and prioritize class work. This research will determine how much of an impact sleep has on learning, the result could potentially 8. The independent variable is amount of sleep (hours per night) that the student is obtaining. It is very hard to control what a participant does unless it happens in a lab. Participants will get checked in with through visitation or a random phone call every so often to avoid this issue. This is the independent variable since this is the variable being manipulated. The control group will receive 8 hours of sleep and will be monitored by a fit bit.

The experiment group will receive less than 6 hours of sleep also monitored by a fit bit. 9. The dependent variable is academic performance. Since the independent variable is the amount of sleep in hours a student is receiving, academic performance is dependent upon the amount of sleep being received. Academic performance will be influenced and impacted if students do not receive adequate amounts of sleep. The goal of this study is to measure the student's academic performance based on the letter grade received. 10.

Students will also be monitored with a fit bit that shall be worn the entire duration of the study. This will allow a better data collection of the students sleep patterns. A Fitbit device uses technological software called a 3-axis accelerometer that monitors and follows motions made during daily activity. The device provides very detailed information consisting of patterns of movement that are either intense such as working out or less intense such as sleeping. An individual sleeps versus when the body is active.

The Fitbit also has another software installed called PurePulse® which monitors the individual's heart rate. Based on the heart rate it is another method to make it clear and easy to differentiate when an individual is sleeping versus when they are awake and active. 11. The data collected of sleep monitored will be graphed by the Fitbit software for each participant. The Fitbit was to record sleep and run a correlational study will be done to interpret the results thus determining the relationship of sleep and academic performance. Correlational studies are used in psychology to search for a relationship between two variables. Three possible results of a correlational study can be obtained..

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A positive correlation of variables, a negative correlation of variables, and no correlation at all of variables. To measure the strength of the correlations, a correlation coefficient will be used. The strength of the correlation will range from -1.00 to $+1.00$.

In this study, if the correlation coefficient becomes close to $+1.00$, these results will indicate a very strong positive correlation between sleep (amount of sleep in hours) and academic performance (the letter grade received). If results steer more toward -1.00 then this is a strong negative correlation.

If the correlation coefficient is 0 then there was no correlation between the variables. 12. There are certain limitations that should be taken in consideration. Researchers will be unable to control the time and day the students are assigned assessment tasks or any written exams.

Other contributing factors that should be considered is personality that is academically conscious, this factor is a strong predictor of academic achievement. Socioeconomic status was not taken into consideration neither was class attendance. This study did not consider if students nap sometime during the day or take medication (homeopathic or over the counter supplements) use that may induce sleep which would significantly affect the results. 13.

The manipulation of sleep could potentially be harmful to participants in this research study; however, it is no more harmful than they would experience in their lifestyle as college students willing to sacrifice sleep to succeed academically. When the sleep subjects are called for their check in it will not be the same individual always calling. The computers will run diagnostics on

the Fitbit and will be recorded in the computer systems data. 14.

Students who received more sleep passed their exams with higher exam grades compared to students who failed most of their exams. Students receiving more amounts of sleep on weeknights and weekends will score higher than students that did not.

When examining each sleep group the percentage of student who did not score high or did not perform well were receiving less than 6 hours of sleep on weekdays and weeknights. Among students receiving the full 8 hours of sleep showed an increased improvement in academic achievement grades and GPA were higher in the group reporting a better sleep quality. Factors that contribute to adequate sleep are the quality of sleep, the amount, and the sleep regimen and are associated with better exam scores. The results have strong implications that some sort of sleep education or program should be incorporated to promote the student body's health as well as their academic performance.