

# [Psych sleep deprivation and academic performance in](https://assignbuster.com/psych-sleep-deprivation-and-academic-performance-in/)

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

The quantitative data that will be collectedand analyzed are the student’s letter grades. 3.  Thisresearch study will examine whether sleep deprivation affects the academicachievement of undergraduate university students attending NSC and test whethersleep variables emerged as significant predictors of succeeding academicperformance.

The goal of this study is toinvestigate if sleep deprivation will cause low academic performance in undergraduatestudents. If students are sleep deprived then they will have a lower academicperformance compared to students who are not sleep deprived.   4.   APACitation 1 and summary. Sleep impactsmental functioning and therefore correlates to the impact of undergraduatestudent’s performance on exams and consequently the grades they received. Thequality of sleep a student’s experience in a 24 hour time frame directly correlateswith physical health, emotional state, and mental functioning/processing. Cognitive performance is at risk because of students failing to receive adequatesleep; cognitive performance decrease when less than 7 hours of sleep isobtained in a day for young adults. Students receiving inadequate sleep aregenerally less attentive and cannot concentrate as well; thus resulting in aslowed and sluggish cognitive processing that affects academic performance.

Inadequatesleep also hinders normal functions within brain structures which are vital tocognitive processes. One of the most impacted structures in the brain that issignificantly affected is the prefrontal cortex. The prefrontal cortex isresponsible for day to day functions that involve speech, recollection, logic, reasoning, and creativity.

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

1111/jsr. 12373  APA Citation 2 and summary.  Few studieshave explored sleep habits in populations of students who are pursing healthcare degrees and careers. Those studies which have been explored found sleepcomplaints were common in medical students and poor sleep habits werecorrelated with changes in academic performance. Regardless of a student’sacademic pursuit, sleep is avital necessity for people to live a healthy lifestyle in which they canfunction well and think properly. It helps with memory consolidation, learning, decision making, and critical thinking. In this article, among finding sleepdeprivation causes cognitive hindrance, they also found that sleep deprivationsignificantly impact a student’s ability to perform successfully in theirclasses.

This is evident through the students’ GPA’s. Researchers in this studyreported that students that who had slept about 9 hours or more within a 24-hourtime frame had higher grade point averages compared to students that only sleepabout 6 hours or possibly less within a 24-hour period. Student receiving lessamounts 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 helpedme understand how sleep deprivation impacts the student’s grades.   Kelly, W., Kelly, K., & Clanton, R. (2001). The relationship between sleep lengthand grade-point average among college students. College Student Journal, 35(1), 84.  APA Citation 3 and summary.

Thisresearch study included subjects that had some sort of sleep disorder incontrast to subjects that had a depressive disorder. The subjects thatconstituted with sleep disorders secondary to other potential contributingfactors such as mental illness, possible factors contributing to theenvironment were exempted from this study. Depression is associated with sleepdisturbances, not only qualitatively, but also quantitatively. Sleepdisturbance arises only after a critical level of depression is reached, anddepression of varying severity may selectively affect different sleepparameters. My research proposal is assessing the affects of sleep deprivedstudents and their grades, depression was not incorporated. This articlesuggests that perhaps lack of sleep could be due to depression.

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

, & Bhatia, M. S. (2009). Effect ofdepression on sleep: Qualitative or quantitative?             Indian Journal of Psychiatry, 51(2), 117–121. http://doi. org/10. 4103/0019-5545.

49451 5.  For thisresearch proposal, I chose an experimental method. This research will testwhether sleep deprivation causes low academic performance.  Sleep deprivation is also a variable that canbe easily manipulated in the experiment since there will be a control groupreceiving normal amounts of sleep and an experiment group that will bereceiving less than 6 hours of sleep. The hypothesis of this study is ifstudents are sleep deprived then they will have a lower academic performance comparedto students who are not sleep deprived 6.

The target population will be studentswhom are randomly selected that attend Nevada State College. Mostindividuals believe in a patterned lifestyle, in this case how humans shouldsleep at night and should work or attend school in the daytime. This cycle ofsleep and activity has been considered the only “ normal” pattern for humansespecially humans still developing.

However, for a student attending auniversity in pursuit of further education this is not always the case. Students must work hard at maintaining grades and set strict priorities oftheir day to day activities. If activities that were meant to be done duringthe day are not complete then the duration of completing the activity seemsinto the time frame of when sleep should be obtained. College campuses encompassa lot of social and academic experience sleep and rest are at time a very lowpriority for students. From demands of classes, not having a parent set acurfew, and stresses that prevent students from getting a full nights restcontribute to sleep deprivation which in turn affect academic performance.  7.

Thesample will be randomly selected undergraduate, degree-seeking students thatattend Nevada State College. College level education is a very challengingexperience since students will sacrifice sleep and prioritize class work. Thisresearch will determine how much of an impact sleep has on learning, the resultcould potentially    8.    Theindependent variable is amount of sleep (hours per night) that the student isobtaining. It is very hard to control what a participant does unless ithappens in a lab.  Participants will getchecked in with through visitation or a random phone call every so often toavoid this issue. This is the independent variable since this is the variablebeing manipulated. The control group will receive 8 hours of sleep and will bemonitored by a fit bit.

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

Students willalso be monitored with a fit bit that shall be worn the entire duration of thestudy. This will allow a better data collection of the students sleep patterns. A Fitbit devices use technological software called a 3-axis accelerometer that monitorsand follows motions mad during daily activity. The device provides verydetailed information consisting of patterns of movement that are either intensesuch as working out or less intense such as sleeping. An individual sleepsversus when the body is active.

The Fitbit also has another software installedcalled PurePulse® which monitors the individuals heart rate. Based onthe heart rate it another method to make it clear and easy to differentiatewhen an individual is sleeping versus when they are awake and active.  11.  Thedata collected of sleep monitored will be graphed by the Fitbit software for eachparticipant. The Fitbit to was to record sleep and run a correlational studywill be done to interpret the results thus determining the relationship ofsleep and academic performance. Correlational studies are used in psychology tosearch for a relationship between two variables. Three possible results of acorrelational study can be obtained..

A positivecorrelation of variables, a negative correlation of variables, and nocorrelation at all of variables. To measure the strength of the correlations, acorrelation coefficient will be used. The strength of the correlation willrange from  –1. 00 to +1. 00.

In thisstudy, if the correlation coefficient becomes close to +1. 00, these resultswill indicate a very strong positive correlation between sleep (amount of sleepin hours) and academic performance (the letter grade received). If resultssteer more toward -1. 00 then this is a strong negative correlation.

If thecorrelation coefficient is 0 then there was no correlation between thevariables. 12. Thereare certain limitations that should be taken in consideration. Researchers willbe unable   to control the time and daythe students are assigned assessment tasks or any written exams. Othercontributing factors that should be considered is personality that isacademically conscious, this factor is a strong predictor of academicachievement. Socioeconomic status was not taken into consideration neither wasclass attendance. This study did not consider if students nap sometime duringthe day or take medication (homeopathic or over the counter supplements) usethat may induce sleep which would significantly affect the results. 13.

The manipulation of sleep could potentially be harmfulto participants in this research study; however, it is no more harmful thanthey would experience in their lifestyle as college students willing to sacrificesleep to succeed academically. When the sleep subjects are called for theircheck in it will not be the same individual always calling. The computers willrun diagnostics on the Fitbit and will be recorded in the computer systems data.  14.  Studentwho received more sleep passed their exams with higher exam grades compared tostudents who failed most of their exams. Student receiving more amounts ofsleep on weeknights and weekends will score higher than students that did not.

When examining each sleep group the percentage of student who did not scorehigh or did not perform well were receiving less than 6 hours of sleep onweekdays and weeknights. Among student receiving the full 8 hours of sleepshowed an increased improvement in academic achievement grades and GPA werehigher in the group reporting a better sleep quality. Factors that contributeto adequate sleep are the quality of sleep, the amount, and the sleep regimenand are associated with better exam scores. The results have strongimplications that some sort of sleep education or program should beincorporated to promote the student body’s health as well as their academicperformance