The Relationship Between Stress and Sleep Quality Among IPFW Students

Chenghao Gan

Indiana University - Purdue University Fort Wayne

Follow this and additional works at: http://opus.ipfw.edu/stu_symp2016

Recommended Citation

http://opus.ipfw.edu/stu_symp2016/44
The Relationship between Stress and Sleep Quality among IPFW Students
Chenghao Gan
Faculty Mentor: Dr. Kim Lloyd
Sociology Department
Indiana University-Purdue University Fort Wayne
Spring 2016

Abstract
Sleep quality impacts our daily life performance and is influenced by multiple factors like the amount of stress we are under. The purpose of the current research is to empirically examine the influence of stress on the amount of time that IPFW students sleep. Specifically, I test the hypotheses that higher stress levels decrease the amount of sleep that students get and also that class standing increases students' reported sleep levels. Multivariate regression analyses of 491 undergraduates support the hypothesis that higher stress levels decrease the hours that students devote to sleep. However, seniors and students with a higher GPA report experiencing significantly less time devoted to sleep and less stress than their fellow classmates.

Introduction
How to define poor sleep
• Inadequate sleep can take on many forms, including restricted sleep length, poor sleep quality, and the impact of sleep disorders.
• Poor sleep quality is a broader label for range of sleep issues, including both qualitative and quantitative aspects (Ellis, et al., 2014).

Why Sleep matters
• Poor sleep quality may negatively impact academic performance.
• Bad sleep quality associates with a wide range of negative outcomes, such as health, and emotion. (Ahrberg, et al., 2012)

Why Stress matters
• Stress might effect student’s academic study ability (Kuem, et al., 2012).
• Excessive stress causes long-term and short-term disability in the various human systems, and activates the defense system of the central nervous system.
• Four out of ten college students report that they feel stressed often and one out of five say they feel stressed most of the time. One out of four students report experiencing daily stress and one in ten report thoughts of suicide (mtU, 2008).

Sleep and Stress
• The immune system is also influential in the relationship between stress and sleep. IL-1β or TNF increase, the sleep will increase, however, stress might decrease IL-1β or TNF (Kuem, et al., 2012).

Methods
• Quantitative, exploratory, descriptive, and correlational.
• Original questionnaire.
• Areas measured: Sleep length, Self-report stress level, GPA, class standing, credit hours, reasons that cause stress.

Participents
• IPFW Undergraduate students

Data Collection
• Data collectors separately handed out 637 surveys to 637 college students at multiple locations, totaling 637 surveys and participants.
• 146 participants had missing data or incomplete data and was not included in this survey, the final sample size was 491 students.

Hypotheses
• H1: The higher the stress that an IPFW undergraduate student feels, the less sleeping time they will report during the school week.
• H2: The higher the class standing of an IPFW undergraduate student, the less sleeping time they will report during the school week.

Data Analysis
• STATA

Results
• Average stress level reported by participants is 6.56.
• Average number of sleep hours reported by participants is 6.68.
• Grades are the most frequently reason that cause stress.

Discussion and Conclusion
• H1 was accepted, holding the class standing senior and credit hours constant, IPFW undergraduate students’ average estimated sleeping hours would likely reduce 12.81 percentage points for every one-unit stress level increase.
• IPFW undergraduate students’ average estimated sleeping hours will likely reduce by 5.8 percentage points for each one credit hour they enrolled this semester.
• H2 was rejected
• IPFW undergraduate students’ average estimated stress level will likely decrease by 23.88 percent for each one point GPA increase, holding Senior constant

Limitations
• Responses based on self-report
• Weak correlations possibly due to small sample size.

Reference