An Empirical Investigation of NNMC Students’ Reports of Stress, Health & Cognition the First Weeks Prior to Midterms

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ABSTRACT

Have you ever wondered if high levels of stress and poor nutrition affects cognition? Pessoa, (2008) Well that is my area of interest. What I want to know is whether high levels of stress and poor nutrition affects how one performs during midterms or finals, as well as some of the contributing factors. In order to obtain data for this topic, a survey was conducted on three non-biased courses here at NNMC. Results from the surveys conducted, revealed that 100% of the 27 students who participated in this study (N = 27) did in fact experience high levels of stress. 82.96% complained that lack of sleep was one of the biggest contributors. 96.30% of the students surveyed were considered married and 88.89% have children. Further results revealed that making time to exercise, eat healthy, and getting enough sleep was a challenge.

INSTRUCTION

Studies have shown that high levels of stress can lead to short-term and long-term health problems. With that said, the reason for this exploratory purpose comes from the simple fact that I am curious to know whether stress and poor nutrition/health affects cognition during midterms, which in turn can affect how one performs during exams. Previous studies regarding stress, have revealed that emotions that are created during stressful events can trigger a response in the region of the brain, thus creating a fearful internal environment, which can come in the form of failing on an exam during midterms. One article explains that, ‘Stress can be defined as a particular misbalance between individuals’ appraisal of environmental demands and their perceived resources to cope with those demands (Lazarus & Folkman, 1984).

HYPOTHESIS

When college students (participants) feel the pressures of stress during midterms and finals their health and cognition are affected (variables). And as high levels of stress increase, health and cognition worsen (predicts effect). 

- x↓=y↓ Low levels of stress during midterms and finals has no effect on health and cognition.
- x↑=y↑ Severe stress during midterms and finals has no effect on health and cognition.
- x↑=y↓ Severe stress during midterms and finals affects health and cognition.
- x↑=y↑ Low levels of stress during midterms and finals affects health and cognition.
- x↑=y↑ Low levels of stress during midterms and finals affects health and cognition.
- x↑=y↑ There is no real evidence relating stress, health and cognition as the only factors affecting one another in this scenario.

THEORY

High levels of stress from pressure to perform well during midterms and finals can cause a drop in health to deteriorate. Becoming ill during midterms or finals can affect cognition, which in turn can affect how one performs during exams.

DATA COLLECTION & METHODS

Sample results

- I administered the survey (Appendix A), to 27 NNMC students enrolled in three different non-biased convenient sample classes at NNMC and all three classes surveyed were done a few weeks prior to midterms.
- The table below (Q7 Table 1, pie chart) describes the percent differences of gender within the sample— which is what percent of the individuals are male and what percent individuals are female. (N = 27)
- [Table with data]
- (N = 26) and missing data is N=1.

Q7 Table 1: Sample results. What is your gender?

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>16</td>
<td>60%</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>34%</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

DATA ANALYSIS & FINDINGS

Independent variable

- See Table 3a below, which displays univariate descriptive of the independent variable measuring the concepts of whether students who workout more during midterms receive higher achievement. The questions were measured on a dichotomous scale of more or less. All 28 of the respondents answered this question which means a missing data of none exists.
- Table 3a Independent Variable: “Q2 How much does the following apply to you”.

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>More</td>
<td>20</td>
<td>71%</td>
</tr>
<tr>
<td>Less</td>
<td>8</td>
<td>29%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>More</td>
<td>19</td>
<td>68%</td>
</tr>
<tr>
<td>Less</td>
<td>9</td>
<td>32%</td>
</tr>
</tbody>
</table>

CONCLUSION

The results of the surveys conducted revealed that the students I surveyed here at NNMC were female and between the ages of 16 and 25. The results also revealed that there are many stress triggers that individuals face, but the majority of them are common to everyone regardless of age differences. The added stresses that differed came from individuals who were married or had children. It also seemed as though finding time to meditate, eat healthy, and exercise prior to midterms were difficult for many of the students surveyed because the time they had throughout the day was spent doing extra homework, studying, and stressing over exams.

I reject the null hypothesis of my findings currently because I did not have a specific correlation to test whether stress was the main contributor that affected health and cognition or whether stress and poor nutrition affects cognition.

Suggestions for future research is recommended on the basis that this is a broad area of study that was conducted on a large group difference. Perhaps narrowing the study somewhat would aide in more specific findings.

The limitations of my data include difficulty in measuring the cause.

Directions for future research would entail studying two specific age groups, both female and male individuals. Studying specific stress triggers, specific nutrition habits, specific health regimens, all prior to midterms and alter to compare results.

ACKNOWLEDGEMENTS

I would like to thank everyone that participated in this research, especially all the professors who allowed me to conduct surveys in their classrooms, and all the staff at NNMC who made all the resources possible to complete this project. A special thanks goes out to:

- Dr. Stephanie Amadeo Marquez
- Dr. Robert Beshara
- Professor Mateo Frazier
- Professor Margaret Franke

REFERENCES


ETHICS

Ethics is very important in today’s society. It is also quite easy for one to encounter a lawsuit if ethics are not met. With that said, in order to conduct my research as ethical as possible, I administered anonymous surveys to several non-biased convenience sample courses here at NNMC where I received consent from the instructors and students who participated prior to administering the surveys. I also made sure that I stated the purpose of my research and mentioned that all information given would be kept confidential. In addition, by filling out the survey’s students acknowledged that this was the case and any questions not understood or not willing to be answered could be left blank. Furthermore, I did not add anything to my surveys that could offend or discriminate anyone.