Effect of Sleep Quality and Physical Activity on Anxiety in Adults
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**Abstract**

Anxiety disorders are the most common form of mental illness in the United States. 18.1% of individuals 18 and older are reported to have been affected by anxiety. An increase in physical activity and an improvement in sleep quality have been found to be effective in the management of anxiety. This study was conducted to find correlations between anxiety, sleep quality, and physical activity. Adults (n=24, male and female) were recruited for the study through convenience sampling. Participants completed a series of questionnaires that evaluated their mood, exercise-habits, and sleep quality. Pearson Correlation Coefficients were performed to determine a correlation between the three variables. The correlation between anxiety and physical activity was statistically significant (r = -.42, p < .02, (r^2=0.18), df= 21). The correlation found between anxiety and sleep quality were also statistically significant (r = -.48, p < .02 (r^2=0.24), df= 22). The findings from both Pearson Correlation Coefficients indicated that there was a moderate association between anxiety, physical activity, and sleep quality. The results coincided with existing research on anxiety. Participants’ physical activity habits and quality of sleep were reflective of adults who reported low to moderate levels of anxiety. Due to the limited nature of the study, further research and replication of the study may yield results that are more representative of the general public.

Anxiety and Physical Activity Correlation

$$y = -0.711x + 6.2491$$

$$R^2 = 0.417$$

Anxiety and Quality of Sleep Correlation

$$y = -0.6292x + 8.8183$$

$$R^2 = 0.3352$$

**Discussion**

The findings suggested that sleep quality and physical activity had a moderately positive effect on anxiety levels. Results showed a significant inverse relationship between anxiety and physical activity.

The correlation between anxiety and sleep quality also yielded a significant inverse relationship between the two variables.

The relationship between anxiety and sleep quality has a weak positive correlation because the correlation coefficient (.24) is far from +1.

The correlation between anxiety, sleep quality, and physical activity supported the original hypotheses that a decrease in sleep quality is associated with higher anxiety levels and frequent exercise is associated with lower levels of anxiety. The results concurred with existing research examining how anxiety is affected by physical activity and sleep quality.

**Conclusions**

I would like to thank Dr. James Amneti for his guidance and feedback over the course of this study. The encouragement provided by him and Dr. Ping Johnson are greatly appreciated. I would also like to thank my family for their support throughout this experience.

**References**


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