

Examination of the Impact Exercise has on Mental Health

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Introduction

- Mental health and exercise is a relationship that is being researched more throughout the years. While there seems to be some sort of common knowledge that exercise has its many benefits, a lot of research does not give a provide a definite and exclusive relationship between the mental health and exercise.
- There has been some research to connect a relationship exercise has on several mental disorders, but these are hard to connect because of all the bias whether from self selected volunteers or fluctuations in the participants mental health.
- Mental health is hard to pinpoint to one specific issue because it different from person to person. However, there is still the need for further research to compare this relationship with exercise and mental health because of its many seen benefits.

Research Question:

Does the more a person exercises allow for that person to have a more overall positive mood?

Literature review

- Exercise allows for the increase of neurotransmitters production and increase in endorphins. Research shows how inflammation disorders contribute to poor mental health, and exercise has shown to lower inflammation (Mikkelsen et al., 2017).
- Some studies observed regular exercise frequency and its correlation to number of bad mental health days. However, the method of asking participants their mental health status the past 30 days is quick and effective, however it does not reflect their mental health on a continuum (Elbe et al., 2018).
- While studies show that exercise reduces symptoms and aids in treatment of many mental health disorders, there is still a need to find evidence of prescription of exercises such as the type, duration, frequency, and intensity (Deslandes, 2014).

Hypotheses

Ha: There will be a significant increase in ratings of positive moods when there is an increase in amount of times exercised in a week.

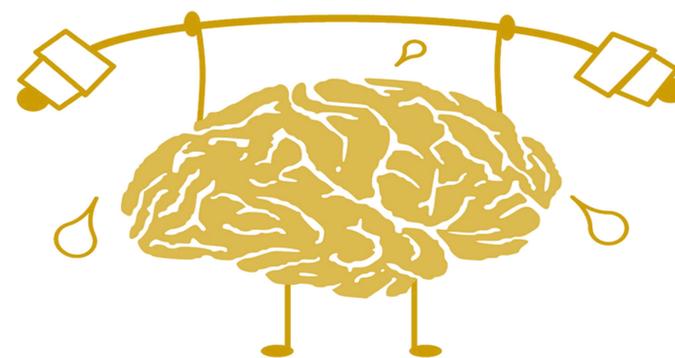
Hb: There will be a significant increase in ratings of positive moods when there is an increase in duration of exercises.

H1: There will be a significant increase in ratings of positive moods with high intensity exercises.

Method

This research was done by making a 7-question survey which included the following questions:

What age range do you fall under?, what do you identify yourself as?, how often do you exercise in a week?, how long do you exercise in a day?, what types of activities do you do for exercise?, how do you feel after a work out?, and rate how often you experience each mood in your daily life (1 being less frequent, 5 being most frequent). The survey was left live for over a week and a total of 37 participants answered these questions.



Participants

Females	22
Males	15
18-25	33
25+	2
Prefer not to say age	2

Results

- **Ha:** **X** There was no statistically significant relationship between mental well being and the amount of times exercised per week, $F(3,25) = 2.330$, $p = 0.099$.
- **H1:** **X** There was no statistically significant relationship between mental well being and the type of exercise done, $F(3,22) = 2.137$, $p = 0.125$.
- **Hb:** **✓** There was a statistically significant relationship between mental well being and the duration of exercise done in a day, $F(4,24) = 3.097$, $p = 0.034$.

Discussion

- The results from this study shows that there was not a statistically significant enough relationship between mental health and exercise. Specifically, there was no significant relationship between mental wellbeing and amount of times exercised per week, as well as the type of exercise. This shows that amount of time exercised, and types of exercise don't predict a more positive mental well being.
- There was only a significantly significant relationship between mental well being and duration of exercise done in a day. This showed that with an increase in amount of time exercises in a day predicts a more positive mental well being.
- While these results show that there was not much of a significant relationship, there are many other factors that influence individuals differently, such as genetics, diet, and environment. It is important to consider these factors when thinking of this relationship.
- Limitations of this study includes participants not answering honestly or fully answering all questions. Not as many participants took the survey whether it be because of lack of incentive or because they are busy.
- Future research should take into account other aspects that play roles in this relationship between exercise and mental health such as genetics, diet, and environment.

References:

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- Mikkelsen, K., Stojanovska, L., Polenakovic, M., Bosevski, M., & Apostolopoulos, V. (2017). Exercise and mental health. *Maturitas*, 106, 48-56. doi: 10.1016/j.maturitas.2017.09.003