The science of exercise and happiness

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1/30/26

The science of exercise and happiness

In my science fair project, I want to determine whether engaging in physical exercise increases endorphins levels and leads to improved mood. Does exercise increase the release or endorphins in the brain then leading to improved mood. This is important because it can improve mood, and help you feel better.

Method

To answer the research question effectively, the experiment was organized including the materials, participants, and step by step procedures. In this experiment I want to determine whether engaging in physical exercise increases endorphins levels and leads to improved mood. Does exercise increase the release or endorphins in the brain then leading to improved mood.

This section outlines the specific materials and equipment used to carry out the experiment and gather reliable results. First you need Exercising shoes, you can use any other shoes but these are recommended for less foot pain. Next you need proper clothing such as a shirt , shorts , and socks for the top and shorts. You can use dry fit because it will help your body stay cool unlike normal cotton tops. Then you will need a speaker you don't have to but I'm going to use one because it helps me exercise. Finally, you're going to need equipment to do most of the exercises.

This section outlines the specific procedures used to carry out the experiment and gather reliable results. First choose the type of music you want to listen to help you get into the exercise. Next, choose what type of workout you are going to do for me. I used crossfit. Then you are going to choose the goal or time that you are willing to do. I did 30 minutes with a 30 minute break in between . You can choose how many days you are going to do it. I did it for 10 days. Finally ask them how they feel and tell them to rate on a scale of 1 to 10 how better they felt.

In this experiment I determined whether exercising for a week increases mood or keeps it the same and yes according to my project and several data and yes it does improve mood. My hypothesis was correct. This is because I followed every step as you can see. Based on my results exercise can lead to improved mood but some people prefer different exercises. If I were to conduct this experiment again I would do a different workout.

Results

This section presents the results of the experiment, including measures and observations recorded during each trial. My hypothesis was supported and led to mood increase. On the first trial subject the recursion was a 10 in feelings of increased mood after the workout. On the second trial subject the recursion was

a 8 in feelings of increased mood after the workout. On the third trial subject the recursion was a 10 in feelings of increased mood after the workout. On the fourth trial subject the recursion was a 10 in feelings of increased mood after the workout. On the fifth trial subject the recursion was a 2 in feelings of increased mood after the workout. On the sixth trial subject the recursion was a 9 in feelings of increased mood after the workout. On the seventh trial subject the recursion was a 1 in feelings of increased mood after the workout. On the eighth trial subject the recursion was a 7 in feelings of increased mood after the workout. On the ninth trial subject the recursion was a 3 in feelings of increased mood after the workout. On the tenth trial subject the recursion was a 10 in feelings of increased mood after the workout. In the end the average was 8.09.

Discussion

There have been similar experiments conducted regarding the topic of whether engaging in physical exercise increases endorphin levels and leads to improved mood. Nia Pavagadhi conducted an experiment on how endorphins relate to exercise. For her experiment, she tested if her participants' mood was improved during a gym class. She had each participant complete a survey at the beginning, middle and end of gym class. She then compared their results to determine if their mood changed as a result of a release of endorphins. In the end, her experiment was successful. People's endorphins were triggered. Some of the people's endorphins were not triggered giving a variety of results.

Darlene E. Jenkins and science buddies conducted an experiment on if exercise can make our brain work better. Studies show that exercise stimulates nerve cells to produce chemicals called neurotrophic factors that act like "fertilizer" for the brain. These proteins encourage brain cells to grow and to connect with other neurons. Other chemicals like adrenaline and noradrenaline are triggered during aerobic workouts and, at least in the short run, wake up the brain's processing systems. Their problem was that many people were having these problems, Sedentary lifestyles, MemoryBrain cortex, and Neurotrophic factors. And proved that yes it does help your brain work.

Two facts about my experiment is that one, the type of exercise you do affects your mood like if you do weights and you don't like doing it it won't be the same as if you do running and you love running you get more into it and have more fun. Lastly, listening to music helps your brain to get pumped and get into the exercise and have more fun releasing more endorphins and improving mood.

Based on the data collected, the hypothesis was supported because the experimental results matched the original prediction. Yes it was successful this is because. One, I followed all of my steps and procedures. Secondly, I made sure that everything was carried out correctly. My results proved that exercise does increase endorphin release and lead to improved mood. In the future I would like to test how our brain reacts to different types of workouts . If I do this experiment again, I will choose the group by experience category such as; high intensity workouts, hot yoga, strength training . Secondly, do a 1 minute recovery time within each workout. As you can see my results were right and matched my hypothesis which is does exercise lead to improved mood and increased endorphin release.

References

Pavagadhi, N. How does exercise affect endorphins? *Projectboard*. https://partner.projectboard.world/ysc/project/how-does-exercise-affect-endorphins

Darlene E. Jenkins, Ph.D., Science Buddies. Can Exercise Really Make Our Brains Work Better? *sciencebudies.org*. https://www.sciencebuddies.org/science-fair-projects/project-ideas/Sports_p011/sports-science/exercise-brain-body-connection

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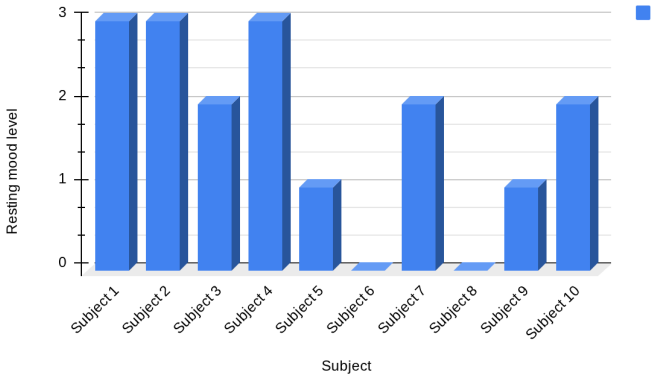
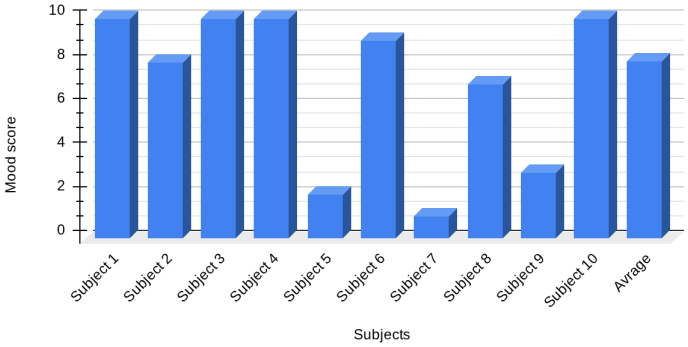
(Control) mood level through endorphin release



Mood level through Endorphin release