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Senior Independent Project

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The Effects of Exercise on Mental Health: Quarantine Edition

For my Senior Independent Project, I decided to do a project on the effects that exercise has on mental health. I felt this was appropriate during this time in which many people are struggling with mental health as a result of being in quarantine for so long and of not knowing when the pandemic will end. As some of my classmates and teachers already know, I have struggled with depression, among other things, from a young age. I was diagnosed with clinical depression in sixth grade and was put on antidepressants soon after. I have definitely had some days during the school year where I just could not bring myself to go to school because of how hopeless and apathetic I felt. I have sought help through therapists and psychiatrists and now know quite a few coping mechanisms for when these feelings get too intense. One of my favorites is called “opposite action,” which states that in times when you are having intense emotions that are coming up seemingly out of nowhere, do an action that corresponds with the emotion that is the direct opposite of your own. For example, the direct opposite of sadness is happiness. If you are incredibly sad out of what seems like nowhere, maybe go do something that makes you happy, like hanging out with friends. When I feel apathetic and numb, it takes a lot of effort to bring myself to do “opposite action,” but most of the time, I do try to go out with friends anyway. However, because of the pandemic, I have not been able to go out to see my friends since March 15th. This has had quite a negative impact on my mental health. I have spent most

days alone in my room, sleeping or just laying in bed and watching Netflix. While it may seem like I might have more time to complete assignments for school or pick up a hobby, to assume that I can just perform these actions completely ignores the very real obstacle that I, and many others who face similar issues, go through on a daily basis. One day, while I was still in bed, I thought to myself that there had to be something I could do to get me out of my depression. I went on TikTok and saw videos of people doing Youtuber Chloe Ting's "2 Weeks Shred Challenge". I remembered how one of the ways in which people promote exercise is by saying that it is good for your mental health as well as your physical health, so I decided to look into that and see what I could find. While I do not want to study exercise science in college, I do think this project will be useful in helping me learn other ways to cope with my depression. I look forward to sharing my findings with you.

Day 1, 5/14/20

Today was my first day of a two week exercise program. I did a basic full body cardio workout and an ab workout. I did not feel much of a long lasting difference in my mood. I did, however, feel a short lived sense of happiness when I finished the workout because I was proud of myself for having accomplished it. This is because when you exercise, one of the chemicals released is serotonin. Serotonin is a chemical that is in charge of willpower and delaying gratification.

According to *Psychology Today*, "decreased levels of serotonin can lead to an inability to create and act on well-formed plans. That can mean having difficulty finishing things, or feeling a little down, getting annoyed easily, or being unable to control your impulses." (Korb 2011). Because I

exercised, my brain gave off serotonin, which contributed to my short-lived happiness. We'll see what the next few days hold.

Day 2, 5/15/20

Today I did three workouts and ended up feeling absolutely exhausted. The workouts I did were a basic full body workout and two ab workouts. The workouts felt slightly easier than they felt yesterday, so I think I'm starting to get the hang of them. After doing the workouts, I convinced myself to do some homework instead of taking a nap. I found that I was more focused and motivated to get it done than I have been in a while. This may, in part, also be because grades are due tomorrow and tonight is the latest I am allowed to send in my work before my teacher no longer accepts it.

Day 3, 5/16/20

Today I did four workouts. I did a basic full body workout, two ab workouts, and a lower body workout. I must be building up some endurance because I find myself being able to last longer without losing my breath. Unlike yesterday, I did not feel too motivated to get ahead on schoolwork, but I did feel accomplished after exercising so much. I did, however, feel pretty happy and talkative today, so maybe this is working afterall!

Day 4, 5/17/20

I only had three workouts today, but they were each pretty intense. I did a full body cardio workout, an ab workout, and an arm workout. The first two workouts are the same every day and

I think I am getting better at the moves each time I do them. I am feeling very calm and content today. Tomorrow is an active rest day, so I think I will go on a long walk and see how that goes.

Day 5, 5/18/20

Today was an active rest day, so I went on a one-mile walk. Active rest days are important because, “your muscles need to rest and repair... Taking an active rest day will quicken your recovery,” (12minuteathlete.org 2013). I did feel somewhat tired afterwards, but not as much as I did during my other workout days, which is good because I am supposed to be resting in order for my muscles to build back up. I felt pretty average today, not particularly great, not particularly bad.

Day 6, 5/19/20

Today, I got back to doing my workouts. I had three today: a full body cardio workout, an ab workout, and a lower body workout. It was pretty intense, especially after taking a one day break, but I will admit that I felt better about myself afterwards. I also felt more motivated to catch up on some late assignments.

Day 7, 5/20/20

Today I had four workouts: a full body cardio workout, two ab workouts, and an arm workout. I think I am noticing some improvement in my overall mood as a result of these workouts so far. It

might be because I feel like I did something productive after doing them. I do still feel tired after doing them, but I suppose I'll always feel that way, otherwise it wouldn't be a workout.

Day 8, 5/21/20

I had four workouts again today. I had my full body cardio workout, as usual, two ab workouts, and a lower body workout. Afterwards, I took a shower and then got back to working on some late homework because, according to HelpGuide, "exercising regularly is one of the easiest and most effective ways to reduce the symptoms of ADHD and improve concentration, motivation, memory, and mood," (Robinson 2019). I discovered that doing my workouts before doing homework actually does help to improve my focus! I might continue trying this out even after I am done with this project.

Day 9, 5/22/20

Today was an active rest day, so I went on an hour-long walk around my neighborhood. I didn't have the same sense of accomplishment as I normally do after my workouts, but it was nice to be able to rest after several days of workouts in a row.

Day 10, 5/23/20

It was a bit difficult to get motivated to workout again today since I didn't workout yesterday. I think finding motivation to do this everyday is definitely the most challenging part of this project. Nonetheless, I did four workouts today, including the usual full body cardio workout, an ab workout, a lower body workout, and an arm workout. Unfortunately, I did not feel any better

after doing this. After looking further into the effects that exercise has on mental health, I discovered that, “if you try to do too much exercise, or feel forced into doing it, it may not have the right effect,” (Korb 2011). I guess because I am forcing myself to do these workouts for my project, they are not having the positive effect that I intended them to have.

Day 11, 5/24/20

Today I only had two workouts. They were the usual full body cardio workout and ab workout. I know I said I would probably continue doing these even after I ended this project, but it is honestly really difficult to find the motivation to do this everyday. Currently, the main things motivating me are this project and the fact that I’m almost done. My mood was okay today; I wasn’t particularly happy or unhappy.

Day 12, 5/25/20

Today I had four workouts, which was definitely a shift from only having two workouts yesterday. The workouts I had were the usual full body cardio workout, two ab workouts, and a lower body workout. I was honestly a bit unmotivated to do these today and I really wanted to give up since I had only done two workouts yesterday. I went on anyway because I have made so much progress these past few days and I don’t want to give up now, especially when the end is so close. My overall mood today was just fine.

Day 13, 5/26/20

Today I had three workouts, starting with the usual full body workout and ending with two ab workouts. I am kind of happy today because I know tomorrow is my last day of doing these workouts! I am able to see a small difference in my ability to focus on conversations, but I am not sure if this is necessarily due to my workouts.

Day 14, 5/27/20

Today is my last day of this two week journey! My workouts today consisted of the usual full body workout, an ab workout, a lower body workout, and an arm workout. While I am definitely in much better physical shape than I was when I first started this, I am not sure if I have really made any permanent changes in terms of mental health. I guess I should not have expected any permanent change to come out of only two weeks of exercise, especially when sources like *Harvard Health* say, “for most of us, the real value is in low-intensity exercise sustained over time,” (Harvard Health Publishing 2013). Because I have not been engaging in any particularly low-intensity workouts, I do not think my results were as good as they could have been. Another reason would be that I cannot just stop doing these exercises when I think I feel better, because the point is to do the exercises consistently.

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