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Article

The effect of sports on teenagers' depression symptoms during the COVID-19 pandemic

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SUMMARY

Throughout 2020 and 2021, many student teenagers were unmotivated and miserable. News of death, disease processes, alienation from society, and active use of social media affected people's mental health severely during the pandemic. Some schools provided student with the opportunity to do sports online. In this study, we sought to investigate the relationship between doing sports and depressive symptoms during the pandemic as we observed many students appeared unmotivated and wanted to see if any factors made a difference. We collected Beck Depression Inventory (BDI) scores from students, aged 15 and 16 years, and compared the data to find a relation. We hypothesized that students who did not participate in sports during the pandemic would have higher BDI scores and a higher level of depressive symptoms than students who did participate in sports. We observed a significant correlation between depressive symptom levels and sports status. In our study we saw that 9 out of 10 students with severe depression symptoms did not do sports. We found no significant relationship between depressive symptoms and either gender or place of exercise. Our results show that doing sports can be a good solution for adolescents to cope with the negative effects of quarantine and general depression.

INTRODUCTION

Pandemics have occurred in different periods throughout human history exposing people to economic, social, or psychological negative effects (1). During the COVID-19 pandemic, people had to endure negative events in their daily lives and/or online environments (2). COVID-19, by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), was first reported on December 2019 (3). Between mid-2020 and the beginning of 2021, many people were mandated to isolate themselves due to public health concerns (4). During the COVID-19 pandemic period, people experienced mental health problems as a result of variables such as the news that updated the number of deaths every hour, fake scenarios on social media, witnessing the death of people they care about, and social isolation (5).

Just as COVID-19 presents with different symptoms in individuals, mental health problems presented differently in everyone during the early stages of the pandemic. During pandemics, depression, anxiety, loneliness, and aggression are common among adolescents (5). It is thought that adolescents are more negatively affected psychologically than other age groups due to the difficulty of understanding the COVID-19 and the lack of self-expression skills (5). Adolescence is one of the most important developmental stages of an individual. During adolescence, children develop physically, mentally, emotionally, sexually, and socially. In addition, children gain experiences that will be decisive for the rest of their lives. Adolescents are worried about the future, as they must make vital decisions such as choosing a profession and further education (6). One of the reasons children today are so affected by these processes is technological progress. Due to the development of technology, young people can be exposed to various kinds of digital media content, many of which are negative. For adolescents, who are more active on social media and online than other age groups, the news and experiences about COVID-19 can be overwhelming (5).

When faced with negative situations, people often resort to different methods to get rid of or minimize them or their consequences. These methods can be getting close to nature, reading a book, being interested in a favorite hobby, or doing sports. Sport is an excellent way to improve one's health physically and mentally (7). When a person is engaged in physical activity, their mind may not be preoccupied with the difficulties and troubles that are bothering them. Sport can help to distract from unpleasant thoughts and daily worries (8). Much work has been done to investigate the positive phycological effects of engaging in sports. One study found that exercises have an increasing effect on the level of the hormones such as endorphin and serotonin (9). When a person does sport, their body produces endorphins that cause a decrease in stress hormones (8). For this reason, perhaps one of the best things that a person can do by themselves while trying to cope with depression and stress is sports (8). Many of the individuals who were in quarantine during the pandemic process resorted to sports to use their long time at home efficiently.

The Beck Depression Inventory (BDI) is a self-administered self-assessment scale that consists of 21 multiple-choice questions developed by Aaron T. Beck (10, 11). The BDI is one of the most popular psychometric tests for determining the severity of depression measures the cognitive, behavioral, and physical manifestations of a person's depression (and its severity) over the past week (12). The BDI is available in three variations. The first was released in 1961, then changed and renamed BDI-1A (Beck Depression Inventory 1A) in 1978, and the second in 1996 (13). On average, the BDI takes 10 minutes to complete and is easily understood by an individual with a simple education level (14). The questionnaire was voluntarily filled out by 50 high school students aged 14–15.

We hypothesized that people who did sports during the pandemic will have a lower Beck's Depression Inventory (BDI) score. Considering the COVID-19 pandemic, and the

sensitive reactions of adolescents to situations, we sought to conduct a study on the effect of sports on the mental health of young people, specifically symptoms of depression, who had to quarantine during the pandemic. Our results showed that the average BDI scores of young people who did sports were lower than those who did not do sports. As time progresses, we can examine specific factors and implement systems to provide mental comfort to students.

RESULTS

We set out to determine the relationship of sports on depression symptoms in adolescence during the COVID-19 pandemic. To do this, we administered a questionnaire asking 50 students about their sport activity and to collect BDI scores **(Appendix A)**. Keep in mind that this study was created in a limited study population therefore the results not general. All participants were students at the same high school. In terms of the gender of the total participants, the majority (56%) were female. The mean age of the girls was 15.61 ± 0.49 years, while the mean age of the boys was 15.31 years and the standard deviation was 0.47.

About half of the participants (42%) indicated that they did not play sports **(Table 1)**. We counted exercising regularly as sport since most of the students do fitness on a regular basis. According to the BDI scores of all participants, 20 (40%) of participants had minimal depression, 9 (18%) reported mild depression, and 11 (22%) reported moderate depression symptoms, while 10 (20%) reported severe depression symptoms **(Table 1)**. The distribution of students who did the following sports during quarantine was: general fitness (n = 15), basketball (n = 4), Pilates (n = 3), tennis (n = 3), walking (n = 3), volleyball (n = 2), fencing (n = 1), windsurfing (n = 1), and dance (n = 1). According to the answers to another question added, 24 people (48%) preferred to do sports outdoor, while 7 people (14%) did indoor sports **(Table 2)**.

Characteristic	n (%)
Gender	
Female	28 (56%)
Male	22 (44%)
Sport Status	
No	21 (42%)
Yes	29 (58%)
Sports Place	
Indoor	24 (48%)
Outdoor	19 (38%)
Not Doing Sports	7 (14%)
Beck's Depression Test Results	
Minimal Symptoms	20 (40%)
Mild Symptoms	9 (18%)
Moderate Symptoms	11 (22%)
Severe Symptoms	10 (20%)

Table 1: All data obtained from the answers of 50 students who completed the online BDI. As a percentage, 56% females and 44% males participated in the research. Doing sports was divided into yes (58%) and no (42%). The percentages of doing sports are indoor (48%), non-doing (38%), and outdoor (14%). The resulting data from the BDI are calculated in percentages.

Sports Place	Indoor	Outdoor	None	Total
Yes	6 (21%)	23 (79%)	0 (0%)	29
No	1 (4.8%)	1 (4.8%)	19 (90%)	21
Total	7 (14%)	24 (48%)	19 (38%)	50

Table 2: The status of the participants in doing sports and the environments they prefer while doing sports. More students prefer to do sports outside compared to inside ($p < 0.001$, Fisher's exact Test).

	Sports Status		
	No	**Yes**	**Total**
Female	10 (36%)	18 (64%)	28
Male	11 (50%)	11 (50%)	22
Total	21 (42%)	29 (28%)	50

Table 3: The status of students doing and not doing sports based on gender. Gender does not impact the likelihood of someone doing sports ($p = 0.3$, Pearson's Chi-Square test).

We examined the relationship between the students' sports status and their gender **(Table 3)**. In our sample, an individual's gender does not change the likelihood of depression symptoms ($p = 0.2$, Fisher exact test, **Table 4**).

We analyzed the relationship between students' sports status and BDI results using the Fisher test. We found that there is a relationship between the variables of doing and not doing sports and depressive symptoms in the teenagers we studied ($p < 0.001$, **Table 5**).

Considering the "I did not do sports" option in the data set, we wanted to look at the effect of indoor or outdoor sports on depression symptoms. We did not see a relationship between the place of sports and depressive symptom status in students who do sports ($p = 0.05$, **Table 6**). In addition, the number of students doing sports is 29, and when we categorize them, it is seen that there are very few participants at each depression level.

Based on our data, a person who does not exercise is more likely to suffer from mild depression than with minimal

Depression Symptoms	Gender		
	Female	**Male**	**Total**
Minimal	9 (45%)	11 (55%)	20
Mild	8 (89%)	1 (11%)	9
Moderate	6 (55%)	5 (45%)	11
Severe	5 (50%)	5 (50%)	10
Total	28 (56%)	22 (44%)	50

Table 4: The relationship between the BDI results and the gender of the participants. When the correlation between the degree of depression symptoms and gender is calculated with Fisher's exact test, the p-value is 0.2.

Depression Symptoms	Sport Status		
	No	Yes	Total
Minimal	2 (10%)	18 (90%)	20
Mild	4 (44%)	5 (56%)	9
Moderate	6 (55%)	5 (45%)	11
Severe	9 (90%)	1 (10%)	10
Total	21 (42%)	29 (58%)	50

Table 5: The relationship between different depressive symptom levels of the participants and their sports status according to BDI scores. Students who participate in sports have less severe depression symptoms ($p < 0.001$, Fisher's exact test).

Depression Symptoms	Sports Place		
	Outdoor	Indoor	Total
Minimal	4 (22%)	14 (78%)	18
Mild	0 (0%)	5 (100%)	5
Moderate	2 (40%)	3 (60%)	5
Severe	0 (0%)	1 (100%)	1
Total	6 (21%)	23 (79%)	29

Table 6: The relationship between the place where the participants do sports and their depressive symptom status. Location of sports place does not impact depression symptoms ($p = 0.5$, Fisher's Exact test).

depression. Another name for minimum is normal in BDI scoring. However, if it is higher than 20 points, the individual may enter the mild depression symptom category. Mild depression is less common for someone who does sports than having minimal depression. A person who does not exercise is more likely to have moderate depression than to have minimal depression. Moderate depression is less common for someone who does sports than having minimal depression. A person who does not exercise is more likely to experience severe depression compared to minimal depression. The probability of a person who does sports experiencing severe depression is less than that of minimal depression.

In summary, we found no correlation between factors such as gender, place of sport and type of sport with depression ($p > 0.05$). However, we did observe that individuals who did not do sports had higher BDI scores.

DISCUSSION

During this study, we investigated the effects of doing sports on depressive symptoms by examining the depression status of adolescents who do and do not do sports under mandatory quarantine conditions during the COVID-19 pandemic. It is important to know that depression is not diagnosed by applying the Beck Depression Inventory alone; the scale only gives clues about depressive symptoms. The diagnosis of depression can only be made in line with the assessment made by a specialist clinician. We saw that 29 participants (58%) did sports during the quarantine period. There was no significant difference between the number of male and female students who did sports in our study (p=0.3). This result was expected, as doing sports is considered a personal choice.

When the relationship between depressive symptom status and gender was examined, we found no significant relationship ($p = 0.2$). Past studies have shown that women are more likely to become depressed than men, especially at a young age, due to socio-cultural conditions and hormonal intensities (15). Our study had a small number of participants (n = 50) which could have prevented us from seeing a link between gender and depression symptoms that has been observed in previous studies. Additionally, the correlation may be weaker now due to the COVID-19 pandemic.

21% of the participants did sports outdoors while the remaining 79% preferred doing sports indoors. When the impact of place of exercise on depressive symptom status was examined, no significant difference was observed ($p = 0.5$). However, this may be due to low sample size as the number of individuals in each category of depression symptoms was quite small. More accurate data could be obtained on this topic by increasing the number of participants in future studies.

In this study, we found that the most significant factor affecting depressive symptoms to be doing or not doing sports. When depressive symptom levels and sports status were examined, we observed that there was a significant correlation between the two ($p < 0.001$). The fact that 18 out of 20 people who show only minimal symptoms of depression according to the BDI results are doing sports, can be a good example of the contribution of doing sports to the decrease in the level of depressive symptoms. Moreover, the fact that 9 out of 10 people with severe depression symptoms do not do sports is a very important example of the negative effects of not doing sports on psychology. This inference can easily be seen from the fact that 90% of people with severe depression according to their BDI scores, which scoring guideline is included within the inventory, who are only a small sample among the entire participant population, do not do sports. In addition, students who did not do sports are more likely to have mild, moderate, and severe depression than students who did sports in all categories combined. Thus, in agreement with our original hypothesis, we found that not doing sports can increase the likelihood of depression symptoms.

For post-pandemic periods, the BDI can be used at regular intervals to assess the mental health of adolescent students. Students who have just come out of the pandemic and do no need any more regulation such as wearing mask or going outside may still be still feeling overwhelmed by the effects of the pandemic, and the mental destruction caused by this process may continue. To help ease the effects of the pandemic, students can be provided with mental and motivational help according to their BDI scores by their schools or parents, and by directing them to sports, this issue can be supported to reduce the symptoms of depression.

One issue that needs to be considered is that a person suffering from mental depression may not always have the motivation and desire to participate in sports. If an individual lacks the energy or desire to participate in sports, their physical activity will be hampered in a vicious cycle. As a result, students who displayed symptoms of depression in the study may not have expressed a desire to participate in sports and might need extra encouragement to participate.

We feel that it would be worth repeating a similar study under more normal conditions where a factor such as quarantine has disappeared. Comparing the two results

will provide a better understanding of the primary cause of the depressive symptoms: sport status or pandemic. With a deeper comprehension of the cause, better systems can be incorporated into schools and parenting to aid in the mental health of adolescents. Previous research has looked at sports and depression. A previous study found that in normal conditions it would be good for an individual with mild depression to do sports. The authors argued that although it is a factor that cannot replace medical drugs such as antidepressants, it helps at a certain level (16).

One question from the BDI was excluded because of concerns of how parents from different cultures would react to a question about sexual desires. This question would have brought more depth and detail to the research; however, we do not believe it changed much in the resulting data since every calculation was changed according to that. Additionally, the effect of participating in sports outdoor vs indoor on depressive symptoms could be investigated with a larger number of participants. Since adolescents had to be inside their homes during quarantine, outdoor vs. indoor locations were not significant factors in this study. Thus, after the pandemic, there will be a better environment to study the effects of the sport on depressive symptoms. Lastly, the number of participants in our study was relatively small to make a definite judgment. More accurate results can be obtained if the analysis is expanded with more participants in the future.

In summary, in our study, the BDI scores of the students who did not do sports were higher than those who did sports. Since the research population was not very large, we could not find any correlation between BDI scores and the following factors: gender, sports fields, and sports type. Based on the results of this study, we conclude that doing sports can be a good solution for adolescents to cope with the negative effects of quarantine and general depression. Considering the BDI scores of young people who do sports regularly, we believe that parents and teachers encouraging them to do sports in processes such as quarantine can reduce the symptoms of depression. In future studies, we think the relationship between individual sports and group sports on depression should be examined to investigate the effect of sports on the individual.

MATERIALS AND METHODS

Study Participants

Fifty adolescents (28 females and 22 males) were enrolled in the study voluntarily. The subjects were 15–16 years old (mean age = 15.48 ± 0.50 years) and were all high school students studying at the same school. All of the students had the same access to sports, and economic conditions on average. The study was carried out between June 21, 2020, and March 9, 2021. It started about half a year later after the first confirmed diagnosis of COVID-19 in Turkey.

These students, who are subject to the same education system, have to take sports lessons until they reach a certain age. All of them are in a position to access all the sports facilities provided by the school in online. During the pandemic process, the facilities provided by the school remained the same, but some students increased their amount by doing sports outside of school. Indoor spaces are described in the survey as sports areas with walls and a roof. However, in this study, outdoor areas are defined as areas that are not enclosed by walls or roofs, such as gardens.

Beck's Depression Index

This test was chosen since it is a simple measuring mechanism. Each item is scored from 0 to 3; 0) minimal, 1) mild, 2) moderate, and 3) severe depression. The higher the overall score, the higher the level of depression symptoms; possible scores range from 0 to 63 (17). The highest possible score a participant can get is 63 and the lowest is 0. The total score of all answers is evaluated as follows: 0 to 9 points = minimal depressive symptoms; 10 to 16 points = mild depressive symptoms; 17 to 29 points = moderate depressive symptoms; 30 to 63 points = severe depressive symptoms (18). It has been suggested that those with a score of 17 and above are in the group at risk of depression (18). In this study, the validity and reliability was studied of the BDI was performed by Hisli and its approved version was used (12, 19). One question pertaining to sexuality was eliminated. As a result, the forecast range was determined appropriately. Thus, in our study, the highest score would be 60 and the lowest would be zero.

Data Acquisition

After the participants were given detailed information about the study and informed that the participation would be on a voluntary basis, written consent was obtained from the volunteer participants and then we administered the modified BDI via Google Forms.

We added a question to find out the gender of the participants. To clarify the research questions, a question determining the type of sport was added. The sport you do regularly during the quarantine period. If you haven't, you can type "N/A" Finally, as a follow-up question, we asked whether the sport was played indoors or outside. The questionnaire was 23 questions in total **(Appendix)**.

Data Analysis

We used SPSS to analyze the survey results. To determine statistically significant variation, mean values and correlations from the data, we used *t*-tests and correlation tests. A *p*-value equal to or less than 0.05 was considered significant. We also used the AIC to determine whether there are better-fit models for not participating in sports and depression symptoms.

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REFERENCES

1. Huremović, D. "Brief History of Pandemics (Pandemics Throughout History)." *Psychiatry of Pandemics,* 2019 May 16: 7-35. doi: 10.1007/978-3-030-15346-5_2.
2. Kumar G, *et al.* "Impact of internet addiction during COVID-19 on anxiety and sleep quality among college students of Bhubaneswar city." *J Educ Health Promot.* 2022 Jun 11; 11:156. doi: 10.4103/jehp.jehp_396_21.
3. Sharma A, *et al.* "Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2): a global

pandemic and treatment strategies". *Int J Antimicrob Agents.* 2020 Aug;56(2):106054. doi: 10.1016/j.ijantimicag.2020.106054.
4. "What Is Coronavirus?" *Johns Hopkins Medicine.* www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus. Accessed 29 July 2022.
5. Muhammed AKAT-Kasım KARATAŞ. "Psychological Effects of COVID-19 Pandemic on Society and Its Reflections on Education". *Journal of Turkish Studies.* 2020. doi:10.7827/TurkishStudies.44336
6. Korkın, Ö. "The relationship between perceived psychological control self-regulation skills and academic motivations of adolescents". *The International Journal of Human and Behavioral Science* 2019. 5(1), 1-10. doi: 10.19148/ijhbs.550200
7. Leonard M. Wankel & Bonnie G. Berger. "The Psychological and Social Benefits of Sport and Physical Activity". *Journal of Leisure Research,* 1990. 22:2, 167-182 doi: 10.1080/00222216.1990.11969823
8. "The Mental Benefits of Sport - News - Active Norfolk." *Active Norfolk.* www.activenorfolk.org/. Accessed 7 May 2021
9. Abdulrasool MD, Joda EO, Alawady AA. "The effect of psycho-physiological sports proposed in terms of the hormone endorphins serotonin and their relative results on mental fitness in the aged". *Ann Trop Med & Public Health.* 2020. 23(S13B): SP231369 doi: 10.36295/ASRO.2020.231369
10. Beck At, *et al.* "An inventory for measuring depression". *Arch Gen Psychiatry.* 1961. Jun;4:561-71. doi: 10.1001/archpsyc.1961.01710120031004.
11. "Beck's Depression Inventory" www.ismanet.org/doctoryourspirit/pdfs/Beck-Depression-Inventory-BDI.pdf. Accessed 20 July 2022
12. Ustun G."Determining depression and related factors in a society affected by COVID-19 pandemic" *International Journal of Social Psychiatry.* 2021. 67(1):54-63. doi:10.1177/0020764020938807
13. Rengidil, U. "Beck Depresyon Ölçeği" *Psikolojik.Gen.Tr.* www.psikolojik.gen.tr/beck-depresyon-olcegi.html. 2021. Accessed 2022, January 19.
14. "Beck Depression Inventory (BDI)." *American Psychological Association.* www.apa.org/pi/about/publications/caregivers/practice-settings/assessment/tools/beck-depression. Accessed 5 July 2022.
15. Albert PR. "Why is depression more prevalent in women?" *J Psychiatry Neurosci.* 2015. Jul;40(4):219-21. doi: 10.1503/jpn.150205.
16. "Depression: Can sports and exercise help?" *Institute for Quality and Efficiency in Health Care.* www.ncbi.nlm.nih.gov/books/NBK559350/. Accessed 2022, January 19.
17. Konstantopoulou G., Raıkou N., "Clinical Evaluation of Depression in University Students During Quarantine Due to COVID-19 Pandemic". *European Journal of Public Health Studies.* vol. 3, no. 1, July 2020. doi: 10.46827/ejphs.v3i1.65.
18. Kilinc, S., & Torun, F. "Depression rating scales used in clinical practice in Turkey". *Dirim Medical Newspaper.* 2021. 86, 39–47.
19. Tekindal, M. & Tekindal, M. A. "Validity and Reliability of Basic Depression Scale for Turkey". *Batı Karadeniz Tıp Dergisi.* 2021. 5 (3), 452-463. doi: 10.29058/mjwbs.906629

Appendix

Thank you very much for your contribution and participation in the research. You can contact us if you have any questions. The aim of our research is to examine the correlation between exercising during the quarantine period and depression symptoms. If you feel uncomfortable with any question while filling out the questionnaire, you can stop answering.

1. Gender
   - Female
   - Male
   - I prefer not to say

2. The type of sport you do regularly during the quarantine. If you haven't you can type "N/A"

3. Did the sport take place outdoors or indoors?
   - Outdoor
   - Indoor
   - I didn't do sports

4. During the quarantine…
   - I do not feel sad.
   - I feel sad.
   - I am sad all the time and I can't snap out of it.
   - I am so sad and unhappy that I can't stand it.

5. During the quarantine…
   - I am not particularly discouraged about the future.
   - I feel discouraged about the future.
   - I feel I have nothing to look forward to.
   - I feel the future is hopeless and that things cannot improve.

6. During the quarantine…
   - I do not feel like a failure.
   - I feel I have failed more than the average person.
   - As I look back on my life, all I can see is a lot of failures.
   - I feel I am a complete failure as a person.

7. During the quarantine…
   - I get as much satisfaction out of things as I used to.
   - I don't enjoy things the way I used to.
   - I don't get real satisfaction out of anything anymore.
   - I am dissatisfied or bored with everything.

8. During the quarantine…
   - I don't feel particularly guilty.
   - I feel guilty a good part of the time.
   - I feel quite guilty most of the time.
   - I feel guilty all of the time.

9. During the quarantine…
    - I don't feel I am being punished.
    - I feel I may be punished.
    - I expect to be punished.
    - I feel I am being punished.

10. During the quarantine…
    - I don't feel disappointed in myself.
    - I am disappointed in myself.
    - I am disgusted with myself.
    - I hate myself.

11. During the quarantine…
    - I don't feel I am any worse than anybody else.
    - I am critical of myself for my weaknesses or mistakes.
    - I blame myself all the time for my faults.
    - I blame myself for everything bad that happens.

12. During the quarantine…
    - I don't have any thoughts of killing myself.
    - I have thoughts of killing myself, but I would not carry them out.
    - I would like to kill myself.
    - I would kill myself if I had the chance.

13. During the quarantine…
    - I don't cry any more than usual.
    - I cry more now than I used to.
    - I cry all the time now.
    - I used to be able to cry, but now I can't cry even though I want to.

14. During the quarantine…
    - I am no more irritated by things than I ever was.
    - I am slightly more irritated now than usual.
    - I am quite annoyed or irritated a good deal of the time.
    - I feel irritated all the time.

15. During the quarantine…
    - I have not lost interest in other people.
    - I am less interested in other people than I used to be.
    - I have lost most of my interest in other people.
    - I have lost all of my interest in other people.

16. During the quarantine…
    - I make decisions about as well as I ever could.
    - I put off making decisions more than I used to.
    - I have greater difficulty in making decisions more than I used to.
    - I can't make decisions at all anymore.

17. During the quarantine…
    - I don't feel that I look any worse than I used to.
    - I am worried that I am looking old or unattractive.
    - I feel there are permanent changes in my appearance that make me look unattractive.
    - I believe that I look ugly.

18. During the quarantine…
    - I can work about as well as before.
    - It takes an extra effort to get started at doing something.
    - I have to push myself very hard to do anything.
    - I can't do any work at all. 16. 0 I can sleep as well as usual.

19. During the quarantine…
    - I can sleep as well as usual.
    - I don't sleep as well as I used to.
    - I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
    - I wake up several hours earlier than I used to and cannot get back to sleep.

20. During the quarantine…
    - I don't get more tired than usual.
    - I get tired more easily than I used to.
    - I get tired from doing almost anything.
    - I am too tired to do anything.

21. During the quarantine…
    - My appetite is no worse than usual.
    - My appetite is not as good as it used to be.
    - My appetite is much worse now.
    - I have no appetite at all anymore.

22. During the quarantine…
    - I haven't lost much weight, if any, lately.
    - I have lost more than five pounds.
    - I have lost more than ten pounds.
    - I have lost more than fifteen pounds.

23. During the quarantine…
    - I am no more worried about my health than usual.
    - I am worried about physical problems like aches, pains, upset stomach, or constipation.
    - I am very worried about physical problems and it's hard to think of much else.
    - I am so worried about my physical problems that I cannot think of anything else.