



## Covid-19 en Turquía: aburrimiento en el ocio, resiliencia psicológica, actividad física y estado emocional

## Covid-19 in Turkey: Leisure boredom, psychological resilience, physical activity and emotional state

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### RESUMEN.

Esta investigación se realizó en el proceso de cuarentena implementado en el brote de CoViD-19 para examinar la relación entre la percepción del aburrimiento de los individuos en los momentos de ocio y los niveles de resiliencia psicológica, y describir las actividades de ocio de los individuos, la participación en la actividad física y estado emocional. En consecuencia, participaron un total de 2214 personas voluntarias que vivían en Turquía, con 909 hombres (41,1%) ( $\bar{X}_{\text{edad}}=33,83\pm 10,73$ ) y 1305 mujeres (58,9%) ( $\bar{X}_{\text{edad}}=32,41\pm 10,02$ ). En el ámbito del estudio, se recogió información sobre variables demográficas, actividad física y estado emocional con el formulario creado por los investigadores. En el estudio, la "Escala de aburrimiento del ocio" y la "Escala de resiliencia psicológica" se utilizaron como herramientas de medición. En el estudio, se pidió a las personas que escribieran una palabra para expresar sus pensamientos sobre el proceso CoViD-19 para análisis descriptivos, y los datos recopilados se visualizaron con el programa de análisis de datos cualitativos "MAXQDA". Además, los datos se presentan en gráficos en el análisis de otras variables. En el análisis estadístico del estudio se utilizó estadística descriptiva, se utilizó la prueba t para determinar la diferencia entre grupos independientes, se utilizó el análisis de correlación de Pearson para determinar las relaciones entre las variables y se utilizó el análisis de regresión lineal simple para determinar la fuerza de la variable independiente en la predicción de la variable dependiente. Como resultado, se observaron estados emocionales



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predominantemente negativos en los individuos durante el período de cuarentena. Sin embargo, a medida que aumenta la participación en la actividad física, aumentará el nivel de resiliencia psicológica y disminuirá la percepción de aburrimiento en el tiempo libre. Además, se encontró que la percepción de aburrimiento en el tiempo libre fue un determinante importante del nivel de resiliencia psicológica, y que explica alrededor del 15% de la varianza.

## **PALABRAS CLAVE.**

COVID-19, aburrimiento en el ocio, resiliencia psicológica, actividad física, estado emocional

## **ABSTRACT.**

This research was conducted in the quarantine process implemented in the CoViD-19 outbreak to examine the relationship between the perception of the boredom of individuals in leisure times and psychological resilience levels, and to describe the leisure activities of individuals, participation in physical activity and emotional state. Accordingly, a total of 2214 voluntary individuals living in Turkey participated with 909 men (41.1%) ( $\bar{X}_{age}=33.83\pm 10.73$ ), and 1305 women (58.9%) ( $\bar{X}_{age}=32,41\pm 10.02$ ). Within the scope of the study, information about demographic variables, physical activity and emotional state were collected with the form created by the researchers. In the study, "Leisure Boredom Scale" and "Psychological Resilience Scale" were used as the measurement tools. In the study, individuals were asked to write a word expressing their thoughts on the CoViD-19 process for descriptive analyses, and the collected data were visualized with the "MAXQDA" qualitative data analysis program. In addition, the data are presented in charts in the analysis of other variables. In the statistical analysis of the study, descriptive statistics were used, t-test was used to determine the difference between independent groups, Pearson correlation analysis was used to determine the relationships between variables, and simple linear regression analysis was used to determine the strength of the independent variable in predicting the dependent variable. As a result, predominantly negative emotional states were observed in individuals during the quarantine period. However, as the participation in physical activity increases, the level of psychological resilience will increase and the perception of boredom in leisure time will decrease. Besides, it was found that the perception of boredom in leisure time was an important determinant of the level of psychological resilience, and that it explains about 15% of the variance.

## **KEY WORDS.**

CoViD-19, leisure boredom, psychological resilience, physical activity, emotional state.

## **1. Introduction.**

The new coronavirus disease, first appeared in Wuhan, China in December and named as 2019-nCoV, has become an epidemic that soon affected the world (Jalali, Shahabi, Bagheri Lankarani, Kamali, & Mojgani, 2020; Lu, Stratton, & Tang, 2020). On January 30, 2020, the World Health Organization (WHO) announced that this outbreak in China had been declared as "Public Health Emergency of International Concern (PHEIC)" (Sohrabi et al., 2020). It was declared as "Pandemic" by the World Health Organization on March 11, 2020 as a result of



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the threat of public health globally by crossing the borders of Asia (World Health Organization, 2020c). As of May 2020, it infected more than 5 million people in 216 countries worldwide, killing more than 350,000 people (World Health Organization, 2020a).

Strict measures taken in China where the outbreak emerged have slowed the incidence of new cases (Anderson, Heesterbeek, Klinkenberg, & Hollingsworth, 2020; Kucharski et al., 2020). However, the CoViD-19 outbreak has affected many countries including particularly the United States of America, Russia, Italy, the United Kingdom, Spain, Germany, and Turkey. A total of more than 150,000 people have been reported to have been infected and about 5,000 have died since 11 March 2020, when the first case was seen in Turkey. For this reason, many countries have declared quarantine to socially distance their citizens who are infected or likely to be, and to isolate themselves at home in order to reduce the infection rate and prevent overloading health systems (Brooks et al., 2020; Rodríguez, Crespo, & Olmedillas, 2020). With the increase in the impact of the virus worldwide, quarantine measures have been increased in many countries (World Health Organization, 2020b). Turkey is one of the countries that implemented quarantine measures. However, there is no long-term quarantine process in Turkey compared to other countries. Restrictions have been imposed to cover weekends in 31 cities with large populations. However, individuals under the age of 20 and over 65 are completely restricted from going out.

Because it is associated with quarantine applications interrupting the work routine, which affect social life intensely, it may cause perception of boredom in people (Muscogiuri, Barrea, Savastano, & Colao, 2020). The perception of boredom is most commonly caused by lack of activity or the presence of an unwanted activity (Fahlman, Mercer-Lynn, Flora, & Eastwood, 2013). In this context, the perception of boredom is defined in various ways by researchers as a disturbing psychophysiological condition created by monotonous lifestyle in individuals (O'Hanlon, 1981; Smith, 1981; Harris, 2000) and a state of low stimulation and dissatisfaction attributed to an environment that is not stimulating enough (Mikulas & Vodanovich, 1993). Although researchers have not yet been able to agree on a common definition of boredom (Vodanovich, 2003), many see the perception of boredom as a secondary symptom of other psychological conditions (Goldberg, Eastwood, Laguardia, & Danckert, 2011). Studies show that the perception of boredom is significantly related to negative emotional states such as depression (Watt & Davis, 1991), anxiety (LePera, 2011), loneliness (Skues, Williams, Oldmeadow & Wise, 2016) and anger (Dahlen, Martin, Ragan, & Kuhlman, 2004; Rupp & Vodanovich, 1997). During the quarantine period in which the boredom perception is heavily felt, negative moods such as stress (DiGiovanni, Conley, Chiu, & Zaborski, 2004), anxiety (Halder, Mahato, & Manot, 2020), depression (Hawryluck et al., 2004), low mood (Lee, Chan, Chau, Kwok, & Kleinman, 2005), emotional exhaustion (Maunder et al., 2003), and perception of boredom (Brooks et al., 2020) emerge in individuals.

It can be said that the unusual and disproportionately increasing leisure time during the quarantine period has led to a major change in everyday life. While leisure time refers to a time frame that individuals can freely use without restrictions or coercion (Godbey, 1994; Torkildsen, 2005), people's leisure experience is changing in accordance with the effects of quarantine practices. The perception of boredom in leisure, which is an important study topic in leisure literature, is described as "the subjective perception available that leisure



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experiences are not sufficient to instrumentally satisfy needs for optimal arousal" (Iso-Ahola & Weissinger, 1990). In studies focusing on leisure and boredom perception, it is shown that the two concepts are closely related (Iso-Ahola & Weissinger, 1987; Oh, Caldwell, & Oh, 2001) and the cause of boredom in leisure times stem from two contradictory perceptions (Iso-Ahola & Weissinger, 1990; Vodanovich & Watt, 1999): (a) individuals have too much leisure time, (b) there is very little activity to be done in leisure time. Therefore, it can be said that individuals have too much leisure time in the quarantine process and that there's limited activity to do which can lead to the perception of boredom in leisure time.

Departing from the fact that individuals participating in activities with increased leisure time due to the quarantine process are psychologically healthier (Pearson, 1998; Sato, Jordan, & Funk, 2014), the concept of psychological resilience discussed in the scope of research is defined as a personality trait that emerges as a source of resilience when faced with stressful events in daily life (Kobasa, 1979), as adaptation to life in the face of physical and psychological challenges (Holahan & Moos, 1985), and the ability of an individual to adapt and cope with adverse situations (Block & Kremen, 1996). The concept of psychological resilience refers to a personality trait consisting of three dimensions that are "commitment" as the individual tends to deal with various areas of life (Kobasa, 1979; Kobasa, Maddi, & Kahn, 1982), "control" as a belief of being able to affect the outcomes of events rather than being helpless when faced with difficulties in life (Kobasa, 1979; Sinclair & Tetrick, 2000) and "challenge" as a belief of change being a stimulus for development rather than a component threatening safety (Kobasa et al., 1982; Lambert & Lambert, 1999; Maddi et al., 2006). Psychological resilience personality trait affects being able to be resistant to stressful situations in daily life and well-being with the implementation of effective coping strategies (Işık, 2016). In this context, it is thought that the stress factor affecting the daily lives of people increases with the quarantine process and one of the ways to deal with it is to participate in regular physical activity (Hammami, Harrabi, Mohr, & Krusturp, 2020; Lippi, Henry, & Sanchis-Gomar, 2020). It is emphasized by researchers that physical activity has positive effects on physical and mental health and is an effective tool for preventing diseases, strengthening the immune system and reducing stress levels (Frühauf, Schnitzer, Schobersberger, Weiss, & Kopp, 2020). Accordingly, it is predicted that regular physical activity performed in leisure time during the quarantine process will drive individuals away from sedentary life and that negative emotional states experienced in this process can be prevented.

Departing from the relationship between both leisure time behaviors and psychological resilience, and the physical activity and emotional state (Hull, 1990; Hills & Argyle, 1998; Giacobbi, Hausenblas, & Frye, 2005; Iwasaki, Mackay, Mactavish, Ristock, & Bartlett, 2006; Chekroud et al., 2018; Mandolesi et al., 2018; Kekäläinen, Freund, Sipilä, & Kokko, 2019; Rodrigues, Teixeira, Cid, & Monteiro, 2019; Matias, Dominski, & Marks, 2020), within the scope of this study, it was aimed to determine the relationship between perception of boredom in leisure time and psychological resilience in individuals affected by the quarantine process implemented in Turkey during CoViD-19 outbreak, and to describe their status of how they use their leisure time, their participation in physical activity, and their moods.



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## 2. Method.

### Research Model.

This study aiming to determine the relationship between the perception of boredom in leisure time and psychological resilience in individuals affected by the quarantine process implemented in Turkey during the CoViD-19 pandemic was designed by using a relational screening model. Relational research aims to identify the relationships between two or more variables and the coexistence of change or the level of change with these variables (Fraenkel, Wallen, & Hyun, 2012; Creswell & Creswell, 2017).

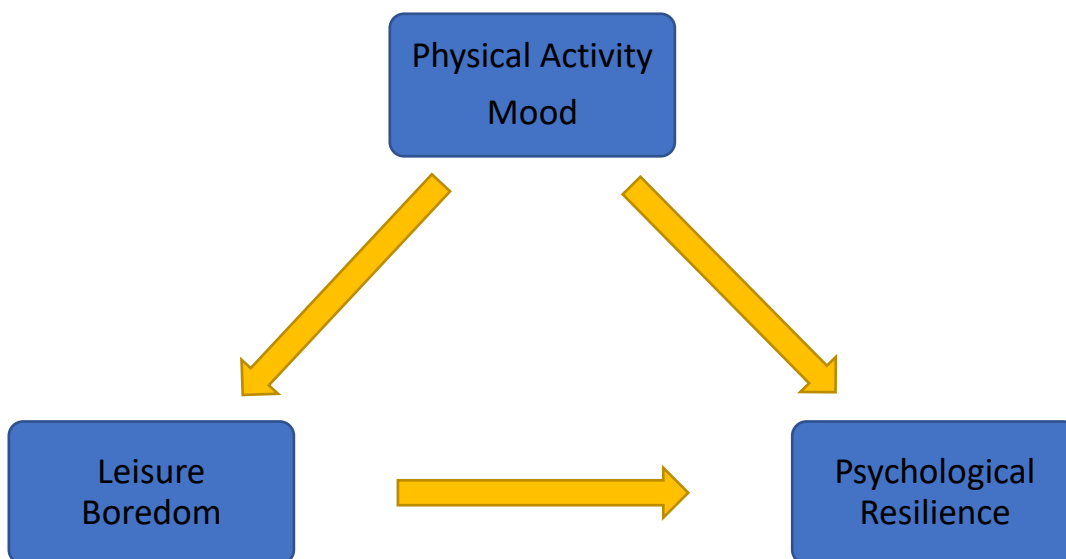


Figure 1. Research model

### Study Group.

Since the environment created by the CoViD-19 outbreak does not provide the opportunity to collect data face-to-face, the participants were selected using appropriate sampling methods by taking into account the easy access and affordability of our study (Gravetter & Forzano, 2012). Accordingly, measurement tools were transferred to electronic media (Google Form) and data collection was carried out online between April 30 and May 9, 2020. Accordingly, with 909 men (41.1%), ( $\bar{X}_{age}33.83 \pm 10.73$ ), and 1305 women (58.9%), ( $\bar{X}_{age}32.41 \pm 10.02$ ), a total of 2.214 individuals participated in the study voluntarily. The descriptive statistical information about the participants of the study is given in Table 1.





Table 1. Descriptive statistical information of the individuals participating in the study

Variable		n	%
Gender	Man	909	41.1
	Woman	1305	58.9
Level of Education	Primary school	29	1.3
	Middle school	62	2.8
	High school	309	14.0
	Associate degree	225	10.2
	Undergraduate	1143	51.6
	Graduate	446	20.1
Marital Status	Married	1078	48.7
	Single	1136	51.3
<b>Total</b>		<b>2214</b>	<b>100</b>

#### Data Collection Tools.

**Personal Information Form:** The personal information form consists of questions about participants' gender, age, education level, marital status and the number of physical activities engaged in weekly.

**Leisure Boredom Scale (LBS):** The scale was developed by Iso-Ahola and Weissinger (1990) to measure "individual differences in perceptions of boredom in leisure." The original scale consists of 16 items and one dimension. The adaptation of PBLs to Turkish was performed by Kara, Gürbüz, and Öncü (2014) and it consists of 10 questions and two dimensions that are: 'boredom' (5 items) and 'satisfaction' (5 items). PBLs is a 5-point Likert scale with 1 being "strongly disagree" and 5 "strongly agree". Kara et al. (2014) found the Cronbach Alpha internal consistency coefficient for the boredom sub-dimension as .72 and .77 for the satisfaction sub-dimension in the Turkish adaptation. The reliability coefficient of the scale in this study was .84.

**Psychological Resilience Scale (PRS):** The "Psychological Resilience Scale" developed by Işık (2016) consists of 3 sub-dimensions and 21 items, namely "commitment" (7 items), "control" (7 items) and "challenge" (7 items). PRS is a 5-point Likert scale with 1 being "strongly disagree" and 5 "strongly agree". In developing the scale, Işık (2016) found the Cronbach Alpha internal consistency coefficient as .62 for the "commitment" dimension, .69 for the "control" dimension, and .76 for the "challenge" dimension. The high scores obtained from the sub-dimensions and the





scale indicate that the level of psychological resilience is high (Işık, 2016). The reliability coefficient of the scale in this study was .84.

### Descriptive Question Items.

Within the scope of the research, the following questions were asked to individuals living in Turkey during CoViD-19 to describe the process, and the results were reported.

- (1) *Select the most appropriate option that defines your feelings (mood) in the CoViD-19 process (Figure 2).*

This question was created to describe the emotional states that may occur in individuals during the quarantine process. In this context, participants were asked to select the option expressing the mood they experienced in the process. Plutchik (1980)'s wheel of emotions taken into consideration when selecting the emotional states.

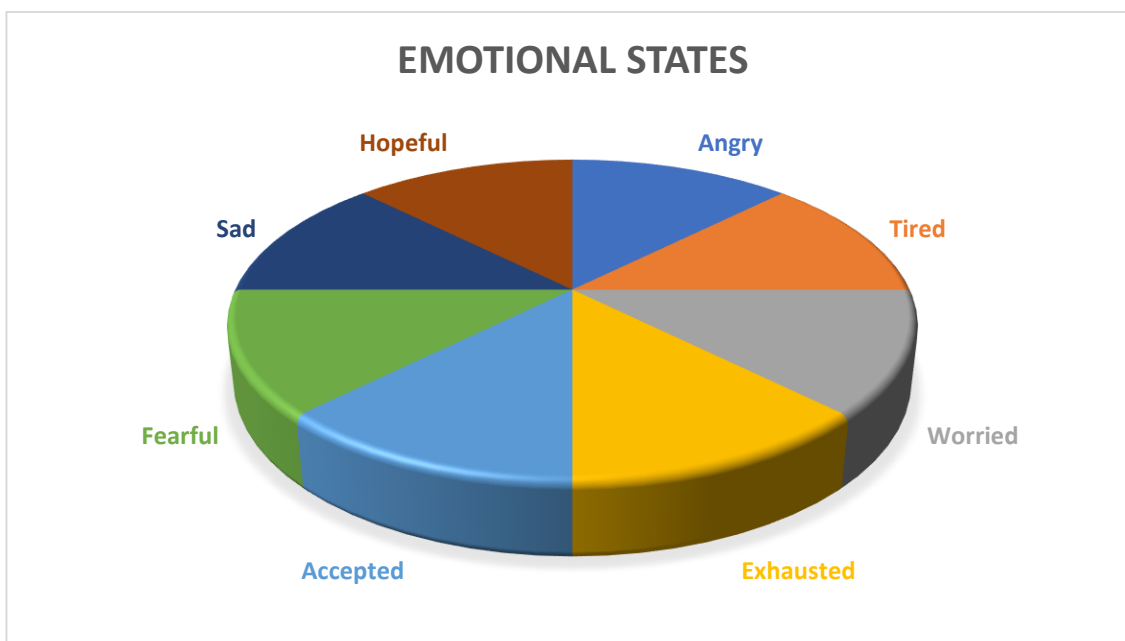


Figure 2. Moods evaluated within the scope of the study

- (2) *Can you describe the CoViD-19 process in 1 word?*

Departing from the saying “a picture is worth a thousand words” by DePaulo and Wilkinson (2014), individuals were asked to write a word expressing their thoughts on the process. The data collected from this question were visualized by word cloud analysis. In the study, MAXQDA qualitative data analysis program was used for word cloud analysis. Word clouds are a method that allows visualization of words in text by taking into account their frequency (Hunt, Gao & Xue, 2014) and allow researchers to visually present themes emerging from the data (Williams, Parkes and Davies, 2013). The purpose of visualizing data with a word cloud is not to make it aesthetically beautiful, but to make it clear (Fronza et al., 2013).



- (3) Questions prepared to determine weekly levels of physical activity before and during the CoViD-19 period were prepared using the International Physical Activity Questionnaire (IPAQ).

### **Data Analysis.**

SPSS 22.0 and AMOS 22.0 software were used for the statistical analysis of data obtained from the scales. In the study, first, the evaluation of blank data was performed for the appropriateness of the analysis and the control of the assumptions. As a result of this process, the data of 29 people who responded to the survey incorrectly and incompletely were excluded from the analysis. After this stage, considering the Mahalanobis distance, extreme value analyses were evaluated. As a result of extreme value analysis, the data of 21 people were excluded from the analysis and the data of the remaining 2214 people were analyzed.

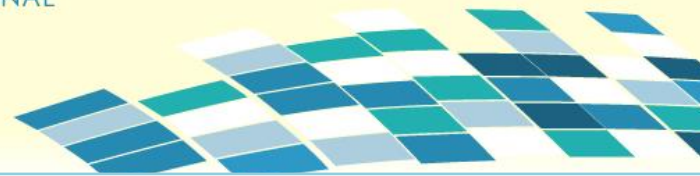
It is stated in the literature that (Downey & King, 1998; Carpita & Manisera, 2011) there are techniques such as assigning a value or exclusion from the analysis. In this context, considering the number of the study group and the lack of answers to the scale items in 50 surveys, the data were excluded.

After this step, first the skewness-kurtosis values were examined for the normality test and the distribution was found to be normal (Tabachnick & Fidell, 2013). Accordingly, T-Test was used for the differences between people's perceptions of positive and negative emotions in leisure time and their psychological resilience levels. For the T-Test, the values related to the level of exposure to the difference between the mean of the significant difference obtained as a result of Cohen's d analysis were calculated. These values are accepted as "small" if they are .20, "medium" if they are .50 and "large" if .80 (Cohen, 1988).

In addition, the Pearson Moments Product Correlation analysis was used to determine the relationships between the variables within the scope of this study, and Simple Linear Regression analysis was used to determine the predictive power of the independent variable (perception of boredom at leisure) for the dependent variable (psychological resilience). After determining that the correlation values among the variables included in the model, that are regression assumption criteria, were below 0.70, the variance increase factor (VIF) was determined to be below 10, and the tolerance value was determined to be above 0.2, it was determined that there was no multicollinearity problem. (Farrar & Glauber, 1967; Tabachnick & Fidell, 2013).







### 3. Results

#### Results on Descriptive Statements.

#### Physical Activity.

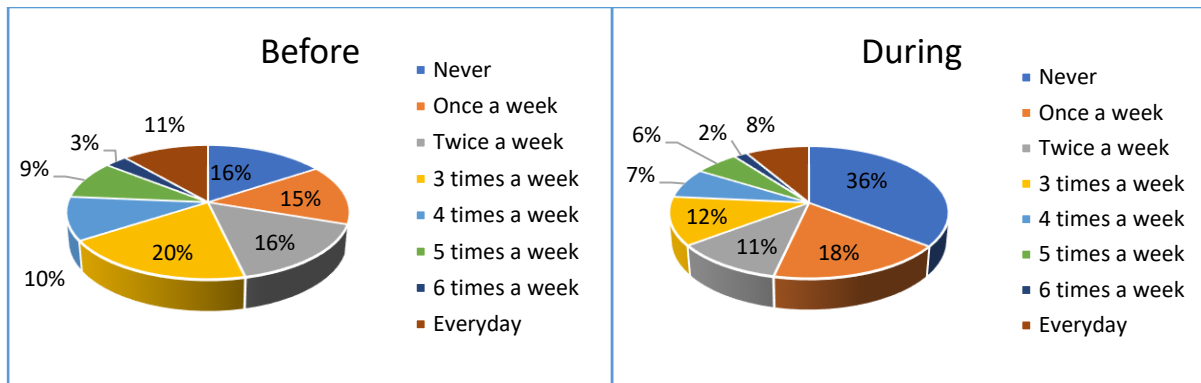
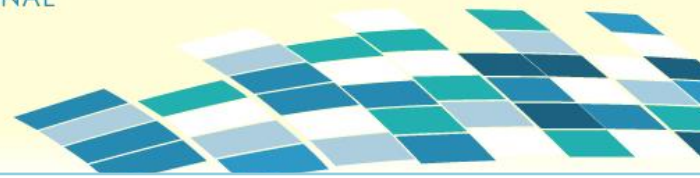


Figure 3. Levels of engaging with physical activities before and during the quarantine process

Figure 3 shows the participants' level of engagement with weekly physical activities before and during CoViD-19 quarantine practices. According to the figure, 20% of the participants engaged in physical activities 3 times a week, 16% never, 16% engaged twice a week, 15% once a week, 11% everyday, 10% 4 times a week, 9% 5 times a week, and 3% engaged in physical activities 6 times a week before the quarantine process. During the quarantine, 36% of the participants never engaged in physical activities, 18% once a week, 12% 3 times a week, 11% twice a week, 8% everyday, 7% 4 times a week, 6% 5 times a week, and 2% 6 times a week. According to Figure 1, a general decrease in weekly physical activity participation levels was observed during quarantine. When this change is examined, it is observed that 84% of individuals participated in physical activity at least once a week before quarantine, while this rate decreased to 64% during quarantine. It is believed that this 20% decrease in the level of participation in physical activity during the CoViD-19 process occurred due to the effects of quarantine and social isolation practices in the society. This finding obtained in this context can be interpreted as individuals tend towards a more sedentary lifestyle with the restriction of their movement areas.





### Emotional States.

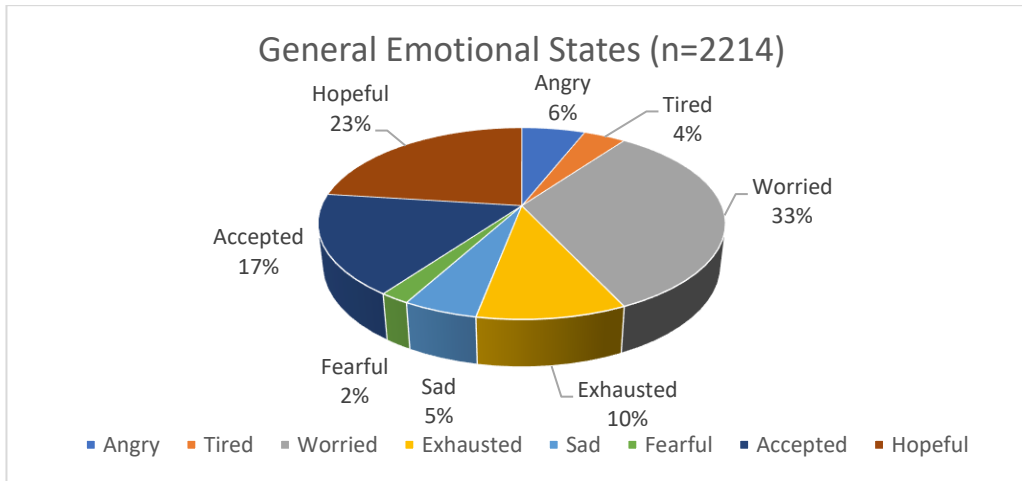


Figure 4. General moods of individuals during quarantine applications

When Figure 4 is examined, participants of the study evaluated the moods they experienced during the CoViD-19 quarantine applications. During the quarantine process, 33% of individuals were worried, 23% were hopeful, 17% accepting, 10% exhausted, 6% angry, 5% were sad, 4% were tired and 2% were fearful. When moods were examined by gender, it was observed that women participants responded with more intense emotional responses than men (Figure 5).

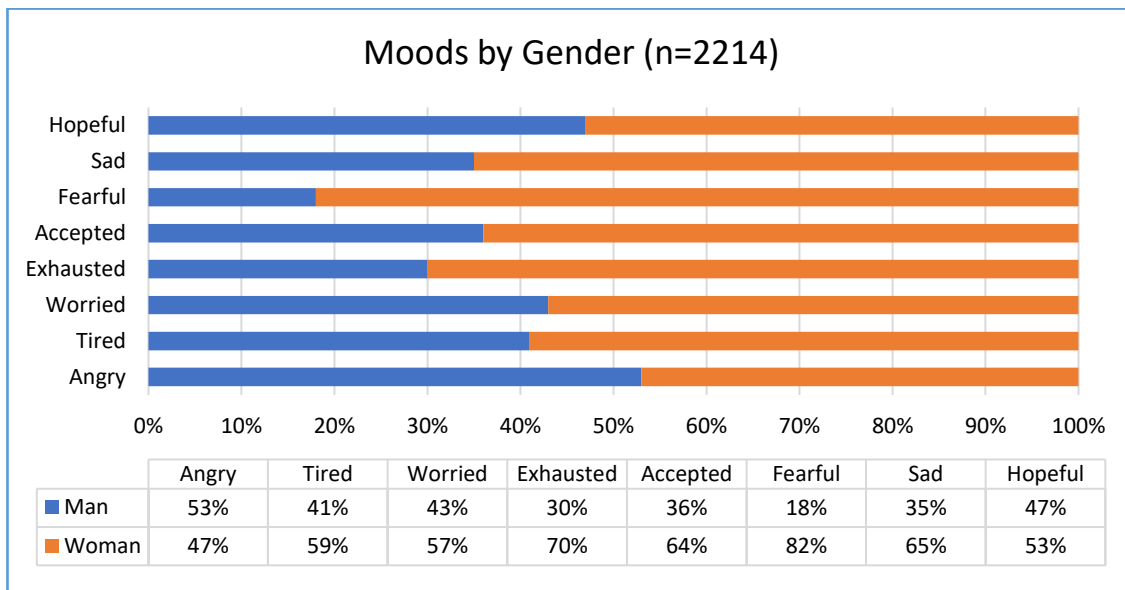


Figure 5. Individuals moods by gender during quarantine



### Word Cloud: Can You Describe the Covid-19 Process In 1 Word?

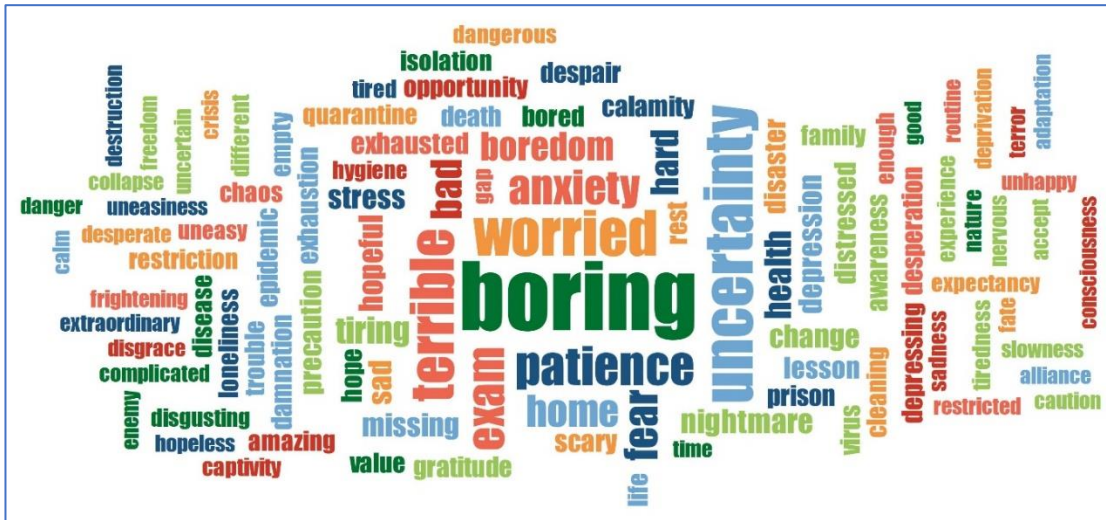


Figure 6. Word cloud of individuals' expressions about the CoViD-19 process

In the visualization by word cloud analysis shown in Figure 6, it is seen that words such as boring, uncertainty, worried, terrible, patience, exam, anxiety, fear, and home are prominent. In this context, it is thought that the words that the CoViD-19 quarantine process evokes in individuals overlap with the research topic.

#### Leisure Time.

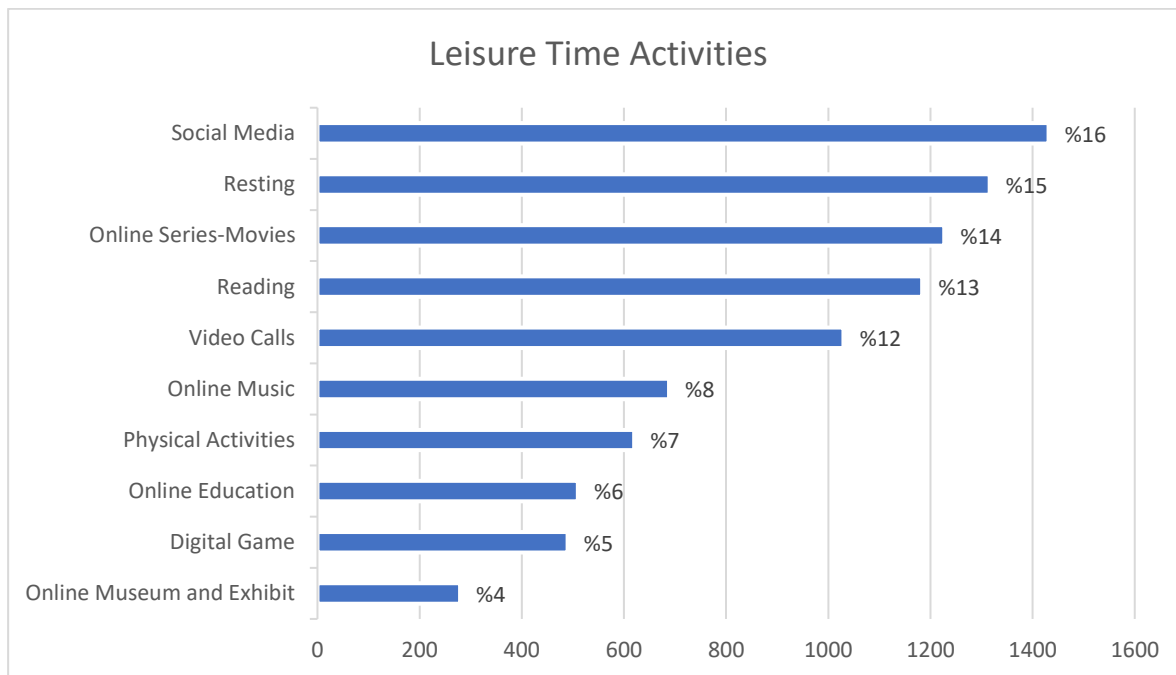


Figure 7. Leisure activities at home during CoViD-19 process



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In Figure 7, participants of the study evaluated the leisure activities they engaged with during CoViD-19 quarantine process. According to the figure, 16% of the participants engaged with social media, 15% with resting, 14% with online shows-movies, 13% with reading, 12% with video calls, 8% with online music, 7% with physical activities, 6% with online education, 5% with digital games, and 4% with online museum and exhibits during the quarantine applications. In addition, most of the participants involved in the study stated that they observed a change in leisure habits due to the quarantine process (Figure 8).

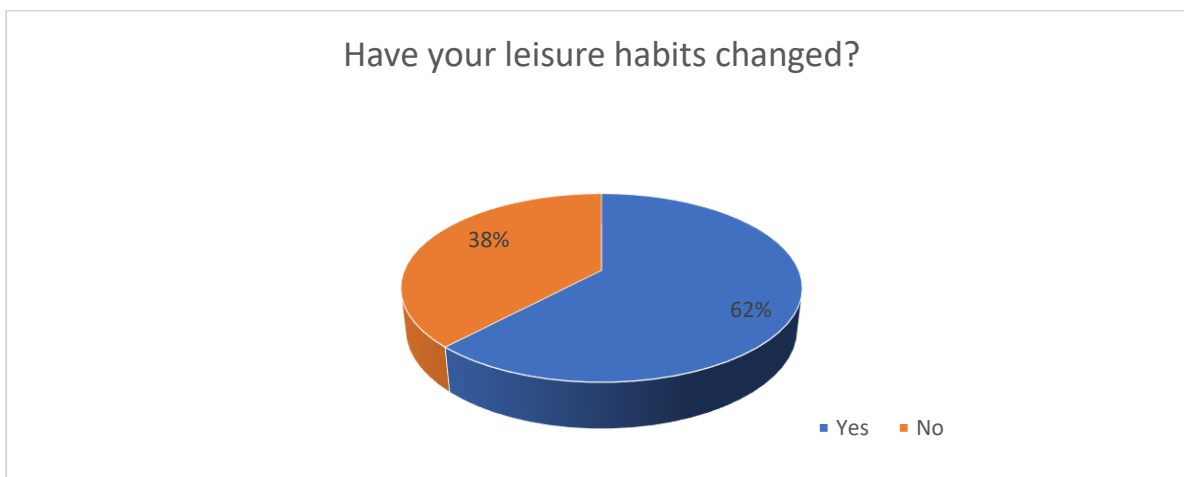


Figure 8. Change in participants' leisure habits during CoViD-19 process

### Results on The Scales Used in The Study

Table 2. Descriptive statistical values for variables included in the study

Scales	Dimensions	n	$\bar{X}$	SD	Skewness	Kurtosis
Leisure Boredom	Boredom	2214	12.110	4.259	.345	-.619
	Satisfaction	2214	12.377	3.452	.268	.018
	LB-Total	2214	24.487	6.810	.147	-.440
Psychological Resilience	Challenge	2214	21.538	3.552	-.426	1.013
	Commitment	2214	19.417	3.615	-.239	.378
	Control	2214	18.187	3.070	-.108	.328
	PR-Total	2214	59.143	8.635	-.265	.995

It is determined in Table 2 that skewness and kurtosis values were between (-1.5, +1.5) and the data showed normal distribution (Tabachnick & Fidell 2013).





Table 3. Goodness of fit index values for scales according to CFA results

Scales	p	RMSEA	SRMR	RMR	GFI
Leisure Boredom	.00	.091	.055	.062	.94
Psychological Resilience	.00	.068	.053	.041	.91

In Table 3, when the goodness of fit index values was examined for the Perceptions of Boredom in Leisure, the RMSEA values was determined to be .091. It is stated in the literature that the value ranges between .08 and .10 show a moderate level of goodness of fit (Steiger, 2000; Kline, 2015). The SRMR value was .055 and RMR was .062. Kline (2015) states that these values below 0.10 indicate that the model's goodness of fit is good. The GFI was found to be .94. It was seen that a value of .90 and above indicates a good level of fitness (Thompson, 2004; Kline, 2015).

When the goodness of fit index values of Psychological Resilience was evaluated, the RMSEA values was determined to be .068. Hu and Bentler (1999) state that values below .08 are acceptable. SRMR value was .053 and the RMR was .041. Kline (2015) states that these values below .10 indicate that the model's goodness of fit is good. The GFI was .91. In the literature, a value of .90 and above has been found to be a good fit (Thompson, 2004; Kline, 2015). The results obtained show that both scales had a good level of fitness within the scope of research.

Chi-square statistics are affected by the sample volume and increase as sample volume increases (Muthen, 2001). It is difficult to obtain insignificant chi-square when the sample volume is 200 or more. As in the sample volume, the size of the model causes an increase in chi-square value (Kline, 2011). Accordingly, considering the sample group of the study (n=2214), the  $\chi^2/df$  fit index value was not evaluated within the scope of the study.

Table 4. T-test results on perceptions of boredom in leisure by gender

Scale	Gender	n	$\bar{X}$	SD	f	t	df	p	Cohen's d
LB	Man	909	25.254	6.963	3.769	4.440	2212	.000	.19
	Woman	1305	23.953	6.652					

When the values of perception of boredom in leisure time according to the gender variable of the individuals participating in the study were examined in Table 4, it was found that there was a statistically significant difference ( $t_{(2212)}=4,440, p<.05$ ). Accordingly, it was determined that the means of perceptions of boredom of men ( $\bar{X}=25,254$ ) were higher than that of women ( $\bar{X}=23,953$ ). It can be said that the *Cohen's d* value, calculated from the difference between the means, is close to the small effect.

Table 5. T-Test results on psychological resilience levels of participants by gender variable

Scale	Gender	n	$\bar{X}$	SD	f	t	df	p	Cohen's d
PR	Man	909	59.371	9.442	15.168	1.040	2212	.299	-
	Woman	1305	58.983	8.025					





When the psychological resilience levels of the individuals participating in the study were examined by gender in Table 5, there was no statistically significant difference ( $t_{(2212)}=1,040$ ,  $p<.05$ ). However, when the average scores were examined, it is seen that the psychological resilience levels of men ( $\bar{X}=59.371$ ) are higher than that of women ( $\bar{X}=58.983$ ).

Table 6. T-Test results on perceptions of boredom in leisure by positive and negative moods

Scale	Mood	n	$\bar{X}$	SD	f	t	df	p	Cohen's d
LB	Negative Mood	1407	25.965	6.686	9.262	14.069	2212	.000	.62
	Positive Mood	807	21.910	6.236					

When the participants' values of perception of boredom in leisure time were examined by the emotional state variable in Table 6, it was found that there was a statistically significant difference ( $t_{(2212)}=14,069$ ,  $p<.05$ ). Accordingly, it was determined that the individuals with negative emotions had a higher mean of boredom perception ( $\bar{X}=25.965$ ) than individuals with positive emotions ( $\bar{X}=21.910$ ). It can be said that the *Cohen's d* value, calculated from the difference between the averages, is close to the medium effect.

Table 7. T-Test results on psychological resilience levels by individuals' positive and negative moods

Scale	Mood	n	$\bar{X}$	SD	f	t	df	p	Cohen's d
PR	Negative Mood	1407	58.068	8.617	.000	-7.833	2212	.000	.34
	Positive Mood	807	61.016	8.348					

When the psychological resilience levels of the individuals participating in the study were examined by the mood variable in Table 7, it was found that there was a statistically significant difference ( $t_{(2212)}=-7.833$ ,  $p<.05$ ). Accordingly, it was determined that individuals with positive emotional state ( $\bar{X}=61.016$ ) had higher levels of psychological resilience than individuals with negative emotional state ( $\bar{X}=58.068$ ).

Table 8. Pearson correlation analysis results on the perception of boredom in leisure time by the number of physical activity engaged during CoViD-19

Variable (n=2214)	Leisure Boredom	
How often do you do physical activity during CoViD-19?	r	-.152
	p	.000
	$\bar{X}$	24.487
	SD	6.810





In Table 8, when individuals' perception of boredom according to the number of weekly physical activities was examined, it was found that there was a statistically significant relationship at a low level in the positive direction ( $r = -.152$ ;  $p < .05$ ). These results can be interpreted as the perception of boredom decreases in leisure time as participation in physical activity increases.

Table 9. Pearson correlation analysis results of individuals' psychological resilience levels based on the number of physical activity they performed during CoViD-19

Variable (n=2214)	Psychological Resilience	
How often do you do physical activity during CoViD-19?	r	.147
	p	.000
	$\bar{X}$	59.143
	SD	8.635

When the psychological resilience levels of individuals according to the number of weekly physical activities were examined in Table 9, it was found that there was a statistically significant relationship at a low level ( $r = .147$ ;  $p < .05$ ). These results can be interpreted as the level of psychological resilience of individuals will increase as participation in physical activity increases.

### Results of The Regression Analysis.

In the analysis of the data, first, the Pearson Moments Product Correlation analysis was conducted in order to test the relationships between the predictive variable of "perception of boredom at leisure" and the predicted variable of "psychological resilience". The relationships between variables are presented in Table 10.

Table 10. Pearson correlation analysis results for the relationship between the perception of boredom in leisure and psychological resilience

Variable (n=2214)	Psychological Resilience	
Leisure Boredom	r	-.385
	p	.000

In Table 10, when the individuals' perception of boredom at leisure time and psychological resilience levels were examined, it was found that there was a statistically significant relationship at a negative level ( $r = -.385$ ;  $p < .05$ ). These results can be interpreted as individuals' level of psychological resilience increases as their perception of boredom with leisure decreases.



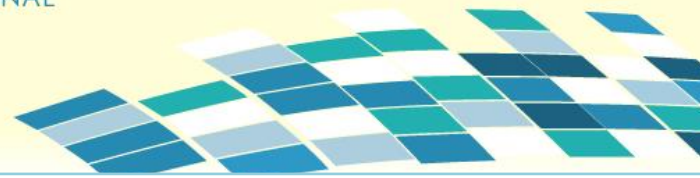


Table 11. Results of simple linear regression analysis related to prediction of the perception of boredom in leisure of psychological resilience levels

Predictive Variable	B	Standart Error	Beta	t	p
Leisure Boredom	-.488	.025	-.385	-19.597	.000
R=.385 R <sup>2</sup> =.148 Durbin Watson=1.676 F=384.038 P<.000					

When the simple linear regression analysis results were examined in Table 11, it is seen that the perception of boredom in leisure time significantly predicts the psychological resilience levels of individuals and explains approximately 15% of the variance ( $R=.385$ ,  $R^2 = .148$ ). The standardized regression coefficient ( $\beta$ ) of the perception of boredom in leisure time was found to be  $-.385$ .

#### 4. Discussion.

This study was carried out to determine the relationship between the perception of boredom in leisure time and psychological resilience in individuals affected by the quarantine process implemented in Turkey during the CoViD-19 pandemic, and to describe the participation in physical activity, emotional states, and leisure activities of 2214 individuals who participated in the study.

#### Findings on the Gender Variable.

According to the results of the analysis, it was determined that men's perception of boredom in leisure time is higher than that of women. There are studies in the literature showing that men are more bored than women (Shaw, Caldwell, & Kleiber, 1996; Newberry & Duncan, 2001; Wegner, Flisher, Chikobvu, Lombard, & King, 2008; Wegner & Flisher, 2009). It is thought that this is due to men having more leisure time than women (Searle & Jackson, 1985; Shaw, 1994; Lee & Bhargava, 2004; Beck & Arnold, 2009).

When the psychological resilience levels were examined, no significant difference was found. Research findings examining the effect of gender on psychological resilience differ in the literature. There are studies similar to our research findings (Harrison, Loiselle & Semenic, 2002; Crowley, Hayslip & Hobdy, 2003; Chan, 2003). On the other hand, a study conducted by Gatab & Ghajari (2013) found that female students' psychological resilience levels were higher than that of male students. In a study in which the relationship between psychological resilience and mental health was found significant, it was revealed that women had more psychological resilience than men (Rudwan & Alhashimia, 2018). These studies show differences with our findings.

#### Findings on Mood.

According to the results of the analysis, it was determined that the individuals who had negative emotions among the participants who were categorized in terms of their emotions were more bored in their leisure time compared to the individuals who had positive emotions. Therefore, the first hypothesis of the study was supported. Pfefferbaum and North (2020)







stated that quarantined people experience many negative emotions such as stress, depression, boredom, insomnia, fear, and frustration. This situation can be interpreted as a mood in which sudden and negative emotional states intensify in individuals experiencing the quarantine process (Zhang & Ma, 2020). These feelings arise from the fact that individuals remain closed at home and do not efficiently utilize their significantly increased leisure time (Marafa & Tung, 2004). Individuals with positive emotions are thought to effectively spend their leisure time in the quarantine process and maintain their emotional state. According to Iso-Ahola and Wessinger (1990), people's participation in leisure activities varies depending on their mood and creates positive feelings when they feel they have the appropriate leisure time for the activity. When several studies on this topic were examined: Iwasaki, Zuzanek, and Mannel (2001), in a study they conducted to address physical activity and health relationship, they stated that these created positive relationships and play an important role in avoiding negative emotional states. In another study conducted with a sample of university students, it was stated that there was a significant improvement in positive moods as a result of the exercises that students engaged in in their leisure time (Giacobbi et al., 2005). On the other hand, Schwartz and Campagna (2008) in a leisure study conducted with the elderly, examined the emotional changes experienced by the participants after ten weeks of exercise. As a result, it was reported that elderly people experienced both positive and negative emotional changes after the activity (Schwartz & Campagna, 2008). Therefore, it can be said that our research findings are similar to the studies in the literature.

When the psychological resilience levels were examined, it was seen that individuals with positive mood had higher psychological resilience than individuals with negative mood. When studies on psychological resilience were examined, the findings of a study by Ong, Bergeman, Bisconti and Wallace (2006) found that participants who had positive emotional experiences exhibited a healing response to stress. In the same study, it was stated that psychological resilience creates significant findings in terms of participants' daily emotional states and stress levels. The results of another study showed that positive feelings of the participants play a critical role in their psychological resilience and physical well-being (Tugade, Fredrickson, & Barret, 2004). In a study by Philippe, Lecours, and Beaulieu-Pelletier (2009), a positive relationship was found between positive emotions and psychological resilience. Min et al. (2013) found in their study that there was a negative relationship between the participants' psychological resilience levels and negative emotions (e.g. boredom). Therefore, it was observed that the findings obtained in our study also overlap with some examples in the literature.





### **Findings on the Physical Activity Variable.**

According to the results of the analysis, it can be stated that an increase in the participation in physical activity is inversely associated with the perception of leisure boredom, and thus the perception of boredom may decrease in participants who spend their leisure time with physical activities. Therefore, this situation can be considered as an important result in terms of exploring the nature of other variables that are thought to be related to physical activity. There are a limited number of studies in the literature that examine the relationship between the perception of leisure boredom and participation in regular physical activity. Kara (2019) stated that regular physical activity has positive effects on coping with the perception of boredom that occurs in leisure time. In a study conducted by Harasymchuk and Fehr (2010) on couples, it was reported that physical activity is an important tool in addition to activities such as reading, socializing, and watching television in dealing with people's perception of boredom. Accordingly, it is thought that the exercise practices that individuals who are exposed to quarantine and isolation practices will perform in their spare time will reduce their negative emotional states such as boredom in addition to positive effects on physical and mental health. When the psychological resilience levels were examined, it is seen that there is a positive relationship between the participants' physical activity and their psychological resilience. In other words, the increase that may occur in the frequency of physical activity of the participants will be in the same direction with the increase in psychological resilience feature. However, it has been stated that there is limited information about the interaction of these concepts in the literature as the studies in which physical activity is associated with psychological resilience are not very diverse (Hegberg & Tone, 2015). However, there are several studies showing that physical activity increases positive moods of individuals (Janisse, Nedd, Escamilla, & Nies, 2004; Penedo & Dahn, 2005), reduces risk of depression (Schuch et al., 2018; Choi et al., 2019), and improves cognitive and mental health (Lau, Yang, Tsui, & Kim, 2003; Spalding, Lyon, Steel, & Hatfield, 2004; Gerber & Pühse, 2009; Klaperski, von Dawans, Heinrichs, & Fuchs, 2013). Therefore, it is thought that physical activity is an important parameter in terms of positive psychological components that have effects on individuals and departing from this point, it is thought to have an effect on psychological resilience.

### **Findings on the Relationship Between Leisure Boredom and Psychological Resilience.**

According to the results, it can be stated that if the perception of boredom in individuals is reduced, it will have an effect to cause a decrease in psychological resilience. Therefore, it can be stated that steps should be taken to distance individuals from the perception of boredom in leisure as a way of increasing psychological resilience. No studies focusing on the relationship between the boredom perception in leisure and psychological resilience were found in the literature.

In the light of the findings obtained within the scope of the research, the following recommendations can be made:





## Recommendations.

- (1) In order to protect our physical and mental health, it may be suggested to increase the level of in-home physical activity in order to prevent increased sedentary life in the CoViD-19 process, based on the findings obtained within the scope of the research.
- (2) Based on these findings, creating a daily routine during social isolation periods (physical activity, joining virtual environments, acquiring healthy living habits, following reliable resources, etc.) can help both adults and children maintain their physical and mental health.
- (3) In order to maintain the level of societal health and welfare during possible crisis periods that may occur in the future, planning practices and policies regarding physical activity and leisure activities in accordance with the nature of this process can be recommended.

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