

# The negative effects of the pandemic on human behavior; alienation and social anhedonia: the example of sport sciences students

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## Abstract

### Background and Study Aim

The social change brought about by the pandemic process all over the world has led to the restructuring of human behavior and daily life practices. This process has brought with it some social-psychological problems (such as alienation and social anhedonia) for social segments. For this reason, the aim of the research is to examine the alienation and social anhedonia levels of the students studying at the faculty of sport sciences during the pandemic process.

### Material and Methods

The sample of the research consists of students studying at the faculties of sport sciences of different universities in Turkey. A total of 423 students (271 males, 152 females) participated in the study. Due to the normal distribution of the data, the t-test, one of the parametric tests, was performed for paired groups, and the relationship between Social Anhedonia Scale and Alienation Scale sub-dimensions was tested with Pearson correlation analysis. Statistical analyzes were performed with the “Statistical Package for the Social Sciences” commercial software (SPSS for Windows, version 26.0, SPSS). The significance level was determined as  $p < 0.05$  in the analyzes, and skewness and kurtosis values were considered for the normality analysis.

### Results

According to the results obtained, it can be said that the pandemic process negatively affected the social anhedonia and alienation levels of male students studying at the faculty of sport sciences compared to female students. Again, it is seen that the level of alienation of the students who do sports at the professional level is higher than the students who do sports at the amateur level. Similarly, it is seen that the students of the faculty of sport sciences dealing with team sports have higher levels of social isolation, which is one of the sub-dimensions of the alienation scale, compared to the students who are engaged in individual sports. Finally, there is a negative and low-level significant relationship between social anhedonia and alienation scale sub-dimensions ( $p < 0.05$ ;  $r = -0.187$ ;  $r = -0.164$ ;  $r = -0.132$ ).

### Conclusions

As a result, it can be said that the pandemic process has had similar negative effects on the students studying in the faculties of sport sciences, as in other social segments.

### Keywords:

pandemic, alienation, social anhedonia, sport science students

## Introduction

The view that humans are a social species has long been an accepted reality. As a social being, human has fundamental motivations such as belonging or needing another [1]. These principal motivation components are one of the basic acceptances and important research topics in both sociology and social psychology [2, 3, 4, 5]. Just as a person needs another person, feeling that he/she is needed by others is also an important motivation for people [6]. Thus, the entity that we call human from the historical process to the present continues its life in mutual interaction with other people. Today, this interaction process has significantly increased compared to the past. The main reason for this increase is the transformations caused by humanity such as social progress and social change. In this process, the society became more complex, and a new lifestyle emerged, which was created by sociological

processes such as the social division of labor. This lifestyle has caused significant changes in human life, and modern people have reached a more comfortable lifestyle with various components of development such as technological development, increase and acceleration of production, urbanization, and urban life. This period is the promise of modernity which refers to the period when people's pleasure and desires are met. However, despite all these developments, two fundamental change processes experienced today affect human life in various ways. One of these fundamental changes is the phenomenon of “isolation in crowds”, which emerged as a result of modernization and with the effect of technological developments, and another is the “global epidemic” experienced all over the world [7]. The lifestyles that emerged as a result of these processes of social change have removed people from traditional types of social order in an unprecedented way. It can be said that these transformations faced by humanity are different and more effective than the forms

of change peculiar to previous periods in terms of both their prevalence and intensity. Especially after the epidemic, studies have focused on the mental problems associated with the COVID 19 pandemic, such as negative mood states, anxiety and depression symptoms, and post-traumatic stress in humans [8, 9, 10]. When the studies are examined in detail, it is seen that this process is often associated with two different concepts separately. These concepts are the concept of “alienation”, which is one of the research areas of social psychology, and “social anhedonia”, which is a neuropsychological concept [11-14].

Although the concept of alienation has been expressed in different ways in the relevant literature, there is considerable overlap in various definitions [15]. In its most general explanation, it is a feeling of distancing from society [16]. In other words, it is the distancing of individuals from each other or a specific social environment or process [17]. It is accepted by many researchers that the use of the concept of alienation in many and quite different meanings in the disciplines of religion, metaphysics, philosophy, sociology, and psychology raises an intractable definition problem [17, 18]. This research deals with the concept of alienation from a social psychological perspective. In other words, alienation should be understood as the feeling of distancing between the individual and the general society or an element of the society, as expressed in similar ways above.

Social Anhedonia (SA), on the other hand, is behaviorally characterized as a relative failure to derive pleasure from previously enjoyed activities or stimuli [12, 19]. In other words, it is described as not taking pleasure in interpersonal relationships [20]. SA is associated with the risk of psychopathology, such as reduced social interaction and social/emotional dysfunction. Socially anhedonic people may face loneliness and apathy in social interaction. In addition, it is stated that various factors such as gender, socio-economic level, place of residence (urban and rural areas) have positive-negative effects on SA [21].

Considering that social research cannot be independent of social changes, the two important concepts mentioned above have become a universal phenomenon in today's world life. In other words, the speed of social change and the current COVID 19 pandemic are similar in terms of affecting human behavior all over the world [8, 22, 23, 24]. When the literature on the subject is examined, it is possible to come across studies that reveal the effects of the mentioned social events on various social groups [13, 25]. However, when the relevant studies were reviewed, no research was found in which the sample group consisted of students studying in the field of sports. The fact that no study has been conducted specifically for this group makes this study different from other studies. In addition, considering the positive effects of sports on socialization and

collective feelings in the axis of functionalist theory, it is crucial to determine to what extent the current social change affects alienation and SA levels on this group (students receiving sports training). In this context, the aim of the research is to examine the alienation and SA levels of the students studying at the faculty of sport sciences during the COVID 19 process.

## Material and Methods

### *Participants*

The sample of the research consists of students studying in the faculties of sport sciences of different universities in Turkey. A total of 423 students (271 males, 152 females) participated in the study.

The criteria for inclusion in the research are as follows:

- Voluntary participation in the study,
- Being a student at the Faculty of Sport Sciences,
- Having no comprehension, vision, hearing, or mental or cognitive impairment.

Students who fell outside the specified criteria were not included in the study. Information about the sample group is presented in Table 1. Data collection tools were distributed to students via “Google Forms” through e-mail. Research data were collected in March and April of 2022. This period coincides with the period when COVID 19 cases started to decline in Turkey [26].

### *Research Design*

In the study, “Personal Information Form” to collect students' personal information, “The Dean Alienation Scale” developed by Dean [27] and adapted to Turkish by Yalçın and Dönmez [17], and “The Revised Social Anhedonia Scale” developed by Eckblad et al. [28] and adapted to the Turkish language by Cihan et al. [20], was used.

Dean Alienation Scale (DAS): The scale, which was developed by Dean [27] and adapted to the Turkish language by Yalçın and Dönmez [17], consists of a total of 17 items and 3 sub-dimensions. The powerlessness sub-dimension consists of 7 items (items 1, 3, 9, 12, 13, 14 and 16), the sub-dimension of normlessness consists of 5 items (items 2, 4, 6, 7, and 10), and social isolation consists of 5 items (5, 8, 11, 15 and 17). The fifth, eighth and fifteenth items in the scale were reverse coded. The scale was designed as a 5-point Likert type scale. The original Cronbach Alpha coefficient of the scale is 0.84.

The Revised Social Anhedonia Scale (RSAS): The scale, which was developed by Eckblad et al. [28] and adapted to the Turkish language by Cihan et al. [29], consists of a total of 40 items and a single sub-dimension. The scale was designed as a “Yes” and “No” scale. The original Cronbach Alpha coefficient of the scale is 0.84.

### *Statistical analysis*

Statistical analyzes were performed with the “Statistical Package for the Social Sciences” commercial software (SPSS for Windows, version 26.0, SPSS). The significance level was determined as  $p < 0.05$  in the analyzes, and skewness and kurtosis values were taken into account for the normality analysis. Descriptive statistical analyzes were made for the personal information of the students participating in the study, and frequency (n) and percentage (%) values were calculated (Table 1). Due to the normal distribution of the data, the t-test, one of the parametric tests, was performed for paired groups, and the relationship between the Revised Social Anhedonia Scale and the Dean Alienation Scale sub-dimensions was tested with Pearson correlation analysis.

## Results

In this part of the study, statistical test results and interpretations of the data obtained are included.

According to Table 1, 64.2% (n=271) of the students participating in the research were male and 35.9% (n=152) were female. It is seen that the students are mostly interested in team sports (54.1%, n=229) at the professional level (87.0%, n=368). In addition, the majority of the students (72.3%, n=306) were not infected with the COVID-19 virus.

As a result of the analyzes made, it is seen that the data provided the assumption of normality and the reliability coefficient was at an acceptable level (Table 2). For the normality test, skewness and kurtosis values are taken into account in social sciences and studies where the Likert type scale

method is used, and if these values are in the range of  $\pm 2$ , the distribution is considered normal [30].

The findings of the difference test, which was conducted to examine the difference between the genders of the students and the sub-dimensions of RSAS and DAS, are shown in Table 3. When the table is examined, a statistically significant difference was found in favor of male students in the sub-dimension of normlessness ( $t = -2.63$ ;  $p = 0.00$ ) and social anhedonia ( $t = 2.61$ ;  $p = 0.00$ ).

According to Table 4, in the powerlessness sub-dimension ( $t = 3.06$ ;  $p = 0.00$ ), normlessness sub-dimension ( $t = 2.22$ ;  $p = 0.02$ ) and social isolation sub-dimensions ( $t = 2.34$ ;  $p = 0.01$ ) was found to be a significant difference. When the arithmetic averages are examined, the powerlessness sub-dimension (professional  $\bar{x} = 3.73$ , amateur  $\bar{x} = 3.41$ ), the normlessness sub-dimension (professional  $\bar{x} = 3.96$ , amateur  $\bar{x} = 3.74$ ) and the social isolation sub-dimension (professional  $\bar{x} = 3,66$ , amateur  $\bar{x} = 3,45$ ), it was determined that there is a statistical difference in favor of students who do professional sports.

According to Table 5, no significant difference was found in other sub-dimensions and Social Anhedonia scale, except for the Social Isolation sub-dimension ( $t = -2.01$ ;  $p = 0.04$ ). When the arithmetic averages were examined, it was determined that there was a statistical difference in favor of the students doing team sports in the Social Isolation sub-dimension (individual sports  $\bar{x} = 3.57$ , team sports  $\bar{x} = 3.69$ ).

According to Table 6, it was determined that there was no statistically significant difference between

**Table 1.** Frequency and Percentage Distribution of Students by Demographic Information

Characteristics	Groups	n	(%)
Gender	Male	271	64,1
	Female	152	35,9
Licensed athlete category	Individual Sports	194	45,9
	Team Sports	229	54,1
Athlete category	Professional	368	87,0
	Amateur	55	13,0
Situation of catching coronavirus	Yes	117	27,7
	No	306	72,3
Total		423	100

**Table 2.** Reliability and normality values of the Alienation Scale and the Social Anhedonia Scale

Dimensions	$\alpha$ (Original)	$\alpha$ (Research data)	Skewness	Kurtosis
Dean Alienation Scale (DAS)	0,84	0,79	-0,216	-0,265
Revised Social Anhedonia Scale (RSAS)	0,84	0,66	0,019	1,401

**Table 3.** Differences between the sub-dimensions of RSAS and DAS according to the gender of the students

Sub-Dimensions	Groups	n	$\bar{X}$	SD	df	t	p
Powerlessness	Male	271	3,65	0,70	421	-1,48	0,13
	Female	152	3,76	0,75			
Normlessness	Male	271	3,87	0,68	421	-2,63	0,00*
	Female	152	4,05	0,70			
Social Isolation	Male	271	3,61	0,66	421	-1,01	0,31
	Female	152	3,68	0,60			
Social Anhedonia	Male	271	1,43	0,13	394	2,61	0,00*
	Female	152	1,40	0,09			

p<0.05.

**Table 4.** The differences between the sub-dimensions of RSAS and DAS according to the athlete status of the students

Sub-Dimensions	Groups	n	$\bar{X}$	SD	df	t	p
Powerlessness	Professional	368	3,73	0,71	421	3,06	0,00*
	Amateur	55	3,41	0,74			
Normlessness	Professional	368	3,96	0,67	421	2,22	0,02*
	Amateur	55	3,74	0,81			
Social Isolation	Professional	368	3,66	0,63	421	2,34	0,01*
	Amateur	55	3,45	0,63			
Social Anhedonia	Professional	368	1,42	0,12	421	-0,292	0,77
	Amateur	55	1,43	0,12			

p<0.05.

**Table 5.** The differences between the sub-dimensions of RSAS and DAS according to the sports category of the students

Sub-Dimensions	Groups	n	$\bar{X}$	SD	df	t	p
Powerlessness	Individual Sports	194	3,66	0,74	421	-0,71	0,47
	Team Sports	229	3,71	0,71			
Normlessness	Individual Sports	194	3,94	0,68	421	0,02	0,98
	Team Sports	229	3,93	0,71			
Social Isolation	Individual Sports	194	3,57	0,63	421	-2,01	0,04*
	Team Sports	229	3,69	0,64			
Social Anhedonia	Individual Sports	194	1,42	0,12	421	-0,15	0,87
	Team Sports	229	1,42	0,11			

p<0.05

the variable of students' catching the corona virus and the sub-dimensions of RSAS and DAS.

When Table 7 is examined, it is seen that there is a negative and low-level significant relationship between revised social anhedonia scale and dean alienation scale sub-dimensions ( $p < 0.05$ ;  $r = -0.187$ ;  $r = -0.164$ ;  $r = -0.132$ ).

### Discussion

In this study, alienation and SA levels of the students of the faculty of sport sciences were examined considering the COVID 19 pandemic process. Bearing in mind that social research cannot be independent of social changes. The findings of this research reveal some behavioral changes in the daily life practices of the students of the faculty of sport sciences during the pandemic process. The new lifestyle, fed by the sociological and psychological changes created by the pandemic, together with the modern lifestyle, leads to a number of unique values and daily practices. In this context, with the pandemic process, which is thought to affect these new daily life practices, the alienation and SA levels of the students studying at the faculty of sport sciences are discussed in this section from the perspective mentioned above.

In the results of the study, first of all, students' SA and alienation levels were compared according to their gender (Table 3), and significant differences were found in favor of male students in the normlessness sub-dimension of the alienation scale and the SA scale ( $p < 0.05$ ). In the relevant literature, normlessness is defined based on Durkheim's concept of anomie. According to Durkheim, anomie refers to the loss of commonly accepted beliefs, behaviors,

and values that give direction or purpose to life [31]. From this point of view, according to the research findings, it can be said that male students studying at the faculty of sport sciences have higher levels of normlessness and SA than female students. Zhu et al. [10] in their study on adult people, stated that the level of alienation of male and female participants increased due to the COVID 19 process. Lee, Yoo and Youn [32] in their study on a sample of secondary and high school students, stated that male and female students participating in physical education classes had partial changes in the level of alienation in the COVID 19 period compared to previous periods. Again, Wieman et al. [33] stated in their study among university students that university students have higher anhedonia levels, especially in the first months of the pandemic. However, no difference was found between genders in the related study. On the other hand, Fekih-Romdhane, Dissem, and Cheour [34] stated in their study among university students that female students have higher levels of schizotypal personality disorder than male students. Similarly, Kaçoğlu, Çobanoğlu, and Şahin [35] stated in their study that female athletes experience more fear of COVID-19 than male athletes. It seems that the results related to gender in the current study differ from the relevant literature. This difference may be due to the fact that the number of female participants participating in the study is lower than that of male participants.

Looking at Table 4, where the alienation and SA levels of the students are examined according to the amateur or professional level of sports; The alienation levels of the students who do sports at the professional level were found to be higher than

**Table 6.** Differences between the sub-dimensions of RSAS and DAS according to the status of students catching the Corona virus

Sub-Dimensions	Groups	n	$\bar{X}$	SD	df	t	p																																
Powerlessness	Yes	117	3,76	0,62	251,18	1,30	0,19																																
	No	306	3,66	0,75				Normlessness	Yes	117	3,98	0,67	421	0,77	0,44	No	306	3,92	0,70	Social Isolation	Yes	117	3,63	0,62	421	-0,03	0,97	No	306	3,63	0,64	Social Anhedonia	Yes	117	1,41	0,10	421	-1,60	0,10
Normlessness	Yes	117	3,98	0,67	421	0,77	0,44																																
	No	306	3,92	0,70				Social Isolation	Yes	117	3,63	0,62	421	-0,03	0,97	No	306	3,63	0,64	Social Anhedonia	Yes	117	1,41	0,10	421	-1,60	0,10	No	306	1,43	0,12								
Social Isolation	Yes	117	3,63	0,62	421	-0,03	0,97																																
	No	306	3,63	0,64				Social Anhedonia	Yes	117	1,41	0,10	421	-1,60	0,10	No	306	1,43	0,12																				
Social Anhedonia	Yes	117	1,41	0,10	421	-1,60	0,10																																
	No	306	1,43	0,12																																			

$p > 0.05$ .

**Table 7.** Pearson correlation table between RSAS and DAS sub-dimensions

Sub-Dimensions	Powerlessness	Normlessness	Social Isolation
Social Anhedonia	-0,187**	-0,164**	-0,132**

$p < 0.05$ .

the students who do sports at the amateur level ( $p < 0.05$ ). In the comparison of SA levels, it can be stated according to the research findings that the amateur or professional level of sports does not have a positive or negative effect on SA. The alienation and mental health problems of professional athletes had already become a prominent topic in the sports medicine and sport psychology literature prior to the COVID-19 pandemic [36]. It can be said that these negative processes continue to increase with the effect of the pandemic process. As a matter of fact, a number of studies support this situation [37, 38]. According to the current research, the higher levels of alienation in the professional sports group can be explained by the fact that the pandemic process caused more radical changes in professional sports and the daily life practices of professional athletes.

Looking at Table 5, where alienation and SA levels are examined according to the sports category (individual or team sports) of the students. In the social isolation sub-dimension of the alienation scale, it is seen that the average scores of the students who do team sports are higher than the students who do individual sports ( $p < 0.05$ ). In the comparison of SA levels, it can be stated according to the research findings that students' individual or team sports do not have a positive or negative effect on SA. The social isolation dimension of alienation scale indicates that the individual does not value the beliefs and goals that are valued by the society. The isolated individual is separated from the group and its standards [17]. Ağduman [39] in his study reported that the levels of catching the virus, anxiety, and socialization anxiety of the athletes who are interested in team sports are higher than those who are engaged in individual sports. The relevant study is in line with the findings of our research. Çifci and Demir [40] on the other hand, in their study, state that professional football players (doing team sports) fear catching the virus during the COVID 19 process, and the stress levels they perceive accordingly are moderate. Similarly, Lima et al. [41] stated in their study that the depression, anxiety, and stress scores of elite athletes who play team sports are significantly lower than elite athletes who do individual contact sports. Therefore, it is seen that different results have been reached in the relevant literature. The main reason for this difference can be explained by the fact that the data collection periods and sample groups of the studies are different from each other.

In another evaluation, when we look at Table 6, where the SA and alienation levels of the students are examined according to the state of being caught to Corona virus; It was determined that there was no statistically significant difference between the variable of the students' status of contracting COVID-19 and their alienation and SA levels ( $p > 0.05$ ). There are significant results regarding

alienation and SA in relation to COVID-19 in the relevant literature [42, 43, 44]. It seems that our research findings do not overlap with the relevant literature. The reason for this difference may be that the majority of the participants (72.3%) who participated in our research have never been diagnosed with COVID-19. In addition, the fact that the participants who make up the research sample are athletes may suggest that they spend this process more comfortably compared to other people. There are also studies supporting that athletes are less affected by this process [40].

Finally, in Table 7, where the relationship between SA and alienation is examined, it is seen that there is a negative and low-level significant relationship between SA and the sub-dimensions of the alienation scale ( $p < 0.05$ ;  $r = -0.187$ ;  $r = -0.164$ ;  $r = -0.132$ ). In other words, students' SA levels and alienation levels show a negative correlation with a low level of variation. As the SA level increases, the level of alienation decreases. Considering once again that the research data were collected at a time when the number of COVID 19 cases in Turkey was on the decline, it would be understood that these two behavioral changes, which are supposed to be positively related, do not positively affect each other.

## Conclusions

The social change brought about by the pandemic process all over the world has led to the restructuring of human behavior and daily life practices. This process has had a significant impact on human and social life. The emerging new behavior patterns have reproduced some social-psychological problems. In this context, in the axis of SA and alienation, which constitute the main theme of our research, this process has been discussed in the sample of students from the faculty of sport sciences. According to the research results, it can be said that this process negatively affects the SA and alienation levels of male students studying at the faculty of sport sciences compared to female students. Again, it is seen that the level of alienation of the students who do sports at the professional level is higher than the students who do sports at the amateur level. Finally, it is seen that the level of social isolation, which is one of the sub-dimensions of the alienation scale, of the students of the faculty of sport sciences dealing with team sports, is higher than the students who are in the category of individual sports.

It is recommended to conduct studies with different sample groups and broader participation. In addition, research conducted at various stages of the pandemic process has reached different results on the subject. For this reason, to better understand the negative impact of the relevant process on human behavior, it is recommended to consider the data collection periods of the studies conducted during the process.

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