



ISSN: 2146-1961

Şahin, M.F. & Gençay, Ö.A. (2021). Investigation of the Effects of the Covid-19 Pandemic and the Social Isolation Process on Physical Levels of Academicians, *International Journal of Eurasia Social Sciences (IJOESS)*, 12(46), 886-899.

DOI: <http://dx.doi.org/10.35826/ijoess.3040>

Article Type: Research Article

## INVESTIGATION OF THE EFFECTS OF THE COVID-19 PANDEMIC AND THE SOCIAL ISOLATION PROCESS ON PHYSICAL ACTIVITY LEVELS OF ACADEMICIANS

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Gönderim tarihi: 18.07.2021

Kabul tarihi: 14.11.2021

Yayın tarihi: 15.12.2021

### ABSTRACT

This study aimed to investigate the extent to which the level of physical activity of academics working in different universities in Turkey is affected by COVID-19, how the type of physical activity they regularly performed before the epidemic changed after the epidemic and during the normalization process, and their thoughts about physical activity after the end of the epidemic. The data collection phase of the study was conducted by sharing the online form created via Google forms with the academics through their email accounts and groups on their social media accounts. 51 of the 445 academics who volunteered to participate in the study were not included because most had health problems caused by a sedentary lifestyle. Therefore, 193 women and 201 men with a mean age of  $44.5 \pm 21.5$  years were included in our study. Our study data shows that the rate of physical inactivity of academics working in different universities of our country is alarmingly low before COVID-19, during the COVID-19 process, and during the normalization process. It is seen that academicians are adapting to a sedentary life due to the intensity of their lectures and academic work. After the pandemic, it is observed that an increasingly sedentary lifestyle has entered the lives of academics. Considering the negative consequences of living without physical activity in the future, it is suspected that academics in our country may experience health problems later in their lives. In our study, we tried to suggest more physical activity to prevent the development of this negative image and lead a healthier life.

**Anahtar kelimeler:** COVID-19, Pandemic, Physical activity, Exercise, Academician.

## COVID-19 PANDEMİSİ VE SOSYAL İZOLASYON SÜRECİNİN AKADEMİSYENLERİN FİZİKSEL AKTİVİTE DÜZEYLERİ ÜZERİNDEKİ ETKİLERİNİN İNCELENMESİ

### öz

Covid-19 sebebiyle, Türkiye'deki çeşitli üniversitelerde görev yapan akademisyenlerin fiziksel aktivite seviyelerinin ne düzeyde etkilendiğini incelemek ayrıca salgın öncesinde düzenli olarak yaptıkları fiziksel aktivite türünün, salgın sonrasında ve normalleşme sürecinde nasıl değişikliklere uğradığını ve salgın bittikten sonra fiziksel aktivite yapma hususunda düşüncelerini öğrenmek amaçlarıyla bu çalışma planladı. Çalışmanın veri toplama aşaması, Google formlar üzerinden oluşturulan online formun, akademisyenlerin şahsi mail hesapları ve sosyal medya hesaplarındaki gruplar aracılığıyla akademisyenlerle paylaşarak yapıldı. Çalışmaya gönüllü olarak katılan 445 akademisyenin 51'i, çoğunluğuna hareketsiz yaşamın yol açtığı sağlık problemlerine sahip olduklarından dolayı çalışmaya dahil edilmediler. Bu sebeple çalışmamıza yaş ortalamaları  $44,5 \pm 21,5$  olan 193 kadın 201 erkek dahil edilmiştir. Araştırmamızda elde ettiğimiz veriler, ülkemizin farklı üniversitelerinde görev yapan akademisyenlerin Covid-19 öncesi, Covid-19 süreci ve normalleşme sürecindeki fiziksel inaktivite oranlarının endişe verici düzeyde düşük olduğunu gösterdi. Akademisyenlerin ders yoğunlukları ve akademik çalışmaları sebebi ile hareketsiz yaşama uyum sağladıkları görülmektedir. Pandemi sonrasında ise giderek daha hareketsiz bir yaşam biçiminin akademisyenlerin hayatında yer ettiği gözlemlenmiştir. Fiziksel aktiviteden uzak bir yaşamın ilerleyen süreçlerde ortaya çıkaracağı olumsuz durumlar göz önüne alındığında, ülkemizdeki akademisyenlerin hayatlarının ilerleyen zamanlarında sağlık sorunlarıyla karşı karşıya kalabileceği düşünülmektedir. Çalışmamızda bu olumsuz tablonun ortaya çıkmasının önlenmesi ve daha sağlıklı bir yaşam sürdürebilmesi için fiziksel aktiviteyi artırmaya yönelik öneriler verilmeye çalışıldı.

**Keywords:** Keyword1, keyword2, keyword3.

## INTRODUCTION

COVID-19 infection originating from the New Type (SARS-CoV-2) emerged in Wuhan, China, towards the end of December 2019 and in a short time affected the entire world, primarily European countries. The World Health Organization (WHO) took a pandemic decision on March 11, 2020, and declared it globally (Ince et al., 2020).

Due to the lack of a particular prevention and treatment method against the COVID-19 virus and the high transmission rate, WHO recommended that people should stay at home to reduce the spread of the disease by lessening the social interaction of people. This proposal aimed to alleviate the burden on the health system in the world (Peçanha et al., 2020; Crisafulli, 2020).

The necessity of staying at home due to the quarantine practices and curfews caused individuals' physical activities to decrease and even stop. Quarantine causes people to find themselves inactive and creates changes in their emotional structure as people move away from their daily lives. The increase in the time spent at home, the virus news that is constantly on the agenda, the increasing number of patients and deaths, the growing anxiety about life, and the rise in the desire to consume food (mainly carbohydrate-laden foods) due to this feeling and thought, as well as the decrease in physical activity, may cause increase in body weight. (Tural, 2020).

In a review, Fallon (2020) stated that "Restriction of movement, loss of possible routine life and decrease in social and physical interaction with other individuals generally cause boredom, frustration and a feeling of isolation from society."

The social isolation that is in place increases physical behavior patterns of people and risk of developing cardiorespiratory diseases and negatively affects their quality of life and sleep (Hall et al., 2020; Hammami et al., 2020; Lippi et al., 2020; Lavie et al., 2019). A decrease in physical activity levels and an increase in sitting times has been observed as people gain the habit of complying with social isolation rules due to their increasing anxiety levels (Wernecka et al., 2019). Considering the need to protect mental and physical health, it is crucial for people to stay active and maintain their exercise routine during the restrictions imposed due to the COVID-19 pandemic. Furthermore, WHO constantly expresses its recommendations on this issue (Lippi et al., 2020; World Health Organization, 2020).

In addition to the fact that the physical activity individuals will do regularly plays a reductive role on the factors causing death due to the disease, it is crucial for today's social life, particularly considering its benefits on diseases and immune factors that are seen as risky in terms of undesirable situations as a result of severe COVID-19 disease, reducing stress and corrective effects on mental health in the short and long term (Nieman et al., 2019; Mikkelsen et al., 2017).

It is vital to determine the physical activity needs of people during the social isolation and quarantine process, so that the authority, as well as health care institutions and individuals can help individuals in their countries to

stay physically active, start and keep up exercise during the stay at home, and make suggestions on this matter (Nyenhuis et al., 2020).

While studies continue to discover the effect of social isolation on people's physical activity levels around the world, Fitbit Inc., one of the American companies, shared the physical activity data of 30 million individuals during the quarantine process in the research it conducted by developing wearable devices that can track people's physical activity levels. Looking at the shared data, it has been concluded that there is a significant decrease in the average number of steps people take (a change between 7% and 38%) as a result of comparisons made on the same period of 2020 with 2019 in almost all countries of the world (Fitbit, 2020).

Physical inactivity, which is accepted as the fourth most prominent cause of death worldwide, is considered a universal problem that leads to bad consequences in terms of economic, health, social, and environmental elements (Alpözgen et al., 2016). Approximately 3.2 million deaths per year are due to a lifestyle without physical activity (Hall et al., 2020). Physical activity is important to increase people's physical health, prolong life, and prevent diseases. When we look at the studies examining the effects on health, it has been reported that physical activity plays an active role in strengthening the immune system, has positive effects on the physical capacities of individuals, provides many psychological benefits (reduction in stress, depression, anxiety problems, etc.) and adds positive social outcomes (Kodama et al., 2013). According to the guidelines published by the American Dietetic Association and the American College of Sports Medicine (ACSM), for people to be considered physically active, an individual must engage in moderate-intensity physical activity for at least 30 minutes every day or many days of the week (Savcı et al., 2006).

Some of the negative consequences of physical inactivity are muscle loss and subsequent weakness, chronic fatigue, obesity, increased insulin resistance, decreased physical activity, cholesterol, and low quality of life. (Gualano et al., 2017).

In the study of Krogh-Madsen et al. (2010), it has been reported that "As a result of physical inactivity, which will occur as the effect of falling from 10,000 steps to 1,500 steps per day even in a short period of two weeks, a decrease in insulin sensitivity, disorders in lipid metabolism, an increase in visceral adiposity and a decrease in cardiovascular level are observed in healthy individuals". Moreover, the decrease in the physical activity levels of individuals increases the emergence of many negative emotions such as sadness, disappointment, and anger, but also triggers the feeling of depression (Brooks et al., 2020).

Knowing how the measures taken due to COVID-19 affect inactive life is essential for future studies to change and diversify physical activity activities (Colbourn, 2020). The measures that will presumably will extend are considered to weaken the already low physical activity activities to a greater extent. Still, after the epidemic, people's interest in physical activity may possibly increase in light of the increasing knowledge of the importance of the positive effects of physical activity on the immune (Hammami et al., 2020) system functions.

Our study aims to examine the changes in the physical activity levels of academics as a result of the restrictions that are in place due to COVID-19 in our country, to obtain information about their physical activity behaviors before the epidemic and whether they were engaged in physical activity during the epidemic process, and to conduct research to determine the physical activity levels of academics in these days when we entered the normalization process.

## **METHOD**

### **Population-Sample**

The population of our study consists of academicians working in different universities of our country and other branches. Our research sample size was determined by considering at least 384 individuals, which corresponds to 1,000,000 individuals in the known homogeneous population used in community research (Yazıcıoğlu et al., 2004). 449 academicians working at different universities and volunteering to participate in our study participated in the research. However, our study sample consisted of 394 academicians who declared that they did not have any diagnosed and followed-up disease. The research was carried out under the Declaration of Helsinki. The participants were informed about the study via the online form, and their consent was obtained.

### **Data Collection Tools**

The data collection phase was carried out between 08 - 22 January 2021, when curfews were imposed on weekends, COVID-19 measures continued within the normalization process, and it was reported that the COVID-19 virus was mutated.

The online form, which consisted of 3 main parts and was created through Google forms for data collection, was sent to the academicians through the personal e-mail accounts of the academicians and the groups in their social media accounts. In the first part of the form, the participants' demographic information was collected by asking questions about gender, age, height, weight, title information, and whether they had any follow-up diagnosed diseases. In the second part of the form, data was collected about the number of days the participants did a physical activity a week before and during the COVID-19 period and which physical activities that they were engaged in. Since no survey form or study is questioning the physical activity status before and during COVID-19 in the literature, questions deemed simple and straightforward were asked to the participants in this section. To get information about their physical activity status before and during the COVID-19 period, the academicians were asked the number of days in a week they did at least 30 minutes of physical activity per day and the type of physical activity they preferred during the pre-pandemic and pandemic period. In the last part of the form, the International Physical Activity Questionnaire (Craig et al., 2003) was sent to the academicians to question the physical activity status of the participants in the last week, as we entered the normalization process in the measures taken in our country due to the COVID-19 pandemic and physical activity status in the normalization process was determined. The validity and reliability study of the questionnaire was conducted by Öztürk (2005). In our study, the short form of the International Physical

Activity Questionnaire, consisting of 7 questions about physical activity performed for at least 10 minutes a day and covering the last week, was used to determine the participant's physical activity level. Calculation of the individual's physical activity level in the short form is done by summing the duration (minutes) and days (frequency) of walking, moderate and very vigorous physical activity in the last week. The "MET-minutes/week" score of the physical activity level is obtained by multiplying the number of days of physical activity, the minutes spent during the activity, and the MET value determined for each activity level. The MET value determined for walking activity is 3.3. The walking activity score was calculated by multiplying the number of days walked, the daily walking minutes, and the walking MET value by 3.3. With this calculation model, the MET value of 4 for moderate-intensity activity and the MET value of 8 for vigorous exercise were used. In order to determine the physical activity levels of the academicians during the normalization process, the MET-minute/week values of walking, moderate, and very intense activities were added, and total MET-minutes/week values were obtained. Physical activity levels were classified as inactive for MET-min/week<600, low FA (low active) for 600-3000 MET-min/week, very active for MET-min/week>3000 (beneficial for health and physical activity level is sufficient) (Craig et al., 2003).

Our research was approved according to the Scientific Research and Publication Ethics Committee of Muş Alparslan University, which was taken at the meeting dated 28.01.2021 numbered 3 and decision of the number 2.

### **Data Analysis**

Data analysis was done using SPSS 22 statistical program. Mean, standard deviation, percentage, minimum and maximum expressions were used as descriptive values. The normality distributions of the data were tested with skewness and kurtosis, and it was found that the data were normally distributed. T-test was used to examine the differences between pre-COVID-19, COVID-19 process, and normalization process variables. Statistical results were evaluated at a 95% confidence interval and  $p < 0.05$  significance level.

### **FINDINGS**

4 of 449 academicians who accessed the survey we created on Google Forms did not approve on the volunteering form, so they were excluded from the study without seeing the other questions. Of the 445 academicians who approved the volunteering form, 88.5% (n=394) were included in the study, declaring they did not have any diagnosed and followed-up diseases. 11.5% (n=51) were caused mainly by sedentary life; they declared diseases such as cancer, diabetes, cardiac arrhythmia, heart failure, hypertension, asthma, epilepsy, reactive hypoglycemia, anemia, fatty liver, hepatitis B. The answers given by our academics with health problems to the other questions in the questionnaire were not considered.

The mean age of 394 academicians included in our study was  $44.5 \pm 21.5$  years, 49% were female (n=193), and 51% (n=201) were male. The mean BMI values of the participants were  $26.74 \pm 10.81$ . According to the BMI values of the participants, 46.7% (n=184) were average, and 39.6% (n=156) were overweight; it was

determined that 2.5% (n=10) were underweight and 11.2% (n=44) were obese. In addition, it was determined that 82.5% (n=325) answered yes, 5.6% (n=22) answered no, and 11.9% (n=47) answered undecided to the question whether they would start a regular physical activity after the COVID-19 process is over.

**Table 1.** T-test Results of Academics by Gender in Terms of Physical Activity Levels Before COVID-19, During the COVID-19 Process, and the Normalization Process.

Variables	Groups	N	X	ss	T-test		
					t	df	p
Before COVID-19	Female	193	2,32	.99	3,708	388	.001*
	Male	201	1,99	.84			
COVID-19 Process	Female	193	2,10	.92	3,175	388	.002*
	Male	201	1,82	.87			
Normalization Process	Female	193	1,44	.62	-1,870	388	.062
	Male	201	1,56	.71			

\*p<0,05

When Table 1 is examined, the physical activity levels of academicians before COVID-19 show a significant difference according to their gender ( $t[388]=3.708$ ;  $p<0.05$ ). The physical activity levels of female academics before COVID-19 ( $X=2.32$ ) are higher than the physical activity levels of male academics before COVID-19 ( $X=1.99$ ).

There is a significant difference in the physical activity levels of academics according to their gender during the COVID-19 process ( $t[388]=3.175$ ;  $p<0.05$ ). The physical activity levels of female academics during the COVID-19 process ( $X=2.10$ ) are higher than the physical activity levels of male academics during the COVID-19 period ( $X=1.82$ ).

When the physical activity levels of the academicians during the normalization process were compared, no significant difference was found according to their gender ( $t[388]=-1.870$ ;  $p>0.05$ ).

**Table 2.** T-test Results of Academics' Physical Activity Levels Before and During the COVID-19 Period

Variables	N	X	ss	T-test		
				t	df	p
Before COVID-19	394	2,15	.88	48,188	393	.001*
COVID-19 Process	394	1,96	.90	42,761		

\*p<0,05

When Table 2 is examined, the physical activity levels of academicians before COVID-19 show a significant difference compared to their physical activity levels during the COVID-19 process ( $t[393]=48.188$ ;  $p<0.05$ ). The physical activity levels of academics before COVID-19 ( $X=2.15$ ), are higher than their physical activity levels ( $X=1.96$ ) during the Covid-19 period ( $X=1.96$ ).

**Table 3.** T-test Results of Academics' Physical Activity Levels Before COVID-19 and During the Normalization Process

Variables	N	X	ss	T-test		
				t	df	p
Before COVID-19	394	2,15	.88	48,188	393	.001*
Normalization Process	394	1,50	.67	43,934		

\*p&lt;0,05

When Table 3 is examined, the physical activity levels of the academicians before COVID-19 show a significant difference according to the physical activity levels during the normalization process ( $t[393]=48.188$ ;  $p<0.05$ ). The physical activity levels of the academics before COVID-19 ( $X=2.15$ ) are higher than the physical activity levels ( $X=1.50$ ) during the normalization process.

**Table 4.** T-test Results of Academics' Physical Activity Levels During the COVID-19 Process and Normalization Process

Variables	N	X	ss	T-test		
				t	df	p
COVID-19 Process	394	1,96	.90	42,761	393	.001*
Normalization Process	394	1,50	.67	43,934		

\*p&lt;0,05

When Table 4 is examined, the physical activity levels of the academicians during the COVID-19 process show a significant difference compared to the physical activity levels during the normalization process ( $t[393]=48.188$ ;  $p<0.05$ ). The physical activity levels of the academics before COVID-19 ( $X=2.15$ ) are higher than the physical activity levels ( $X=1.50$ ) during the normalization process.

**Table 5.** Rates of Academics Performing Physical Activity Before and During Covid-19

		Those who do not engage in regular physical activity		Those Who Engage In Regular Physical Activity	
Total		66.49% (n=262)		33.51% (n=132)	
Before COVID-19	Frequency	Never (I don't do any effortful activities other than daily routine)	Physical activity 1-2 days a week or less frequently	3-4 days a week	5-6 days a week or more
		25.63% (n=101)	40.86% (n=161)	26.4% (n=104)	7.11% (n=28)
Total		72.59% (n=286)		27.41% (n=108)	
COVID-19 Process	Frequency	Never (I don't do any effortful activities other than daily routine)	Physical activity 1-2 days a week or less frequently	3-4 days a week	5-6 days a week or more
		37.56% (n=148)	35.03% (n=138)	21.57% (n=85)	5.84% (n=23)
Rate of Change in Physical Activity		9.16% increase ( $p<0.05$ )		18.18% decrease ( $p<0.05$ )	

When Table 5 is examined it is seen that, the rate of not performing physical activity that requires any effort other than the daily routine by academicians who do not engage in regular physical activity during the COVID-19 period, compared to the period before COVID-19, increased from 25.63% (n=101) to 37.56% (n=148) ( $p<0.05$ ). Furthermore, it was observed that the rate of performing physical activity 1-2 times a week or less



frequently decreased from 40.86% (n=161) to 35.03% (n=138) among the academicians in the group who did not engage in regular physical activity ( $p<0.05$ ).

On the other hand, it was seen that the rate of performing physical activity 3-4 days a week for academicians who are in regular physical activity during the COVID-19 process, compared to the period before COVID-19, decreased from 26.40% (n=104) to 21.57% (n=85) ( $p<0.05$ ). In addition, it was observed that the rate of performing physical activity 5-6 days a week or more among the academicians in the group who do regular physical activity decreased from 7.86% (n=28) to 5.84% (n=23) ( $p<0.05$ ).

It was noted that the rate of physical inactivity level of academicians before COVID-19 increased from 66.49% (n=262) to 72.59% (n=286) with an increase of 9.16% compared to the rate of inactivity level during the COVID-19 process. ( $p<0.05$ ). In addition, it was observed that the rate of regular physical activity of academicians before COVID -19 decreased by 18.18% from 33.51% (n=132) to 27.41% (n=108) compared to the rate of regular physical activity during the COVID -19 process ( $p<0.05$ ).

**Table 6.** Types of Physical Activity Preferred by Academics Who Do Physical Activity Regularly Before and During COVID-19

Selected Activity Style	Before COVID-19 (n=132)	COVID-19 Process (n=108)
Team Sports	5	-
Individual Sports	54	19
Walking	66	43
Indoor Exercise	7	46

When Table 6 is examined, it is seen that the type of physical activity preferred by academicians during the COVID-19 period varies compared to before COVID-19. It has been observed that team sports activities before COVID-19 were completely terminated during the Covid-19 process. There was a decrease in people who prefer individual activities such as Fitness, Tennis, Cycling, Running, Swimming, and walking activities during the COVID-19 process. The number of people who practice exercises that can be done at home, such as Yoga, Pilates, and Dance, which do not have a particular name but can be done at home, has increased during the COVID-19 process.

**Table 7.** Distribution of Physical Activity Levels of Academicians in the Normalization Process

	MET-min/Week<600 (inactive)		MET-min/Week= 600 – 3000 (Low Active)		MET-min/Week>3000> (Very Active, Beneficial for Health)		Tot. N
	N	%	N	%	N	%	
Female	123	31,22	57	14,47	13	3,31	193
Male	115	29,19	60	15,22	26	6,59	201
Total-N %	238	60,41	117	29,69	39	9,90	394

When Table 7 is examined, the distribution of physical activity levels of academicians in the normalization process by total and gender is given. It was determined that during the normalization process, 60.41% (n=238)

of the academicians were inactive, 29.69% (n=117) were active at a low level, and 9.9% (n=39) of them were very active and engaged in physical activity that is beneficial for health.

#### **CONCLUSION and DISCUSSION**

Our study, which we conducted to examine the effects of the COVID-19 pandemic process on the physical activity levels of academics who had to stay at home as a result of the prohibitions and restrictions that countries had to impose to keep the epidemic rate under control, and to reveal these effects, a total of 394 academicians with an average age of  $44.5 \pm 21.5\%$ , 49 of whom were female (n=193), and 51% (n=201) were male, who declared that they voluntarily participated in the study and did not have any health problems were included. The mean BMI values of the participants were  $26.74 \pm 10.81$  (min: 15.92, max: 37.55) and according to the BMI values of the participants, 46.7% (n=184) were normal and 39.6% (n= 156) were overweight; It was determined that 2.5% (n=10) were underweight and 11.2% (n=44) were obese.

It was seen that the physical activity levels of the academicians participating in the study before COVID-19 were higher than their physical activity levels during the COVID-19 process. However, this situation did not prevent the fact that the rate of academicians who did not engage in regular physical activity before COVID-19 included a large majority of 66.49% (n=262). In addition, it was determined that this rate increased by 9.16%, with the pandemic process to a higher rate of 72.59% (n=286). According to the MET-min/week scores obtained as a result of the answers given to the International Physical Activity Questionnaire, which we directed to the participants to learn the physical activity levels of our academics who lead their lives inactively during the normalization process; in the normalization process, the majority of the academicians, such as 60.41% (n=238), were physically inactive, and 29.69% (n=117) were active at a low level, 9.9% (n=39) of them were very active and engaged in physical activity that is beneficial for health. In a study conducted by Keohane et al. (2018) on physicians, it was reported that 21% of 219 physicians were inactive, 30% were low-active, and 49% were very active and had a beneficial level of physical activity (Keohane et al., 2018:690). Physicians choose an active lifestyle because they have first-hand knowledge of the effects of inactive life on people and the diseases it brings and that their self-management skills are high in preferring a physically active life.

In the meta-analysis study conducted by Wahid et al. (2016) and compiled with the results obtained from approximately 3 million individuals participating in the research, the results obtained in the light of 12 years of follow-up and evaluation of people who engage in regular physical activity in the intervals defined by the World Health Organization has shown that they had less (23%) cardiovascular problems and a decrease in mortality rates stemming from these problems compared to 12 years before, and type 2 diabetes is at a lower level (26%) compared to 12 years before.

As a result of the study of Kivimaki et al. (2019), who supported this study, following forty individuals, they have shown that physical inactivity was associated with a 24% increase in coronary heart disease, a 16% increase in stroke, and a 42% increase in type 2 diabetes in the individuals followed . When we look at the sub-reasons of deaths due to the Covid-19 virus, it has been seen that diseases caused by physical inactivity are

among the leading factors that cause the disease processes of people with Covid-19 disease to end with death (Zhou et al., 2020).

The risk that the long-standing quarantine measures, which had to be taken all over the world to combat Covid-19 since the day the pandemic was declared could lead people to continue their lives physically inactive permanently, and the probability that the devastating effects of this inactive lifestyle in the long term will be seen, is quite substantial considering the past examples (Charansonney, 2011) In our study, starting from the pre-pandemic, the pandemic process, and the normalization processes, the result of the inactive life of the majority of our participants is quite frightening. According to the researchers, regular physical activity is a form of behavior (Young et al., 2014). Self-management is one factor limiting regular physical activity (Keating et al., 2005). From this perspective, it is expected that our academics, who participated in our study and engaged in regular physical activity during the COVID-19 process and during the normalization process, effectively managed the pandemic process by changing the types of activities before COVID -19. In other words, although we conducted our research in a period when the measures taken in our country were still intense, and there were restrictions, that fact that our academicians who have gained physical activity in their lives as a permanent behavior continue their physical activities, is consistent with the results of studies in the literature that refer to behavioral patterns (Bandura, 2004; Keating et al., 2005; Young et al., 2014). Within the framework of the results we obtained in our study, it was seen that the physical inactivity rates of the participants, which were high before Covid-19, and the other rates obtained were consistent with the literature (American College Health Association, National College Health Assessment (ACHA-NCHA, 2016).

Our research has shown that the physical inactivity rates of academics working in different universities of our country before Covid-19, during the Covid-19 process, and during the normalization process are alarming. In contrast, academics who continue to lead their lives in regular physical activity have changed their physical activity styles and adapted to the pandemic process.

## **RECOMMENDATIONS**

It is thought that initiatives should be taken to increase the awareness of academicians about the importance of the problem of inactivity in the plans of universities. If necessary, academicians from Faculties of Sport Sciences and Schools of Physical Education and Sports may be asked to regularly give seminars on physical activity to academics in other units. Since it is seen that quarantine measures and restrictions extensively feed the inactivity situation that existed before the pandemic in the lives of the majority of the participants, and the inactive lifestyle caused by the developing technology with each passing day, and the increase in the standard of living and the high risk of contracting the diseases caused the Covid-19 virus, significant sensitivity should be paid to this issue in order not to encounter different sad consequences in the future.

In addition, considering that academics who have to give online education due to the process we are in have to sit in front of the computer for hours, it may be a precaution to arrange the course loads and course hours in a way that does not prevent them from doing physical activity.

Physical activities and various meditation techniques that can be done at home can help you calm down and protect your health by reducing stress during this process. By making positive use of the developing technology, support for physical activity can be obtained through television, computer, smartphone or tablet, and from the websites of organizations that have a say in the field of sports such as the Sports Sciences Association, the Ministry of Youth and Sports, and the HiS (Sports for Everybody) Federation. In addition, exercise programs created by contacting trainers or conditioners who are experts in their fields can be applied on social media. These applications can be used by downloading exercise programs from smartphone application stores, starting with the exercise appropriate for your level.

#### ETHICAL TEXT

Our research was approved according to the Scientific Research and Publication Ethics Committee of Muş Alparslan University, which was taken at the meeting dated 28.01.2021 numbered 3 and decision of the number 2.

"In this article, the journal writing rules, publication principles, research and publication ethics, and journal ethical rules were followed. The responsibility belongs to the author (s) for any violations that may arise regarding the article. "

**Author(s) Contribution Rate Statement:** The first author contributed at the rate of 50% and the second author contributed at the rate of 50%.

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