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**Doi Number:** <http://dx.doi.org/10.38063/ejons.369>**COVID-19 PANDEMISİNDE MÜZİSYEN OLMAK****BEING MUSICIAN IN COVID-19 PANDEMIC****Şebnem AVCI**

Dr. Öğr. Üyesi. Bolu Abant İzzet Baysal Üniversitesi, Sağlık Bilimleri Fakültesi, Fizyoterapi ve Rehabilitasyon Bölümü, [avci\\_s@ibu.edu.tr](mailto:avci_s@ibu.edu.tr) Bolu/Türkiye ORCID: 0000-0003-3712-0551

**Ece ACAR**

Öğr. Gör. Karabük Üniversitesi, Sağlık Hizmetleri Meslek Yüksekokulu, Tıbbi Hizmetler ve Teknikler Bölümü, [eceacar@karabuk.edu.tr](mailto:eceacar@karabuk.edu.tr) Karabük/Türkiye ORCID: 0000-0002-0470-5935

Tel: 05457925035

**Büşra İNAL**

Arş. Gör. Bolu Abant İzzet Baysal Üniversitesi, Sağlık Bilimleri Fakültesi, Fizyoterapi ve Rehabilitasyon Bölümü, [inalbusra@yahoo.com](mailto:inalbusra@yahoo.com) Bolu/Türkiye ORCID: 0000-0003-3717-5501

**Mehmet SÖNMEZ**

Öğr. Gör. Erzurum Teknik Üniversitesi, Sağlık Bilimleri Fakültesi, Fizyoterapi ve Rehabilitasyon Bölümü, [mehmet.sonmez@erzurum.edu.tr](mailto:mehmet.sonmez@erzurum.edu.tr) Erzurum/Türkiye ORCID: 0000-0002-3617-9087

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**ÖZET**

**Amaç:** Farklı meslek gruplarını farklı şekillerde etkileyen COVID-19 pandemisinde tüm dünyada olduğu gibi Türkiye’de de karantina ilan edildi. Karantinada bazı meslek grupları işlerini normal veya online olarak sürdürmüş, bazı kişiler de işlerini kaybetmiştir. Bu araştırma, aktif müzisyen olarak çalışmakta olan müzisyenlerin COVID-19 pandemisinden nasıl etkilendiğini ve bu etkinin müzisyenlerin mesleki, egzersiz yapma ve ağrı durumlarına olan yansımalarını değerlendirmek amacıyla planlandı.

**Gereç ve Yöntem:** Demografik veriler, egzersiz yapma, ağrı, pandemide müzik yapmaya devam durumu, gibi sorulardan oluşan ve Google Forms üzerinden hazırlanan bir online anket formu sosyal medya aracılığıyla müzisyenlere ulaştırıldı. Katılıma onam verenler ankete ulaştı. Araştırma 211 kişiyle tamamlandı. Veriler SPSS 20.0 programıyla analiz edildi.

**Bulgular:** Katılımcıların yaş ortalamaları  $37,98 \pm 12,90$  olup, %49,28’i kadın, %50,71’i erkekti. Katılımcıların 94’ü (%44,5) 20 yıldan fazla süredir enstrüman çalmaktaydı. Pandemi 40 kişi (%19) işlerine aynı şekilde, 87 kişi (%41,2) online olarak devam ettiğini belirtirken, 84’ü (%39,8) işe gidemediğini belirtti. Pandemi sürecinde en fazla etkilenen mesleki aktivite konser aktiviteleri idi (n=118, %55,9). Katılımcılardan 120 kişi (%56,9) pandemi döneminde gelir kaybı yaşadığını belirtti. Pandemi sürecinde enstrüman çalma süresi anlamlı olarak azaldı (p=0,00). İcra öncesinde 143 kişinin (%67,8) ısınma yaptığı, 153 kişinin (%72,5) soğuma yapmadığı belirlendi. Enstrüman çalmaya bağlı ağrı 44 kişi (%20,8) ile en fazla sırt bölgesindeydi. Pandemi sürecinde, öncesine göre egzersiz yapma durumu değişmedi (p>0,05).

**Tartışma:** Müzisyenlerin pandemi döneminden mesleki olarak olumsuz etkilendikleri, egzersiz yapma ve ağrı durumu bakımından bir değişiklik olmadığı bulundu. Müzisyenlerin mesleki olarak olumsuz etkilendikleri karantina dönemlerinde fiziksel olarak yaşadıkları sıkıntıları minimize etmek

için ısınma, soğuma aktiviteleri ve düzenli egzersiz yapma konusunda bilgilendirilmeleri önerilmektedir.

**Anahtar Kelimeler:** COVID-19, Müzisyen, Egzersiz, Ağrı.

## ABSTRACT

**Purpose:** In COVID-19 pandemic which affected different occupational groups in different ways quarantine has declared in Turkey. After this period, some occupational groups continued their jobs normally or online, and some people lost their jobs. This study was planned to evaluate how musicians who work as active musicians are affected by the COVID-19 pandemic and the reflection of this effect on the occupational, exercise and pain states of musicians.

**Methods:** An online questionnaire consisting of questions such as demographic data, exercise status, pain, continuing to play music in pandemic, which was prepared on Google Forms was delivered to musicians via social media. Those who gave consent to participation reached the survey. Study completed with 211 participants. Data were analyzed with SPSS 20.0 program.

**Results:** The mean age of the participants was  $37.98 \pm 12.90$ , 49.28% of them were women and 50.71% were men. 94 of the participants (44.5%) had been playing instruments for more than 20 years. In the pandemic, 40 people (19%) stated that they sustained their jobs in the same way, 87 people (41.2%) continued their jobs online, while 84 (39.8%) could not go to work. Concert activities were the most affected occupational activities during the pandemic process (n=118, 55.9%). 120 participants (56.9%) stated that they lost income during the pandemic period. During the pandemic period, the duration of playing an instrument significantly decreased ( $p=0.00$ ). It was determined that 143 people (67.8%) warmed up before playing and 153 people (72.5%) did not cool down. The pain associated with playing an instrument was mostly in the back region with 44 individuals (20.8%). During the pandemic, the state of performing exercise compared to the previous period did not change ( $p > 0.05$ ).

**Conclusion:** It was found that the musicians were negatively affected by the pandemic period and there was no change in terms of exercise and pain status. It is recommended that musicians should be informed about warming up, cooling down activities and regular exercise in order to minimize their physical stress during the quarantine periods in which their professional life is impacted negatively.

**Keywords:** COVID-19, Musician, Exercise, Pain.

## 1. INTRODUCTION

The virus causing COVID-19 was first detected in people living in Wuhan, China in December 2019 was identified as a new Coronavirus (2019-nCoV) on January 7, 2020 which was not previously identified in humans (Team, 2020). Following the disease spreading rapidly globally and seen in all continents except Antarctica, a pandemic was declared by the World Health Organization on March 11, 2020. The concept of social isolation in order to prevent its spread has been stated in the literature as the most important preventive treatment protocol (Chang et al., 2020). Policies to prevent the spread of the virus began to be implemented rapidly after the date of March 11, 2020, the first cases seen in Turkey. In this context, restrictions were placed on all activities where people can gather together, including musical performances, concerts and all performing arts, as well as education and travel activities (Duyuru, n.d.; Korona Virüsü Salgınına Karşı Tedbirler, n.d.; "Uzaktan Eğitim" Bakan Selçuk'un Verdiği Dersle Başladı., n.d.). Individuals were encouraged to spend their time in a home environment and to conduct social and business life online. Production had to be interrupted compulsorily in work branches that could not be carried out online. Change of living conditions necessitated changes in the life styles of musicians, as in every profession and business field.

In the process of social isolation, it became important to inform people regards to reducing their sedentary behaviors such as sitting, lying down and leaning. In the literature, during the coronavirus pandemic process, the importance of sustaining to practice light to medium intensity physical activities, preferably in open air environments or at home, has launched to be noted (Pitanga et al., 2020). For those who could not go out, the importance of physical activity at home was brought up (Aubertin-Leheudre & Rolland, 2020; Pizzoli et al., 2020). In our country, the importance of being active and various exercises also tried to be announced in the social isolation process (Arslan & Ercan, 2020; *Kas gevşemesi ve solunum egzersizi*, n.d.).

Music performance requires a high level of energy expenditure and demanding cardio-vascular activities in addition to aesthetic and musical quality. Also, playing music is often associated with increased levels of psychosocial stress and anxiety. Physiological signs of stress, energy expenditure and cardiac demand change depending on the physical characteristics of the musician, the type of instrument and the tempo of the music performed (Araújo et al., 2020; Vellers et al., 2015). Considering this physical and psychosocial burden, musicians can be called "upper extremity athletes". This requires them to be physically and mentally fit in order to perform at the highest levels (Vera A.E. Baadjou et al., 2015; Quarrier, 1993). Considering their working pace, one might expect musicians' upper extremity fitness levels to be very good, but little is known about the fitness levels or physical characteristics required to meet these physical demands (Araújo et al., 2020; Romero, Bryan, Jared W. Coburn, Lee E. Brown, 2016). On the other hand, available evidence reveals that musicians have a high incidence of performance-related musculoskeletal system disorders and pain in the upper extremity, and that anxiety and psychological pressure that can begin from an early age have a high incidence (Araújo et al., 2020; Cruder et al., 2018; Gembris et al., 2018). For performance-related musculoskeletal disorders in musicians, there are many risk factors such as music making posture, hypermobile joints, prolonged playing hours in limited working conditions and performance anxiety. In addition to these risk factors, there are studies suggesting that musicians' health-promoting behaviors, including participation in physical activity, are limited. When the lack of physical activity is combined with long-term practices and stressful working conditions including competition, some musculoskeletal system problems that they are more prone to such as overuse injuries, focal dystonia, and movement problems caused by pain may occur (Araújo et al., 2020; Rickert et al., 2014).

The fact that musicians stay away from communication with other musicians during the pandemic process and cannot perform music in public in the usual way may affect their motivation and musical performance. In addition, people who work as musicians professionally and thus maintain their lives may lose their jobs because their workplaces are closed due to the pandemic (*81 İl Valiliğine Umuma Açık İstirahat ve Eğlence Yerleri Genelgesi Gönderildi*, n.d.). Although music, which is an integral part of art and life, does not need a time and place to be performed, the sustainability of an art depends on a number of factors. These factors can be stated as the formation and execution of an artistic idea, the production of artistic tools, the functioning of the wage-based market, the realization of support activities, the consumption and critical evaluation of the work (Kabataş Öz, n.d.). A deficiency in one of these stages will bring along problems in the continuity of art. On the other hand, when the world history is examined, it is seen that mass events constitute important breaking points in the progress of art (*The Destruction of Art: Iconoclasm and Vandalism Since the French Revolution - Dario Gamboni - Google Kitaplar*, n.d.). Society uses the art as a means of distance and relaxation under negative situations. The most recent example of this can be shown as people who making music on balconies and windows during the pandemic in Italy. Considering that musicians are in social isolation like other people during the pandemic process, there is a possibility that not every musician may have the necessary material or motivation to do music and regular exercise or physical activity at home. In addition, even if these are possible, the musician may experience difficulties in performing music due to the location of her/his home or living in a crowded family. Beside musculoskeletal problems that musicians have tendency due to characteristic of their profession may

arise or deteriorate due to the decrease in physical activity during the pandemic process or may decrease due to not performing music.

The aim of this study is to examine the effects of the changes in the music making situation of the individuals who actively perform music during their stay at home during the pandemic on the pain, tension and exercise in the musculoskeletal systems.

## **2. MATERIAL and METHOD**

### **2.1. Participants**

211 musicians participated in this research between July and November 2020. The necessary permission was obtained from Bolu Abant Izzet Baysal University Human Research Ethics Committee in Social Sciences (Protocol No. 2020/146). Consent was also obtained from the musicians to participate in the study.

### **2.2. Inclusion criteria**

Volunteering to participate in the research, being between the ages of 18-75, being an active musician.

### **2.3. Exclusion criteria**

Neurological, orthopedic or psychiatric problems that impeding making music.

### **2.4. Evaluation**

A questionnaire prepared on Google Forms was delivered to the musicians via e-mail and social media. People were asked to submit this questionnaire to other musician acquaintances. With this way, it was aimed to reach as many people as possible. Republic of Turkey Ministry of Culture and Tourism Directorate General of State Opera and Ballet was requested to forward the questionnaire to their musicians. It was observed that a total of 213 people who were reached in this way clicked on the link to fill the questionnaire. One person was excluded from the study because they did not approve the consent form. Since the same person filled out the questionnaire twice, one of their answers was deleted. The research was thus completed with 211 people.

The questionnaire form consisted of three parts: sociodemographic data, definitions specific to music, and the impact of musical activity during the pandemic process. Sociodemographic data consisted of 19 questions including, gender, age, height, weight, occupational definition questions, as well as employment status, the impact of the work during the pandemic process, the presence of chronic illness, the presence of pain, drug use, whether there has been a previous injury due to music, whether there is a history of surgery because of the music, whether physical therapy and rehabilitation was received due to injuries, whether regular physical activity was performed or not. In the definitions specific to music, there were 4 questions about the instrument the musician played, how many years she/he played music, the type of music performed and how much time she/he spent for daily training. The part of condition of musical activity during the pandemic consisted of 12 questions including the existence of a studio suitable for making music, the difficulties experienced in working with the instrument, the change in the time of making music, the loss of income, the possibility of warming and cooling activities before and after the performance. This questionnaire, consisting of 37 questions in total, was created by the researchers based on the literature information.

### **2.5. Statistical analysis**

Statistical analyzes were performed using the SPSS 20.0 program. For normally distributed metric data such as sociodemographic characteristics, musical instrument, duration of performance, daily working time, condition of working situation during pandemic period evaluated with mean and standard deviation. Ordinal data not suitable for normal distribution and qualitative data were given as frequency. Homogeneity was determined by examining skewness and kurtosis in addition to the Kolmogorov-Smirnov test. The impact of musical performance during the pandemic period according

to gender, age and educational status was evaluated with the Chi-square and Kruskal Wallis test. Statistical significance level was accepted as  $p < 0.05$ .

### 3. FINDINGS

The research was completed with a total of 211 individuals, consisting of 104 females and 107 males with a mean age of  $37.98 \pm 12.90$ . Body Mass Index (BMI) of the participants was determined as  $24.29 \pm 4.07$ . Most of the individuals were master's degree graduates with a rate of 24.2% ( $n=51$ ). 31.3% ( $n=66$ ) of the participants were active orchestra workers, 38.4% ( $n=81$ ) were public employees. The education and working statuses of the participants are given in Table 1. From the answers given to the number of people living in the same house between 1 and 6 people, it was seen that the participants lived in their homes as 3 people at most ( $n=71$ , 33.6%). 94 of the participants (44.5%) had been musicians for 20 years or more, 35 (16.6%) of them had been musicians for 15-19 years, 26 (12.3%) of them had been musicians for 10-14 years, 35 (16.6%) of them had been musicians for 5-9 years, 21 (10%) of them had been musicians for less than 5 years. As a result of our research, where it was possible for the musicians participating in our study to mark the type of instruments they play in more than one choice, it was observed that stringed instruments, then key instruments, followed by string and wind instruments were performed the most. In addition to playing an instrument, there were also participants who made music with their voices. While 19% ( $n=40$ ) of the participants stated that they continue their jobs as usual, 41.2% ( $n=87$ ) of them stated that they continue their work online, while 39.8% ( $n=84$ ) stated that they did not continue their work.

Data on spending time for playing an instrument before the pandemic and how this was affected in the pandemic are given in Table 2. According to this, people who said that they worked for various periods before did not mark the answer "I do not work at all", during the pandemic process, it was observed that the number of those who said "I do not work at all" increased to 33 people. This situation statistically revealed that less time was spent playing an instrument during the pandemic process ( $p=0.00$ ). Considering the difference between men and women, it was seen that there was a significant decrease in both groups (female  $p=0.000$ ;  $Z=-4.273$ ; male  $p=0.000$ ;  $Z=-6.664$ ). It was determined that 161 people (76.3%) participating in the study had their own music studio. The majority of those who evaluated the effect of having a personal studio on professional performance as "much" and "too much" ( $n=142$ , 67.3%).

It was determined that the most affected musical performance in the pandemic was concert performance ( $n=118$ , 55.9%). This was followed by teaching activities ( $n=91$ , 43.1%), orchestra activities ( $n=89$ , 42.2%), solo activities ( $n=82$ , 38.9%) and studio activities ( $n=40$ , 19%). More than one option could be marked in the question of activities affected during the pandemic process. 120 participants (56.9%) stated that they lost income during the pandemic period. When questioned whether they had the opportunity to make music online with their colleagues in this process, 109 people in total stated that they did not have this opportunity. When looking at the difference between men and women, it was found that this opportunity of women was significantly less ( $p=0.04$ ).

A total of 136 participants (64.5%) did not have a chronic illness, 75 (35.5%) stated that they had a chronic illness. While 114 people stated that they had not had a surgical operation before, 97 people said that they had. In addition to these, 129 people stated that they do not use drugs regularly, 82 people stated that they use it. Among these, 35 people (16.6%) made up the group who used medication when they had pain due to playing an instrument. More than half of the participants (110 people) stated that they had constant aching body parts due to playing the instrument. The area where they felt the most pain was the back ( $n=44$ , 20.90%). Other areas of the body with high rates of pain were the neck ( $n=38$ , 18%), wrist ( $n=31$ , 14.70%), shoulder ( $n=29$ , 13.60%) and low back ( $n=24$ , 11.40%), respectively.

When the body regions where pain is felt were grouped as lower extremities, trunk and upper extremities, those who felt pain in these regions and the change in the state of pain after the pandemic

was analyzed statistically, it was found that the pain status did not change during the pandemic period ( $p>0.05$ ).

To the question of whether you have received physical therapy and rehabilitation due to your occupational diseases previously, 168 (79.6%) responded as “no”, 43 (20.4%) stated that they had received or stopped treatment one or more times. It was found that 32.2% ( $n=68$ ) of the participants did not warm up before starting to play an instrument. Among those who stated that they were warming up, 112 (53.1%) stated that they started with easy parts like music scale and warmed up, and 22 (10.4%) stated that they stretched their joints and muscles. The rate of those who stated that they did not cool down when they finished working with the instrument was found to be higher than those who did ( $n=153$ , 72.5%).

Among the musicians participating in the study, 68 people (32.2%) stated that they exercise 2-4 days a week, and 22 (10.4%) stated that they exercise 5-7 days. Exercises were mostly in the form of using home exercise equipment and following online exercise activities. 81 people (38.4%) stated that they did not exercise. When the effects of sports activities or exercises during the pandemic period were examined, it was noticed that the number of those who did not do sports or exercise increased by 10, but there was no statistically significant difference ( $p>0.05$ ). These data are given in Table 3.

#### 4. DISCUSSION

In this study, where we investigated how the professional practices and physical conditions of musicians during the Covid-19 pandemic process and whether they exercise or not were affected in the lockdown, it was found that the musicians were professionally affected by the pandemic, they spent less time playing instruments in the pandemic, and their exercise status and pain status did not show a statistically significant change.

The Covid-19 pandemic caused a major disruption in the economy and social activities, especially in the entertainment industry, and music production, by lockdown of public events completely. It has been shown in the literature that singing and playing wind instruments generates significantly more aerosols compared to normal speech and breathing. If aerosols emitted from an asymptomatic musician contain viruses, it can cause the spread of Covid-19 (He et al., 2021). This situation and the characteristic of music gathering large groups together constitute justified grounds for restricting such activities.

In a study examining the situation of musicians who lost their jobs due to Covid-19, an instrumentalist, who was asked how the pandemic affected her, stated that she was affected by the situation both financially and morally. The negative attitude of many of the students who get private lessons from her to online education due to their old age has caused her to be unable to do her job online (Taylor et al., 2020). Contrary to the example here, the majority of the musicians who participated in our research stated that they could do their work online. However, just below this number were musicians who stated that they lost their jobs with a large proportion.

The Covid-19 pandemic has had serious adverse effects on employees, customers, supply chains and financial markets. It can be said that the pandemic caused a global economic recession (Ömer Açıkgöz, 2020). In a study investigating the impact of the Australian music industry on the Covid-19 pandemic, it was emphasized that the ban on non-mandatory social gatherings by the Australian government caused serious financial losses, job losses, and job insecurity in the music industry. In addition, the fact that musicians describe their job loss and economic losses as "the biggest problem of their lives" shows that these people also experience psychological depression (Brunt & Nelligan, 2020). The vast majority of our sample consisted of musicians who played music in the government agencies, private sector or orchestras for more than 20 years. Considering that these people earn economic income by playing music, it is seen as a natural result that the participants stated that they lost income during the pandemic period, in parallel with the world musicians.

The fact that musicians come together and perform music in front of a community shows that making music is a social interaction. Considering the methods of presenting their art to the public, it can be

thought that pandemic periods in which the use of media tools continue will not cause much trouble (Wikström, n.d.). However, it is clear that performing in front of a large crowd and performing in a digital environment cannot have the same motivational effect. Being able to see the expression on the faces of the audience and the physical intimacy established can be more valuable than the number of the audience at the place, and instant relations between the musician and the audience are important (Cohen, 2019). When the musicians who participated in our study were asked whether they had the opportunity to make online music with their musician friends during the pandemic period, 109 out of 211 people stated that they did not have these opportunities. The chance to make music online was found to be significantly lower for women than for men. This situation may be due to the lack of technical substructure and organization, as well as due to the lack of motivation due to the pandemic and the quarantine eliminating the interaction between the musician and the audience, as stated in the literature. With the foresight that women have more domestic responsibilities during their stay at home, we can say that they may not have had enough time to perform online activities with their musician friends.

In the literature, it is stated that elite musicians spend up to 8 hours a day to play an instrument (Bird, 2013), while the average weekly practice time for amateur musicians is 2.92 hours (Kok et al., 2017). It was found that most of the musicians in our research work between 2-4 hours a day. We consider that this time may be due to the fact that although there are orchestra musicians in our sample, there are also musicians working as educators and that these people do not spare as much time as active orchestra musicians for their work. In our study, it was found that the time of playing an instrument was significantly negatively affected during the pandemic process. This situation affected men and women alike. Based on the fact that the most affected professional activity is concert activities, it can be described as an expected result that our participants spend less time playing an instrument during the pandemic period. However, although they have stated that they have studios where they can make music in home environments during pandemic periods, it may be possible to attribute the decrease in working time to the psychological problems caused by the pandemic quarantine or other family responsibilities caused by being at home.

Playing a musical instrument is a physically and mentally demanding activity. The stress on the musculoskeletal system, together with psychosocial factors such as performance stress, makes the musician vulnerable to musculoskeletal injuries. The prevalence of injuries due to overuse throughout the life of musicians has been reported as 26-93%. Neck and shoulder are the most frequently injured areas (V. A.E. Baadjou et al., 2018; Bragge et al., 2006; Foxman & Burgel, 2006). In a study in which pain was evaluated in all musician groups, it was stated that the condition of pain varied between 29-90%, and the most affected areas were the waist and neck (Silva et al., 2015). Among the musicians participating in our study, the most painful area was the back region, and the neck, wrist, shoulder and waist region, respectively, in accordance with the literature. When these painful areas were grouped as lower extremities, trunk and upper extremities, it was found that the conditions of those who stated that they had pain did not change significantly after the pandemic. The fact that we did not evaluate pain before and after the pandemic by using a visual analog scale and associating it with activity was considered as our limitation.

Musculoskeletal disorders related to music making can be painful and disabling, as well as may cause financial difficulties. As musicians, they may be without health insurance because they work part-time, have intermittent periods of unemployment or work freelance. Therefore, early access to treatment, adequate follow-up and comprehensive treatment may not be possible. Untreated situations can lead to social and psychological stress, permanent disability that causes inability to play music (Foxman & Burgel, 2006). It is stated in the literature that musicians do not tend to seek health care for their physical problems (Araújo et al., 2020). A majority of the individuals participating in our study stated that they did not receive treatment due to their occupational problems; however, there were lower rates of participants who stated that they had received or stopped treatment.

The most important conditions that can reduce or prevent musculoskeletal injuries in musicians are proper playing technique, correct posture, warming up before playing and cooling down after playing.

It will be beneficial to stretch the muscles and joints and increase blood flow in order to warm up the body parts that will be exposed to repetitive traumas under abnormal postures during music performance before playing (Foxman & Burgel, 2006). While it is essential for athletes to warm up large muscle groups before competitions to prevent injuries, more studies are needed to emphasize the importance of warming for musicians who will play the musical instrument using smaller muscle groups (Russell et al., 2012). The musicians participating in our study stated that they warmed up before playing but did not cool down. The importance of this issue should be evaluated in future studies.

In order to maintain a healthy and long career in the performance arts, it is important to practice cardiovascular fitness and resistance exercises regularly. Regular physical activity has a positive effect on cardiovascular fitness, skeletal muscle endurance, reaction time and the incidence of conditions such as depression and anxiety. One study showed that musicians who do regular physical exercise have a significantly lower perceived level of effort during rehearsal than those who do little or no physical activity (Chan & Ackermann, 2014). There are studies reports in the literature that exercise prevents performance related musculoskeletal disorders (Chan et al., 2014; Foxman & Burgel, 2006). At the end of our research, it was found that the number of participants who exercised regularly was small. Since the definition of regular exercise was not clearly defined in the questionnaire form, it was not questioned whether the people perceived what was included in the exercise definition. This situation was seen as a limitation of our research. In the questionnaire, among the options, there was an activity option that cannot be counted as a regular exercise, such as “once a month” and there were some participants marked it suggested that the issue of exercise should be clarified and the level of physical activity should be evaluated using other detailed scales.

## 5. CONCLUSION

The COVID-19 pandemic has damaged many professional groups in our country, as well as musicians in terms of job and income loss. The most remarkable results were the interruption of concert and educational activities and the reduction of time spent on playing an instrument. In addition, it was observed that performance-related musculoskeletal problems such as pain did not change, and although they did not spend much time to exercise, it was not affected by the pandemic. It is important for musicians to be informed that regular exercise or physical activity in order to prevent physical injuries, warming up before playing and cooling down after playing can be effective solutions for back pain they constantly feel. It is recommended that these types of studies be planned in a more detailed way to examine physical activity levels with more participants.

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**TABLES:****Table 1: Demographic information of the participants**

		Female	Male	Total
Gender		104	107	211
Age		36.62±13.36	39.27±12.38	37.98±12.90
BMI		22.89±3.79	25.67±3.87	24.29±4.07
Education status	High school music department	2	4	6
	Vocational schools	4	4	8
	Education faculty-music education department	27	19	46
	Conservatory-music department	26	26	52
	Master's degree	26	25	51
	Doctorate degree	12	11	23
	Education other than music	7	17	24
Occupational definition	Active orchestra musician	22	44	66
	Orchestra independent musician	15	17	32
	Teacher at a state school	27	9	36
	Teacher at a private school	15	9	24
	Academician in a university	11	8	19
	Musicians with different occupation	14	20	34
Working status	Not employee	21	27	48
	Private sector employee	16	17	33
	State employee	40	41	81
	Self-employed	9	12	21
	Retired (not working)	7	7	14
	Retired (working)	4	1	5
	Other	7	2	9

Frequency test

20

**Table 2: Change of working time with the instrument**

	Before pandemic		During pandemic		p	Z
	n	%	n	%		
None	0	0	33	15.6	0,00*	-7.892
Few days/week	40	19	32	15.2		
Less than 1 hr/week	28	13.3	28	13.3		
1 hr/week	42	19.9	42	19.9		
2-4 hrs/week	78	37	64	30.3		
5 hrs/week	19	9	10	4.7		
Other	4	1.9	2	0.9		
Total			211	100		

Analysis: Wilcoxon test.  $p < 0.05$

**Table 3: Change in sports activity and exercise status**

	Before pandemic		After pandemic		P	Z
	n	%	n	%		
2-4 days/week	68	32.2	70	33.2	0.99	-0.017
5-7 days/week	22	10.4	28	13.3		
Once in a month	7	3.3	4	1.9		
2-3 times in a month	33	15.6	18	8.5		
None	81	38.4	91	43.1		
Total	211	100	211	100		