

The Relation Between Physical Activity and Life Quality on Students of Sports Sciences During the Covid-19 Pandemic*

Setenay TETİK^{ID}, Hürmüz KOÇ^{†ID}
Çanakkale 18 Mart University, Çanakkale.

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Abstract

The purpose of this survey was to examine the levels of physical activity and life quality of Sports Sciences students in Turkey during the Covid-19 pandemic. In order to achieve this objective, necessary authorizations were secured and the survey was conducted by using surveys forms prepared in a digital environment and a total population of 414 students was reached in Turkey, including 224 male and 190 female students. The Turkish version of IPAQ short form was used to determine the physical activity levels of the students whereas SF-36 life quality questionnaire was used to evaluate their life quality. Package SPSS was used for the analysis of the data obtained. Chi-Square test was used to establish the relationship between physical activity and gender variables. Independent Sampling t-test was used for the comparisons of life quality sub-dimensions according to the gender variable while single way Manova analysis was conducted to determine the difference between the activity level and life quality sub-dimensions. Tukey analysis was used to be able to determine the origin of the differences between the groups. A significant difference was observed at four sub-dimensions of the life quality scale according to gender whereas no meaningful difference was observed at any sub-dimensions according to the area of specialization and grade. A relationship was determined between gender and physical activity as the female students were observed to have a greater inactivity tendency during the pandemic. On the other hand, a significant effect on life quality was determined according to physical activity levels.

Keywords: Sports Sciences, Physical activity, Life quality, Pandemic, Covid-19.

Covid-19 Pandemi Dönemi Spor Bilimleri Öğrencilerinde Fiziksel Aktivite ve Yaşam Kalitesi Arasındaki İlişki

Öz

Bu çalışmada Covid-19 pandemi döneminde Türkiye’de Spor Bilimleri alanında eğitim gören öğrencilerin fiziksel aktivite düzeyleri ile ve yaşam kaliteleri arasındaki ilişkinin incelenmesi amaçlanmıştır. Türkiye genelinde dijital ortamda hazırlanan anket formları aracılığıyla 224 erkek ve 190 kadın olmak üzere toplamda 414 spor bilimci öğrenciye ulaşım sağlanmıştır. Öğrencilerin fiziksel aktivite düzeyi IPAQ kısa formunun Türkçe versiyonu ile belirlenmiş, yaşam kalitelerini değerlendirmek için ise SF-36 Yaşam Kalitesi Ölçeği kullanılmıştır. Elde edilen verilerin analizi için SPSS paket programı kullanılmıştır. Fiziksel aktivite ve cinsiyet değişkenleri arasındaki ilişkiyi tespit etmek için ki kare testi, cinsiyet değişkenine göre yaşam kalitesi alt boyutlarının karşılaştırılmasında bağımsız örneklem t testi ve aktivite düzeyinin yaşam kalitesi alt boyutları arasındaki farkın belirlenmesi için tek yönlü Manova analizi yapılmıştır. Gruplar arasındaki farkın nereden kaynaklandığının belirlenebilmesi için ise Tukey analizi kullanılmıştır. Analizler sonucunda, yaşam kalitesi, enerji-canlılık, ruhsal sağlık, sosyal işlevsellik ve genel sağlık algısı boyutlarında cinsiyet değişkenine göre farklılık olduğu tespit edilmiştir. Cinsiyet ve fiziksel aktivite düzeyinde bir ilişkinin olduğu, kadın öğrencilerin pandemi döneminde daha inaktif eğilimde olduğu saptanmıştır. Bununla birlikte fiziksel aktivite düzeyinin yaşam kalitesi üzerinde anlamlı etkiye sahip olduğu tespit edilmiştir. İnaktif olan spor bilimleri öğrencileri ile minimal aktif ve çok aktif öğrenci grupları arasında enerji-canlılık, ruhsal sağlık, sosyal işlevsellik ve genel sağlık algısı boyutlarında fark olduğu sonucuna ulaşılmıştır. Araştırma sonucunda pandemi süresince fiziksel aktivite düzeyi orta ve yüksek düzeyde olanların yaşam kalitesinin daha iyi olduğu sonucuna varılmıştır.

Anahtar kelimeler: Spor bilimleri, Fiziksel Aktivite, Yaşam Kalitesi, Pandemi, Kovid-19.

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† **Corresponding Author:** Prof. Dr. Hürmüz KOÇ, **Email:** hurmuzkoc@gmail.com

INTRODUCTION

Epidemics are known to be extensive health issues since the existence of humanity affecting and leading way too important worldwide governance and life changes. Those epidemics which have caused radical changes in peoples' lives in the past, continue to do so. By the same, the current Covid-19 pandemic has not only affected the social, cultural and economic environment but also modified the lifestyle of communities by forcing them to immobility. SARS-CoV-2 defined as the new type of coronavirus first appeared in the city of Wuhan, China. The Covid-19 disease came up thereof, spread widely all over the world in no time.

As soon as the Covid-19 virus, also named Severe Acute Respiratory Syndrome (SARS) was diagnosed in Turkey on March 11th 2020, nationwide isolation and quarantine measures were immediately announced (T.C. Kamu Denetçiliği Raporu, 2020). Stay at home orders directly affecting the people's physical activities and life quality, temporary lockdown of all sports centers, banning of parks and closing of all educational institutions are the issues that students of Sports Science have been going through since.

Although these measures were originally planned to fight the Covid-19 disease, the absence of other measures to overcome the state of immobility caused by social isolation may bring a series of health issues: To survive, human metabolism has always required a need for movement. The only condition to which human metabolism could not adapt was immobility. For instance, the human body starts losing some of its functions when exposed to immobility of long duration and this state increases the risks of contracting immobility-based skeleton-muscle system diseases, coronary heart diseases, hyperlipidemia/dyslipidemia, obesity, diabetes, hypertension and hypokinetic diseases like cancer (Atar, 2020). Considering the positive effects that regularly performed exercise has on morbidity and immunological factors due to the Covid-19 disease, on reducing stress and its midterm and long-term curing effects on mental health, it is important for the current social situation (Burtscher, Burtscher and Millet 2020; Nieman, 2019; Mikkelsen, 2017). It is therefore important to observe the physical activity and life quality states of the sports sciences students who choose movement as their lifestyle and who make use of their professional skills this way and let these studies take place in the scientific literature for them to define measures to be taken against similar situations that society could face in the future. From this point of view, the present study was conducted to define the effects of the Covid-19 pandemic on the physical activity and life quality of sports sciences students.

METHOD

The correlational survey model was used in this study, which was conducted to examine the relationship between life quality and physical activity level of sports sciences students. The correlational survey model was used in terms of determining the level of relationship between variables and giving an idea about cause-effect possibilities (Fraenkel, Wallen, & Hyun, 2012). The necessary authorizations were secured to apply the survey forms. The survey forms were prepared and delivered in a digital environment to students of sports sciences studying in Turkey under the Covid-19 isolation and quarantine conditions. The physical activity level of

the students was determined with the Turkish version of IPAQ short form whereas SF-36 Life Quality Scale was used to evaluate their life quality factor.

The Sample Group

The survey was carried out over 57 Sports Sciences Faculties and 41 Schools of Physical Education and Sports students who were reached by the survey forms prepared in a digital environment. The distribution of the sample group are shown in Table 1.

Table 1. The distribution of the Students took part in the survey.

	Variable	%	F
Gender	Male	54,1	224
	Female	45,9	190
Department	Coaching Education	34,8	144
	Instruction of Physical Education and Sports	23,4	97
	Recreation	3,6	15
	Sports Management	34,3	142
Grade	Graduate	3,9	16
	1. Grade	34,3	142
	2. Grade	28,0	116
	3. Grade	17,9	74
	4. Grade	15,7	65
	Graduate	4,1	17
Activity level	Inactive	15,45	64
	Minimal Active	60,38	250
	Very Active	24,15	100
Total		100	414

Research Ethic

The ethic commission authorization was obtained in 15.10.2020 with the application protocol number 2020/124 by Çanakkale Onsekiz Mart University Graduate Education Institute Ethics Commission

Data Collection Tools

In this survey where the quality levels of Sports Sciences students were observed according to their physical activity levels, 11 questions were prepared by the researcher to obtain participants' demographic information. "SF-36 scale was used to determine life quality levels while "International Physical Activity Survey" short form was used to determine physical activity levels.

International Physical Activity Survey: This survey, developed by Craig et al (2003) and consisting of 9 questions, was used to measure physical activity levels. It was adapted to the Turkish culture by Öztürk (2005). The survey form determines the time spent by the participant on physical activity in the last week, and a score is obtained as "MET-min/wk". The score is obtained in duration in minutes, the number of days and basal metabolic speed times the correspondent MET value. During the evaluation of output results, participants below the value <600 MET-mn/wk are considered as "inactive", those between 600–3000 MET-min/wk are considered "Minimal Active" and those above >3000 MET-min/wk are considered "Very Active".

SF-36 Life Quality Scale: The scale developed by Ware and Sherbourne (1992) and adapted to Turkish by Koçyiğit et al. (1999), determining the life quality levels of individuals contains 36 points. The SF-36 life quality scale consists of a total of 8 sub-dimensions: "Physical

Function”, “Physical Role Functioning”, “Emotional Role Functioning”, “Energy/Vitality”, “Mental Health”, “Social Functionality”, “Pain” and “General Health Perception”. Out of these 8 dimensions, 4 relate to physical component points and the other 4 to mental component points. Each sub-dimension is rated between 0-100 points. The greater the points get in each sub-dimension the higher is the life quality value. The answer types of items vary according to the characteristics of the sub-dimensions. The scoring is calculated with the below-stated formula.

Data Analysis

Because the data were to be collected during the Covid-19 pandemic, Google forms were sent to students’ e-mail addresses. The data were transferred from the Excel format into the SPSS-23 package program. Scale points were calculated with the help of necessary formulae. In priority, in order to determine the extreme values of each item, 9 of them were extracted from the set by taking into account -3 and +3 Z values. Skewness and kurtosis values were observed for the normal distribution of the data. Because the skewness and kurtosis values ranged between +2 and -2, parametric tests were applied (George and Mallery, 2003).

The independent sampling t-test was used for the comparisons of life quality sub-dimensions according to the gender variable. To determine the difference between the activity level and the life quality sub-dimensions manova test was used. Box’s m test ($p>0.05$) was used for the compliance of the dependent variables related points with the manova analysis. Levene test was used to determine whether variances were homogenous for the dependent variables and it was observed that the data met the required conditions. In order to determine the origin of the differences between the groups, tukey analysis, one of post-hoc tests were applied.

FINDINGS

Table 2. Independent sampling t test results of life quality sub-dimensions according to gender.

Sub-dimensions	Gender	N	\bar{X}	SS	SD	T	p																																																																																												
Physical Function	Male	224	87,63	19,59	412	-,932	0,352																																																																																												
	Female	190	89,28	15,96				Physical Role Functioning	Male	224	50,78	37,68	412	-1,528	0,127	Female	190	56,31	35,53	Emotional Role Functioning	Male	224	47,32	41,07	412	1,419	0,157	Female	190	41,57	40,95	Energy/Vitality	Male	224	54,15	17,11	412	5,143	0,000*	Female	190	44,15	22,38	Mental Health	Male	224	56,51	17,45	412	4,131	0,000*	Female	190	48,63	21,37	Social Functionality	Male	224	54,35	25,26	412	1,505	0,029*	Female	190	50,52	26,37	Pain	Male	224	69,38	22,99	412	2,152	0,133	Female	190	64,56	22,37	General Health Perception	Male	224	67,13	18,67	412	3,586	0,032*	Female	190	60,71	17,50	Average MET	Male	224	2020,87	199,05	412	1,118	0,264
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* $p<.05$

According to the independent sampling t test results conducted to compare energy/vitality points, significant differences were observed between male ($\bar{X}= 54,15$, S.S.= 17,11) and female ($\bar{X}= 44,15$, S.S = 22,38; $t(413)= 5,143$, $p= 0,000$) participants. The test results showed a higher average of energy/vitality points in male students. When mental health points were compared between genders, data obtained from male students ($\bar{X}= 56,51$, S.S.= 17,45) and those obtained from female students ($\bar{X}= 48,63$, S.S.= 21,37; $t(413)= 4,131$, $p= 0,000$) were significantly different. According to the results, the mental health point averages of male students were higher. Again when social functionality points were compared between genders, significant differences were observed between male ($\bar{X}= 54,35$, S.S.= 25,26) and female students ($\bar{X}= 50,52$, S.S.= 26,37; $t(413)= 1,505$, $p=0,029$). The social functionality point averages of male students were higher. Similarly, according to the independent sampling t test results conducted to compare the general health perception points between genders, data obtained from male students ($\bar{X}= 67,13$, S.S.= 18,67) and those obtained from female students ($\bar{X}= 60,71$, S.S.= 17,50; $t(413)= 3,586$, $p= 0,032$) were significantly different. According to test results, the general health perception point averages of the male students showed a higher value. The Average MET Value points obtained with the independent sampling t test to measure life quality sub dimensions according to genders no significant difference was observed between male ($\bar{X}= 2020,87$, S.S.= 1199,05) and female ($\bar{X}= 1888,28$, S.S.= 12060,49; $t(413)= 1,118$, $p=0,26$) students.

Table 3. Chi-square test results according to physical activity level and gender variable.

Groups	Gender		Total	X ²	sd	p
	Female	Male				
Inactive	38	26	64			
Minimal active	104	146	250	6,719	2	,035*
Very active	48	52	100			
Total	190	224	414			

* $p<.05$

According to Ki square independence test results, there was a significant relationship between gender and physical activity variables $X^2(2, n=414) = 6,719$, $p=0,035$. It was observed that the physical activity levels of the female students were lower than those of male students.

Table 4. Manova analysis results of students' life quality according to physical activity levels

Effect	Wilks' Lambda (λ)	F	Assumption Sd	Error Sd	p	$\eta k2$
Activity level	0,888	3,101 ^b	16,000	808,000	0,000	0,058

According to manova test results, it was observed that the students' physical activity level (Wilks' Lambda=0,888, $F_{(16,808)} = 3,101$, $p<0,001$, $\eta k2 = 0,058$) has an important effect on their life quality. According to Stevens (1992), effect sizes are grouped as "small" for $\eta k2 \leq 0,01$, "medium" for $\eta k2 = 0,06$ and "large" for $\eta k2. = 0,14$.

It was observed that the activity level has a medium-sized effect according to eta square values.

Table 5. Analysis results of the students' life quality subscale points observed according to activity levels

Source	Dependent variable	Squares total	Sd	Square Averages	F	p	1. Partial η^2
Activity level	Physical Function	6948,236	2	3474,118	11,233	,000	,052
	Physical Role Functioning	1255,773	2	627,886	,463	,630	,002
	Emotional Role Functioning	7060,984	2	3530,492	2,104	,123	,010
	Energy/Vitality	2644,380	2	1322,190	3,243	,040	,016
	Mental Health	4266,515	2	2133,258	5,603	,004	,027
	Social Functionality	3872,795	2	1936,398	2,932	,054	,014
	Pain	3033,078	2	1516,539	2,941	,054	,014
	General Health Perception	5834,985	2	2917,492	8,942	,000	,042

The table shows the following differences between the life quality sub-dimensions according to activity levels: *physical function*, *energy/vitality*, *mental health* and *general health perception*. It was observed that the activity level variable explains physical function at a rate of 5,2%, energy/vitality at a rate of 1,6%, mental health at a rate of 2,7% and general health perception at a rate of 4,2%. "Tukey" test was conducted to determine among which groups differences were.

Table 6. Tukey test results according to physical activity level

Dimensions	Activity state	Difference in point averages	p
Physical Function	Inactive-Minimal Active	-11,614*	,000**
	Minimal Active-Very Active	-10,244*	,001**
Energy/Vitality	Minimal Active-Very Active	6,000*	,037*
Mental Health	Inactive/Minimal Active	-7,113*	,029*
	Minimal Active-Very Active	6,168*	,024*
General Health Perception	Inactive-Minimal Active	9,082*	,001**
	Minimal Active-Very Active	6,490*	,008**

* $p < .05$; ** $p < .01$

According to Tukey test results, in the *physical function* sub-dimension, there is a significant statistical difference between students of inactive-minimal active activity level $p < 0,01$ (Difference in point averages=-11,614, $p=0,000$) and students of minimal active-very active activity level $p < 0,01$ (Difference in point averages=-10,244, $p=0,001$). In the *Energy/Vitality* sub-dimension, there is a significant statistical difference between students of active-very active activity level $p < 0,05$ (Difference in point averages= 6000, $p=0,037$). In the *Mental Health* sub dimension, there is a significant statistical difference between students of inactive-minimal active activity level $p < 0,05$ (Difference in point averages =-7,113, $p=0,029$) and students of active-very active activity level $p < 0,05$ (Difference in point averages=6,168, $p=0,024$). Finally, in the *general health perception* sub dimension, there is again a significant statistical difference between students of inactive-minimal active activity level $p < 0,01$ (Difference in point averages= 9,082, $p=0,001$) and students of minimal active-very active activity level $p < 0,01$ (Difference in point averages= 6,490, $p=0,008$).

DISCUSSION

This study which observes the physical activity and life quality levels of Sports Sciences students during the Covid-19 pandemic draws attention on some differences of life quality perceptions between male and female students. To be more specific, the study determined that the gender variable creates a significant statistical difference on the life quality sub-dimensions of energy/vitality, mental health, general health perception and social functionality and it was observed that male students compared to female students scored higher points in the above-mentioned sub-dimensions

On the contrary, in a study conducted on leisure consumers no significant statistical difference was observed according to gender variable when the participants' life quality sub-dimensions and point averages were analyzed (Akyüz, 2018). Şahan (2020), in his survey conducted on Sports Sciences students in Turkey, concluded that the gender variable does not create a significant difference in life quality. Similarly, the study performed by Vatansever et al. (2015) on a middle-aged group, supports Şahan's (2020) results and states that the gender variable does not create any difference in any of the life quality sub-dimensions. Fusco et al. (2012) in a study conducted on old women and men, realizing different types of analysis and taking into account the important gender interaction between physical function and life quality could not consistently associate a physical function to the concept of life quality for men. As for women, physical function was significantly associated with the concept of life quality. A study with a different conclusion was conducted by Tural (2020) during the pandemic in Turkey on 260 adult persons complying with the quarantine measures in Turkey during the pandemic and found a positive significant difference scored by men compared to women in the life quality emotional role functioning sub-dimension. In a recent other survey conducted by Ulukan and Esenkaya (2020) on students of Sports Sciences in Turkey, it was determined that male students had slightly higher life quality scores compared to female students.

Several surveys carried out in Turkey and Europe show a-parallelism with this study results so that Emamvirdi et al. (2016) in their survey of life quality within the departments of Physical Education and Sports Instruction, Sports Management, Coaching Education and Recreation observed higher results for male students compared to female students in the subdivisions of energy/vitality, social functionality, general health and pain. The fact that male students have a higher rate of continuing their sports life at the elite or amateur level may have caused this result. The similar results in studies before and after the pandemic may be due to the fact that men have adopted a more active lifestyle

In another analysis of our study, it has been determined that there was no significant difference between the departments where the students specialize and their life quality sub-dimensions. On the other hand, a similar survey has determined significant differences in life quality sub-dimensions of sports science students. This survey shows higher energy/vitality points scored by Recreation Department's students compared to other departments. The recreation department realized the highest score in the mental health sub-dimension while the department of Physical Education and Sports Instruction obtained better points in the social functionality and pain sub-dimensions. The study determined that students of the Recreation department scored higher results compared to other departments in the overall life quality scale related to health (Emamvirdi et al., 2016).

Another finding of this survey conducted during the pandemic is that no significant difference was found between the students' grades and the life quality sub-dimensions. Contrary to the results of this survey, Emamvirdi et al. (2016) in their study have found higher scores for the students of 2nd grade compared to those of 1st grade in the sub-dimension of general health perception.

Literature review gives limited analysis and results for the same sampling on the life quality scale sub-dimensions related to health with grade levels and field of specialization. The fact that no significant difference was found on both variables may be associated to factors like the social isolation and quarantine measures that accompanied the pandemic, targeting not only a specific group but the whole population or to this study covering all the sampling groups. By the same, the present survey's analysis results may be explained by the fact that although students' study in different departments and at different grades, their basic curriculum, their existing socio-cultural values and their present state of living under the same pandemic conditions be similar. Whether a relationship exists between the physical activity levels according to gender constitutes another analysis of this survey. In this sense, this survey researched a possible relation between the physical activity levels and gender and found that male students had a greater tendency to physical exercise than female students. Thus the probability of either male or female students being minimal active versus the other activity levels is among the findings.

This survey which obtains findings that female students display a more inactive tendency than male students reaches different results versus a survey conducted on the relation between the physical activity levels and the life quality of the students according to gender over students studying in educational sciences including the department of Physical Education and Sports. The subject survey did not find any significant difference between the physical activity levels according to gender (Tekkanat, 2008). On the other hand, a survey conducted by Vural et al. on physical activity levels of office desk workers concluded that male individuals displayed a higher physical activity level than female workers. In a survey conducted by Molanorauzi et al. (2015) on adult individuals' similar findings were observed indicating that physical activity habits were affected by the gender factor. Another survey carried out in Romania (Badicu, 2018) on students of Physical Education and Sports Faculty supports these findings. The subject survey concluded that male students had a higher physical activity level than female students. The fact that the rate of doing sports in both sports science students and the rest of the society is higher in men may have caused this result.

The effects of physical activity on life quality have been for years a subject frequently mentioned in literature and proven with scientific data. In this survey, a vast majority of the students have stated that physical activity created an evident improvement of their mental health. Nevertheless, 3 students out of 10 said physical activity made them feel mentally and psychologically tired or that it did not have any effect. In this sense, a large part of their mind-body perception, stating the philosophy of certain parallelism and an undeniable interaction between mind and body is in the nature of supporting Spinoza's monism. The results obtained by the data analysis of this survey also direct us to a Spinoza type of approach. To be more specific, significant differences were determined in this survey conducted under isolation conditions between physical activity and the sub-dimensions of life quality. The significant

effects of students' life quality scale according to physical activity levels are visible on the sub-dimensions of physical function, energy/vitality, mental health and general health perception.

Numerous surveys can be found today studying the effects of physical activity levels on life quality during the Covid-19 pandemic. For instance, a recent survey conducted in Italy during the pandemic determined that the participant's physical activity levels have significantly decreased during the Covid-19 pandemic. According to this survey, while the total points scored by inactive groups determined a moderate stress level, better psychological results were obtained out of a group reported having a higher level of physical activity. In this same study, a significant correlation was found between the physical activity variation and mental health level made adopt the idea that the increase of physical activity levels could create mentally healthier individuals (Maugeri et al., 2020).

In another survey conducted on the effects of physical activity on mental health and anxiety during the pandemic, it was determined that during social isolation, inactive individuals having highly increased their physical activity level showed lesser anxiety compared to those inactive individuals who moderately increased their physical activity level. In this sense, it was observed that individuals inactive during the Covid-19 pandemic scored lower mental health points compared to those who tended to have a higher physical activity level. On the other hand, no difference was observed in their anxiety levels (Lesser and Nienhuis, 2020). In the nature of supporting the above-mentioned surveys, this study survey has also determined a similar relation on the mental health sub-dimension between inactive students and the minimal active ones. As in the survey realized by Brady et al. (2021), a better level of physical activity for the old aged individuals sampling during the Covid-19 pandemic has also been correlated with-better mental health.

The survey conducted by Suzuki et al. (2020), observed that individuals with an inactive tendency displayed an even lower level of physical activity during the social isolation and those lower life quality scores have been correlated with the risk of low physical activity. In the survey where Gama de Mathos et al. (2020) studied the effects of the Covid-19 quarantine on physical activity levels and mental health points over a Brazilian population sampling, a significant decrease in individuals' physical activity levels and life quality points was reported during the pandemic and an increase thereof in stress levels was noticed. This conclusion also clearly shows the effects of social isolation on mental health.

In the survey that Richardson et al. (2021) conducted in the UK during the pandemic a significant increase was observed in individuals' depression levels during the pandemic and the reason why no change had occurred in the physical activity field was explained by the fact that social isolation left a space limited to vital duties only.

In the survey conducted by Endstrasser et al. (2020) on patients suffering from hip and knee arthritis, it was determined that social isolation had reduced the physical activity levels and although no major differences were observed on life quality mental health sub-dimensions, a significant decrease was observed on the physical sub-dimensions. Thus, with the state of inactivity due to Covid-19 isolation, a regression in patients' physical functions and an increase in their joint function's loss were observed. Supporting this conclusion, in a survey conducted on inflammatory rheumatism patients during the pandemic, it was observed that inactive

individuals had a higher physical function handicap but obtained better results in terms of energy/vitality (Brady et al., 2021). In a survey conducted on 216 individuals who complied with the isolation rules during the Covid-19 pandemic, it was found that moderate, high intensity and total levels of physical activity had a significant relation with all the sub-dimensions of life quality, equally in positive correlation with both men and women (Slimani et al., 2020). The results found in the survey of Slimani et al. (2020), overlap with the findings of this thesis on the moderate physical activity level. To be precise, the present survey which was conducted during social isolation and which found a significant difference in the sub-dimensions according to physical activity, determined that a moderate level physical activity may have more positive effects on life quality. The physical activity suggestions of the survey are based on these findings

In a survey performed by Blom et al. (2019) on adult individuals, a significant difference was determined with participants of moderate and very high-intensity physical activity in the life quality sub-dimensions of general health perception, physical function and physical role functioning. Moreover, it was deduced that low-intensity physical activity had a positive correlation with the sub-dimensions of physical function, physical role functioning, general health perception, mental health and energy/vitality, whereas inactive tendency was reported to have negative effects on the fields of physical function, general health, mental health, energy/vitality and social functionality. In a survey conducted by Di Stefano et al. (2020), on patients suffering from neuromuscular disease during the Covid-19 pandemic, it was determined that the level of physical activity created a significant positive difference on both mental health and general health perception sub dimensions.

Another finding of this survey is the determination of a significant difference among students with the closest activity levels on the sub-dimensions where physical activity level affected life quality (physical function, mental health, general health perception and energy/vitality). The relations within sub-dimensions according to physical activity levels were pronounced between inactive-minimal active and active-very active students

Health and Sports Sciences Experts agree on the fact that any physical activity performed with low or moderate intensity, 30 to 60 minutes per day and 4 to 5 days per week will have health benefits. This survey also has arrived at the finding that in each 4 sub-dimensions where physical activity creates a difference, minimal active students scored better points than inactive students. Such a state takes us to the deduction that instead of an inactive life, going even to a minimal active life will provide positive effects on life quality.

Even though the contribution of physical activity to human health is proven on the scientific level, it is yet necessary to well precise and well plan the intensity of this physical activity. Recent surveys warn against high-intensity physical activity which may have negative effects both on general health and mental health. That the body needs to be pushed to get stronger, quicker and more agile is a fact. However, importance must also be given to the resting factor. Individuals practising high-intensity physical activity are affected by biological, social and psychological stress factors (Purvis et al., 2010). USA National Medical Library (2018) stated that not being able to show long-term steady performance or regression in performance, need for a longer rest, feeling tired and exhausted, getting depressed, sleep problems, regression of mental health, nervousness, anxious mood, loss of motivation, muscle pain, injuries, weight

problems and flu diseases due to a weaker immunity level are among the health risks that very active individuals may be exposed to. In this survey also it was found that on every sub-dimension where the level of physical activity created a difference (physical function, mental health, general health and energy/vitality), the minimal active students group obtained higher points compared to very active ones. In another word, when average points were considered, minimal active students have defined themselves as happier, calm, peaceful, full of life and energetic individuals compared to very active students. This situation supporting the literature takes us to the possibility that moderately performed physical activity produces more positive effects on health-related life quality than a physical activity performed with high intensity.

In conclusion, it is determined that the lack of movement displayed during the Covid-19 pandemic had negative effects on life quality and created physical and mental health risks whereas moderate-intensity physical activity has positive effects on health-related life quality. The present survey which reached the conclusion concluded that physical activity had definite positive effects on life quality makes the following suggestions: Define strategies to increase the physical activity levels of female students and help them this way increase their life quality levels, study the reasons behind the sub-dimensions of life quality where male students obtained better results than female students and foresee the inclusion of those compensation methods developed thereof in the lives of the latter.

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Information on Ethics Committee Permission

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