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COVID-19 Pandemisi Sırasında Erteleme Davranışı ile Fiziksel Aktiviteye Katılım Motivasyonu Arasındaki İlişkinin İncelenmesi

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Özet
Üniversite öğrencilerinin fiziksel aktiviteye katılma motivasyonlarının ve erteleme eğilimlerinin araştırılması, onların uzun ve sağlıklı yaşamaları için gerekli sağlıklı davranış alışkanlıkları kazanmalarında belirleyici olabilir. Bu araştırma, Türkiye'deki üniversite öğrencilerinin genel erteleme davranışları ile fiziksel aktiviteye katılma motivasyonları arasındaki ilişkiyi incelemeyi amaçlamaktadır. Veriler, Nisan 2020'de Türkiye'nin farklı coğrafi bölgelerinden 421 üniversite öğrencisinden elde edilmiştir. Demografik bilgi formu ile veri toplama aracı olarak Fiziksel Aktiviteye Katılım Motivasyon Ölçeği ve Genel Erteleme Ölçeği kullanılmıştır. Verilerin analizinde, fiziksel aktivite motivasyonunu tanımlayan üç farklı alt boyutun genel erteleme davranışları tarafından yordanmasını incelemek için üç farklı doğrusal regresyon modeli oluşturulmuştur. Genel erteleme ve zaman eksikliği puanları, fiziksel aktivite motivasyonunda bireysel nedenleri, çevresel nedenleri ve motivasyon eksikliği puanlarını önemli ölçüde yordamıştır. Algılanan sağlık durumu ve gelir değişkenleri hiçbir modelde anlamlı değilken, yaş değişkeni sadece sosyal motivasyonlarla ilişkilendirilmiştir. Sonuç olarak fiziksel aktivite, COVID-19 kısıtlamaları sırasında üniversite öğrencileri için kişisel ve sosyal faydaları olduğu için günlük görevlere eğlenceli bir alternatiftir.

Anahtar kelimeler: Fiziksel aktivite, Fiziksel aktivite katılım motivasyonu, Erteleme davranışı, Üniversite öğrencileri, Kovid-19.

Examination of the Associations Between Procrastination Behavior and Motivation to Participate in Physical Activity During the COVID-19 Pandemic

Abstract
Investigating university students' motivation to participate in physical activity and their procrastination tendencies can be decisive in building healthy behavioral habits in their long and healthy lifespan. The research aims to examine the relationship between the general procrastination behaviors and motivation of participating in physical activity among Turkish university students. Data were derived from 421 university students from different geographical regions of Turkey in April 2020. Physical Activity Participation Motivation Scale and General Procrastination Scale were used as data collection tools with demographic information form. In the

analysis of the data, three different linear regression models were created to examine the prediction of three different sub-dimensions defining physical activity motivation by general procrastination behaviors. General procrastination and lack of time scores significantly predicted individual reasons, environmental reasons, and lack of motivation scores in physical activity motivation. While the variables of perceived health status and income were not significant in any model, age was only associated with social motives. In conclusion, physical activity is a fun alternative to daily tasks, as it has personal and social benefits for university students, during COVID-19 restrictions.

Keywords: Physical activity, Physical activity participation motivation, Procrastination behavior, University students, Covid-19.

INTRODUCTION

Physical activity is defined in its most general form in the literature as any bodily movement produced by skeletal muscles that result in energy expenditure (Bull et al., 2020; Caspersen, Powell, & Christenson, 1985). Piggin's (2020) holistic perspective, on the other hand, expands the scope of physical activity and defines it as a structure that requires the ability to act and perform in culturally diverse contexts, and includes individuals' interests, feelings, thoughts, and relationships with each other. Regardless of the perspective, mortality and morbidity related to non-communicable diseases can be reduced significantly, by making physical activity a part of daily life (Kohl 3rd et al., 2012; Lee et al., 2012). Moreover, physical activity improves individual well-being by supporting the ability to cope with stress (Kinnafick & Thøgersen-Ntoumani, 2014), increases sleep quality (Ekkekakis, Parfitt, & Petruzzello, 2011), strengthens mental health (Faulkner et al., 2020), and from various ages, gender groups, and different socio-economic levels. On the other hand, an increased sedentary lifestyle is associated with the death of 3.2 million people every year (World Health Organization, 2014). Physical activity participation is maintained as insufficient on a global scale, with 27.5% of adults, and 81% of adolescents not participating in physical activity at the recommended levels (Bull et al., 2020; Guthold, Stevens, Riley, & Bull, 2018; Guthold, Stevens, Riley, & Bull, 2020). Hence, prevailing chronic health conditions such as diabetes, obesity, hypertension, cardiovascular diseases, and various types of cancer are the main health problems that cause high rates of mortality, and physical activity is an important tool in the prevention of these problems (Kyu et al., 2016). Despite the well-established benefits of regular physical activity, physical activity is also one of the most common procrastinated health behaviors (Codina, Pestana, Valenzuela, & Giménez, 2020).

Procrastination has been defined as the problem of time management causing needlessly delaying important and necessary tasks (Sirois, 2016). It has also been defined as leaving the actions that need to be completed to a later date due to various reasons (Grund & Fries, 2018; Owens, Bowman, & Dill, 2008). Delaying health-related tasks or behavior may be further amplified if the procrastinated behavior is directly related to an individual's health (Sirois, 2007). Engaging in health-promoting and maintaining activities such as diet programs and regular exercise are also highlighted as important and procrastinated health behaviors (Haghbin & Pychyl, 2016). Studies show that many individuals of all ages and groups prefer to procrastinate their activities due to their current negative psychological state and low motivation (Owens et al., 2008; Sirois, 2007). Although there has not been yet reported an association between procrastination of physical activity and motivation, studies have reported an association of motivation with academic procrastination (Alaya, Ouali, Youssef, Aissa, & Nacef, 2021; Cerino, 2014), and bed-time procrastination (Kadzikowska-Wrzosek, 2020). In this perspective, as motivational processes are among the highlighted main reasons for low participation in physical activity (Carty et al., 2021; White, Elliott, Wheeler, & Fleming, 2018a), it may also be associated with procrastination of health-related behavior such as physical activity. Moreover, this association could be more apparent during the COVID-19 pandemic due to the restrictions and individual measures (Unda-López, Osejo-Taco, Vinueza-Cabezas, Paz, & Hidalgo-Andrade, 2022).

Deci and Ryan (1990) examine the motivations of individuals that affect their performance of behavior in two structures intrinsic and extrinsic motivation. In short, intrinsic motivation is when an individual performs behaviors related to internal reasons such as finding an activity interesting or enjoying the activity without any external reward, while extrinsic motivation is when individuals perform these behaviors with environmental stimuli such as reward or appreciation that may come from outside. Deci and Ryan (1985) state that extrinsic motivation, as the spark that starts a behavior, is beneficial at the beginning of the process, whereas intrinsic motivation plays a vital role in the permanence of the relevant behavior and is more effective than extrinsic motivation in the long run. In other words, it can be said that individuals with intrinsic motivation to participate in physical activity are more likely to make physical activity a part of their daily life (Kalajas-Tilga, Koka, Hein, Tilga, & Raudsepp, 2020). At the same time, when the individual's basic psychological needs are supported, high motivation indicates a strong intention that the behavior will take place, while low motivation is an important indication that the behavior will fade (Deci & Ryan, 1985, 1990; Gardner & Lally, 2013). To illustrate, regular physical activity participation supports the motivation to participate in physical activity continuously by making individuals feel positive in the context (Carty et al., 2021; Maher, Hevel, Reifsteck, & Drollette, 2020; White et al., 2018a), in turn, they would be less likely to postpone physical activity. On the other hand, a low motivation level in participating in physical activity may cause individuals to stay away from physical activity for various reasons and to postpone physical activity frequently. Putting off physical activity, leads to a decrease in psychological well-being, negative moods, low self-esteem, decreasing in social relationships, depression due to the deterioration of the body composition of individuals, increasing the behavior of quitting or procrastinating physical activity (Cecchini, Fernandez-Rio, Mendez-Gimenez, & Sanchez-Martinez, 2020; Hoare, Milton, Foster, & Allender, 2016; Tremblay et al., 2016). In addition, the level of health that decreases with the procrastination of physical activity affects negatively the life quality and satisfaction of individuals, reducing the enjoyment they will get from a physical activity they participate in (Sirois, Melia-Gordon, & Pychyl, 2003).

Thus, procrastinating physical activity behavior might likely emerge as a loop that consists of low motivation due to negative outcomes of sedentary behavior, and motives to continue procrastinating physical activity. It is considered valuable to investigate the procrastination behaviors of university students, who have had a particularly intense academic and social period, on their motivation to participate in physical activity. Although the extraordinary period of the COVID-19 pandemic increased sedentary behavior (Romero-Blanco et al., 2020), and decreased light, moderate and vigorous physical activity levels among university students (López-Valenciano, Suárez-Iglesias, Sanchez-Lastra, & Ayán, 2021), has also an important contribution to physical and mental health (Savage et al., 2020). Thus, investigating personal determinants of physical activity behavior among university students is important to designing and implementing intervention programs. Investigating university students' motivation to participate in physical activity and their procrastination tendencies can be decisive in building healthy behavioral habits that will be effective in their long and healthy life span. A limited number of studies examined the relationship between university students' procrastination behavior and their motivation to participate in physical activity. Therefore, it

has become important to investigate the association between procrastination and physical activity motivation. The aim of this research is to examine the relationship between the general procrastination behaviors and motivation of participating in physical activity among Turkish university students.

MATERIAL AND METHODS

Study Design and Participants

Since this research aims to examine the association between university students' general procrastination behaviors and their motivation to participate in physical activity, it was designed with the correlational research design (Friis, 2009). Data were derived from 421 university students from different geographical regions of Turkey in April 2020. In the first step, 249 university students participated the study for completing the principal component analysis protocol of the Motivation Scale for Participation in Physical Activity among university students. In this step, 72.5% (n=145) of them were female and 27.5% (n=55) of them were male university students. In the second phase of the study, confirmatory factor analysis was completed with different samples and additional data were collected from 171 university students to test the hypothesis of the study. 60.2% (n=103) of the final sample were female and 39.8% (n=68) of them were male university students. Participation in the research was voluntary and all participants provided informed consent forms. Also, this research was approved by Social and Human Sciences Scientific Research and Publication Ethics Committee in local university with the decision number 11488 on 12 May 2020.

Data Collection Tools and Variables

Demographic Information Form: Demographic information about age, gender, grade level, and perceived health status were collected via this form.

Physical Activity Participation Motivation Scale: Tekkursun-Demir and Cicioglu (2019) developed the Physical Activity Participation Motivation Scale by following a three-stage procedure of validity and reliability protocols among Turkish high school students. These are, respectively, the creation of the item pool, the taking of expert opinions, and the pilot implementation studies. Deci and Ryan's (1985) motivation theory and studies on motivation in the literature were used to determine the items to be included in the pool at the stage of creating the item pool in the first stage. In the second stage, the opinions of field and language experts were used to determine the suitability of the items created in the item pool. As a result of the evaluations from the expert opinion, the number of items was reduced. At the last stage, the items in the measurement tool were presented to the participants, who were determined through a pilot application, and the scale was finalized by rearranging the items that were difficult to understand with the feedback received. Accordingly, the Motivation Scale for Participation in Physical Activity consists of three sub-dimensions called individual reasons, environmental reasons, and no reason, and a total of 16 items. The items in the scale were graded on a 5-point Likert type scale as "strongly disagree", "disagree", "undecided", "agree" and "strongly agree".

Since the measurement tool was developed in a group of high school adolescents, its validity and reliability were retested for individuals with university education within the scope of this

study. In this context, the results of the confirmatory factor analysis conducted with the data collected from 200 university students, the x2/sd value was 4,437; RMSEA is 0.131; IFI value was 0.873; NFI value was 0.842; NNFI value is 0.848; CFI value of 0.872, RMR value of 0.141 and SRMR value of 0.163 indicated poor fit with fit index values. For this reason, it was aimed to reach a new factor structure by conducting exploratory factor analysis in the same group.

In order to determine the psychometric qualities of the Motivation Scale for Participation in Physical Activity, the correlation matrix showing the suitability of the data set for factor analysis was examined and it was observed that the relationship between each item and the other items was between the reference values of 0.25 and 0.90 (Özdamar, 2013). The Kaiser-Meyer-Olkin (KMO) test, which tests the suitability of the sample size to provide factor distribution, was found to be 0.903, and the Bartlett sphericity test results showing the correlation between the variables are significant. A Kaiser-Meyer-Olkin value between 0.5 and 1.0 indicates that the sample size is sufficient for principal component analysis (Field, 2009). The fact that the Barlett sphericity test is smaller than the determined alpha value indicates that the data came from multiple normal distributions, which highlights that the sphericity assumption is met in the execution of the principal component analysis (Hair, Black, Babin, Anderson, & Tatham, 1998).

The variance and eigenvalues explained as a result of the principal component analysis were examined and it was determined that there were 3 sub-dimensions with an eigenvalue higher than 1 and explaining 73.89% of the total variance. Tavsancil (2002) indicated total variance values greater than 60% for social science research are sufficient. According to the factor structure obtained, the item distributions were named as the factors that were re-examined (Table 1). The reliability values of the new factor structure were determined as 0.92, 0.89, and 0.95 for the new factor structures.

Table 1. Renewed factor structure and factor load distributions of the motivation scale for physical activity participation among university students

Item No	Factor Loads		
15	0,925		
16	0,907		
13	0,899		
14	0,804		
9	0,786		
3	0,680		
5		0,897	
6		0,895	
1		0,891	
4		0,873	
2		0,844	
7			0,871
12			0,834
10			0,809
8			0,797
11			0,616

For the confirmatory factor analysis (CFA) conducted to test the renewed factor structure of the measurement tool, data were collected from a new sample consisting of different participants reflecting the same characteristics. This new sample consists of 137 women and

83 men. The mean age of this sample is 21.22 and its standard deviation is 2.52. The fit indices obtained as a result of the analyzes carried out with the renewed factor structure, in the analysis x2/sd value was 1.858; RMSEA value of 0.063; IFI value 0.971; NFI value 0.938, NNFI value 0.964; and the CFI value was 0.970, the RMR value was 0.062, and the SRMR value was 0.045. In Table 2, the model put forward by Tekkursun-Demir and Cicioglu (2019) and tested with the data collected from university students and the model obtained within the scope of this research are given. The fit index values obtained are among the acceptable fit index value ranges indicated by the sources in Table 2. The reliability analyses carried out with the new sample showed the reliability of the sub-dimensions of the measurement tool by reaching Cronbach's alpha values of Personal Motives 0.907, Social Motives 0.956, and Lack of motivation 0.899, as in the group in which the principal component analysis was carried out. The analyzes were carried out with the new factor structure of the Motivation Scale for Participation in Physical Activity, which was found to be valid and reliable for individuals with university education.

Table 2. CFA results and fit indices norm values for physical activity participation motivation scale for university students

Fit Indexes	Reference Values	Model developed by Demir and Ilhan (2009)	New Model	Source
X^2/df	$0 \leq x^2/df \leq 5$	4.437	1.858	Tabachnick & Fidel, 2001
RMSEA	$0 \leq RMSEA \leq 0.07$	0.131	0.063	Steiger, 2007
SRMR	$0 \leq SRMR \leq 0.10$	0.163	0.044	Hu & Bentler, 1999
RMR	$0 \leq RMR \leq 0.10$	0.141	0.062	Kline, 2005
NFI	$0.90 \leq NFI \leq 1.00$	0.842	0.938	Steiger, 2007
NNFI	$0.90 \leq NNFI \leq 1.00$	0.848	0.964	Steiger, 2007
CFI	$0.90 \leq CFI \leq 1.00$	0.872	0.970	Raykov & Marcoulides, 2000
GFI	$0.90 \leq GFI \leq 1.00$	0.797	0.909	Hooper et al., 2008
IFI	$0.90 \leq IFI \leq 1.00$		0.971	Steiger, 2007

General Procrastination Scale: It is a measurement tool developed by Cakici (2003) in order to measure the realization status of individuals within the time they have determined the responsibilities they take on in their daily life. The scale consists of two subscales namely general procrastination and time inefficiency. There are 18 items in total, 11 of which are reverse scored. Three of the items in the scale are given as examples: “Even if I have decided on something, I leave it to the last minute to act”, “My family and friends tell me that I'm always late for my appointments”, “I finish the work on time”. The values given to the items in the scale are graded in a 5-point Likert type as “does not reflect me at all”, “reflects me very little”, “reflects me a little”, “reflects me mostly”, and “reflects me completely”. Accordingly, high scores obtained from the sub-scales are interpreted as having a strong general procrastination behavior or using time ineffectively.

Analysis of the Data

In the analysis of the data, three different linear regression models were created to examine the prediction of three different sub-dimensions defining physical activity motivation by general procrastination behaviors. In all models, the scores obtained from the sub-dimensions

of the general procrastination scale, using time effectively and procrastination, were considered as independent variables, while the scores obtained from the sub-dimensions of the physical activity motivation scale, personal motives, social motives, and lack of motivation were considered as dependent variables. In all models, gender, age, health status, and income level were included as control variables. SPSS 24 program was used in the analysis of the data and the significance level was accepted as 0.05. To carry out the regression analysis, estimating variables not reaching a significant value in the interaction model should meet the linearity assumption between the predictive variable and the predicted dependent variable (Field, 2009). Accordingly, the data of the study satisfies the assumption of linearity. Finally, by examining the tolerance and VIF values, the assumption of multiple linear correlations can be examined (Field, 2009). VIF values greater than 10 and that the tolerance values less than 0.01 indicate multicollinearity (Menard, 1993; Myers, 1990). The tolerance values ranged from 0.347 to 0.878 and the VIF values ranged from 1.139 to 2.885.

RESULTS

General procrastination and time inefficiency scores significantly predict individual reasons, environmental reasons, and lack of motivation scores in physical activity motivation. When the predictive degree of the dependent variable of the independent variables considered for each model is examined, gender is included in the model as a control variable. Perceived health status and income variables did not show significance in any model, whereas age was only associated with social motives.

General procrastination score (B=-0.105. 95% CI:0.031, 0.179) was directly and the time inefficiency score was inversely (B=-0.298. 95% CI: -0.417, -0.178), and significantly associated with personal motives in physical activity, F(6.170)=4.247, p=001, R2=0.135. Similarly, the general procrastination score (B=-0.163. 95% CI:0.085, 0.240) was directly and the time inefficiency score was inversely (B=-0.298. 95% CI: -0.413, -0.165), and significantly associated with social motives in physical activity, F(6.170)=5.757, p<001, R2=0.175. Moreover, age (B=-0.663. 95% CI: -1.141, -0.126), was also inversely associated with social motives in physical activity. On the contrary to first two models, the general procrastination score (B=-0.168. 95% CI:-0.242, -0.095) was inversely and the time inefficiency score was directly (B=0.107. 95% CI: -0.011, 0.226), associated with lack of physical activity motivation, F(6.170)=4.372, p<001, R2=0.140.

Table 3. The predictive levels of each dependent variable of the variables included in the regression models

Dependent Variables	Independent Variables	B	Std Error	t	p
Personal Motives	General Procrastination	0.105	0.038	2.784	0.006
	Time Inefficiency	-0.298	0.060	-4.926	0.000
	Gender	0.144	0.780	0.185	0.854
	Age	-0.069	0.247	-0.278	0.781
	Perceived Health	1.034	1.275	0.811	0.419
	Income Rate	5.527	0.000	0.253	0.801
Social Motives	General Procrastination	0.163	0.039	4.156	0.000
	Time Inefficiency	-0.289	0.063	-4.602	0.000
	Gender	0.833	0.810	1.027	0.306
	Age	-0.633	0.257	-2.463	0.015
	Perceived Health	0.742	1.325	0.560	0.576
	Income Rate	0.000	0.000	0.513	0.608

Lack of Motivation	General Procrastination	-0.168	0.037	-4.506	0.000
	Time Inefficiency	0.107	0.060	1.789	0.075
	Gender	-0.939	0.774	-1.213	0.227
	Age	0.240	0.245	0.980	0.329
	Perceived Health	0.606	1.265	0.479	0.633
	Income Rate	0.000	0.000	1.157	0.249

DISCUSSION

The aim of this research was to examine the associations between general procrastinative behaviors and physical activity motivation. Procrastination may cause concerning health consequences which may be further amplified if the procrastinated task is directly related to individuals' physical health such as engaging in physical activity (Haghbin & Pychyl, 2016). Considering the motivational context provides the basis of sustained physical (Carty et al., 2021; Maher et al., 2020; White et al., 2018b), understanding the association between general procrastination and physical activity motivation might be crucial for promoting healthy behavior. The results demonstrate the importance and different associations of general procrastination and using time ineffectively as its' attributes with individual and social aspects of physical activity motivation as well as lack of motivation.

Studies revealed that procrastination is associated with less physical activity participation (Rapoport, Bengel, Möcklinghoff, & Neidhardt, 2022). Indeed, Hen and Goroshit (2018) studied the procrastination behavior of highly educated adults in eleven different life domains, and the highest proportion of procrastination was founded in maintaining healthy behaviors among the adult population. However, university students are a different population with different responsibilities such as academic workload. The association of general procrastination behavior of university students with personal and social physical activity motives could be attributed to the fact that physical activity is a fun alternative to daily tasks such as academic workload that university students are responsible for (Dewitte & Schouwenburg, 2002). Fun activities are generally realizable and should be more highly valued by individuals, in turn, those activities have a short delay and high motivation to participate or perform (Steel, 2007). In addition, the positive association of general procrastination with personal and social physical activity motives could be explained by the degree of conflict between two choices (Anderson, 2003). As data collection tools of this study indicate physical activity and daily tasks such as academic workload, temptation levels based on the attractiveness of these two options are different for college students. To illustrate, studies conducted in the Turkish context have shown that high school-aged adolescents and university students highly procrastinate academic tasks, and rather prefer to engage in enjoyable activities (Klassen & Kuzucu, 2009; Pekpazar, Kaya Aydın, Aydın, Beyhan, & Arı, 2021).

Although the short-term social rewards of fun activities were stated as hardly comparable with procrastination (Dewitte & Schouwenburg, 2002), the findings of this study indicate that general procrastination is also positively associated with social motives of physical activity, and this association can be explained by the socialization benefits of physical activities (Bayrak & Yıldırım, 2017). Considering the data collected from university students during COVID-19 pandemic restrictions, the social activities that students regularly attend were

much less and emotional support was reduced compared to the pre-pandemic period (Elmer, Mepham, & Stadtfeld, 2020). Physical activity was highlighted as an important coping strategy for mental health through socializing behaviors during the COVID-19 pandemic (Faulkner et al., 2020). Similarly, Lowinger et al. (2016) indicated that activities that provide a platform for socialization might also promote procrastination among university students. Steel (2007) has explained the importance of socializing, as the socializing process is perpetually in the present, whereas the rewards of other daily tasks such as academic work are initially temporally distant. Hence it can be concluded that physical activity is an enjoyable activity that includes social and personal benefits for university students, and it is also a fun alternative to their daily tasks, especially during COVID-19 in which they need more emotional support (Elmer et al., 2020). In addition, the association between general procrastination and lack of physical activity motivation could also be attributed to the fun factor of physical activity compared to the daily tasks of university students. Procrastination and motivation have been extensively researched based on the concepts of self-determination theory one of the main factors that differentiate what should be done from what is already done is the presence or lack of motivation (Codina, Valenzuela, Pestana, & Gonzalez-Conde, 2018; Grunschel, Schwinger, Steinmayr, & Fries, 2016). However, our findings indicate that increase in general procrastination decreases the lack of physical activity motivation. In other words, physical activity motivation increases with procrastination. Hence, this finding may also be perceived as a supportive argument that physical activity is an enjoyable alternative for academic workload, and when students procrastinate the routine tasks, they are motivated to participate in physical activities for both personal and social motives such as having fun and socializing.

Another important finding of this study was that university students' perceptions about using their time inefficiently in their daily tasks were positively associated with both personal and social motives for physical activity. University students who are more likely to struggle with using their time effectively in daily tasks are also more likely to have higher personal and social physical activity motivation. While individuals with high procrastinative behaviors are generally depicted as lazy with an inability to self-regulate, the perspective of procrastination as being negative has been criticized, with the identification of types of procrastination in relation to time management (Corkin, Shirley, & Lindt, 2011). The first type characterized procrastination as people who do not intend to postpone their tasks but do so because of a lack of time management skills (Ferrari, Doroszko, & Joseph, 2005). This explanation is consistent with a previous study that examined time management and physical activity or sports procrastination due to the tight academic workload among university students (Almutairi et al., 2018). The other form of procrastination is characterized as deliberate procrastinative actions of individuals who manage time effectively yet choose to postpone tasks for focusing on more immediate or important tasks (Anderson, 2003; Brownlow & Reasinger, 2000). Deliberate procrastinative actions could be attributed to the aforementioned degree of conflict between two choices. Hence as a physical activity provides fun, and socializing opportunities during the COVID-19, university students may be postponing their daily tasks deliberately. In fact, investing time in physical activity is a healthy choice for individuals and is most likely to yield positive health outcomes (Codina et al., 2020).

CONCLUSION

This study, it was aimed to present possible associations between general procrastination and physical activity motivation among Turkish university students during COVID-19 restrictions. Overall, results indicated that personal and social motives increase when general procrastination which is mainly composed of academic tasks for university students, also increases. These results support the claim that physical activity is a fun alternative to daily tasks, as it has personal and social benefits for university students, special during COVID-19 restrictions. It would be more explanatory to find out the association between procrastination and physical activity motivation controlled for objectively measured physical activity levels. Another aspect that could have affected the results is that data collected during COVID-19 restrictions such as social distancing, the closing of private gyms, and public spaces for physical activity but not total lockdown. Thus, students might spend substantial time on their daily tasks such as academic duties and longing for any type of physical activity. Moreover, these findings also suggest examining the academic procrastination tendencies of university students and investigating the effects of physical activity elements such as brain breaks in learning and teaching activities, to increase university students' focus on these tasks and decrease procrastination.

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