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Participation in Physical Activity and Social Media Addiction in Students*

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ABSTRACT

The purpose of this research was to examine participation in physical activity and social media addiction among university students. A total of 462 university students from 3 different universities voluntarily participated in the study. In the study, the "Motivation Scale for Participation in Physical Activity" and "Facebook addiction scale" were used as data collection tools. In the study, the independent sample t-test and One-way ANOVA test were applied for normally distributed data depending on the number of variables. Also, correlation analysis and regression analysis were used. According to the simple linear regression analysis conducted to determine the effect of motivation on participation in physical activity on social media addiction, it was determined that the model established was statistically significant ($F=70.305$; $p<0.05$) and the ratio of explanation of the dependent variable by the independent variable was $R2=0.182$. It was determined that the most important factor that motivates students to participate in physical activity is individualistic reasons. Individualistic reasons were followed by environmental and causality factors, respectively. The results of the study show that students' participation in physical activity and social media addiction was not significantly differ in terms of their gender.

Keywords:
Physical activity, motivation, social media, addiction

1. Introduction

That the society in which we live has poor knowledge on physical activity, the importance of the physical activity to health is not understood well enough and physically less active lifestyle has been adopted more and more have been one of the crucial causes that increases the prevalence of such chronic diseases in society as obesity, cardiovascular diseases, hypertension, diabetes and osteoporosis (Bek, 2012). Physical activities are described as the activities that are performed in daily life by consuming energy through the use of muscle and joints, elevate the heart and respiratory rate and lead to fatigue of different levels (Baltacı, 2012). The secret of a healthy and fit life is to do physical activity regularly. Due to such reasons as weight control, healthy life, socialization, fight against stress, disease protection, wish to forget daily problems, tendency to keep away from bad habits and to stay away from negative thoughts, entertainment, development of physical identity, using free time, development of healthy lifestyles, desire to increase self-confidence; people may tend to do physical activities. It may be suggested that one's motivational approach plays a key role in not being away from physical activities and the engagement in physical activities (Demir & Cicioğlu, 2018; Eskiler & Küçükibiş, 2019; Gumus et al., 2019; Yılmaz et al., 2019). Although fast advances in technology and the industrialization process have eased life's burdens, with the increased virtual/digital venues, people's physical activity levels have decreased and with the emergence of social media, which let them socialize, time spent on the internet has increased. Desire to socialize with others promotes the internet. The motivations to use the internet, to create an online image, to have fun, and to build interpersonal

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relations are similar to those motivations used to answer needs for humane relations. As emphasized by Papacharissi and Rubin (2000); internet –with its functions in e-mail and online chat rooms- meets people's interpersonal communication satisfaction (Alioğlu, 2016). Besides, such essential portable electronic devices as smartphones and tablets provide the internet access is one of the factors that produce excessive internet use. According to the Digital 2019 Turkey report published by global social media agents -We Are Social and Hoot Suite (WASH)-; with its 82.4 million population, 98% of the adults in Turkey used mobile phones and 77% of them used smartphones and in the last one year the number of those who used internet increased by 5 million and the number of active social media users by 1 million. In Turkey, in the past one-year internet users spent an average of 7 hours 15 minutes on the internet and 2 hours 46 minutes of this on social media with 52 million social media owners (Wash Report, 2019).

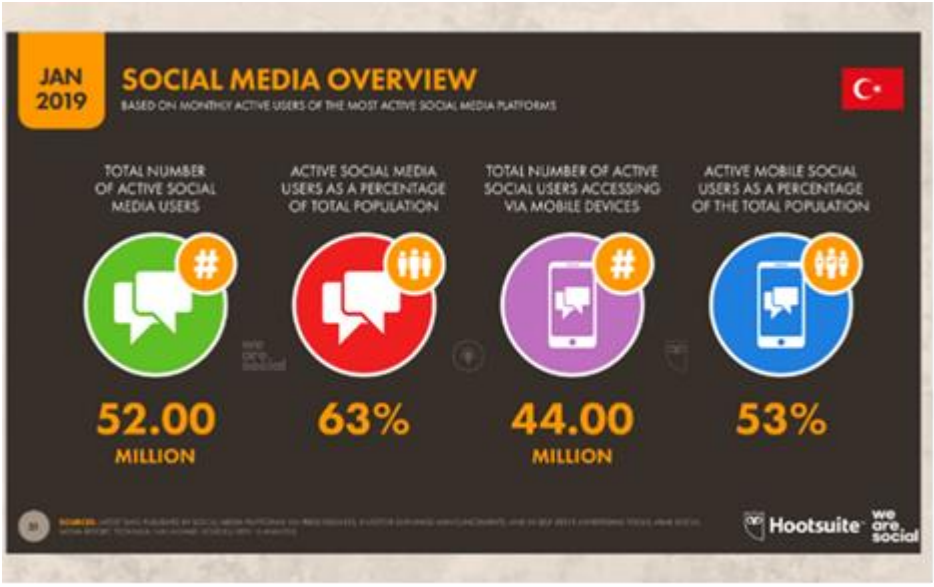

Figure 1. Social Media Overview (Global Digital Report of Turkey, We are Social, 2019).

Meanwhile, social media has been widespread as a popular leisure-time activity. From the old to the young, all segments of society use social media networks excessively, focus on technology more than needed; which –without noticing- triggers inactivity and causes numerous spine and health problems. Excessive use of social media and being addicted to social media without noticing may be an addiction. It may be suggested that most social media users often demonstrate behavior that seems to be an addiction such as continuously checking social media responses given to his/her existence and profile on internet platforms (Kula et al., 2020; Alioğlu, 2016). The studies underline that internet dependency has been going up day by day and people's tendency to socialize has been going down. A study done in Germany identified 2.1% of the general population as internet addicts, a study in the USA found 26.3% of the university students as internet addicts, a study in Egypt reported 40% of the university students as internet addicts and another study performed in Turkey 2017 showed that 1.6% of the participant students were internet addicts and 16.2% of them were potentially internet addicts (Kara, 2019). That social sharing networks have been very popular and serve to millions of users, users want to keep their virtual milieu under control all the time and people get access to these networks without any income or age barrier has led to a disease called social media addiction (Büyükaslan & Kırık, 2013). Today, many countries have been conducting different studies to combat this disease and taking necessary measures. Physical activity may be a significant argument in combating this disease. Therefore; to know factors that encourage people to do physical activities and to present the correlation of these factors with social media addiction is important. In this context, this study focused on investigating physical activity participation and social media addiction among university students.

2. Method

2.1. Research Model and Participants

This descriptive study was planned in a correlational survey model to explore the correlation between motivation for physical activity participation (MPAP) and social media addiction (SMA) among university students and in the cross-sectional survey model to explore whether students' MPAP and SMA scores

differed in terms of gender and academic departments. Descriptive studies are generally undertaken to explore various aspects of the phenomenon, to clarify correlations among the phenomenon under investigation, and to evaluate it in line with the standards. Descriptive studies are the ones that describe the phenomenon exactly and carefully. Survey models are the studies where participants' aspects such as their views or interests, skills, abilities, attitudes in relation to a subject or event are explored and larger samples are generally used as compared to other studies (Karasar, 2009; Büyüköztürk et al. 2014).

The study population consisted of university students studying at the faculties of sports sciences in Turkey while the study sample was composed of 462 students recruited using the convenience sampling method from three different universities. Convenience sampling is not random sampling but involves the sample being drawn from the population that is close to hand according to the criteria set by the researchers. In convenience sampling, data are collected from the close population in the easiest, fastest, and economic manner (Malhotra, 2004, Aaker et al., 2007; Zikmund, 1997). Kinnear and Taylor (1996) reported that convenience sampling is used by 53% in practice. Likewise, Kurtuluş et al. (2004) emphasized that nearly 90% of the studies done in Turkey employed convenience sampling (cited by Haşıloğlu et al., 2015).

Table 1. *Demographic Characteristics of the Participants*

Variables	N	%
Gender		
Female students	233	50.4
Male students	229	49.6
University		
Şırnak University	89	19.3
Gazi University	190	41.1
Mersin University	183	39.6
Academic Department		
Teaching	246	53.2
Coaching	104	22.5
Recreation	112	24.2
Total	462	100

2.2. Data Collection Tools

In the study; Demographic Information Request Form, Motivation Scale for Participation in Physical Activity (MSPPA), and "Social Media Addiction Scale" (SMAS) were used.

2.2.1. Motivation scale for participation in physical activity (MSPPA). Motivation Scale for Participation in Physical Activity was developed by Tekkurşun Demir and Cicioğlu (2018). The scale consists of 16 items and three subdimensions (internal motivation, external motivation, and non-motivation). Scores between 1 and 16 indicate very low motivation, scores between 17 and 32 low motivation, scores between 33 and 48 medium motivation, scores between 49 and 64 high motivation, and scores between 65 and 80 very high motivation. 3rd, 9th, 13th, 14th, 15th, and 16th items are reverse-scored. The scale is a five-point Likert scale (from strongly disagree 1 to strongly agree 5). Scale's Cronbach's alpha values were 0.941 for internal motivation, 0.931 for external motivation and 0.907 for non-motivation and 0.924 for total scale. The explained variance was 54.695.

2.2.2. Social media addiction scale (SMAS). To measure participants' social media addiction, Facebook Dependency Scale was used and the Turkish adaptation of the scale was done by Çam (2012). In the current study; instead of the word "Facebook" "Social Media" was used for the items of the scale. To this end, construct validity was tested using Explanatory Factor Analysis and Confirmatory Factor Analysis whereas construct reliability was tested using Cronbach's alpha coefficients. Different consistency criteria are used to test the consistency of the model in Confirmatory Factor Analysis. According to the Confirmatory Factor Analysis, goodness of fit values were as follows: RMSEA=.50, GFI=.95, AGFI=.94, NFI=.93, and CFI=.97. These values were within the limits of the goodness of fit. In addition to these values, the value of $\chi 2/sd=1.83<3$ indicated too that the model's consistency was acceptable. The scale consists of 19 items and one dimension. Higher scores indicate high dependency. It was a five-point Likert scale (1: Never; 5:

Always). Scale's Cronbach's alpha value was 0.942 in this current study and explained for 59.42% of the total variance.

2.3. Data Analysis

The normality test of the study was tested according to coefficients of skewness and kurtosis and it was identified that the data followed a normal distribution. To analyze the data; descriptive statistics were used and the correlation between MPAP and SMA was tested using correlation analysis. The effect of motivation for physical activity participation upon social media addiction was determined using simple linear regression analysis. Finally; to explore whether or not average MSPPA and SMAS scores differed in terms of the variables of gender and academic department, independent samples t-test and One-way analysis of variance were employed.

3. Findings

Table 2 presented participants' MSPPA scores and motivation levels

Table 2. *Factors that Motivated Students for Physical Activity Participation and Motivation Levels*

Variables		$\overline{x}$	sd
MPAP	Internal motivation	26.314	3.58
	External motivation	22.630	4.57
	Non-motivation	17.760	3.11
	Total	66.7035	8.60
		N	%
MPAP LEVEL	Very low	0	0
	Low	0	0
	Medium	16	3.5
	High	141	30.5
	Very high	305	66.0
	Total	462	100

In Table 2, it was found that the most important factor that motivated students for physical activity was internal motivation, external motivation, and non-motivation; respectively. When students' MSPPA scores were examined; it was noted that they generally showed very high motivation.

Table 3. *T-test Results Related to the Comparisons of Scores of MSPPA and SMAS in Terms of Gender*

Variables	Gender	n	$\overline{x}$	Sd	t	p
Internal motivation	Female	233	26.20	3.53	-.678	.498
	Male	229	26.43	3.64		
External motivation	Female	233	22.43	4.73	-.951	.342
	Male	229	22.83	4.41		
Non-motivation	Female	233	17.52	3.07	-1.651	.099
	Male	229	18.00	3.13		
SMA	Female	233	35.02	15.26	1.505	.133
	Male	229	32.82	16.15		

In Table 3, it was found that gender did not create a significant difference in the scores of MSPPA total, its sub-dimensions and SMAS. According to this finding, it may be concluded that MPAP and SMA did not differ among university students in terms of gender.

Table 4. *Correlation Coefficients between Motivation Scale for Participation in Physical Activity and Social Media Addiction Scale*

	SMA	External motivation	Internal motivation	Non-motivation
SMA	1			
External motivation	-.396*	1		
Internal motivation	-.498*	.356*	1	

Non-motivation	-.294*	.361*	.201*	1
MPAP T	-.426*	.321*	.308*	.297*

*p<0.001

According to the results of correlation analyses; it was identified that the lowest correlation value existed between SMAS and MSPPA-"Non-motivation" sub-dimension whereas the highest correlation value existed between SMAS and MSPPA-"Internal motivation" sub-dimension.

Table 5. *The Effect of Motivation for Physical Activity Participation upon Social Media Addiction*

	b_j	S_{bj}	t	p	F	p	R^2
Constant	1.402	.276	5.086	.001	70.305	.001	.182
MPAP	-0.567	.068	8.319	.001			

Table 5 demonstrated the results of simple linear regression analyses done to explore the effect of MPAP upon SMA. Accordingly; the regression model obtained to explore the effect of motivation for physical activity participation upon social media addiction can be structured as follows. It was identified that the model was statistically significant (F=70.305; p<0.001) and the independent variable explained for the dependent variable by R^2=0.182. Besides, regression model coefficients were also statistically significant.

Social media addiction = 1.402-0.567 x motivation for physical activity participation

When this regression model was investigated, the model formulated showed that one unit increase in motivation for physical activity participation would produce a decrease of 0.567 upon social media addiction.

4. Discussion and Conclusion

In this study where students' motivations for physical activity participation and social media dependency were investigated, it was found that motivation for physical activity participation of the study group was generally very high. The fact that the study group consisted of the students of the faculty of sports sciences may be the main reason to explain this result. Such factors as students' theoretical and applied courses, their accessibility to sports facilities as compared to the students of other academic departments, education, and training that they received about sports and physical activity may have been the factors that greatly affected students' physical activity participation. Actually, Sarol (2017) stated that the biggest barriers to physical activity participation were structural barriers. Masmanidis et al. (2009) concluded that sports facilities are the most important structural barrier. Similarly; the studies of Öztürk (2019) on university students identified that facilities are an important factor in physical activity participation.

It was seen that the most important factor that motivates students for physical activity participation is "internal motivation" ($\bar{x}$=26.317; sd=3.58). "Internal motivation" was followed by "external motivation" ($\bar{x}$=22.630; sd=4.57) and "non-motivation" ($\bar{x}$=17.760; sd=3.11); respectively. This finding pointed out that individuals paid more attention to their physiological and psychological status than the physical image to be reflected others. Even if studies conducted underlined that external factors are more important in physical activity participation (Asma and Gencer, 2019; Esatbeyoğlu & Karahan, 2014; Gümüş et al., 2017; Payan et al., 2019; El-Bagoury et al., 2017); it was found that individual and personal factors are more important for the students (Guler & Turkmen, 2018) who studied sports sciences; which –we think- may have resulted from their knowledge level about physical activity acquired at their academic departments. The relevant studies reported that as people's knowledge level about physical activity, exercise, and training increases, so does their participation in physical activities (Hanna et al., 2017; Ross & Melzer, 2016; Chen et al., 2017; Santiago et al., 2016). On the other hand; the study group was selected to the academic departments where they studied with special talent tests. For this test; serious preparation was necessary and therefore, this preparation may have led to a change in the students' attitudes towards physical activity.

In the comparison perform among the students in terms of gender, no significant difference was found between SMAS and MSPPA scores; which may be interpreted that being a female student or male student did not change their social media addiction and motivation for physical activity participation. Although many studies were performed in Turkey found significant differences in women's and men's physical activity participations (Alemdağ & Öncü, 2015; Cheah & Poh, 2014; Zaragoza et al., 2011); there are also many studies recently done showing that gender is not a significant variable in physical activity

participation (Çakır, 2019; Tekkurşun Demir & Cicioğlu, 2019; Wuerstl et al., 2019). In the studies that drew attention to gender variable; the difference is mainly on behalf of men and these studies show that women face many barriers to physical activity participation and motivation. These studies reported that the barriers mainly result from society's view of women, problems that women have while they are using facilities and the traditional roles of women (mother, spouse, cook, cleaner, etc.) (Lapa & Korkmaz, 2017; Lopez, 2019; Ayhan et al., 2017; Bulgu et al., 2007; Gümüş & Işık, 2018). However; it is not true to argue that these gender-based differences do matter for today's young generation –called Z generation-. On the other hand; today most cities offer much more advanced physical activity opportunities than they did 20 years ago (Sallis et al., 2016; Rose et al., 2018). Another area where the gender variables did not affect is the use of social media. Many studies performed both in Turkey and abroad emphasized that gender variables did not lead to an important difference in using social media (Zheng et al., 2016; Shim & Stengel, 2017). The common point where these studies agreed was that –as in our study- social media users are very high in both genders. Many studies support this finding (Alt, 2018; Swart et al., 2019; Andreassen et al., 2017). Another common point of these studies was that social media is heavily used due to the desire to spend leisure time. The contradiction related to social media addiction and physical activity participation is that people argue that they spend time on social media because they have free time but the same people tell that they cannot participate in physical activities because they do not have enough free time. This is a point to reflect on and to discuss about.

Today; numerous scientists have emphasized in the studies that the most crucial factor that prevents young people from physical activity participation was digitalization (Pehlivan, 2009; Thompson et al., 2005). Actually; the current study found a negative and moderate correlation between SMA and MPAP. According to the results of the analyses, the lowest correlation (r:0.294) existed between SMAS and MSPPA-"non-motivation" sub-dimension in a "weak" manner whereas the highest correlation existed between SMAS and MSPPA-"internal motivation" sub-dimension in a "negative and moderate" manner. This finding brings physical activity forward as an important factor in fighting against social media addiction; about which everybody has lately been complaining and which is thought to cause many physical and psychological diseases in the future.

After the correlation analyses; simple linear regression analyses were done to determine the effect of motivation for physical activity participation upon social media addiction and according to these analyses, the regression model formulated was statistically significant ($F=70.305$; $p<0.05$) and independent variable accounted for the dependent variable by $R^2=0.182$. Besides, regression model coefficients were also statistically significant. Accordingly; the model proved that one unit increase in motivation for physical activity participation would produce a decrease of -0.567 upon social media addiction.

As a result; the most important factor that motivates individuals towards physical activities is "internal motivation" and efforts should be made to focus on internal motivation so that participants can be encouraged and motivated to do physical activities. To this end, physiological effects as well as psychological effects of regularly done physical activities upon the human body should be clarified in a more detailed way. Raising people's awareness of physical activity benefits will increase their activity participation and -as presented by the regression model- as people's motivation for physical activity participation is maximized, their social media dependency is minimized. Therefore; if physical activity participation level is elevated, combat against social media addiction will gain big momentum. This study proved the importance of physical activity participation in the struggle against social media addiction -described as a psychological disorder-.

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