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Evaluation Of Participation In Recreational Exercise With Basic Psychological Needs And Happiness Parameters During The COVID-19 Pandemic Process

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Abstract

This cross-sectional study aimed to characterize the basic psychological needs of individuals participating in recreational exercises during coronavirus disease process (COVID-19) and to evaluate their level of happiness. A total of 182 adults (26 ± 6.13 years; 50.5% male, 49.5 female) and individuals who attended private gyms during the pandemic process participated in the study. The demographic information form created by the researchers in the study, "Basic Psychological Needs in Exercise Scale" (31,32) and "Oxford Happiness Scale-Short Form" (18, 11) were used. As a result of the study, while there was no difference in the basic psychological needs scale (BPNES) and its sub-dimensions in exercise according to gender, a significant difference was found in favor of male participants ($t = -4.344$; $p < 0.01$) in the happiness scale. When evaluated according to age, no significant difference was observed in the happiness scale, while a significant difference was found in the sufficiency and autonomy sub-dimensions of the BPNES in favor of 33 years and over compared to age 21 and below. As a result of this study, it has been revealed that autonomy and competence are the primary needs that motivate individuals to exercise during the pandemic period. It has been confirmed that especially adult groups attach greater importance to these needs. The importance of internal regulators in dealing with obstacles in the period when pandemic can be seen as an obstacle to participation in recreational exercise has been demonstrated.

Key words: Pandemic, Recreational exercise, Sport,

INTRODUCTION

The Covid-19 enfection, which WHO describes as a pandemic in 2020, continues to affect the whole world (31, 38). With the "stay at home" motto that national and international measures focus on, individuals have remained away from social and physical activities. The limitation of sports and exercise areas in the service class that will continue, the increase in the epidemic dimension and the psychological effects of individuals in this process have led to the formation of sedentary life (17). It is possible to explain the risks of this period with studies examining the effect of inactivity on the muscle, cardiovascular, metabolic, endocrine and nervous systems (26). In addition to these systems, it is revealed that they also affect the psychological states of individuals. Lim (23), "The shutting down of gyms, swimming pools, and fitness centers, postponement of sporting events, and closure of non-emergency physical therapy services, along with the practice of self-isolation, quarantine, and social distancing, as well as restrictions on outdoor activities and exercises, could eventually have physical, psychological, and behavioral consequences to the population. " has reported as this process.

Inactivity and related deaths are reported to exceed three million. For example, it is recommended that adults aged between 18 and 64 years, the age group most affected by COVID-19 according to recent

statistics (i.e. accounting for over 70% of all severe cases) (35) should engage in weekly training of at least 150 min of moderate-intensity physical activity or 75 min of vigorous-intensity physical activity, or a corresponding combination of moderate- and vigorous-intensity activity (33). Recent evidences also attest to the benefits of regular physical activity on survival (29, 12). With the increasing awareness of social distance and isolation during the Covid-19 pandemic process, individuals have adapted to the forced restricted area. The fact that these limited areas (home, workplace, etc.) are not suitable for exercise and recreational activity has restricted individuals with a lack of motivation during the pandemic period, even if we already have a routine of exercise or physical activity.

Considering the possible consequences that this period of social isolation may have on the levels of stress and anxiety (7), the WHO emitted a set of deliberations to minimize its effects. Among other measures, the need to restrict the time spent watching COVID-19 news and to seek reliable information in official media was highlighted, along with the need to maintain family routines and to seek a healthy lifestyle, namely through regular physical activity, healthy eating and regular sleep routines (34) Psychological well-being can be predicted by the degree of satisfaction of three basic psychological needs, autonomy (i.e., the subject's ability to regulate his or her own actions), competence (i.e., the subject's efficiency in interacting with the environment) and relatedness (i.e., the subject's ability to search for and develop connections and interpersonal relationships), according to the theory of basic psychological needs (9, 2). Present researchs has shown, well-being is understood as consisting of hedonic as well as eudaimonic aspects. It therefore include both positive emotion (such as happiness) and intrinsic learning motivation, to operationalise human psychological well-being. Based on previous findings, would be assume that all three basic needs, namely competence, autonomy and relatedness, relate to positive emotion and intrinsic learning motivation (19).

Exercise and sports activities yield a favorable health and mental impact when performed in moderation (23, 24).Regular exercise enhances rather than suppresses the immune response in individuals of all ages and a physically active lifestyle may delay or limit the aging of the immune system, leading to a reduced risk of contracting communicable diseases (e.g. viral and bacterial infections) and non-communicable diseases (e.g. diabetes, hypertension, and cancer) (6). Reductions in physical activity may also affect one's mental health, which may be experienced as unpleasant emotions such as sadness, anger, frustration and/or irritation. In a review on psychological impact of quarantine recently performed by Brooks et al., the authors stated that experiencing disease outbreaks can trigger symptoms of post-traumatic stress, depression and/or confusion, among others (25).

MATERIAL AND METHOD

Study design

Permission was obtained from the Selcuk University ethics committee before the study began (Ethics committee approval no=E-40990478-050.99-34874). In this study conducted on the basis of survey model; the data collection tools used in the study were filled face to face in the exercise hall. Detailed information about the study was given to all volunteers. An informed consent form was obtained from participants who volunteered to participate in the study.

Participants

This study Covid-19 pandemic period, the Ministry of Internal Affairs of the Republic of Turkey participated in individuals who continue to exercise restraint according to the hall. The sample of the study was determined by the convenient sampling method, which is one of the non-random sampling types (5). A research was conducted with 182 people (90 women, 92 men) who voluntarily participated in the study in two private sports halls in Selçuklu district of Konya province, which is active in 2020 and whose customer portfolio varies.

PROCEDURE

Questionnaires

Basic Psychological Needs İn Exercise Scale

It was developed by Vlachopoulos and Mchailidou (32) in order to evaluate the three basic needs of people, namely autonomy, competence and interconnectivity within the scope of self-determination theory in an exercise environment. BPNES consists of 12 items and 3 sub-dimensions (competence (α=.80), autonomy (α=.60) and being related (α=.75)). The Turkish adaptation of the scale was made by Vlachopoulos et al. (31) with an intercultural study and consists of the degrees of "Totally Disagree" (1) and "Completely Agree" (5). It

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is evaluated using a 5-point Likert-type scale with a score between 1-5. The internal consistency coefficient obtained in this study is .71.

Oxford Happiness Scale Short Form

Oxford Happiness Questionnaire-Short Form (OHQ-SF) This scale was developed by Hills and Argyle (18) The scale is composed of eight items and there is .93 ($p<.001$) correlation among twenty-nine items in the original form. OHQSF was translated into Turkish by Doğan and Cötok (11). As a result of exploratory factor analysis, a single factorial structure was obtained which contains seven items, a 2.782 eigenvalue, and explains 39.74 % of the total variance. A single factorial structure of OHQ-SF was analyzed with confirmatory factor analysis and goodness of fix indices were found to be (v2/df = 2.77, AGFI = .93, GFI = .97, CFI = .95, NFI = .92, IFI = .95, RMSEA = .074). The coefficient of internal consistency for reliability of OHQ-SF was .74 and the reliability coefficient of the test–retest was .85. The internal reliability coefficient of this study was calculated as .77.

Statistical analysis

The data gathered via questionnaire was analyzed using SPSS 24 package software. In order to descriptive statistical methods were utilized in the data analysis including frequency (n), percentage (%). Fundamental assumptions regarding such analysis were assessed. For the choosing comparison tests, the normality distribution was tested in various ways. As a result of the tests, the data had shown a normal distribution, it exceeds the reference skewness-kurtosis values as -1.95/+1.95 (13). Since the data showed normal distribution, independent group t test was used for pairwise set comparisons, and One-Way Analysis of Variance (ANOVA) was used for comparisons of more than two sets. Post-hoc tests bonferroni were used to determine the difference between groups in multiple comparisons. The significance level was taken as 0.05 in the study.

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RESULTS

Table 1. The characteristic of participants are given in table 1.

		N	%
Gender	Women	90	49.5
	Men	92	50.5
Age	<21	39	21.4
	22-24 age	42	23.1
	25-28 age	31	17.0
	29-32 age	35	19.2
	33<	35	19.2
Education	Primary School	27	14.8
	High School	88	48.4
	Bachelor	67	36.8
Income	<2000 tl	46	25.3
	2001-3000 tl	84	46.2
	3001 tl <	52	28.6
Total		**182**	**100**

Table 2. Compare by variables

	Basic Psychogical Needs in Exercise Scale						**Happiness Scale**	
	Competence		**Being Related**		**Autonomy**			
	X	Ss	X	Ss	X	Ss	X	Ss
Women	3.20	0.64	3.29	0.61	3.21	0.49	2.91	0.49
Men	3.22	0.58	3.22	0.49	3.27	0.42	3.21	0.42
t	-0.281		0.832		-0.627		-4.344	
p	0.77		0.40		0.53		**0.00****	
	X	**Ss**	**X**	**Ss**	**X**	**Ss**	**X**	**Ss**
<21[1]	2.97	0.62	3.11	0.60	3.05	0.40	3.05	0.40
22-24 age[2]	3.05	0.55	3.19	0.52	3.12	0.54	3.12	0.54
25-28 age[3]	3.33	0.56	3.30	0.60	2.98	0.56	2.98	0.56
29-32 age[4]	3.35	0.54	3.27	0.47	3.00	0.45	3.00	0.45
33<	3.42	0.64	3.45	0.55	3.16	0.44	3.16	0.44
F	4.305		1.904		3.829		0.904	
p	**0.00****		0.11		**0.00****		0.46	
Bonferroni	1-5				1-5			
	X	**Ss**	**X**	**Ss**	**X**	**Ss**	**X**	**Ss**
Premilary School	3.22	0.54	3.37	0.62	3.33	0.58	3.07	0.49
High School	3.19	0.62	3.22	0.54	3.25	0.60	2.98	0.44
Bachelor	3.23	0.62	3.27	0.54	3.19	0.57	3.17	0.52
F	0.094		0.749		0.534		2793	
p	0.91		0.47		0.58		0.06	
Bonferoni								
	X	**Ss**	**X**	**Ss**	**X**	**Ss**	**X**	**Ss**
<2000 tl	3.02	0.63	3.15	0.65	3.04	0.63	3.04	0.39
2001-3000 tl	3.24	0.58	3.31	0.52	3.33	0.57	3.03	0.51
3001 tl <	3.34	0.59	3.26	0.50	3.28	0.53	3.15	0.50
F	3.614		1.237		3.869		1.042	
p	**0.02***		0.29		**0.02***		0.35	
Bonferoni	1-3				1-2			

*p<0.05; **p<0.01

According to Table 2, which shows the comparison of the basic psychological needs scale and happiness scale in exercise to various variables, there is a significant difference in favor of male participants in the happiness scale by gender, and a significant difference in favor of 33 years and over compared to under 21 years in the competence and

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autonomy subscales of the BPNES scale by age according to the income variable, statistically significant differences were found in the autonomy sub-dimension of the BPNES scale in favor of the participants with medium income compared to the low income group.

Table 3. Correlation Between BPNES and Happiness Scale

		Oxford Happiness Scale
Competence	r	0.117
	p	0.115
Being Related	r	0.155
	p	0.036*
Autonomy	r	0.212
	p	0.004**

*p<0.05; **p<0.01

According to Table 3, in which the relationship between BPNES and Happiness scale is questioned, there is no relationship between Competence sub-dimension and happiness scale (r = 0.117; p> 0.05), while between being related sub-dimension and happiness there is a low level of positive direction (r = 0.115; p < 0.05) and a low level of positive correlation (r = 0.212; p <0.01) between autonomy subscale and happiness scale.

DISCUSSION

The purpose of this study is to define the simple psychological needs of individuals who continue to exercise in recreational fitness centers during the covid-19 pandemic period and to reveal their relationship with happiness.The Covid-19 pandemic is a period in which the whole world is affected and its effects will be questioned for a long time. Individuals had to ignore many activities in their daily lives during this period. The area of influence and spread of the virus has increased day by day. This increase has affected individuals' attitudes towards many areas. One of the areas where this effect is felt the most is undoubtedly the exercise areas. The safety of indoor areas such as the fitness center where there is a lot of interaction continues to be questioned, even restrictions are imposed within the framework of national measures. In this context, the differences in the attitudes of individuals who continue to use fitness centers when they are open even though many people are away from activities and activities are questionable. It is possible to explain physical activity and recreational activities with psychological processes and emotional states. Basic psychological needs in exercise participation have already been defined. However, the literature should be enriched in order to reveal which need is defined by exercise participation during the pandemic period. It should be based on determining the infrastructure of the need to participate in exercise and recreational activities even in the most risky periods and the diversity and quality of the services to be offered to individuals.As a result of our study, the happiness levels of men who attend recreational fitness centers were found to be higher than women. According to the data we evaluate Turkey Statistical Institute in 2020, overall happiness and life satisfaction has fallen 4%. In addition, TSI data indicates that the general happiness level of women is higher, while the rate of men who declared that they are happy was 43.2% in 2020, while it was 47.6% in 2019. For women, this rate was 57.0% in 2019 and 53.1% in 2020. Similarly, when the literature is examined, women have a high level of happiness (30). Considering the sample of our study specifically for individuals who exercise, an important factor of exercise participation is the happiness parameter. The reason why this parameter is high in racial participants can be explained by the goal theory. When the studies based on the theory of goal to be achieved were examined (10,1), It was found that women's motivation to participate in sports such as health and body perception was high, while men's more self-confidence and motivation to participate for success were higher (24). The exceptional situation experienced in this period may contribute to a lower perception of satisfaction of competence, particularly in the female gender, mostly due to changes in the usual routine, namely regarding activities that may provide greater interaction with the environment and that may help experience a better satisfaction of this psychological basic need (2, 17).There is a significant difference in the

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competence and autonomy subscales of the BPNES by age scale in favor of the age of 33 and over when compared to the under 21 age group. Competence; The individual's judgment about himself / herself about how successful he / she can be in overcoming difficult situations that he / she may face in the present and the future is his belief (37,39). Studies have emphasized that young people have difficulties in managing mental processes and their anxiety rates increase during the pandemic period (20, 36, 4, 16). This supports the results in favor of adults in our study. The management of internal processes, in which experience and control mechanisms will be supported, and the response to extraordinary situations and evolving needs will vary (15,21). In this context, recreational activity and physical activity, which can be considered as an external coping strategy during the pandemic process, can also be seen as an important parameter in the protection of mental and physical health. On the other hand, the significant difference in favor of 33 years and over in the autonomy sub-dimension can be explained by self-regulation theory. While the needs and expectations of young individuals may be more superficial (28), the source of adult individuals' motivation and need for exercise is explained by the concepts of internal regulation and self-determination (14). Considering the studies based on all these theories and practices, the motivations and needs of individuals to participate in recreational exercises during the pandemic period can be considered as the desire to take part freely in environments where they can express themselves and feel belonging.

CONCLUSION

With the COVID-19 disease, which started in the first half of 2020 and continues to affect today, the social lives of individuals have been greatly affected. This effect has also affected physical and mental health, especially with the effective implementation of the "stay at home" principles as a result of national measures (8). In this process, it has been reported that individuals are more adapted to inactive life (27). When we look at the current number of cases and related death rates, it is understood that the virus poses a great risk especially for people with weak immune systems and various chronic diseases. Among the main elements of the weak immune system and various chronic diseases; It is known that the vast majority of them, such as high blood pressure and diabetes, are caused by inactivity (sedentary life) (3).

In our study, simple psychological needs and happiness parameters during exercise were evaluated specifically for individuals who continued exercising during the pandemic period. As a result of this evaluation, it has been revealed that autonomy and competence are the primary needs that motivate individuals to exercise during the pandemic period. It has been confirmed that especially adult groups attach greater importance to these needs. The importance of internal regulators in dealing with obstacles in the period when pandemic can be seen as an obstacle to participation in recreational exercise has been demonstrated once again.

When the studies are examined, the scarcity of studies investigating the importance and effects of exercise during the pandemic period is seen as a limitation to discuss the study. The direction of the studies is increasing especially for elite athletes. Elite athletes have had the opportunity to access many social support and regulations in this process. However, it is thought that individuals participating in recreational exercise and sedentary individuals are more affected by this period. Increasing studies are important in evaluating the measures that can be applied and developing solutions for inactivity.

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