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ORIGINAL ARTICLE

Investigation of the Reasons Motivating Undergraduate Students to Physical Activity According to Behavior Change Stages

AHMET NACI DİLEK[1], ZEKI TAŞ[2]
[1]*Bartin University, Faculty of Sports Sciences, Bartin/Turkey*
[2]*Sakarya University of Applied Sciences, Faculty of Sports Sciences, Sakarya/Turkey*
Correspondence to Dr. Ahmet Naci DİLEK, Email.ahmetbosna@yahoo.com Cell: 0553 108 51 92

ABSTRACT

Aim: In this study, it was aimed to investigate the reasons that motivate undergraduate students to physical activity according to the stages of behavior change.

Method: A total of 598 students, including 328 male and 270 female students, voluntarily participated in the research conducted with the screening model. Independent t-test, one-way analysis of variance and LSD tests were used for statistical operations.

Results: The difference between interest and physical fitness dimension scores between male and female students was statistically significant (p<.05). In the dimension of interest and physical fitness, female's scores are higher than male's. In the study, statistically significant differences were found in interest, ability, appearance, physical fitness and social dimensions according to age category (p<.05). Statistically significant differences were found in all sub-dimensions when comparing the sub-dimensions of the reasons that motivate to participate in physical/sports activity according to the behavioral change steps (p<.01).

Conclusion: It has been determined that while the factors that motivate undergraduate students to physical activity are different in terms of interest and physical fitness, they are similar in terms of ability, appearance and social dimension. It has been observed that physically active people are better in interest, physical fitness, ability, appearance and social dimensions than those who are not physically active. It is recommended to direct undergraduate students to be more physically active.

Keywords: Behavior, Physical activity, Motivation

INTRODUCTION

It is a fact that sedentary lifestyles of young adults are increasing in all developed and developing countries[1]. With each passing day, life conditions become more and more difficult, bringing along psychological problems[2]. It is accepted that physical and mental diseases and problems caused by sedentary life are at an alarming level[3]. One of the conditions of a healthy life is physical activity. Physical health and physical fitness go hand in hand. Physical activities have an important place for health and it is stated that physical activities have many benefits in terms of health[4]. Physical activity is defined as any body movement that results in energy consumption[5]. Regular physical activity makes significant differences in the healthy growth and development of children and young people, in getting rid of unwanted bad habits, in socialization, in protecting adults from various chronic diseases or in the treatment or support of treatment of these diseases, in ensuring that the elderly have an active old age period, in other words, in increasing the quality of life throughout life[6].

Physical activity is effective in a lively and cheerful daily life, protecting the body against diseases, preventing obesity by consuming excess energy naturally, slowing down aging and organic regression caused by aging. Again, physical activity helps the respiratory and circulatory systems reach and maintain their superior capacity, reduce nervous tensions and increase the preventive and protective effects of death caused by coronary vascular diseases, protect the health and functionality of muscle-related joint tissues, help to get rid of loneliness by providing social cohesion and help with posture disorders effective preventing it[7]. There is an urgent need for better and more effective physical activity adaptation for a long-term physically active life. According to the American Sports Medicine Association and the American Dietetic Association, adults should do at least 30 minutes of moderate-intensity activity every day[8.] Especially, university students should be directed to physical activities for a fit body and mental health by avoiding many negative conditions such as exam anxiety, alienation from family, financial difficulties, inability to socialize, and future anxiety. With regular physical activity, a person can reduce his tension, get away from daily pressures and keep his mind fit[9].

In some European Union countries, participation rates in physical and sportive activities in order to improve health and physical fitness is known to be at the level of 56% in the Netherlands, 53% in Germany, 41% in England, 39% in France, 35% in Italy and 28% in Spain[10]. Considering the situation in these countries; With a rate of 3.5%, Turkey is the country with the lowest level of physical activity[11]. Physical activity and exercise is the sum of the actions that improve the health of the individual as a tool of the preventive health approach, maintain the improved state, and increase the resistance against fatigue and diseases. Absence of exercise and low level of physical fitness are very important risk factors for disease and premature death[12]. Making physical activity a habit in daily life and maintaining it throughout life is extremely important in terms of individual and public health. For a healthy life, physical activity should be a part of people's daily life and should be made into a lifestyle. It is thought that participation in physical activities increases self-expression and self-confidence, reinforces the spirit of cooperation, unity and gentlemanliness, helps in reducing mental fatigue and tension, and improves success and social communication skills[13]. Motivation gives energy and

direction to behavior. Motives have 4 functions: initiating behaviors, determining the energy and severity level of behaviors, guiding behaviors and ensuring the continuation of behaviors[14]. From this point of view, in this study, it is aimed to investigate the reasons that motivate undergraduate students to physical activity according to the stages of behavior change.

METHOD

Research Model

In this study, screening model was used. This model is "research approaches that aim to describe a past or present situation as it is"[15].

Population and Sample of the Research

The population of the research consists of undergraduate students of Samsun Ondokuz Mayıs University. The sample of the research consists of a total of 598 students, 328 male and 270 female students, who continued their education in 6 different faculties between 2018-2021 and participated in the study voluntarily.

Data Collection Tools: In this study, a personal information form, a scale of reasons that motivate for physical activity, and an exercise behavior evaluation questionnaire were used.

A Scale of Reasons that Motivate for Physical Activity: This scale, which consists of 30 questions, determines the reasons for participation in physical activity. These reasons are evaluated in 5 dimensions. These; interest/enjoyment (because it's fun), talent (because I like activities that challenge me physically), looks (because I want to maintain my weight so I look better), physical fitness (because I want to be physically fit), and social (because I want to be with my friends) dimensions. Scoring of the 7-point Likert-type scale is determined by ranking from 1 (not at all correct) to 7 (definitely correct). There are 7 questions (questions numbered 2,7,11,18,22,26,29) expressing the dimension of interest from the sub-components in the scale. There are 7 questions expressing the skill dimension (questions numbered 3,4,8,9,12,14,25). There are also 6 questions expressing appearance dimension (questions numbered 5,10,17,20,24,27), 5 questions expressing physical fitness dimension (questions numbered 1,13,16,19,23), 5 questions expressing social dimension (questions numbered 6,15,21,28,30). Each dimension is evaluated within itself and scoring is done[16]. In this study, the reliability coefficient of the scale was determined as 0.82.

Exercise Stages of Change Questionnaire: "Exercise Stages of Change Questionnaire" (ESOCQ), developed by Marcus and Lewis[17], aims to determine the individual's exercise behavior steps. The four items in the questionnaire, in which the participants' wishes for exercise are tried to be determined, are answered as yes/no. Individuals' intention to exercise and their habits of participating in exercise are divided into five different exercise behavior steps according to their responses to the items: Pretension, Tendency, Preparation, Movement and Continuity[17].The validity and reliability study of the Turkish version of the ESOCQ was performed by Cengiz and others[18] The analyzes conducted by Cengiz and others (2010) to test the criterion validity of the questionnaire support the criterion validity of the questionnaire. In addition, the test-retest value (ICC=.80) for the reliability of the questionnaire was found to be high[18].

The scale consists of 32 questions. Participants gave binary answers as yes/no to the four items in the questionnaire. People's intention to exercise and their habits of participating in exercise are divided into five different exercise behavior stages by using scoring algorithms according to their responses to the items: These are; pre-intention, intention, preparation, action and continuity[17]. The following questions were asked in the survey; (1) Currently, I physically participate in moderate activity, (2) My intention is to increase my physical participation in moderate activity in the next 6 months, (3) Currently, I regularly engage in moderate physical activity, (4) Since 6 months I regularly participate physically in moderate activity[11].

Analysis of Data: The data were evaluated in the SPSS 23,00 package program. To test whether the data are normally distributed, Kolmogorov-Smirnov test was performed and it was determined that the data showed normal distribution. Independent t-test, one-way Anova and LSD tests were used for statistical operations.

FINDINGS

Table 1: Comparison of sub-dimensions of motivations to participate in physical/sports activity by gender

Sub-dimensions	Gender	n	X	sd	t
Relevance Dimension	Male	328	42,22	5,75	-2,14*
	Female	270	43,35	4,54	
Ability Dimension	Male	328	41,73	6,48	0,79
	Female	270	42,16	5,21	
Appearance Dimension	Male	328	32,98	6,61	-1,39
	Female	270	33,72	5,84	
Physical Fitness Dimension	Male	328	29,42	5,50	-3,89**
	Female	270	31,30	3,60	
Social Dimension	Male	328	27,70	5,45	1,32
	Female	270	27,05	4,70	

*p<0,05 and **p<0,001

According to the results of the "*independent groups t-test*" in Table 1, statistically significant differences were obtained according to gender in the sub-dimensions of interest and physical fitness of the participants' motivation to physical activity (p<.05). Accordingly, the mean scores of female in these sub-dimensions are significantly higher than that of male. On the other hand, no statistically significant difference was found in ability, appearance and social dimension (p>.05).

Table 2: Comparison of sub-dimensions of motivations to participate in physical/sports activity by age category

Sub-dimensions	Age category	n	X	sd	F	LSD
Relevance dimension	17-21 age (1)	230	43,39	5,12	10,02**	1,2>3
	22-25 age (2)	220	42,56	4,96		
	26 and above (3)	148	39,67	7,03		
Ability dimension	17-21 age (1)	230	43,05	5,19	12,48**	1,2>3
	22-25 age (2)	220	41,61	6,12		
	26 and above (3)	148	38,45	7,75		
Appearance dimension	17-21 age (1)	230	33,77	6,38	8,11**	1,2>3
	22-25 age (2)	220	33,53	5,58		
	26 and above (3)	148	30,01	8,17		
Physical Fitness Dimension	17-21 age (1)	230	30,59	4,15	4,81*	1,2>3
	22-25 age (2)	220	29,96	5,34		
	26 and above (3)	148	28,17	6,44		
Social Dimension	17-21 age (1)	230	28,55	5,17	10,93**	1,2>3
	22-25 age (2)	220	27,12	4,67		
	26 and above (3)	148	24,97	6,35		

*p<0,05 and **p<0,001

According to the results of the "*one-way analysis of variance*" in Table 2, statistically significant differences were obtained in the sub-dimensions of interest, ability, appearance, physical fitness and social sub-dimensions of the participants' motivation to physical activity according to age groups (p<.05). According to the Post Hoc (LSD) results made for the source of the difference, it was determined that the mean score of those aged 17-21 and 22-25 in all sub-dimensions was statistically significantly higher than the mean score of those aged 26 and above.

Table 3: Comparison of sub-dimensions of motivations to participate in physical/sports activity according to behavior change steps

	Change steps	n	X	sd	F	LSD
Relevance dimension	Pretension (1)	145	43,61	5,18	14,23**	5<1,2,3,4
	Tendency (2)	131	43,56	5,27		
	Preparation (3)	115	43,76	8,06		
	Movement (4)	105	41,99	3,47		
	Continuity (5)	102	39,29	5,01		
Ability dimension	Pretension (1)	145	44,11	5,08	41,21**	5<1,2,3,4 1>4
	Tendency (2)	131	42,83	4,73		
	Preparation (3)	115	41,63	8,11		
	Movement (4)	105	41,60	4,18		
	Continuity (5)	102	36,04	5,41		
Appearance dimension	Pretension (1)	145	34,35	6,51	10,01**	4,5<1,2 3>4
	Tendency (2)	131	34,86	8,72		
	Preparation (3)	115	31,33	9,59		
	Movement (4)	105	29,12	3,44		
	Continuity (5)	102	30,67	4,84		
Physical Fitness Dimension	Pretension (1)	145	31,51	3,58	22,98**	5<1,2,3,4 1>4
	Tendency (2)	131	30,45	2,84		
	Preparation (3)	115	30,89	5,92		
	Movement (4)	105	29,08	3,71		
	Continuity (5)	102	26,12	6,66		
Social Dimension	Pretension (1)	145	27,96	5,77	8,43**	5<1,2 2>3,4
	Tendency (2)	131	29,42	5,64		
	Preparation (3)	115	27,11	5,73		
	Movement (4)	105	25,93	3,38		
	Continuity (5)	102	25,38	3,94		

*p<0,05 and **p<0,001

According to the results of the "*one-way analysis of variance*" in Table 3, no statistically significant differences were found in the sub-dimensions of interest, ability, appearance, physical fitness and social sub-dimensions of the participants' motivation to physical activity according to the behavior change steps (p<.05). According to the Post Hoc (LSD) results for the source of the difference, it was determined that in the dimension of ability and physical fitness; according to the continuity mean score of the pretension, tendency, preparation and movement mean scores, and according to the action group mean of the pretension score average; according to the continuity mean scores of pretension, tendency, preparation and movement mean scores in the dimension of interest; according to the movement and continuity score average of the pretension and tendency score average in the appearance dimension, according to the movement score average of the preparation score average; in the social sub-dimension, the mean score of pretension and tendency was higher than the mean score of continuity, and the mean score of eduation was significantly higher than the mean score of preparation and movement.

DISCUSSION AND CONCLUSION

In this study, it was aimed to investigate the reasons that motivate physical activity according to the behavior change stages of undergraduate students.

In this study, female's scores were significantly higher than male in the dimension of interest and physical fitness. In some studies, physical fitness sub-dimensions were found to be higher in female than in male[4-19-21]. In this study, the scores of female in the sub-dimensions of interest and physical fitness were found to be higher than male. In the dimension of interest, the motivations of people to have fun in the activity they participate in, to be happy and to be excited by enjoying it come to the fore[4]. According to this situation, it can be said that university students as female have more motivation to have fun, be happy and get excited by enjoying the activities they

participate in compared to male. Again, considering the physical fitness dimension, it was found that female want to be physically healthy, want to have more energy, want to develop their heart and blood vessels, and want to maintain the continuity of their physical strength and appearance more than male. Although there is no significant difference, female's scores are higher in the dimension of appearance, where outer appearance is more prominent. Appearance dimension includes the desire to maintain weight, to be more attractive by improving body shapes. If the appearance dimension is low, people may feel physically unattractive. Although there was no significant difference in this study, male's social dimension scores were higher than female's. The desire to enjoy spending time with other individuals in the activities they participate in order to socialize, strengthen their existing relations with their friends or establish new friendships constitute the components of the social dimension[4]. The high social dimension scores of male may be due to the fact that male use social environments more actively in Turkish society.

İmamoğlu and friends,[19] found statistically significant in a study by age groups in terms of interest, ability, appearance, physical fitness and social dimensions. In his study, Karacan[4] found the subscale scores of the 23-year-old and older group to be lower than the younger ones.

In this study, the scores of the 17-21 age group and the 22-25 age group by age category were significantly higher than the 26 age group and above group (Table 2). In the study, it was observed that the scale scores decreased with increasing age. In our study, the scale scores decreased as the age group increased.

Callaghan and friends[20] found that individuals in the preparation, movement and continuity exercise behavior steps had higher exercise self-efficacy than those in the lower stages of the exercise behavior step, that is, in the sedentary group (pretension and tendency steps). İmamoğlu and friends,[19] found a statistically significant difference in all sub-dimensions when comparing the sub-dimensions of the reasons that motivate them to participate in physical/sports activity according to the behavioral change steps of university students. In this study, a statistically significant difference was found in all sub-dimensions when comparing the sub-dimensions of the reasons that motivate to participate in physical/sports activity according to behavior change steps ($p<.01$). In all sub-dimensions, the pretension stage, tendency, preparation, action and continuity stage scores decreased sequentially. This can be interpreted as the motivating factors for sports lose their importance as participation in sports activities increases. For this reason, a new survey study can be recommended for the motivating factors for sportive activity for elite athletes.

CONCLUSION

It has been determined that while the factors that motivate undergraduate students to physical activity are different in terms of interest and physical fitness, they are similar in terms of ability, appearance and social dimension. It has been observed that physically active people are better in interest, physical fitness, ability, appearance and social dimensions than those who are not physically active. It is recommended to direct undergraduate students to be more physically active.

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