

Is exercise addiction in adults a meaningful predictor of their attitudes towards nutrition?

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Abstract. The aim of this study is to determine whether exercise addiction in adults is a significant predictor of their attitudes towards nutrition by examining exercise addiction in adults and attitudes towards healthy nutrition. Relational Screening Model was used in the study. The study group consisted of 767 young people aged 18 and over. Exercise Addiction Scale (EAS) and Attitude Scale for Healthy Nutrition (ASHN) has been used in data collection. The relationship between exercise addiction and attitudes towards healthy nutrition has been examined using the Pearson Moments Multiplication Correlation. Multiple Linear Regression Analysis was conducted in order to examine the effect of exercise addiction on adults' attitudes towards healthy nutrition. The relevance level was found as 0.05. As a result of the research, it has been seen that exercise addiction in adults is a significant predictor of their attitudes towards healthy nutrition and it directly explains the 58% of points of attitudes towards healthy nutrition alone.

Keywords: exercise addiction, nutrition, attitude

Introduction

The effect of exercise and nutrition on human health is an undeniable fact. It is necessary to adopt some behavioral patterns such as physical activity, exercise, sports, and healthy nutrition as a lifestyle in order to live a healthy life. Exercise is planned, structured, voluntary and regular activities that are repeated in order to achieve, improve or maintain physical fitness, to develop or maintain one or more aspects of physical fitness (1, 2). Exercise includes activities that help weight control, lower blood pressure and cholesterol, improve respiratory function, and help reduce the risk of a heart attack. In addition, exercise is an important factor in reducing daily problems and anxiety that people have. In this context, it can be said that exercise has both physical and psychological benefits.

Exercise has negative effects as well as positive effects (3). The most important concept that is

handled when explaining the negative results of the exercise is exercise addiction. The concept of exercise addiction is defined by Veale (1995) for the first time as participation in exercise for fun results in uncontrollable excessive exercising behavior (4). Exercise addiction is a condition defined as excessive willingness to exercise, continue exercising even though it has harmful effects, such as in the case of injuries and feeling unwell when hindered. Individuals who are addicted to exercise are known for symptoms like not being able to stop doing exercise, feeling the need for doing more exercise every day, experiencing anxiety if the exercise is interrupted, exercising more than anticipated, spending quite a long time on exercising, preferring exercising to socializing. Psychological and physiological symptoms of exercise addiction are defined as feelings of guilt when not exercising, inability to stay still, anxiety, aggression, laziness, malnutrition, insomnia and headache (5).

Nutrition is considered as the primary factor affecting one's health, quality of training and exercise performance positively or negatively in individuals who exercise. Food consumption should be made by taking into account the person's health, age, gender, daily exercise level, type of exercise, duration of training and frequency in individuals who exercise regularly (6). The energy intake appropriate for the exercise, the balance in the distribution of energy to the nutrients and meals, carbohydrate consumption, nutritional preference before, during and after the exercise, adequate fluid intake are the factors that determine performance in terms of nutrition.

Nutrition is the use and absorption of nutrients for growth, development, survival and health protection. Healthy nutrition is the adequate supply of all nutrients that are needed by considering the age, gender and physiological status of the individual (7). Healthy nutrition is the pleasure of the food consumed, eating varied and balanced diet, eating all the necessary nutrients in sufficient quantities and maintaining the ideal body weight. The goal of healthy nutrition is to ensure an adequate and balanced diet (8).

In the literature, there are separate studies on exercise addiction and nutrition, but there are no studies in which two variables are handled together in the same study. The aim of this study is to determine whether exercise addiction in adults is a significant

predictor of their attitudes towards nutrition by examining exercise addiction in adults and attitudes towards healthy nutrition.

Method

Research Model

Relational Screening Model was used to examine the exercise addiction and attitude towards healthy nutrition in this study. Screening models are research models aiming to describe a condition in the past or present as it is (9).

Participants

The study group consisted of 767 young people aged 18 and over in Turkey. Participants who did not complete the scales properly were excluded from the study.

When Table 1 is examined, it is seen that 399 of the study group is female (52%) and 368 is male (48%). When analyzed by marital status, 218 of the participants are married (28.4%) and 549 of them are single (71.6%). When the education status of the participants is examined, 112 of them are high school graduates (14.6%) and 596 of them are university graduates

Table 1. The Characteristics of the Participants

Variables	Group	Frequency	Percent
Gender	Female	399	52
	Male	368	48
	Total	767	100
Marital Status	Married	218	28,4
	Single	549	71,6
Educational Status	High School	112	14,6
	University	596	77,7
	Master's Degree	59	7,7
Doing Active Sports	Yes	336	43,8
	No	431	56,2

(77.7%) and 59 of them has master's degree (7.7%). According to the status of doing active sports, 336 of the participants do active sports (43.8), while 431 do not do active sports (56.2%). In addition, the average age of the study group is 26.

Data Collection Tools

A personal information form has been created by the researcher to determine the characteristics of the participants such as gender, age, marital status, educational status and the status of doing active sports. Furthermore, in the research, Exercise Addiction Scale (EAS) has been used to determine the level of exercise addiction of the participants and The Attitude Scale for Healthy Nutrition (ASHN) has been used to determine their attitudes towards healthy nutrition.

Exercise Addiction Scale (EAS): Exercise Addiction Scale has been developed by Tekkurşun-Demir, Hazar and Cicioğlu (2018). The scale is 5-point Likert and consists of 17 items in total. EAS consists of three sub-dimensions: "too much focus and emotion change", "postponement of individual-social needs and conflict", "tolerance development and passion" and there are no inverse items on the scale (10). The sub-dimension of too much focus and emotion change consists of the first 7 items (1, 2, 3, 4, 5, 6, 7), the sub-dimension of postponement of individual-social needs and conflict consists of 6 items (8, 9, 10, 11, 12, 13) and the sub-dimension of tolerance development and passion consists of the last 4 items (14, 15, 16, 17). The Cronbach Alpha coefficient of the sub-dimension of too much focus and emotion change is ,83; the Cronbach Alpha coefficient of the sub-dimension of postponement of individual-social needs and conflict is ,79; the Cronbach Alpha coefficient of the sub-dimension of tolerance development and passion is ,77 (10). The scale ranges are as follows : "1-17 normal group, 18-34 low-risk group, 35-51 risk group, 52-69 dependent group, 70-85 highly dependent group".

Attitude Scale for Healthy Nutrition (ASHN): Attitude Scale for Healthy Nutrition has been developed by Tekkurşun-Demir, Hazar and Cicioğlu

(2019). The scale is 5-point Likert and consists of 21 items in total. There are positive and negative items in the scale. Positive items are (1, 2, 3, 4, 5, 12, 13, 14, 15 and 16), negative items are (6, 7, 8, 9, 10, 11, 17, 18, 19, 20 and 21). ASHN has a structure consisting of 4 factors (8). These factors are named Information on Nutrition (IN), Emotion for Nutrition (EN), Positive Nutrition (PN) and Malnutrition (MP). IN consists of the items (1, 2, 3, 4, 5), EN consists of the items (6, 7, 8, 9, 10, 11), PN consists of the items (12, 13, 14, 15, 16) and MP consists of the items (17, 18, 19, 20, 21). The internal consistency coefficients of the scale are ,84 for the factor of information on nutrition; ,90 for the factor of the emotion for nutrition; ,84 for the factor of the positive nutrition; ,75 and for the factor of the malnutrition factor ,83.

Data Analysis

The relationship between exercise addiction and attitude towards healthy eating was studied in the study using the Pearson Product-Moment Correlation. Multiple Linear Regression Analysis was conducted in order to examine the effect of exercise addiction on adults' attitudes towards healthy nutrition. The relevance level was found as 0.05.

Findings

Within the scope of the research, Pearson correlation coefficients between independent variables were investigated to determine whether there were multiple connections between variables and it was determined that the correlation coefficients between variables varied between .13 and .77. According to Büyüköztürk, Çakmak, Akgün, Karadeniz and Demirel (2012), the correlation above .80 indicates that there may be multiple connections, while the correlation of .90 and above indicates a meaningful multiple connection (11). In the study, the relationship between independent variables was found to be between .115 and .767.

Table2. Correlations

		Attitude Scale for Healthy Nutrition Totally	Too Much Focus and Emotion Change	Postponement of Individual-Social Needs and Conflict	Tolerance Develop- ment and Passion	Exercise Addiction Totally
Too Much Focus and Emotion Change	Pearson Correlation	,267**	1	,187**	,633**	,767**
	Sig. (2-tailed)	,000		,000	,000	,000
	N	767	767	767	767	767
Postponement of Individual- Social Needs and Conflict	Pearson Correlation	,749**	,187**	1	,131**	,129**
	Sig. (2-tailed)	,000	,000		,000	,000
	N	767	767	767	767	767
Tolerance Development and Passion	Pearson Correlation	,115**	,633**	,131**	1	,765**
	Sig. (2-tailed)	,001	,000	,000		,000
	N	767	767	767	767	767
Exercise Addiction Totally	Pearson Correlation	,158**	,767**	,129**	,765**	1
	Sig. (2-tailed)	,000	,000	,000	,000	
	N	767	767	767	767	767

Table3. Regression Analysis Results According to Total Attitude Scale for Healthy Nutrition

	B	Std. Error	Beta	t	p	Partial	Part
Constant	29,853	1,762		16,946	,000		
Too Much Focus and Emotion Change	,385	,068	,305	5,645	,000	,200	,131
Postponement of Individual-Social Needs and Conflict	2,142	,072	,717	29,947	,000	,735	,697
Tolerance Development and Passion	-,001	,093	-,001	-,013	,990	,000	,000
Exercise Addiction Totally	-,115	,048	-,198	-2,395	,017	-,086	-,056

R: 0.766; R²: 0.58; F: 270,78; P:0,00

As it can be seen in Table 3, it was determined that exercise addiction and sub-dimensions explained 58% of attitude points towards healthy nutrition ($R=0.76$; $R^2=0.58$; $p<0.05$). When the effect of exercise addiction and its sub-dimensions are examined one by one, a negative correlation was observed between exercise addiction total score and attitude towards healthy nutrition ($t: -2.39$). Moreover, it was determined that the sub-dimension that most affects the attitudes of adults towards healthy nutrition is the sub-dimension of PISNC.

Conclusion and Discussion

As a result of the research, it has been seen that adults' exercise addiction is a significant predictor of their attitudes towards healthy nutrition and it directly explains the 58% of points of attitudes towards healthy nutrition alone.

In a study by Costa, Cuzzocrea, Hausenblas, Larcana and Oliva (2012), it has been concluded that frequency of exercise, daily exercise duration and years of experience in sports can be effective in the formation

of exercise addiction (12). In the same study, it has been concluded that people with a high level of exercise addiction increase their level of exercise due to reasons such as physiological problems, body dissatisfaction, or having better physical fitness. This situation can be interpreted as there may be a relationship between the increase in the level of exercise addiction and physical appearance.

Cicioğlu, Tekkurşun Demir, Bulğay and Çetin (2019) has stated that there is a strong relationship between exercise addiction and long-term and regular exposure to exercise and long-term regular and high intensity training could increase addiction after so many years in their study with elite athletes and students. Furthermore, in the same study, it has been found that men have higher levels of exercise addiction than women (13).

Pierce, Rohaly and Fritchley (1997) have found that athlete women have higher levels of exercise addiction than men in their study. Moreover, it has been stated that many people who have exercise addiction to achieve their physical image and perceptions in society do bodybuilding as a type of exercise and they have been dealing with this type of exercise for many years to achieve effective results (14).

Namlı (2019) stated that female participants have higher nutritional knowledge than male participants in her study examining the attitudes of athletes engaging in winter sports towards healthy nutrition (15).

Bulduk, Bulduk and Özkula (2018) have noted that participants were less satisfied with their body image due to irregular eating habits, and they have found that nutritional training is necessary to support nutritional attitudes and to improve body image with body weight in their study on high school students' attitudes towards nutrition (16).

Kurtipek, Güngör, Esentürk and Tolukan (2020) have determined that awareness is important to eliminate the individuals' obsession with healthy eating in their study (17). This finding can be interpreted as an indicator that people's awareness of nutrition will contribute positively to their attitudes towards healthy nutrition.

As a result of these findings it can be suggested that;

- The study group can be extended quantitatively with more numbers or with different age groups.
- Research methodology can be conducted by using a mixed method in which quantitative and qualitative methods are used together.

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