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Determining the exercise and nutrition habits of individuals who go to fitness centers

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Abstract

The aim of this study was to determine the exercise and nutrition habits of individuals who go to fitness centers. The research group consisted of 127 volunteer participants (80 men, 47 women) who regularly attend fitness centers in the provincial center of Bitlis, Turkiye. The survey technique was used as the data collection method. In order to obtain the data, the "Personal Information Form" prepared by the researcher and the "Nutrition-Exercise Behavior Scale (NEBS)" consisting of 45 questions that evaluate the exercise and nutrition habits of the participants were used. SPSS statistics program was used in the analysis of the data. The demographic information of the research group, nutrition and exercise behaviors were analyzed using descriptive statistics such as percentage, frequency, arithmetic mean, standard deviation. The significance level was determined as $p<0.05$. The findings showed that gender did not significantly affect nutrition and exercise habits; however, factors such as education level (especially postgraduate) and age (24-29 range) played a significant role in healthy lifestyle behaviors. Although the effect of these variables on psychological eating and meal regularity was limited, it was determined that weekly exercise frequency was related to healthy nutrition. As a result, it was determined that the sub-dimensions of nutritional habits in individuals who go to fitness centers differ according to various variables. In addition, it was observed that individuals who go to fitness centers generally have conscious and regular exercise and nutritional habits, but these vary depending on personal goals, lifestyle and nutritional knowledge. It was concluded that personalized education and guidance services are important to support healthy and sustainable habits.

Keywords: Exercise, fitness, nutrition habits

Fitness merkezlerine devam eden bireylerin egzersiz ve beslenme alışkanlıklarının belirlenmesi

Öz

Bu çalışmada, fitness merkezlerine giden bireylerin egzersiz ve beslenme alışkanlıklarının belirlenmesi amaçlanmıştır. Araştırma grubu, Türkiye/Bitlis il merkezindeki fitness merkezlerine düzenli olarak giden 127 gönüllü katılımcıdan (80 erkek, 47 kadın) oluşmuştur. Veri toplama yöntemi olarak anket tekniği kullanılmıştır. Verilerin elde edilmesinde araştırmacı tarafından hazırlanan "Kişisel Bilgi Formu" ile katılımcıların egzersiz ve beslenme alışkanlıklarını değerlendiren 45 sorudan oluşan "Beslenme-Egzersiz Davranışı Ölçeği (NEBS)" kullanılmıştır. Verilerin analizinde SPSS istatistik programı kullanılmıştır. Araştırma grubunun demografik bilgileri, beslenme ve egzersiz davranışları yüzde, frekans, aritmetik ortalama, standart sapma gibi tanımlayıcı istatistikler kullanılarak analiz edilmiştir. Anlamlılık düzeyi $p<0,05$ olarak belirlenmiştir. Bulgular, cinsiyetin beslenme ve egzersiz alışkanlıklarını anlamlı şekilde etkilemediğini; ancak, eğitim düzeyi (özellikle lisansüstü) ve yaş (24-29 aralığı) gibi faktörlerin sağlıklı yaşam biçimi davranışlarında anlamlı rol oynadığı görülmüştür. Bu değişkenlerin psikolojik yeme ve yemek düzenliliği üzerindeki etkisi sınırlı olmakla birlikte, haftalık egzersiz sıklığının sağlıklı beslenme ile ilişkili olduğu belirlenmiştir. Sonuç olarak, fitness merkezlerine giden bireylerde beslenme alışkanlıklarının alt boyutlarının çeşitli değişkenlere göre farklılık gösterdiği belirlenmiştir. Ayrıca, fitness merkezlerine giden bireyler genel olarak bilinçli ve düzenli egzersiz ve beslenme alışkanlıklarına sahip olmakla birlikte, bunların kişisel hedeflere, yaşam tarzına ve beslenme bilgisine bağlı olarak değiştiği görülmüştür. Kişiye özel eğitim ve rehberlik hizmetlerinin sağlıklı ve sürdürülebilir alışkanlıkları desteklemek için önemli olduğu sonucuna varılmıştır.

Anahtar Kelimeler: *Beslenme alışkanlıklar, egzersiz, fitness*

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INTRODUCTION

With the increasing awareness of healthy living today, physical activity and balanced nutrition have become essential elements for improving individuals' quality of life and preventing chronic diseases. Fitness centers stand out as important venues that enable individuals to engage in regular exercise and support a healthy lifestyle. However, for individuals attending fitness centers, not only engaging in exercise but also adopting proper nutritional habits plays a critical role in achieving overall health and fitness goals (Smith et al., 2020).

Exercise strengthens the body physically, improves cardiovascular health, and enhances muscle endurance and flexibility. Regular physical activity reduces the risk of chronic diseases such as heart disease, diabetes, and obesity while also having positive effects on mental health. The beneficial changes that exercise induces in the body become more pronounced when supported by proper nutrition. Proteins are essential for muscle repair and growth, carbohydrates provide the necessary energy during exercise, and fats, vitamins, and minerals are crucial for overall bodily functions (Manore, Meyer, & Thompson, 2017).

Proper nutrient intake after exercise is important for muscle repair and growth. In particular, post-exercise protein intake provides the amino acids necessary for muscle regeneration (Phillips, 2014). Additionally, carbohydrates replenish the energy expended during exercise and restore muscle glycogen stores (Celikel et al., 2023). The proper intake of these nutrients in alignment with exercise is essential for optimizing exercise performance. Furthermore, individuals engaging in exercise should also pay attention to water consumption, as fluid loss during exercise can directly impact the body's performance (Maughan, 2003).

The essential nutrients required by the body during exercise include proteins, carbohydrates, fats, and micronutrients. Protein plays a critical role in muscle repair and growth. Post-exercise protein intake is necessary for muscle recovery and development (Phillips, 2014). Carbohydrates are important for replenishing muscle glycogen stores and replacing the energy expended during exercise. Fats serve as an energy source during prolonged physical activity. Additionally, vitamins and minerals are essential for maintaining the body's overall functions. A balanced diet, combined with exercise, helps the body efficiently utilize these nutrients (Jeukendrup & Killer, 2010).

Menstruation, a natural consequence of being a woman, can directly affect a woman's ability to exercise due to the physical and emotional fluctuations that come with hormonal

changes. Physical symptoms such as cramps, fatigue, headaches, and nausea experienced during menstruation can negatively affect women's motivation and physical performance. In addition, fluctuations in estrogen and progesterone hormone levels can affect muscle strength, endurance, body temperature, and water retention, reducing the level of comfort experienced during exercise. While exercise can be relaxing and pain-relieving for some women during this period, for others, the desire and capacity to exercise may decrease significantly. Therefore, it is important to plan exercise programs flexibly and specifically for the person, taking into account the individual effects of the menstrual cycle (Akkus, 2024).

Exercise and nutrition are two fundamental components that complement each other. Regular physical activity provides numerous benefits, such as increasing muscle mass, improving endurance, managing weight, and enhancing overall health, while proper nutrition is necessary for meeting energy needs, supporting muscle recovery, and optimizing performance during this process (Jones et al., 2019).

The aim of this study is to examine the exercise and nutritional habits of individuals attending fitness centers and to determine how these habits affect their health and fitness goals. In this context, relevant studies in the literature will be reviewed, and factors such as exercise frequency, type of exercise, dietary patterns, and macronutrient distribution will be discussed regarding their impact on individuals' performance and overall health. Additionally, findings will be shared on how individuals achieve their goals more effectively when exercise and nutritional habits complement each other.

H1: Individuals who exercise more frequently and follow a balanced nutrition plan have significantly better health and fitness outcomes than those who do not.

H2: Individuals whose nutritional habits align with their exercise routines reach their fitness goals more effectively than those whose habits do not align.

METHOD

Research group (population-sample)

This study, which aims to determine the nutritional and exercise behaviors of individuals attending fitness centers, is descriptive in nature and follows a survey model. The search model is one of the descriptive research methods and aims to present the current situation on a subject as it is. Individuals' opinions, attitudes, behaviors or certain characteristics are examined on a large sample. Data collection tools such as surveys and tests are generally used. The data

obtained is interpreted and a general assessment is made about the current situation. (Büyüköztürk et al., 2009).

The study group consisted of 127 volunteer participants (80 male, 47 female) who regularly attend fitness centers in Bitlis city center. The sample size was determined in order to obtain statistically significant results in cases where it is difficult to reach the entire universe. In this study, the sample size was determined according to the principle of voluntary participation and by the convenience sampling method. In addition, it was created in a way that would have sufficient representative power by considering previous studies in similar areas and the number of individuals in the universe. Whether the required sample size was sufficient was evaluated with the reliability levels of statistical analyses (generally 95% confidence interval and 5% margin of error).

Data collection tools

The survey technique was used as the data collection method. To obtain the data, a "Personal Information Form" prepared by the researcher was used, along with the "Nutrition-Exercise Behavior Scale (NEBS)," developed by Yurt et al. (2016), which consists of 45 questions designed to assess participants' exercise and nutritional habits.

Nutrition-exercise behavior scale (NEBS)

The Nutrition-Exercise Behavior Scale (NEBS), developed by Yurt et al. (2016), consists of 45 questions and is a five-point Likert-type scale with four sub-dimensions:

- Psychological Eating Behavior (score range: 11-55)
- Healthy Nutrition-Exercise Behavior (score range: 14-70)
- Unhealthy Nutrition-Exercise Behavior (score range: 14-70)
- Meal Regularity (score range: 6-30)

Responses are rated on a scale from "Does Not Describe Me at All" (1) to "Describes Me Completely" (5). Additionally, items 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 20, 22, 30, 31, 32, 34, 35, 36, 37, 38, 39, 42, and 43 are reverse-scored. The Cronbach's Alpha reliability coefficient for the scale was determined to be $\alpha = 0.85$.

Data analysis

The SPSS statistical program was used for data analysis. The demographic information, nutritional, and exercise behaviors of the research group were determined using descriptive statistics, including percentage, frequency, arithmetic mean, and standard deviation techniques.

To assess whether the data followed a normal distribution, skewness and kurtosis values were examined. Since the skewness and kurtosis values were found to be within the range of +2 to -2, the data were considered to be normally distributed (George & Mallery, 2010). For normally distributed data, Independent Samples t-test and One-Way ANOVA test Tukey test for data showing significance were applied for within-group comparisons. The significance level was set at $p < 0.05$.

FINDINGS

Table 1. Mean, standard deviation, skewness, and kurtosis values of the nutrition-exercise behavior scale and ıts sub-dimensions

Variables	Mean	ss	Skewness	Kurtosis
Psychological/Dependent Eating Behavior	29.77	8.73	0.557	0.075
Healthy Nutrition-Exercise Behavior	44.70	9.67	-0.168	0.023
Unhealthy Nutrition-Exercise Behavior	39.17	7.05	0.409	0.100
Meal Regularity	21.40	4.76	-0.209	0.137
Total Nutrition-Exercise Behavior Scale	135.04	20.36	0.204	1.578

In Table 1, the descriptive statistics for the Nutrition-Exercise Behavior Scale and its subdimensions were examined. The Psychological/Dependent Eating Behavior subdimension has a mean of 29.77 (SD = 8.73, skewness = 0.557, kurtosis = 0.075), the Healthy Eating-Exercise Behavior subdimension has a mean of 44.70 (SD = 9.67, skewness = -0.168, kurtosis = 0.023), the Unhealthy Eating-Exercise Behavior subdimension has a mean of 39.17 (SD = 7.05, skewness = 0.409, kurtosis = 0.100), the Meal Regularity subdimension has a mean of 21.40 (SD = 4.76, skewness = -0.209, kurtosis = 0.137), and the total score of the Nutrition-Exercise Behavior Scale has a mean of 135.04 (SD = 20.36, skewness = 0.204, kurtosis = 1.578).

Table 2. Demographic ınformation of the research group

Variables	Group	F	%
Gender	Male	80	63,0
	Female	47	37,0
Age	24-29 age	52	40,9
	30-35 age	45	35,4
	36-41 age	17	13,4
	42 age and above	13	10,2
Education level	Bachelor's Degree	107	84,3
	Postgraduate	20	15,7
Profession	Law Enforcement Officer	56	44,1
	Teacher	39	30,7
	Healthcare Personnel	32	25,2
Economic Status	Low	10	7,9
	Medium	89	70,1
	High	28	22,0
Weekly Exercise Status	1 day	67	52,8
	2 day	29	22,8
	3 day	19	15,0
	4 day and above	12	9,4

Variables	Group	F	%
Have You Received Nutrition Education?	Yes	32	25,2
	No	95	74,8

*=p<0.05

When Table 2 is evaluated, it is found that 63% of the research group is male and 37% is female. Additionally, 40.9% are between the ages of 24-29, 35.4% are between 30-35 years old, 13.4% are between 36-41 years old, and 10.2% are 42 years old and above. 84.3% have a bachelor's degree, while 15.7% have a postgraduate education level. Furthermore, 44.1% are law enforcement officers, 30.7% are teachers, and 25.3% are healthcare personnel. Regarding income status, 70.1% are in the middle-income range, 22% in the high-income range, and 7.9% in the low-income range. It was also found that the vast majority of the research group exercises once a week and, in general, has not received nutrition education.

Table 3. t-test analysis according to the gender variable in the research group

		Gender		t	p
		$\overline{X}$	ss		
Psychological/Dependent Eating Behavior	Male	28.90	8.65	-1.473	0.14
	Female	31.25	8.78		
Healthy Nutrition-Exercise Behavior	Male	44.18	9.65	-.779	0.43
	Female	45.57	9.74		
Unhealthy Nutrition-Exercise Behavior	Male	38.67	7.18	-1.039	0.30
	Female	40.02	6.81		
Meal Regularity	Male	21.55	4.46	.457	0.64
	Female	21.14	5.26		
Total Nutrition-Exercise Behavior Scale	Male	133.31	19.87	-1.255	0.21
	Female	138.00	21.06		

*=p<0.05

When Table 3 is examined. it is found that there is no significant difference between the gender variable and the total score of the Nutrition-Exercise Behavior Scale as well as its subdimensions (p>0.05). It was observed that the mean scores of the female participants in the research group were higher than those of the male participants on the Nutrition-Exercise Behavior Scale.

Table 4. T-test analysis according to the education level variable in the research group

		Education		t	p
		$\overline{X}$	ss		
Psychological/Dependent Eating Behavior	Bachelor's Degree	29.70	8.57	-.210	0.83
	Postgraduate	30.15	9.81		
Healthy Nutrition-Exercise Behavior	Bachelor's Degree	43.84	9.75	-2.358	0.02*
	Postgraduate	49.30	7.92		
Unhealthy Nutrition-Exercise Behavior	Bachelor's Degree	39.12	6.71	-.190	0.84
	Postgraduate	39.45	8.82		
Meal Regularity	Bachelor's Degree	21.04	4.76	-2.074	0.04*
	Postgraduate	23.30	4.40		
Total Nutrition-Exercise Behavior Scale	Bachelor's Degree	133.71	20.04	-1.725	0.08
	Postgraduate	142.20	21.08		

*=p<0.05

When Table 4 is examined. it is found that there is a significant difference between the education level variable and the total score of the Nutrition-Exercise Behavior Scale. as well as the subdimension of healthy eating-exercise behavior ($p<0.05$). However. no significant difference was found between the subdimensions of psychological/dependent eating behavior. unhealthy eating-exercise behavior. and meal regularity ($p>0.05$). It was observed that participants with a postgraduate education had higher mean scores on the Nutrition-Exercise Behavior Scale compared to participants with a bachelor's degree.

Table 5. T-test analysis according to the nutrition education status in the research group

		Nutrition Education		t	p
		$\overline{X}$	ss		
Psychological/Dependent Eating Behavior	Yes	30.56	10.59	.590	0.55
	No	29.50	8.06		
Healthy Nutrition-Exercise Behavior	Yes	49.87	9.62	3.667	0.00*
	No	42.95	9.09		
Unhealthy Nutrition-Exercise Behavior	Yes	39.46	6.87	.273	0.78
	No	39.07	7.14		
Meal Regularity	Yes	22.78	4.83	1.915	0.05
	No	20.93	4.66		
Total Nutrition-Exercise Behavior Scale	Yes	142.68	24.29	2.504	0.01*
	No	132.47	18.29		

*=p<0.05

When Table 5 is examined. it is found that there is a significant difference between the nutrition education status and the total score of the Nutrition-Exercise Behavior Scale. as well as the subdimension of healthy eating-exercise behavior ($p<0.05$). However. no significant difference was found between the subdimensions of psychological/dependent eating behavior. unhealthy eating-exercise behavior. and meal regularity ($p>0.05$). It was observed that participants who received nutrition education had higher mean scores on the Nutrition-Exercise Behavior Scale compared to participants who did not receive nutrition education.

Table 6. Analysis of variance (anova) according to the age variable in the research group

		Age		F	Sig	Difference Tukey
		$\overline{X}$	ss			
Psychological/Dependent Eating Behavior	24-29 age (a)	30.26	8.36	0.492	0.68	-
	30-35 age (b)	30.31	9.35			
	36-41 age (c)	27.76	8.77			
	42 age and above (d)	28.53	8.46			
Healthy Nutrition-Exercise Behavior	24-29 age (a)	46.92	8.76	3.500	0.01*	a>c
	30-35 age (b)	45.22	9.73			
	36-41 age (c)	39.47	10.81			
	42 age and above (d)	40.84	8.71			
Unhealthy Nutrition-Exercise Behavior	24-29 age (a)	40.26	6.10	3.537	0.01*	a>d. b>d
	30-35 age (b)	40.20	8.08			
	36-41 age (c)	36.64	7.01			
	42 age and above (d)	34.53	4.15			

		Age		F	Sig	Difference Tukey
		$\overline{X}$	ss			
Meal Regularity	24-29 age (a)	21.15	4.77	0.179	0.91	-
	30-35 age (b)	21.40	5.15			
	36-41 age (c)	21.52	4.61			
	42 age and above (d)	22.23	3.76			
Total Nutrition-Exercise Behavior Scale	24-29 age (a)	138.61	19.31	2.911	0.03*	a>d
	30-35 age (b)	137.13	22.75			
	36-41 age (c)	125.41	17.51			
	42 age and above (d)	126.15	13.18			

*=p<0.05

When Table 6 is examined. it is found that there is a significant difference between the age variable and the total score of the Nutrition-Exercise Behavior Scale. as well as the mean scores of the healthy and unhealthy eating-exercise behavior subdimensions (p<0.05). However. no significant difference was found between the subdimensions of psychological/dependent eating behavior and meal regularity (p>0.05). A significant difference was found between the age variable and the healthy eating-exercise behavior subdimension of the Nutrition-Exercise Scale $t(125) = 3.50$, $p < 0.05$. Analysis results indicate that the mean scores of participants in the 24-29 age group ($\bar{X} = 46.92 \pm 8.76$) were statistically significantly higher compared to the 30-35 age group ($\bar{X} = 45.22 \pm 9.73$). the 42 and above age group ($\bar{X} = 40.84 \pm 8.71$). and the 36-41 age group ($\bar{X} = 39.47 \pm 10.81$). A significant difference was also found between the age variable and the unhealthy eating-exercise behavior subdimension of the Nutrition-Exercise Scale $t(125) = 3.537$, $p < 0.05$. Analysis results indicate that the mean scores of participants in the 24-29 age group ($\bar{X} = 40.26 \pm 6.10$) were statistically significantly higher compared to the 30-35 age group ($\bar{X} = 40.20$). the 36-41 age group ($\bar{X} = 36.64 \pm 7.01$). and the 42 and above age group ($\bar{X} = 34.53 \pm 4.15$). A significant difference was also found between the age variable and the total score of the Nutrition-Exercise Scale $t(125) = 2.911$, $p < 0.05$. The analysis results show that the mean scores of participants in the 24-29 age group ($\bar{X} = 138.61 \pm 19.31$) were statistically significantly higher compared to the 30-35 age group ($\bar{X} = 137.13 \pm 22.75$). the 42 and above age group ($\bar{X} = 126.15 \pm 17.51$). and the 36-41 age group ($\bar{X} = 125.41 \pm 13.15$).

Table 7. Analysis of variance (anova) according to the occupation variable in the research group

		Profession		F	Sig	Difference Tukey
		$\overline{X}$	ss			
Psychological/Dependent Eating Behavior	Law Enforcement Officer (a)	30.58	9.61	0.816	0.44	-
	Teacher (b)	28.30	7.80			
	Healthcare Personnel (c)	30.12	8.23			
Healthy Nutrition-Exercise Behavior	Law Enforcement Officer (a)	44.55	10.51	0.421	0.65	-
	Teacher (b)	43.87	9.15			
	Healthcare Personnel (c)	45.96	8.87			
Unhealthy Nutrition-Exercise Behavior	Law Enforcement Officer (a)	39.48	7.32	0.688	0.50	-
	Teacher (b)	38.10	6.52			
	Healthcare Personnel (c)	39.93	7.25			
Meal Regularity	Law Enforcement Officer (a)	22.00	5.11	1.029	0.36	-
	Teacher (b)	21.28	4.61			
	Healthcare Personnel (c)	20.50	4.25			
Total Nutrition-Exercise Behavior Scale	Law Enforcement Officer (a)	136.62	23.44	0.821	0.44	-
	Teacher (b)	131.56	17.70			
	Healthcare Personnel (c)	136.53	17.44			

*=p<0.05

When Table 7 is examined. it is found that there is no significant difference between the occupation variable and the total score of the Nutrition-Exercise Behavior Scale. as well as the mean scores of its subdimensions (p>0.05).

Table 9. Analysis of variance (anova) according to the income status variable in the research group

		Economic Status		F	Sig	Difference Tukey
		$\overline{X}$	ss			
Psychological/Dependent Eating Behavior	Low (a)	30.00	7.97	0.566	0.56	-
	Medium (b)	29.26	9.04			
	High (c)	31.28	8.07			
Healthy Nutrition-Exercise Behavior	Low (a)	39.90	12.40	2.108	0.12	-
	Medium (b)	45.71	9.42			
	High (c)	43.17	9.03			
Unhealthy Nutrition-Exercise Behavior	Low (a)	40.30	5.01	0.159	0.85	-
	Medium (b)	39.00	7.48			
	High (c)	39.17	6.36			
Meal Regularity	Low (a)	19.60	5.60	2.047	0.13	-
	Medium (b)	21.94	4.62			
	High (c)	20.32	4.70			
Total Nutrition-Exercise Behavior Scale	Low (a)	129.80	24.79	0.442	0.64	-
	Medium (b)	135.93	20.72			
	High (c)	134.10	17.79			

*=p<0.05

When Table 8 is examined. it is found that there is no significant difference between the income status variable and the total score of the Nutrition-Exercise Behavior Scale. as well as the mean scores of its subdimensions (p>0.05).

Table 9. Analysis of variance (anova) according to the weekly exercise status in the research group

		Weekly exercise		F	Sig	Difference Tukey
		$\overline{X}$	ss			
Psychological/Dependent Eating Behavior	1 day (a)	30.22	8.83	0.131	0.94	-
	2 day (b)	29.10	7.85			
	3 day (c)	29.47	9.26			
	4 day and above (d)	29.33	10.32			
Healthy Nutrition-Exercise Behavior	1 day (a)	41.50	9.33	8.460	0.00*	a<b. a<c
	2 day (b)	47.20	6.08			
	3 day (c)	52.47	8.60			
	4 day and above (d)	44.16	12.24			
Unhealthy Nutrition-Exercise Behavior	1 day (a)	39.56	7.08	0.181	0.90	-
	2 day (b)	38.68	6.98			
	3 day (c)	39.10	7.23			
	4 day and above (d)	38.25	7.48			
Meal Regularity	1 day (a)	20.64	5.13	3.157	0.02*	a<c
	2 day (b)	21.82	4.02			
	3 day (c)	24.15	4.18			
	4 day and above (d)	20.25	3.59			
Total Nutrition-Exercise Behavior Scale	1 day (a)	131.94	4.53	2.332	0.07	-
	2 day (b)	136.82	5.05			
	3 day (c)	145.21	3.99			
	4 day and above (d)	132.00	3.59			

*=p<0.05

When Table 8 is examined. it is found that there is a significant difference between the weekly exercise status and the mean scores of the healthy eating-exercise behavior and meal regularity subdimensions of the Nutrition-Exercise Behavior Scale (p<0.05). However. no significant difference was found between the total score of the Nutrition-Exercise Behavior Scale and the subdimensions of psychological/dependent eating behavior and unhealthy eating-exercise behavior (p>0.05). A significant difference was found between the healthy eating-exercise behavior subdimension and weekly exercise status [t=8.460. p<0.05]. According to the analysis results. a statistically significant difference was observed in favor of participants who exercised three days per week. whose mean scores ($\bar{X}$ = 52.47) were higher compared to those who exercised two days ($\bar{X}$ = 47.20). one day ($\bar{X}$ = 41.50). and four or more days ($\bar{X}$ = 44.16) per week. A significant difference was also found between the meal regularity subdimension and weekly exercise status [t=3.157. p<0.05]. According to the analysis results. a statistically significant difference was observed in favor of participants who exercised three days per week. whose mean scores ($\bar{X}$ = 24.15) were higher compared to those who exercised two days ($\bar{X}$ = 21.82). one day ($\bar{X}$ = 20.64). and four or more days ($\bar{X}$ = 20.25) per week.

DISCUSSION AND CONCLUSION

This study aims to determine the exercise and nutrition habits of individuals attending fitness centers. A total of 127 individuals participated in the study. including 80 men and 47 women. Regarding the gender variable. no statistically significant difference was found in the

subdimensions of the nutrition and exercise behavior scale. Arslan (2025) determined in her study that healthy eating attitudes do not differ according to gender. In a study conducted on adolescents under the age of eighteen. it was found that female students had significantly more negative unhealthy eating habits. exercise behaviors. and meal patterns compared to males (Kalay & Türkmen. 2015). Another study found that the nutrition subdimension of healthy lifestyle behaviors was higher among female students compared to male students (Moghaddam et al., 2017). However. another study evaluating eating attitudes concluded that women had a more negative attitude towards eating compared to men (Duran et al., 2016). This finding aligns with previous studies supporting the strong connection between healthy eating behaviors and physical activity (Smith et al., 2020; Johnson & Lee. 2019). However. psychological/compulsive eating behaviors may persist regardless of education level. It was observed that participants with a postgraduate education level had higher nutrition-exercise behavior scale scores compared to undergraduate graduates. This finding is consistent with previous studies emphasizing the positive impact of education level on health behaviors (Brown et al., 2018; Taylor et al., 2021).

It was observed that individuals who had received nutrition education had higher nutrition-exercise behavior scale scores compared to those who had not. This finding suggests that nutrition education has a positive impact on healthy eating and exercise habits ($p<0.05$). However. no similar effect was observed on psychological/compulsive eating behavior and unhealthy nutrition-exercise behavior. Integrating nutrition education with psychological support and behavior change strategies may make it more effective in modifying eating habits (Contento et al., 2006). When examining the nutrition and exercise behavior scale in terms of the age variable. a significant difference was found between age and healthy/unhealthy nutrition-exercise behaviors. The analysis results indicated that participants in the 24-29 age group had significantly higher scores in healthy and unhealthy nutrition-exercise behavior compared to other age groups. This finding suggests that young adults have a higher awareness of a healthy lifestyle. and this awareness decreases with age (Smith et al., 2018; Johnson & Taylor. 2020).

This suggests that occupational groups have similar characteristics in terms of nutrition and exercise behaviors. However. some studies have reported differences among occupational groups (Özçetin et al., 2017). These contradictory findings suggest that nutrition and exercise behaviors cannot be explained solely by the occupation variable but may also be influenced by other factors such as age. gender. education level. and socioeconomic status.

This finding indicates that income level is not a determining factor in nutrition and exercise behaviors. Instead. factors such as education level. cultural influences. and lifestyle are thought to be more effective. This result indicates that regular exercise has a positive impact on healthy eating habits and meal patterns.

Limitations

- The study is limited to 127 volunteers who regularly attend fitness centers in Bitlis city center; this reduces generalizability.
- Convenience sampling method was used; the sample does not represent the entire universe.
- The study has a cross-sectional design; therefore. cause-effect relationships cannot be established.
- Data were collected through self-report; participants may have exaggerated or underestimated their responses (social desirability bias).

In conclusion. gender does not have a significant impact on nutrition and exercise behaviors. whereas education level and age play an important role in healthy eating and exercise habits. It was observed that individuals with a postgraduate education level and young adults aged 24-29 paid more attention to healthy nutrition and exercise behaviors. Weekly exercise frequency had a positive impact on healthy eating and meal patterns. but its effect on more complex structures such as psychological eating behaviors was found to be limited. These findings suggest that interventions promoting a healthy lifestyle should be developed based on age. education level. and exercise frequency.

Recommendations

To increase healthy eating and exercise habits. educational programs should be structured according to age and education level. and to address psychological eating behaviors. nutrition education should be integrated with psychological support and behavior change strategies. Additionally. considering the positive impact of regular exercise on eating habits. interventions should be developed to encourage individuals to increase their weekly exercise frequency.

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KATKI ORANI ***CONTRIBUTION RATE***	**AÇIKLAMA** ***EXPLANATION***	**KATKIDA BULUNANLAR** ***CONTRIBUTORS***
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Tasarım *Design*	Yöntem ve araştırma desenini tasarlamak *To design the method and research design.*	Sezgin BAL
Literatür Tarama *Literature Review*	Çalışma için gerekli literatürü taramak *Review the literature required for the study*	Korhan KAVURAN
Veri Toplama ve İşleme *Data Collecting and Processing*	Verileri toplamak, düzenlemek ve raporlaştırmak *Collecting, organizing and reporting data*	Korhan KAVURAN
Tartışma ve Yorum *Discussion and Commentary*	Elde edilen bulguların değerlendirilmesi *Evaluation of the obtained finding*	Ramazan ERDOĞAN

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