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ORIGINAL ARTICLE

The Relationship Between Feeling Healthy Levels Sportive Activity and Nutritional Habits of Faculty of Sports Science Students

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ABSTRACT

Background: The study aimed to examine the correlation between the perception of wellness related to physical activity and the dietary patterns of students enrolled in the Faculty of Sports Science.

Methods: A total of 451 students enrolled at Kirikkale Faculty of Sport Sciences (268 males and 183 females) voluntarily participated in the study. The data were collected by questionnaire method to determine the students' healthy feeling levels, sportive activity levels, and nutritional habits. After filling out the personal information form and collecting anthropometric data, the nutritional habits and food consumption frequency questionnaire form developed by Alpar in 2011 was applied to determine nutritional habits. The data obtained from our study were analyzed in the IBM SPSS 25.0 program.

Result: According to the analysis of the data obtained, it was seen that the majority of the students ate 2-3 meals, the most skipped meal was lunch, BMI values were collected in the normal range, the majority did sports activities 3–4 days a week, and their level of feeling healthy was at the "good" level.

Conclusions: As a result, it was concluded that students who participated in sportive activities and had regular eating habits felt healthier, and there was a relationship between sportive activity, eating habits, and feeling healthy.

Keywords: College students, physical inactivity, dietary habits, athlete nutrition, healthy diet

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INTRODUCTION

In general terms, education is defined as the formation or development of positive changes in human behavior. It is seen as important that the students studying in the faculty of sport sciences have positive changes in their behaviors with the education they have received. This is important for both current and future students. In addition, movement therapy for students with health problems has an important place in the general practices of physical education in universities (Thornton et al., 2016). Physical education is defined as all of the activities carried out without competition in order to bring the physical, spiritual, and mental qualities that make up the whole human being to the efficiency required by age and genetic capacity (Mamurov et al., 2020). Sports are physical activities that people do within systematic and regular rules in order to win and succeed by using their determination to fight. They are systematic movements based on certain rules organized with the aim of defeating, passing, and showing success (Rodos et al., 2017; Hosseinpour & Terlutter, 2019). Today, sports are considered performances. Elite (performance) sports are activities that are done with the aim of increasing existing performance and aiming to win. In addition, the current physical activity and nutrition levels of athletes and individuals outside of sports are also very important. Recreational sport is the understanding of sport that gains meaning with the slogan "sport for all", which is done with the aim of enabling individuals to renew themselves, to regain their health, to increase their life span and quality, and to ensure continuity. As stated in the definitions above, physical health is important in both physical education and sports. Physical health and physical fitness are a whole (Jia, & Li, 2021). Physical activities have an important place in health, and it is stated that physical activities have many health benefits (Meyer et al., 2020). According to the World Health Organization (WHO), health is defined as being physically, mentally, and socially able to work, and as a prerequisite for physical health, fitness levels can be achieved through exercise (Carl et al., 2020). One of the reasons why university youth do sports is to be healthy (Jovanov et al., 2019). Regular physical activities also ensure that physiological functions remain at a high level (Theis et al., 2021). Undoubtedly, one of the factors affecting physical health is nutrition. Nutrition is one of the factors that are under the control of the person and affect his or her working efficiency and health (Wang et al., 2021). In order to meet the energy needs of vital activities in our body, protect our health, enable physical growth and development, adapt to training, and maximize the effects of training, a balanced consumption of carbohydrates, fats, proteins, vitamins, minerals, and water, which are essential nutrients, can be defined as nutrition (Proia et al., 2021).

Balanced and adequate nutrition is important for the performance of students studying at the Faculty of Sports Sciences during daily physical activity, training, and competition periods. Balanced and adequate nutrition is the intake of basic nutrients at a level that meets the content and quantity of nutrients according to energy expenditure values (Beermann et al., 2020; Dobrowolski, & Włodarek, 2019). However, the level of nutritional knowledge of the students studying in the faculty of sports sciences is considered important in the dimensions of knowledge-based practice in education and training processes. Although nutrition is

important, there are also studies indicating that the nutrition education they have received in the education and training processes is inadequate or not done consciously (Riviere et al., 2021; Aşçı, & Dobbin, 2022). In this context, it is considered important to be an athlete or to be educated in this field, How much of what the students of the faculty of sports sciences learn and how much of what they have learned they put into their lives. The aim of this study was to examine the relationship between the level of feeling healthy, sportive activity, and nutrition levels of students studying at the Faculty of Sports Sciences.

MATERIALS AND METHODS

Research Model

The aim of this study was to investigate the relationship between the level of feeling healthy and the sports activity and nutrition habits of students studying at the Faculty of Sports Sciences. The research is a quantitative study. A descriptive survey model was used as a model in the study. Research studies using the survey model are studies in which the opinions of the people participating in the research on the subject, event, attitudes, abilities, interests, skills, etc. are determined and generally have more samples than other studies (Karasar, 2019**).** In the sampling method, convenience sampling was used. This method is a non-random sampling method in light of the researcher's basic information about the study and the sample group to be selected from the basic group. This method is fast and cost-effective in terms of data collection (Haşıloğlu et al., 2015).

Research Group

In our study, 451 (268 men, 183 women) students studying at Kırıkkale University Faculty of Sport Sciences in Kırıkkale province participated in the study voluntarily. The questionnaire method was applied in the study. In the study, the questionnaire questions were made to determine gender, age, anthropometric characteristics, eating habits, BMI (CDC), number of days of weekly sports, participation in sports activities, and feeling healthy. Volunteers who read the information form about the research have the right to withdraw from the study at any time without completing the questionnaire.

Data Collection

The questionnaire method was applied in the study. The questionnaire questions aimed to determine the gender, age, anthropometric characteristics, eating habits, BMI (CDC), number of days of weekly sports, participation in sports activities, and healthy feeling levels of the students. After obtaining the necessary permissions, the students were first informed about the purpose and subject of the study in the classrooms where they were located. Students who wanted to participate in the study on a voluntary basis were included in the study. Age, height, body weight, and BMI (CDC) data were collected for anthropometric measurements. In order to determine nutritional habits, the questionnaire on nutritional habits and frequency of food consumption developed by Alpar in 2011 was used. A personal information form was also used.

Statistical Analysis

The data obtained in our study were analyzed in the IBM SPSS 25.0 program. Percentage and frequency methods were used to determine the distribution of participants' personal information. Mean and standard deviation statistics were calculated for all data. The "Shapiro-Wilk" test was applied to determine whether the data showed a normal distribution. To evaluate the data in terms of various variables, a t-test was applied, and the significance level was specified as 0.01. A correlation test was performed for the relationship between the students' participation in sports activities and feeling healthy and their eating habits, BMI (CDC), number of days of weekly sportive activity, gender, and BMI (CDC).

Results

Descriptive statistics of men and women participants are given in Table 1. A total of 451, 268 men and 183 women participated in the study.

Table 1. Descriptive statistics of gender, daily meal distribution, daily meal skipping distribution, and BMI values of sports sciences faculty students (mean ± SD).

Variables		**n**	**Column %**
Total number of participants		**451**	**100**
Gender	Men	268	59.4
	Women	183	40.6
Daily meal distributions	One meal	21	4.6
	Two meals	201	45.9
	Three meals	178	38.9
	Four meals	51	10.6
Distribution of daily skipped meals	Skipping meals	90	19.4
	Breakfast	141	32.0
	Lunch	202	44.7
	Dinner	18	3.9
BMI (CDC)	Weak	76	16.9
	Normal	249	55.2
	Overweight	85	18.8
	Extreme Overweight	41	9.1
Number of days of sportive activity per week	1-2 Days	95	21.1
	3-4 Days	250	55.4
	5-6 Days	76	16.9
	Nothing	30	6.7
Participation in sports activities and feeling healthy	Very good	122	25.7
	Good.	186	40.9
	Middle	117	27.7
	Weak	20	4.4
	Very weak	6	1.3

BMI: body mass index; CDC: Disease control and prevention

When the table is examined, it is seen that 59.4% of the sports sciences faculty students participating in the study were male and 40.6% were female, 45.9% ate two meals, 4.6% ate one meal, 44.7% skipped lunch, 55. 2% had a BMI within normal values, 55.4% had a weekly number of sports days in the range of 3-4

days, 40.9% had a good level of participation in sports activities and feeling healthy.

Table 2. T-test results of anthropometric characteristics, nutritional habits, BMI (CDC), number of days of weekly sports practice, participation in sports activities, and feeling healthy of sports sciences faculty students according to gender variables.

Variables	**Men (n=268)**	**Female (n=183)**	***t***	***p***
Anthropometric				
Age (y)	21.6 ± 2.5	21.2 ± 1.8	0.768	0.768
Height (cm)	177 ± 6.8	164 ± 5.4	0.200	0.001*
Body mass (kg)	73.3 ± 9.1	56.2 ± 6.9	-0.908	0.001*
BMI (kg/m2)	23.3 ± 4.1	20.8 ± 3.6	-1.167	0.001*
Daily meal distributions				
One meal	13	8	-0.325	0.001*
Two meals	104	97	-1.287	0.001*
Three meals	112	66	-1.652	0.001*
Four meals	39	12	-0.754	0.001*
Distribution of daily skipped meals				
I don't skip meals	60	30	2.210	0.001*
Breakfast	75	66	5.452	0.001*
Lunch	121	81	4.028	0.001*
Dinner	12	6	0.521	0.001*
BMI (CDC)				
Weak	104	31	0.456	0.001*
Normal	113	77	0.652	0.001*
Overweight	22	58	1.252	0.001*
Extreme Overweight	19	27	0.575	0.001*
Number of days of sportive activity per week				
1-2 Days	68	27	0.856	0.001*
3-4 Days	138	85	1.252	0.001*
5-6 Days	53	68	0.362	0.001*
Nothing	7	5	0.163	0.001*
Participation in sports activities and feeling healthy				
Very good	88	34	1.412	0.001*
Good.	114	72	1.363	0.001*
Middle	49	68	0.452	0.001*
Weak	13	7	0.212	0.001*
Very weak	4	2	0.110	0.001*

BMI: body mass index; CDC: Disease control and prevention; *p< 0.001

When the t-test results of the anthropometric characteristics, nutritional habits, BMI (CDC), weekly number of days of doing sports, participation in sports activities, and feeling healthy levels of the students of the Faculty of Sport Sciences were examined according to the gender variable, it was found that there was a significant difference between males and females in all variables of height, body weight, BMI (CDC),

daily meal distributions, daily meal skipping distributions, BMI (CDC) distributions, weekly number of days of doing sports, participation in sports activities, and feeling healthy levels except the age variable.

Table 3. Table of the relationship between participation in sports activities and feeling healthy and meal and meal skipping distributions, BMI (CDC), number of days of weekly sports activities of male and female students in the Faculty of Sport Sciences

Variable		**r**	**r^2**	**p value**
Men and Women				
Participation in sportive activities and feeling healthy	Daily meal distributions	0.459**	0.210	**p<0.001**
	Distribution of daily skipped meals	-0.378**	0.142	**p<0.001**
	BMI (CDC)	0.169**	0.028	**p<0.001**
	Number of days of sportive activity per week	0.655**	0.429	**p<0.001**
Women				
Participation in sportive activities and feeling healthy	Daily meal distributions	0.292**	0.085	**p<0.001**
	Distribution of daily skipped meals	-0.042**	0.002	**p<0.001**
	BMI (CDC)	0.197**	0.039	**p<0.001**
	Number of days of sportive activity per week	0.195**	0.038	**p<0.001**
Men				
Participation in sportive activities and feeling healthy	Daily meal distributions	0.551**	0.304	**p<0.001**
	Distribution of daily skipped meals	-0.399**	0.159	**p<0.001**
	BMI (CDC)	0.323**	0.104	**p<0.001**
	Number of days of sportive activity per week	0.737**	0.543	**p<0.001**

BMI: body mass index; CDC: Disease control and prevention; *p< 0.001

When the table is examined, it is determined that there is the highest positive relationship between the levels of participation in sportive activities and feeling healthy and the distribution of daily meals, the lowest positive relationship in the number of days of weekly sportive activities, and a negative relationship in the distribution of skipping daily meals. It was determined that there was the highest positive correlation between men's participation in sportive activities and feeling healthy and the number of days of weekly sportive activities, the lowest positive correlation between BMI (CDC) scores, and a negative correlation between the distribution of daily meal skipping. When the scores of men and women were examined, it was determined that there was the highest positive relationship between the levels of participation in sports activities and feeling healthy and the number of days of weekly sportive activity, the lowest positive relationship in BMI (CDC) scores, and a negative relationship in daily meal skipping distribution.

DISCUSSION

The aim of this study was to examine the relationship between the level of feeling healthy according to sport activity and the nutritional habits of the students studying at the Faculty of Sport Sciences. Some studies on university students have examined how students perceive their eating habits (de-Mateo-Silleras et al., 2019). In these studies, it was generally found that students perceived their eating habits as poor, negative, or inadequate (Antono-Poulou et al., 2020; Soriano-Ayala et al., 2020). In a study conducted on

students studying in sports departments of universities, it was aimed to examine the variables affecting the nutritional habits of students, and it was reported that a significant proportion of students, 63.3%, had poor eating habits (Amatori et al., 2020; Al-Awwad et al., 2021). Athletes should follow special nutrition programs before, during, and after training to maximize their mental and physical performance (Kontele & Vassilakou, 2021). Especially in long-term, intense training, athletes should consume the recommended amounts of nutrients to meet their needs. In addition, individuals who do sports should pay attention to their nutrition programs because their energy needs are higher (Hulton et al., 2022). It was seen that 59.4% of the students participating in the study were male and 40.6% were female; 45.9% of them ate "two meals", 38.9% ate "three meals," and 4.6% ate "one meal" when the distribution of daily meals was examined. It was observed that 44.7% skipped "lunch", 32.0% skipped "breakfast", 3.9% skipped "dinner" and 19.4% skipped "no meal". It was determined that 55.2% of the participants had a "normal" BMI, 18.8% were "overweight", 16.9% were "underweight", and 9.1% were "overweight". 55.4% of the participants had "3–4 days" of sportive activity per week, 21.1% had "1-2 days", 16.9% had "5–6 days" of sportive activity, and 6.7% had "no" sportive activity. When the levels of participation in sports activities and feeling healthy were analyzed, it was determined that 40.9% were at "good" values, 27.7% were at "moderate", 25.7% were at "very good", 4.4% were at "poor", and 1.3% were at "very poor" levels. There was no significant difference in the age variable according to the gender variable, but it was observed that the scores of male students were higher than those of female students in height, weight, and BMI values In a study conducted by Zileli et al. (2016), based on body mass index calculations, it was concluded that the body fat percentage of girls was higher than that of boys based on the data calculated according to the body mass index between female students and male students. In the study conducted by Gülü and Yapıcı (2022) on adolescent individuals, it was revealed that the height, body weight, and BMI values of boys were significantly higher compared to those of girls. According to the results obtained in this study, previous studies support the research.

In the distribution of daily meals, it was observed that male students had higher scores than female students in all meals, including one meal, two meals, three meals, and four meals per day. In the daily meal skipping distribution, it was observed that male students had higher scores when the data on skipping no meal, skipping breakfast, lunch, and dinner were analyzed, and the highest skipped meal score among the meals was skipping lunch, which was skipped by male students at higher scores. According to the study conducted by Yaman and Egemen (2021), it was found that the most frequently skipped meal was lunch by 65.8% of the participants.

In a study conducted by Yeşilkaya and Kaçar (2020), when the dietary habits of professional female soccer players are considered, the rate of those who consume two meals daily is 30%, and the rate of those who consume three meals daily is 60%. In addition, the rate of those who consume more meals is 10%. In the study conducted by Oktay et al. (2021) on university students, the majority of the students participating in the study, 66.4%, consumed three main meals daily; 20% of them preferred three snacks during the day.

Approximately 64.5% of the students stated that they do not skip meals. In addition, 26.4% of the students followed a special nutrition program on the days they practiced sports or trained.

In the study conducted by Öztürker and Özer (2016) on university students, it was found that the average body weight of male students was 71.66 kg, while that of female students was 57.20 kg. In addition, the average height of male students was 175.91 cm, while the average height of female students was 161.49 cm. The mean values of body mass index (BMI) calculated based on these data were 23.15 kg/m² for male students and 21.99 kg/m² for female students. It also shows that 14% of the students participating in the study were underweight, 78.6% were normal weight, 15.6% were overweight, and 2.4% were obese. It was found that 86% of the students skipped meals, and the most common reason for this behavior was a lack of time.

It was observed that there was a significant positive correlation between female students' levels of participation in sportive activities and feeling healthy and their daily meal distribution, BMI (CDC), and the number of days of weekly sportive activity. It was observed that there was a significant negative correlation between the levels of participation in sportive activities and feeling healthy and the distribution of skipping daily meals. It was observed that there was a significant positive relationship between male students' levels of participation in sportive activities and feeling healthy and their daily meal distribution, BMI (CDC), and the number of days of weekly sportive activity. There was a significant negative correlation between the levels of participation in sportive activities and feeling healthy and the distribution of skipping daily meals. When the data of female and male students were evaluated together, it was seen that there was a significant positive correlation between the levels of participating in sports activities and feeling healthy and the distribution of daily meals, BMI (CDC), and the number of days of weekly sports. It was seen that there was a significant negative relationship between the levels of participation in sports activities and feeling healthy and the distribution of skipping daily meals.

CONCLUSIONS

As a result, it was concluded that the students studying at the Faculty of Sports Sciences were fed 2 and 3 meals, those who skipped meals mostly skipped lunch, the BMI values of men were concentrated in the normal range and women were concentrated in the overweight range, the number of days of weekly sportive activity was more in the range of 3–4 days in women and men, and the levels of participation in sportive activities and feeling healthy were concentrated at a good level. It is thought that doing sports activities, organizing their eating habits, and having good physical health are important steps for a person to feel good. Not only the students of the Faculty of Sports Sciences but also all individuals, taking into account their age and health status, doing sports activities according to their level, and regulating their eating habits, will feel good about themselves.

Author Contributions

Conceptualization, K.G and H.Y.; methodology, H.Y.; formal analysis, H.Y.; investigation, H.Y.; data curation, B.E.; writing—original draft preparation, K.G., B.E., D.U., H.Y., A.A.D. ; writing—review and editing, K.G., B.E., D.U., H.Y., A.A.D.

Informed Consent Statement:

Participants took part in the research voluntarily and the research was conducted in line with the Declaration of Helsinki.

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Conflicts of Interest:

The authors declare that no conflicts interest.

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