ORIGINAL ARTICLE

Examination of the Relationship between University Students' Physical Activity and Imagination Levels

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ABSTRACT

Background: While the level of physical activity is essential to public health, daily scientific interest can be attracted by the variety of mental influences surrounding fitness and participation in sport. For this cause it is increasingly common for people to provide an influence with the imagination technique, which is increasingly common in the field of exercise and sports psychology. Based on this; the relationship between the level of participation in physical activity and the level of imagination of university students, who are the young adults of the society, has been a matter of concern.

Aim: To find out the relationship between physical activity levels and imagination levels of Dicle University students.

Place & duration of study: In the study, there are university students attending their education in the 2020-2021 academic year at Dicle University in Diyarbakır, Turkey.

Method: 572 students voluntarily participated in the study. The general surveying method was applied in the study. The questionnaire form applied consists of two parts. In the first part, the form developed by the researcher (Gender, Age, Class and Faculty of Study) including demographic features was used, in the second part; the physical activity questionnaire (IPAQ) and the Sports Imagination Inventory were used. SPSS 21 package program was used in the analysis of the data.

Results: Out of the total 572 students, 296 (51.7%) are female and 276 (48.3%) are male. According to the results of the correlation analysis, it is seen that there is a statistically positive and significant relationship between the visualization scale in sports and the total MET scores of the international physical activity scale (IPAQ) depending on physical activity levels ($r =, 117$, $p <.01$).

Conclusion: As a result, it can be said that there is a positive relationship between the physical activity levels of university students and their imagination levels, and accordingly, as the physical activity levels of the students increase, their visualization levels will also increase.

Keywords: Physical Activity, Imagination, University Students

INTRODUCTION

When taken from a sporting perspective, athletes with physical superiority were generally debated that athletes with a poor physical structure have better performance ratings. Moreover, when the competitive landscape is continually changing, sport psychology's approach to competition increases every day. If we look at it from another perspective, the use of psychological skill training appears to be an important field of study for individuals who participate in sports and those who participate less in sports or do not participate in sports at all.

Imagination, one of the most common types of psychological skill training; It is a mental simulation with high efficiency by making use of most senses in humans. Imagination is a psychological practice that the person who is performing the visualization can voluntarily control[2]. While Feltz and Riessinger[3] stated that imagination is used to use the information stored as a result of past experiences, they stated that it is effective for learning a new skill or perfecting a known skill with the process of visualization without actual training. Combining physical studies and visualization studies is one of the effective methods for development in terms of sportive performance and psychological well-being[4]. Researchers working on imagination highlighted its conceptual importance while including imagination in psychological research[5].

Imagination is part of our mental structure. While imagining ourselves, we can see the images as if we are doing our best and evaluate them in the process of improving performance. In short, in our brains, we can recall and reproduce previously experienced experiences or see experiences that have not occupied any place in our minds. Imagination is similar to our real sensory experiences such as seeing, feeling, hearing, tasting, but they are internal references formed within the mind itself [6].

Imagination is used not only in sports but also in many fields. The environment of the individual also allows him to change the results of his beliefs and beliefs [7]. Imagination the behavior that is desired to change or develop in terms of the learning task of the brain gives results in the desired direction by using positive images instead of negative images in imagination. Therefore, it seems possible that an individual can be directed to a different life with imagination[8].

Irregular and insufficient level of physical activity is a crucial problem in many countries. Therefore, increasing the level of exercise to a better level is one of the most important parts of the public health advice of all countries[9]. According to the American Sports Medicine Association (ACSM) and the American Dietetic Association guidelines, adults are required to get a minimum of 30 minutes of moderate vigorous exercise on all or most days of the week[10].

The habits of exercise at an early age affect the health disorders and risks that may be seen in later years. For this reason; examining the exercise attitudes of young

people acquires value. University students in our country include a significant portion of young adult individuals. In addition, students represent a healthy, homogeneous and accessible group[11]. On the other hand, the level of exercise of young adults affects the frequency of health problems that may occur in advanced ages [12].

This research examined the relationship between the physical and creativity stages of university students. The results of the study to be done are also thought to lead and apply to studies in sports psychology.

METHOD

The research was realized using the general approach of surveying. In the scanning process, statistical procedures allow a condition in the past or present to be defined and numerical values for a variable to be collected, described and present[13]. The study was conducted to reveal the relationship between physical activity levels and imagination levels of students studying in Dicle University 2020-2021 academic year. 572 (296 female, 276 male) university students voluntarily participated in the study. The questionnaire form applied consists of two parts. In the first part, the form developed by the researcher (Gender, Age, Class and Faculty of Study) including demographic features was used, in the second part, the physical activity questionnaire (IPAQ) and the Sports Imagination Inventory were used.

International Physical Activity Questionnaire (IPAQ): International Physical Activity Assessment Questionnaire (IPAQ) Dr. It was designed by Micheál Booth (Sydney-Australia) in 1996 to examine the relationship between community health and physical activity levels. Later, the international physical activity evaluation community developed the IPAQ by taking the current questionnaire as reference. IPAQ has been developed in short and long form to determine adults' physical activity levels and sedentary lifestyles. In 1998-1999, reliability and validity studies were carried out using the IPAQ test - retest method in 12 countries and 14 research centers in 6 continents. As a result of these studies, it has been declared that IPAQ is a reliable and valid method to determine the level of physical activity[14]. Later, the "International Physical Activity Questionnaire" (IPAQ) was developed by Craig et al. [15] to determine the physical activity levels of subjects between the ages of 15-65. The validity and reliability study of the scale in Turkey was carried out by Öztürk in 2005[16]. The questionnaire consists of 4 separate sections and 7 questions in total. It is recommended that the questionnaire be administered to adults between the ages of 18-69. The questionnaire includes questions about physical activity that has been done for at least 10 minutes in the last 7 days. The questionnaire determines how many days in the last week and how long for each day a) Heavy physical activities (EFA), b) Moderate intensity physical activities (OFA), c) Walking (Y). In the last question, the time spent daily without moving (sitting, lying, etc.) is determined. MET method is used to determine the level of physical activity. MET = 3.5 ml / kg / min. While resting, each person consumes 3.5 ml of oxygen per kilogram per minute. In IPAQ, it is accepted that AFA = 8.0 MET, OFA = 4.0 MET, Y = 3.3 MET. The total amount of MET spent on these three different physical activities is calculated by determining how many days and how long each person performs EFA, OFA and Y in a week.

Imagination Inventory in Sports: In the study, data were collected using the "Imagination in Sports Inventory" and personal information form developed by Hall et al. [17] and adapted into Turkish by Kızıldağ [6] in order to examine the imagination skills of individual and team athletes. The original of the Sports Imagination Inventory consists of 5 sub-dimensions and 30 items in which judgments are evaluated according to seven evaluation levels. The Cronbach Alpha value of the original inventory ranges from .68 to .87. While it was adapted to Turkish, it was reduced to 4 sub-dimensions and 21 items. The general Cronbach Alpha value of the Sports Imagination Inventory is .86. Factor loadings vary between .50 and .77. The correlation between sub-dimensions varies between .32 and .48. [18]. The meanings and properties of the 4 sub-dimensions in the inventory are as follows[19,20, 21];

Cognitive Imagination: In view of the item in the sub dimensions of cognitive imagination, the items include the optimum performance, the correction of mistakes in the execution of competencies and the creation of new and different techniques. Besides, the items for learning game plans and the implementation of these plans, which are included in the cognitive features, are also included in this sub-dimension. In another aspect, cognitive Imagination is used for the correct application of special skills. This kind of Imagination occurs in different skills. It can be said that it is used in different sports branches such as golf swing, service in volleyball, a free throw in basketball, inner kick in football [22]. The use of cognitive Imagination can be seen in athletes who are new to sports, as well as in high-level athletes for learning, remembering and perfecting complex skills [23].

Motivational Special Imagination: When the items of this sub-dimension are examined; It can be stated that these items include personal performance goals. Feelings such as winning, being successful, being congratulated for their good performance and the pride of winning increase their motivation. Paivio [22] stated in his statement about Motivational Special Imagination that athletes are more successful in pursuing goal-related tasks (training). Martin and Hall [24], on the other hand, state that golf players who use motivational special imagination are more successful in maintaining their training program than other athletes who do not use imagination despite their new start in this sport.

Motivational General Stimulation: When the items in this sub-dimension are examined, it is observed that these items cover the stimulation levels of the athletes. Athletes using this type of Imagination are trying to control their stimulation levels. For this reason, the person can comprehend the ways to struggle emotionally. In addition, this form of Imagination can be used to control the anxiety and stimulation level that may occur during the preparation period of the season [25].

Motivational General Mastery: When the items of the Motivational General Mastery sub-dimension are evaluated, it can be stated that it is related to motivational skills at a higher level. It can be said that the motivational general mastery imagination style is used more in skills related to mastery. It allows the athlete to be cognitively

strong and in control[17]. It is monitored that athletes with high motivational general mastery score have high self-confidence [26].

Analysis of the Data: Statistical analyzes were made using the SPSS program. By performing a normality test (Kolmogorow-Smirnov D test) on the data, suitable test methods for analysis were determined. In the analysis, t-test was used in paired comparisons (independent samples) from parametric test groups, and one-way analysis of variance (ANOVA) tests were used in multiple comparisons.

Findings: The data obtained from the research group are analyzed and presented in tables below.

When Table 1 is examined, it is seen that the frequency and percentage distribution is given according to the demographic characteristics of the students. According to the gender variable, 51.7% (n = 296) of the students participating in the study are female and 48.3% (n = 276) are male. According to the age variable, 1.7% (n = 10) of the students were between the ages of 18 and under, 23.8% (n = 136) in the 19-20 year age group, 34.6% (n = 198) 21-22, 39.9% (n = 228) of the students are in the age range of 23 and over. According to the variable of the grade they read, 20.3% (n = 116) of the students are first year students, 36.0% (n = 206) are second year students, 21.7% (n = 124) 3rd year student, 22.0% (n = 126) are 4th grade students. In terms of the faculty-college variable they studied, 58.0% (n = 332) of the students were physical education students, 42.0% (n = 240) were students of other departments.

When Table 2 is examined, it is seen that the imagination levels of the students in sports are at a high level with an average score of X = 4.34 according to the visualization scale in sports. Considering the sub-dimensions of the imagination in sports scale applied to the students, the average scores of the students in the sub-dimensions are found in the motivational general mastery sub-dimension (X = 4.91), the cognitive imagination sub-dimension (X = 4.45) and the motivational special imagination sub-dimension (X = 4 , 08), and medium level in the motivational general stimulation sub-dimension (X = 3.98).

Variance	Groups	N	%
Gender	Female	296	51,7
	Male	276	48,3
	Total	572	100
Age	18 years and below	10	1,7
	19-20 years	136	23,8
	21-22 years	198	39,9
	23 years and above	228	39,9
	Total	572	100
Class	1st Year	116	20,3
	2nd Year	206	36,0
	3rd Year	124	21,7
	4th Year	126	22,0
	Total	572	100
Faculty-College	Physical Education	332	58,0
	Other	240	42,0
	Total	572	100

Table 1. Frequency and Percentage Distributions Regarding the Demographic Characteristics of the Students

Table 2. Distribution of the Average Scores of the Participants in Sports Imagination Scale and Its Sub-dimensions

Scale sub dimensions	N	x̄	SS
Cognitive Imagination	572	4,45	1,61
Motivational Special Imagination	572	4,08	1,91
Motivational General Stimulation	572	3,98	1,73
Motivational General Mastery	572	4,91	1,73
Imagination Scale in Sports (Total)	572	4,34	1,49

FA1 x̄: High-Intensity Physical Activity score and High Intensity MET value
FA2 x̄: Moderate Physical Activity score and Moderate MET value
FA3 x̄: Low-Intensity Physical Activity score and Low Intensity MET value
FA4 x̄: Total Physical Activity Score and Total MET value

Table 3. Distribution of Average FA Scores (min/week) and Total MET Values Obtained from the International Physical Activity Scale (IPAQ)

Variance	Groups	N	%	FA1x̄	Ss	FA2x̄	Ss	FA3x̄	Ss	FA4x̄	Ss
Gender	Female	296	51,7	962	135,39	601	75,91	1359	89,73	2923	227,72
	Male	276	48,3	1915	146,22	765	103,61	1637	109,33	4319	288,61
	Total	572	100								
Age	18 years and below	10	1,7	840	1137,01	128	196,68	716	378,35	1684	1166,41
	19-20 years	136	23,8	1549	2088,77	564	901,44	1294	1334,77	3408	3310,74
	21-22 years	198	39,9	1320	2348,13	695	1843,73	1569	1606,79	3584	4845,29
	23 years and above	228	39,9	1461	2702,66	762	1536,24	1582	1942,44	3805	4674,48
	Total	572	100								
Class	1st Year	116	20,3	2224	3437,39	1024	2486,79	1769	1663,28	5018	6480,57
	2nd Year	206	36,0	1100	1705,54	522	1145,51	1199	2051,60	2822	2729,21
	3rd Year	124	21,7	1210	1618,10	599	741,92	2052	2506,12	3861	3625,59
	4th Year	126	22,0	1419	2791,73	703	1426,15	1174	1123,61	3296	4713,11
	Total	572	100								
Faculty/College	Physical Education	332	58,0	2046	2836,85	867	1832,02	1694	1887,19	4607	5205,16
	Other	240	42,0	559	1263,17	422	875,85	1217	1310,96	2199	2378,73
	Total	572	100								

Regarding Some Demographic Characteristics of Participants

Table 4. T-Test Results Related to the Significant Difference in the Sports Visualization Scale and its Sub-Dimensions According to the Gender of the Students and the MET Scores of the International Physical Activity Scale (IPAQ) Based on Physical Activity Levels

Scale and Sub Dimensions	Gender	N	x̄	Ss	T	df	P
Cognitive Imagination	Female	296	36,95	14,81	-5,44	570	,00**
	Male	276	43,40	13,40			
Motivational Special Imagination	Female	296	18,89	9,45	-4,03	570	,00**
	Male	276	22,06	9,37			
Motivational General Stimulation	Female	296	16,27	7,23	1,27	570	,21
	Male	276	15,54	6,57			
Motivational General Mastery	Female	296	13,87	5,49	-4,12	570	,00**
	Male	276	15,64	4,71			
Imagination Scale (Total)	Female	296	85,98	32,53	-4,11	570	,00**
	Male	276	96,63	29,19			
High-Intensity MET MET Score	Female	296	962,43	2329,25	-4,79	570	,00**
	Male	276	1915,07	2429,24			
Moderate-Intensity MET Score	Female	296	601,22	1306,08	-1,29	570	,20
	Male	276	765,80	1721,32			
Mild-Intensity MET Score	Female	296	1359,84	1543,71	-1,98	570	,04*
	Male	276	1637,94	1816,31			
Total MET Score	Female	296	2923,49	3917,85	-3,82	570	,00**
	Male	276	4318,81	4794,77			

** (p<0,01) * (p<0,05)

When Table 3 is examined, the physical activity scores and total MET values obtained by the participants from the international physical activity questionnaire (IPAQ) can be seen. When these scores were examined according to the gender variable, it was found that male participants had higher physical activity scores, moderate physical activity scores, low-intensity physical activity scores, and total MET values compared to female participants.

When the physical activity scores and total MET values obtained from the international physical activity questionnaire (IPAQ) of the participants were examined according to the age variable, it was found that both the moderate physical activity scores and the low-intensity physical activity scores and the total MET values of the participants over the age of 23 years It was found to be higher than 19-20-year-old participants. In addition, it was found that the high-intensity physical activity scores of the 19-20-year-old participants were higher than the participants under the age of 18, 21-22, and over the age of 23.

When the physical activity scores and total MET values obtained from the international physical activity questionnaire (IPAQ) of the participants were examined according to the class variable, the high-intensity physical activity scores, moderate physical activity scores and total MET values of the first-year participants were It was found to be higher than the 4th year participants. In addition, it was found that the low-intensity physical activity scores of the 3rd grade participants were higher than the 1st year, 2nd year, and 4th year participants.

When the physical activity scores of the participants obtained from the international physical activity questionnaire (IPAQ) and the total MET values are examined according to the variable of the department-college you are studying, the high-intensity physical activity scores of the participants studying at the physical

education sports college, both the medium-intensity physical activity scores and the low-intensity physical activity scores and the It was determined that the total BAT values were higher than the participants studying in other colleges and departments.

In Table 4, the results of the t-test regarding the significant difference according to the physical activity levels of the international physical activity scale (IPAQ) according to the visualization scale in sports and its sub-dimensions according to the gender of the participants are given. When Table 4 is examined, an independent sample t-test was conducted to determine the differences in the participation levels of the students in the scales according to the gender variable. According to the results of the test, the total MET scores of the students' " Sports Visualization Scale " ($t = -4.11$, $p = 0.00$, $p < 0.01$) and the physical activity levels of the " International Physical Activity " scale ($t = -3.82$, $p = 0.00$, $p < 0.01$) it was determined that the difference according to gender was statistically significant at 99% confidence level. It has been determined that those whose gender is male ($\bar{x} = 96.63$) have higher levels of "Imagination in Sports" than women ($\bar{x} = 85.98$). In addition, it has been determined that those whose gender is male ($\bar{x} = 4318.81$) have higher MET scores depending on the physical activity levels of the "International Physical Activity" scale compared to women ($\bar{x} = 2923.49$).

According to the results of the independent sample t-test made, it was determined that the difference of "Cognitive Imagination" levels, which is one of the sub-dimensions of the sports imagination scale, according to their gender, was statistically significant at 99% confidence level. ($t = -5.44$, $p = 0.00$, $p < 0.01$). It has been determined that those whose gender is male ($\bar{x} = 43,40$) have higher "Cognitive Imagination" levels than women ($\bar{x} = 36.95$).

According to the results of the independent sample t-test conducted, it was determined that the difference of "Motivational Special Imagination" levels, which is one of the sub-dimensions of the sports imagination scale, according to their gender, was statistically significant at 99% confidence level. ($t = -4.03$, $p = 0.00$, $p < 0.01$). It has been determined that those whose gender is male ($\bar{x} = 22.06$) have higher "Cognitive Imagination" levels than women ($\bar{x} = 18.89$).

According to the results of the independent sample t-test conducted, it was determined that the difference of "Motivational General Mastery" levels of the sub-dimensions of the sports imagination scale according to their gender was statistically significant at 99% confidence level. ($t = -4.12$, $p = 0.00$, $p < 0.01$). It has been determined that those whose gender is male ($\bar{x} = 15.64$) have higher "Cognitive Imagination" levels than women ($\bar{x} = 13.87$).

According to the results of the independent sample t-test, it was determined that the difference of "Motivational General Stimulation" levels, which is one of the sub-dimensions of the visualization scale in sports, according to their gender is not statistically significant at 95% confidence level.

According to the results of the independent sample t-test made, it was determined that the difference between the MET values of the students' international physical activity (IPAQ) scale based on "High-Intensity Physical Activity" levels was statistically significant at 99% confidence level. ($t = -4.79$, $p = 0.00$, $p < 0.01$). It has been determined that those whose gender is male ($\bar{x} = 1915.07$) have higher MET values related to "High-Intensity Physical Activity" levels than women ($\bar{x} = 962.43$).

According to the results of the independent sample t-test conducted, it was determined that the difference in MET values of the students' international physical activity (IPAQ) scale based on "Mild Physical Activity" levels was statistically significant at a 95% confidence level. ($t = -1.98$, $p = 0.00$, $p < 0.01$). It has been determined that those whose gender is male ($\bar{x} = 1637.94$) have higher MET values related to "Mild Physical Activity" levels than women ($\bar{x} = 1359.84$).

According to the results of the independent sample t-test, it was determined that the difference in MET values of the students' international physical activity (IPAQ) scale based on "Moderate Physical Activity" levels was not statistically significant at 95% confidence level.

Table 5 shows the results of the t-test for the significant difference in the visualization scale in sports according to the faculty-college they attend, and the MET scores in its sub-dimensions, and the physical activity levels of the international physical activity scale (IPAQ).

Table 5. T-Test Results Related to the Significant Difference in the MET Scores of the Students' Visualization Scale in Sports According to the Faculty-College They Study, and its Sub-Dimensions and the Physical Activity Levels of the International Physical Activity Scale (IPAQ)

Scale and Sub Dimensions	Faculty-College	N	$\bar{x}$	Ss	t	df	P
Cognitive Imagination	Physical Education	332	43,85	13,22	7,71	570	,00**
	Other	240	34,83	14,58			
Motivational Special Imagination	Physical Education	332	22,60	9,12	6,69	570	,00**
	Other	240	17,39	9,28			
Motivational General Stimulation	Physical Education	332	16,92	6,72	4,12	570	,00**
	Other	240	14,53	6,97			
Motivational General Mastery	Physical Education	332	16,20	4,40	8,50	570	,00**
	Other	240	12,68	5,52			
Imagination Scale (Total)	Physical Education	332	99,57	27,23	7,98	570	,00**
	Other	240	79,43	33,03			
High-Intensity MET Score	Physical Education	332	2045,78	2836,85	7,59	570	,00**
	Other	240	559,33	1263,17			
Moderate-Intensity MET Score	Physical Education	332	867,47	1832,02	3,49	570	,00**
	Other	240	422,1667	875,85			
Mild-Intensity MET Score	Physical Education	332	1694,05	1887,19	3,37	570	,00**
	Other	240	1217,33	1310,96			
Total MET Score	Physical Education	332	4607,30	5205,16	6,68	570	,00**
	Other	240	2198,83	2378,73			

** (p<0,01) * (p<0,05)

When Table 5 is examined, an independent sample t-test was conducted to determine whether the participation levels of the students in the scales differ according to the faculty-college they studied. According to the results of the independent sample t-test, the total level of the students' '' Visualization Scale in Sports' '(t = 7.98, p = 0.00, p <0.01) and the physical activity levels of the' 'International Physical Activity' 'scale It was determined that the difference of MET scores (t = 6.68, p = 0.00, p <0.01) according to the faculty-college they studied was statistically significant at 99% confidence level. It has been determined that the "Imagination in Sports" levels of the students who study at the physical education sports college ($\bar{x}$ = 99.57) are higher than the students who study in other departments ($\bar{x}$ = 79.43). In addition, it has been determined that the MET scores of the "International Physical Activity" scale of the students studying at the physical education sports college ($\bar{x}$ = 4607,30) are higher than the students studying in other departments ($\bar{x}$ = 2198,83).

According to the results of the independent sample t-test made, it was determined that the difference of "Cognitive Imagination" levels of the sub-dimensions of the sports imagination scale compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 7.71, p = 0.00, p <0.01). It has been determined that the "Cognitive Imagination" levels of the students who study at the physical education sports college ($\bar{x}$ = 43.85) are higher than the students who study in other departments ($\bar{x}$ = 34.83).

According to the results of the independent sample t-test, it was determined that the difference between the levels of "Motivational Special Imagination", which is one of the sub-dimensions of the sports imagination scale, compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 6.69, p = 0.00, p <0.01). It has been determined that the "Motivational Special Imagination" levels of the students studying at the physical education sports college ($\bar{x}$ = 22,60) are higher than the students studying in other departments ($\bar{x}$ = 17.39).

According to the results of the independent sample t-test, it was determined that the difference of "Motivational General Stimulation" levels, which is one of the sub-dimensions of the visualization scale in sports, compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 4.12, p = 0.00, p <0.01). It has been determined that the "Motivational General Stimulation" levels of the students studying at the physical education sports college ($\bar{x}$ = 16.92) are higher than the students studying in other departments ($\bar{x}$ = 14.53).

According to the results of the independent sample t-test, it was determined that the difference between the levels of "Motivational General Mastery", one of the sub-dimensions of the visualization scale in sports, compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 8.50, p = 0.00, p <0.01). It has been determined that the "Motivational General Mastery" levels of the students studying at the physical education sports college ($\bar{x}$ = 16.20) are higher than the students studying in other departments ($\bar{x}$ = 12.68).

According to the results of the independent sample t-test made, it was determined that the difference between the MET values of the students' international physical activity (Ipaq) scale based on "High-Intensity Physical Activity" levels compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 7.59, p = 0.00, p <0.01). It has been determined that the MET values of the students studying at the physical education sports college ($\bar{x}$ = 2045.78) are higher than the students studying in other departments ($\bar{x}$ = 559.33) depending on their "High-intensity Physical Activity" levels.

According to the results of the independent sample t-test made, it was determined that the difference of MET values of the students' international physical activity (Ipaq) scale based on "Moderate Physical Activity" levels compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 3.49, p = 0.00, p <0.01). It has been determined that the MET values of the students who study at the physical education sports college ($\bar{x}$ = 867.47) are higher than the students studying in other departments ($\bar{x}$ = 422.17) depending on the levels of "Moderate Physical Activity".

According to the results of the independent sample t-test conducted, it was determined that the difference of MET values of the students' international physical activity (IPAQ) scale based on "Mild Severe Physical Activity" levels compared to the faculty-college they studied was statistically significant at 99% confidence level. (t = 3.37, p = 0.00, p <0.01). It has been determined that the MET values of the students studying at the physical education sports college ($\bar{x}$ = 1694.05) are higher than the students studying in other departments ($\bar{x}$ = 1217.33) depending on the levels of "Mild Physical Activity".

Table 6 indicates the correlation test results showing the relationship between the sports Imagination scale and its sub-dimensions and MET scores of the International Physical Activity Scale (IPAQ) depending on their physical activity levels.

Table 6. Correlation Test Results Showing the Relationship Between the Sports Imagination Scale and its Sub-dimensions and the MET Scores of the International Physical Activity Scale (IPAQ) Based on Physical Activity Levels

Variance	IS F1	IS F2	IS F3	IS F4	IST	MET1	MET2	MET3	IPAQ
1.Cognitive Imagination (İS F1)	1								
2.Motivational Special Imagination (İS F2)	,726**	1							
3. Motivational General Stimulation(İS F3)	,486**	,572**	1						
4. Motivational General Mastery (İS F4)	,816**	,719**	,573**	1					
5.Imagination Scale Total (İS T)	,925**	,884**	,713**	,888**	1				
6.High-Intensity FA Score (MET1)	,182**	,081	-,048	,133**	,120**	1			
7.Moderate-Intensity FA Score (MET2)	,116**	-,008	-,002	,084*	,065	,676**	1		
8.Mild-Intenstiy FA Score (MET3)	,054	,056	,089*	,085*	,076	,243**	,290**	1	
9.FA Scale Total MET (IPAQ)	,160**	,063	,007	,134**	,117**	,875**	827**	615**	1

**p<,01*p>,05

When Table 6 was examined, Pearson correlation coefficient was examined to determine whether there was a significant relationship between the students' visualization scale in sports and its sub-dimensions and MET scores of the international physical activity scale (IPAQ) depending on their physical activity levels. According to the results of the Pearson correlation analysis, there is a statistically positive and significant relationship between the visualization scale in sports and the total MET scores of the International Physical Activity Scale (IPAQ) depending on physical activity levels (r =, 117, p <.01). Accordingly, it can be said that as the physical activity levels of the students increase, their imagination levels will increase. Total MET scores of the International Physical Activity Scale (IPAQ) based on physical activity levels and the Cognitive Imagination sub-dimension of the sports imagination scale (r =, 160, p <.01) and the Motivational General Mastery sub-dimension (r =, 134, p <.01) There are positive and significant relationships between them. Accordingly, it can be said that as the physical activity levels of the students increase, their Cognitive Imagination and Motivational General Mastery levels will increase.

DISCUSSION

The findings of this study point out that; students' healthy living styles are important in determining their physical and mental activity levels. This indicates that as well as the importance of physical activity level, the level of mental activity is also important in adopting a healthy lifestyle.

572 university students, 296 female and 276 male, studying at Dicle University, participated in the study.

Based on the analysis results; When the physical activity scores of the students were examined according to the gender variable, it was found that both the high intensity physical activity scores of the male participants, the moderate physical activity scores, the low intensity physical activity scores and the total MET values were higher than the female participants. Findings in our study coincide with the results of previous research[11], [27]. Savcı et al.[11] found in a previous study that physical activity levels of female university students were lower than male university students. It is thought that the reason for this is that some anthropometric and physical characteristics such as body fat percentages of women and men are different. In a study by Martine-Gomez et al.[28], they found that young people with a high percentage of fat had lower physical activity levels, as well as less time spent on vigorous exercise. Another reason may be that women's social status in our society includes difficult conditions compared to men, so they cannot spare enough time for exercise or sports[29].

When the physical activity scores and total MET values obtained from the international physical activity questionnaire (IPAQ) of the participants were examined according to the age variable, it was found that both the moderate physical activity scores and the low-intensity physical activity scores and the total MET values of the participants over the age of 23 years It was found to be higher than 19-20 year old participants. In addition, it was found that the high intensity physical activity scores of the 19-20 year old participants were higher than the participants under the age of 18, 21-22 and over the age of 23. Various studies show that there is a negative relationship between physical activity and age variables [30, 31]. However, according to the findings of Arabacı and Çankaya's study [32], we can say that there is a positive relationship between age and physical activity variances.

When the physical activity scores of the participants obtained from the international physical activity questionnaire (IPAQ) and the total MET values are examined according to the variable of the department-college you are studying, the high intensity physical activity scores of the participants studying at the physical education sports college, both the medium intensity physical activity scores and the low intensity physical activity scores and the It was determined that the total BAT values were higher than the participants studying in other colleges and departments. In a research report where 5 studies were examined together, it was stated that 51% of university students had insufficient physical activity [33]. Findings of Şahin et al.[34] also support our findings. According to the study, the activity levels of sports science students are above the literature average.

Considering the findings, it was determined that "Cognitive Imagination, Motivational General, Motivational Special Mastery" levels of men were higher than women, but no significant difference was observed between genders in the "Motivational General Stimulation" sub-dimension. When the literature is examined, Habacha, Molinaro and Dosseville[35] stated that there is a difference in favor of the study. On the other hand, Yarayan and Ayan [36] found that female athletes were significantly higher than male athletes in all sub-dimensions of the imagination scale. Türksoy and Altıncı[37], in their study investigating the imagination levels of athletes, concluded that there is no statistically significant difference between gender and the sub-dimensions of imagination. These differences in the literature are thought to be due to the differences in exercise levels, types of sports and sports experiences of the individuals included in the studies.

As a result of the statistics, it was determined that the physical activity levels and imagination levels in sports of the students studying in sports sciences or physical education sports schools were significantly higher than the students studying in other departments. Supporting the findings, Dinçer [38] reported in his study on university students that "Cognitive Imagination, Motivational Special Imagination and Motivational General Mastery" scores of sports sciences students increased significantly compared to the students studying in the theater department.

As a consequence of the examinations, it was observed that as the physical activity levels of the students increased, their imagination levels also increased. It is believed that sports and exercise are not only physical activities but also psychological processes are effective in increasing performance. [6]. Woolfolk et al. [39] investigated the relationship between positive and negative Imagination of university students and their motor skill performance. According to this, the subjects who performed the Imagination using positive images obtained more successful results than the subjects who did not imagine, while the subjects who used the images negatively were more unsuccessful than both groups. As a result, they

reported that visualizing with positive images positively affected exercise behavior. Mahboubeh et al. [40] determined that the imagination technique is an effective method in creating and developing positive exercise and sportive behaviors. It has been supported by the literature that visual intervention may increase physical exercise and sportive behavior[41]. The types of mental training and especially the imagination create a high level of consciousness function by stimulating the region in the brain where the imagination is processed; hence; imagination should be included in mental actions in terms of continuity of active mind[42].

In accordance with the findings of our research, the creativity of students with higher levels of physical activity in university is also increasing. This shows that young people can be a major influence in raising society's welfare. Studies between the relationships of these two phenomena should be extended in prospective studies of physical activity and imagination and the cause of the relationship should be found during the examinations to be conducted. In relationship research, it is also a matter of curiosity to assess the distinctions between adolescents, youths and adults.

REFERENCE

1- Gould DJ, Hewitt-Taylor J, Drey NS, Gammon J, Chudleigh J, Weinberg JR. (2007). The Clean Your Hands Campaign: critiquing policy and evidence base. Journal of Hospital Infection, 65(2), 95-101.
2- Perry C, Morris T. (1995). Mental Imagination in sport. In T. Morris & J. Summers (Eds.), Sport psychology: Theory, applications and issues. Queensland: John Wiley.
3- Feltz DL, Riessinger CA. (1990). Effects of in vivo emotive Imagination and performance feedback on self-efficacy and muscular endurance. Journal of Sport and Exercise Psychology, 12(2), 132-143.
4- İkizler C, Karagözoğlu C. (1997). Psychology of Success in Sports, 3rd Edition, Alfa Press Distribution, Istanbul.
5- Weinberg RS, Gould D. (2003). Foundations of sport and exercise psychology (3rd ed.). Champaign, IL: Human Kinetics.
6- Kızıldağ E. (2007). "Imagination Styles of Athletes in Different Sports Branches". Master's thesis, Mersin University Institute of Health Sciences, Mersin.
7- Addington J, Addington D. (1999). Neuro-cognitive and social functioning in schizophrenia. Schizophrenia bulletin, 25(1), 173-182.
8- Borg E. (2012). Pursuing meaning. Oxford University Press.
9- Pate RR, Pratt M, Blair SN, Haskell WL, Macera CA, Bouchard C, ..., Wilmore JH. (1995). Physical activity and public health: a recommendation from the Centers for Disease Control and Prevention and the American College of Sports Medicine. Jama, 273(5), 402-407.
10- Driskell JA, Kim YN, Goebel KJ. (2005). Few differences found in the typical eating and physical activity habits of lower-level and upper-level university students. Journal of the American dietetic association, 105(5), 798-801.
11- Savcı S, Öztürk M, Arıkan H, İnce Dİ, Tokgözoğlu L. (2006). Physical activity levels of university students. Turkish Cardiology Association Res. 34: 166-172.
12- Von Bothmer MI, Fridlund B. (2005). Gender differences in health habits and in motivation for a healthy life style among Swedish university students. Nursing & health sciences, 7(2), 107-118.
13- 13- Büyüköztürk, Ş. (2010). Manual of data analysis for social sciences. Ankara: Pegem Publishing.
14- Atenz A.A.(2001). A review of empirically based physical activity program for middle aged to older adults. Journal of Aging and Physical Activity: 9(1), 38-55. Church T. (2011).
15- Exercise in Obesity, Metabolic Syndrome And Diabetes Program. Cardiovascular Dis: 53(6), 412-418.
16- Craig CL, Marshall AL, Sjöström M, Bauman AE, Booth ML, Ainsworth BE, Pratt M, Ekelund U, Yngve A, Sallis JF, Oja P. (2003). International Physical Activity Questionnaire: 12-Country Reliability and Validity. Medicine Science and Sports Exercise. 35: 1381–95.
17- Öztürk M: A Research on Reliability and Validity of International Physical Activity Questionnaire and Determination of Physical Activity Level in University Students [in Turkish]. PhD Thesis. Hacettepe University, The Institute of Health Sciences; 2005.
18- Hall CR, Mack DE, Paivio A, Hausenblas HA. (1998). Imagination use by athletes: development of the Sport Imagination Questionnaire. International Journal of Sport Psychology.
19- Kizildag E, Tiryaki MŞ. (2012). Imagination use of athletes in individual and team sports that require open and closed skill. Perceptual and motor skills, 114(3), 748-756.
20- Hardy L. (1997). The Coleman Roberts Griffith address: Three myths about applied consultancy work. Journal of Applied Sport Psychology, 9(2), 277-294.
21- Rodgers WM, Munroe KJ, Hall CR. (2001). Relations among exercise Imagination, self-efficacy, exercise behavior, and intentions. Imagination, Cognition and Personality, 21(1), 55-65.
22- Boyd J, Munroe KJ. (2003). The use of Imagination in climbing. Athletic Insight, 5(2), 15-30.
23- Paivio A. (1985). Cognitive and motivational functions of Imagination in human performance. Canadian journal of applied sport sciences. Journal canadien des sciences appliqué sausport, 10(4), 22S-28S.
24- Poon PP, Rodgers WM. (2000). Learning and remembering strategies of novice and advanced jazz dancers for skill level appropriate dance routines. Research Quarterly for Exercise and Sport, 71(2), 135-144.
25- Martin KA., Hall CR. (1995). Using mental Imagination to enhance intrinsic motivation. Journal of Sport and Exercise Psychology, 17(1), 54-69.
26- White A, Hardy L. (1998). An in-depth analysis of the uses of Imagination by high-level slalom canoeists and artistic gymnasts. The Sport Psychologist, 12(4), 387-403.
27- Munroe KJ, Giacobbi PR., Hall C, Weinberg R. (2000). The four Ws of Imagination use: Where, when, why, and what. The Sport Psychologist, 14(2), 119-137.
28- Baş AU, Livanelioğlu A, Aslan Ş. (2007). Evaluation of physical activity level in university students with two different methods. Physiotherapy Rehabilitation, 18 (1): 11-19.
29- Martínez-Gómez D, Eisenmann JC, Moya JM, Gómez-Martínez S, Marcos A, Veiga OL. (2009). The role of physical activity and fitness on the metabolic syndrome in adolescents: effect of different scores. The AFINOS Study. J Physiol Biochem. 65(3):277-89.
30- Ölçücü B, Vatansever Ş, Özcan G, Çelik A, Paktaş Y. (2015). The relationship between physical activity level and depression and anxiety among university students. International Journal of Turkish Educational Sciences, (4), 294-303.
31- Burton NW. and Turrell G. (2000). Occupation, hours worked ,and leisure – time physical activity. Prev. Med. 31. 673-681.
32- Cauley JA, Donfield SM, Laporte RE, Warhaftig NE. (1991). Physical activity by socio- economic status in two population based cohorts. Med. Sci. Sports Exercises 23. 343-351.
33- Arabacı R, Çankaya C. (2007). Investigation of physical activity levels of physical education teachers. Journal of Uludağ University Education Faculty, 20(1), 1-15.

34- Martin SB, Morrow JR, Jackson AW, Dunn AL. (2000). Variables related to meeting the CDC/ACSM physical activity guidelines. Medicine and science in sports and exercise, 32(12), 2087-2092.
35- Şahin M, Kırandı Ö, Atabaş G, Bayraktar B. (2017). Physical activity levels of sports sciences faculty students (Istanbul University example). Sports Education Journal, 1 (1), 26-33.
36- Habacha H, Molinaro C, Dosseville F. (2014). Effects of gender, Imaginationability, andsportspractice on theperformance of a mentalrotationtask. TheAmericanJournal of Psychology, 127(3): 313-323.
37- Yarayan YE, Ayan S. (2018). Examining the Imagination Styles of Athletes in Different Team Sports. Journal of International SocialResearch, 11(60).
38- Kartal Z, Güvendi B, Türksoy A, Altıncı EE. (2017). The relationship between team athletes' use of imagination and their motivation for success. IU Journal of Sport Sciences, 7(1), 41-53.
39- Dinçer, Ö. (2016). Examination of the imagination skills of students studying sports at universities. Education Sciences Society Journal, 14(55), 138-149.
40- Woolfolk RL, Parrish MW, Murphy SM. (1985). The effects of positive and negative Imagination on motor skill performance, Behavioral Science, 9: 3, 335-341.
41- Mahboubeh GN, Amir-Hossein M, Ramin K, Monir S, Mohammad-Ali E. (2015). Mental training can improve physical activity behavior in adolescent girls, Journal of Sport and Health Science.
42- Andersson EK, Moss TP. (2011). Imagination and implementation intention: a randomized controlled trial of interventions to increase exercise behavior in the general population. Psychology of Sport and Exercise, 12, 63-70.
43- Roizen MF, Oz M. (2005). Your User Guide. (Trans. Selim Yeniçeri). İstanbul: Boyut Press. (Original of the Work Published in 2002). 97.