Correlation between the physical activity level and grade point averages of faculty of education students

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The aim of the study is to find the correlation that exists between physical activity level and grade point averages of faculty of education students. The subjects consist of 359 (172 females and 187 males) under graduate students To determine the physical activity levels of the students in this research, International Physical Activity Questionnaire (IPAQ) was used. Grade points of students were obtained from the registrar's office of the faculty. Pearson Correlation test was used to determine the correlation between physical activity level and general grade point averages. There is no significant correlation determined between the grade point averages and physical activity level of the students (p<0.05). But, there is a difference between male and female students in terms of physical activity level (p<0.05). Male students have high level physical activity compared to female students. There is no significant correlation between physical activity level and grade point averages of faculty of education students.

Key words: Physical activity level, student, grade point averages.

INTRODUCTION

The aim of education and training is to direct students in the best way. Universities give priority to the grade point averages of the students. Failures of the college students are frequently a source of worry to college management, scholars, students' families and students themselves. Grade point averages provide happiness and personal satisfaction while failures cause disappointment, loss in self-confidence and depression in the students. Accordingly, many families, teachers and students think that sport activities, game and body workout have a negative impact on their grade point averages (François and Roy, 2008). Many scientists, however, believe that sport and physical activities contribute to physical, psychological, and social development as well as to mental development (Meier et al., 2004; Taras, 2005; Brown and Blanton, 2002). Ballantine (1981), in his studies, has found a positive relation between academic achievement and participation in various sport activities. In another study at high school level, general academic averages of the students who participate in sport activities and that of students who do not participate in sport activities were compared and it is found that academic averages of the students who participate in sport activities were higher than non-participant students; and the difference between the two groups was statistically significant (Ballatini, 1981). Many studies have shown that participation in extracurricular sport activities has a positive impact on academic success (Taras, 2005; Brown and Blanton,
yet some studies indicate that participation in sport activities has negative impacts on academic success (Cheung et al., 1998; Morehous and Miller, 1976). Today, insufficient physical activity is seen as a general health problem. In the Physical Activity and Health Report of Surgeon General, published in 1996, physical inactivity was defined, according to suggestions of American College of Sports Medicine (ACSM) and Center for Disease Control and Prevention (CDC) as physical activity level less than 150 min a week. The report stated that minimum activity level that can help one’s health should be at least 30-min-level activity a day.

Whether the physical activity has a positive impact on the human mental performance or not is an important question in the education process. And how extracurricular sport activities affect the academic success is another concern that should be addressed (U.S.CDC Report, 1996; Ainsworth et al., 2000; Sarkin et al., 2000; Schmidt et al., 2003). So far in the studies on the correlation between physical activity level and academic success, different results have been observed on different levels of age, gender, and education (Taras, 2005; Brown and Blanton, 2002; Mark, 2000; Cheung et al., 1998; Morehous and Miller, 1976). In this study, students of Faculty of Education were selected as target group because they contribute to future education, raise consciousness and guide the society. After graduating from the faculty of education, students can support sport activities in different regions of the country and schools. The aim of the study is to correlate physical activity level and grade point averages of Faculty of Education students.

**METHOD**

Study group consists of 172 females and 187 male from Gazi University Faculty of Education in Turkey. In this study, an info form of basic questions and International Physical Activity Questionnaire (IPAQ) for evaluating the physical activity levels of the students were used (Craig et al., 2003). Craig et al. conducted international validity and reliability studies. This questionnaire provides information on the time spent during sitting, walking, moderate-, and severe-level activities (Craig et al., 2003). The validity and reliability of the Turkish version of the questionnaire on university students was done by Öztürk (2005). Questionnaire was applied to each student in the faculties, using question-and-answer method by the researcher in 2013.

During the evaluation stage of the study, for all activities, the basic criterion was that each activity should last at least 10 min at a time. Minute, day, and MET value (resting oxygen consumption) were multiplied, thus “MET-min/week” scores were obtained. Physical activity levels were classified as physically inactive (<600 MET-min/week), lower level physical activity (600-300 MET-min/week), and sufficient physical activity level (that helps in terms of health) (>3000 MET-min/week) (Craig et al., 2003). In order to obtain academic success of the students, university entrance scores and general grade point averages were obtained from student affairs of Gazi University.

Data obtained as a result of this study were recorded into computer media (SPSS), and thus the average and standard deviation range of the data given as descriptive statistics were obtained first. Pearson correlation test was used to determine the correlation between physical activity level and general grade point averages. The differences between female and male students in terms of physical activity levels and general grade point averages were investigated through t test p<0.05.

**RESULT**

Average points of age, height, body mass, general grade point, and physical activity levels of the participant students were found as 19.89±1.61, 167.74±6.11, 62.51±9.15, 2.87±0.81, and 2954.85±237.48, respectively.

As a result of the study, it is found that there is not a statistically significant correlation between physical activity levels and grade point averages of the college students. When average physical activity level of all students is considered, questionnaire point score was found as 2854.85±237.48. Since 2854.85±237.48<3000 MET-min/week, this result revealed that college students are not sufficiently active. It is found there is not a statistically significant correlation between physical activity level of the students and general grade point averages (p<0.05) as shown in table 1.

Physical activity level was found as 2618.52±219.76<3000 MET-min/week in female students, and as 3301.44±227.20>3000 MET-min/week in male students. It is been determined that while male students were sufficiently active, female students were insufficiently active. The study showed a statistically significant difference between female and male students in terms of physical activity level (p<0.05).

General grade point average was 2.86±0.67, while male’s general grade point average was found as 2.88±0.06. Though general grade point averages of the male students were higher than that of female students, there was not found a statistically significant difference in terms of grade point averages between female and male students in the study (p<0.05) as shown in table 2.

**DISCUSSION**

In the study, average of physical activity level of the students who study in the faculty of education was found as “2954.85±237.48<3000 MET-min/week” in the study. This level indicates that the students were not sufficiently active. Savcı et al. (2006), in their study by using IPAQ (International Physical Activity Questionnaire), have found that average weekly energy consumption was 1958±1588 kcal, while Vaizoglu et al., in his study on “Determination of the Physical Activity Level in Young Adults”, have found the daily average energy expenditure of the students as 1779.67±2539.86 kcal (Vaizoglu et al., 2004). As it can be seen from similar study, we can say that students are not active during their learning life.

A reverse correlation of -0.28% was observed between
Table 1. Correlation between physical activity level score and grade point average in male and female student (p<0.05).

<table>
<thead>
<tr>
<th>Parameters</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical activity score and grade point average</td>
<td>Female</td>
<td>0.048</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>-0.062</td>
</tr>
</tbody>
</table>

Table 2. Comparison between female and male student physical activity level score and grade point average (p<0.05).

<table>
<thead>
<tr>
<th>Subject</th>
<th>n</th>
<th>Grade point average</th>
<th>Physical activity score Met-Min/Week</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>172</td>
<td>2.86±0.67</td>
<td>2618.48±219.76</td>
<td>0.089</td>
</tr>
<tr>
<td>Male</td>
<td>187</td>
<td>2.88±0.06</td>
<td>3301.44±227.20</td>
<td>0.001*</td>
</tr>
</tbody>
</table>

general grade point averages and physical activity levels. However, the results were found statistically insignificant. Therefore, it can be said that there is not a statistically significant correlation between physical activity levels and academic success of the students. Leslie had conducted a study on participation in sport activities and academic performances among 4690 students, ranging from 5th grade to 12th grade, and found that 72% of the subjects reported themselves at medium level in terms of academic performances, while 16% of the subject reported themselves as academically good, 9.9% of them reported themselves as under average, and 2.6% of them reported themselves as academically poor. Of the subjects who perceived themselves as academically successful, 87.5% reported that they frequently participated in sport activities and that they have higher motivation to participate in such activities (Leslie, 1999). In other study, general academic averages of the students who participate in sports activities and that of the students who do not participate in any sport activities were compared, and while academic averages of the students who participate in sports activities were found higher, the difference was also found statistically significant (Soltz, 1986). Some other studies have found, while investigating other effects of the school’s sport activities other than those on academic success, that sport activities also improve the democratic behavior features, bring obedience to the rules, and thus reduce the violence and undisciplined behaviours in school (Langbein and Bess, 2002). Grade point averages, absence, disciplinary issues, school drop-out rates, and graduation rates of the sportive and non-sportive students from 301 schools that were member of North Carolina High School Athletic Association, ranging from 9th grade to 12th grade, between 1993 and 1996 were compared. At the end of the comparison, grade points and graduation rates of the sportive students were found higher, while rate of absence and drop-out as well as rate of disciplinary issues were found lower than that of nonsportive students (Whitley, 1999).

In this study, physical activity level for females was found 2618.52±219.76<3000 MET-min/week, and as 3301.44±227.20>3000 MET-min/week for males. It was found that male students were sufficiently active, while female students were insufficiently active. When other studies on physical activity and academic performances of female and male students are reviewed, we can say that the results were variable due to age group, different countries, and different cultures. Garber (1996), in a study on 8th grade students, has found the correlation between physical activity and academic success is significantly different in favor of female students (Garber, 1996), while Şanlı (2008) has found no statistically significant difference, in comparison of physical activity scores of male and female individuals, between total physical activity scores, moderate-level of physical activity scores, and walking-related physical activity scores of both gender (Şanlı, 2008). Haase et al. (2004), in their study on 2729 college students in Australia, have found that 47% of the female students and 32% of the male students were physically inactive (Haase et al., 2004). Leslie et al., in their study on the students from 23 countries, have indicated that male students are physically more active than female students (Leslie et al., 1999). Result of the study shows that female students are more passive than male. This situation may be explaining some cultural effect. Many families use more conservative approach to girls in Turkey (Aras et al., 2007).

There is not a significant correlation between physical activity levels and academic success of the students, and thus we can say that the idea of “physical activities negatively affect the academic success” is wrong. It can be said that in the present study, there was not a clear correlation between physical activity level and academic success in Gazi University Education Faculty student. Many parents, teachers, scholars, and even many students should not think that physical activities, sports,
Physical activity is important for healthy life. In addition to physical activity, it is also important especially in the teaching process to have exercise habits. As a result, parents and scholars should support and increase physical activity facilities.

### Conflict of Interests

The author have not declared any conflict of interests.

### REFERENCES


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