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# Examination of Exercise Addiction Levels of University Students

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**Abstract**

Study was conducted to examine the addiction levels of university students. The research group consists of 343 male and 277 female totally 620 students in the academic year of 2019-2020 in Bingöl University School of Physical Education and Sports (Pesa), Faculty of Arts and Sciences and Vocational Schools. "Exercise Addiction Scale" was used to obtain data for the purpose of the research. The students participating in the study were asked personal information questions regarding their demographic characteristics. The study was carried out in SPSS 22 statistical package program and the degree of significance was taken as 0.05. Independent Sample T (Independent Sample) and Mann Whitney-U test in dual comparisons, One-Way Variance Analysis (One Way Anova) in multiple comparisons and Kruskal Wallis Analysis in non-normally distributed data, and correlation (Pearson) test to determine the relationship between variables. According to the answers given by the students who participated in the study, there was a significant difference between the groups in terms of gender, faculty, time spent on social media and academic grade point average. According to the results of the correlation analysis, a low level of meaningful relation was found between the time spent on social media and exercise addiction levels of the students.

**Key Words:** Exercise, Addiction, University Students

## INTRODUCTION

Exercises are physical activities performed out planned and programmed and aimed at maintaining or improving physical fitness (17). In another definition, exercise; planned, structured, voluntary and regular activities that are repeated to achieve, develop or maintain physical condition, to develop or maintain one or more aspects of physical fitness (10, 12, 21). Regular physical activity plays an important role in maintaining health and preventing diseases. However, excessive exercise has the potential to adversely affect physical and psychological health (3).

Although it is universally accepted as a healthy habit, it is accepted that exercise behavior has the potential to turn into an obsessive and harmful behavior on people (16).

The reason for this may be that individuals' desire to appear physically better, if they are working in a business area with high stress intensity, the desire to vanish the stress and fatigue of the day, if they have any mental and nervous diseases or if they exhibit behaviors that tend to violence, it can be said to be caused by the desire to get rid of it.

According to Eysenck, addiction (7) is a notion that expresses the individual's susceptibility to some types of behavior that may have unusual and harmful consequences. These types of behavior can be alcohol and drug use, as well as sex, sports, travel or work. Exercise addiction; is defined as the exercise routine being out of control of the individual, increasing the duration, frequency and intensity of the exercise continuously to ensure the desired effect from the exercise, not exercising for

family and friends, not exercising instead of participating in social activities and rearranging the individual's life within the framework of exercise habits (1, 25). Researchers negatively addicted exercise addiction; when an individual who is over-exercising cannot exercise, experiences problems such as anxiety, depression, irritability, insomnia (11) and positive addiction; They evaluate the individual in two different forms as over-exercising (8) to deal with the difficulties encountered in his/her life. In recent years, studies on the function of the brain and the brain have been found to cause many addictions to chemical addiction. Therefore, it is seperated into two groups as addiction, substance addiction and process addiction. Until recently, process dependence, which is the second main area of addiction, also known as behavior or activity addiction, has not attracted much attention. Although process dependencies are parallel to substance addiction, they do not include substance use. In order to understand process dependence, it is important to understand that addicted behavior or activity is used as a substance against mental pain as substance does in substance addiction (23). It is determined that exercise addiction is associated with factors such as physiological factors, exercise type, gender and year of participation in the exercise (11, 2).

The aim of this research we have done is to examine the addiction levels of university students and to determine the effects of these addiction levels on the social and cultural characteristics of students and to associate them with the previous studies in the literature.

**MATERIAL - METHOD**

The study group of this research, which was performed out to examine the addiction levels of university students, consists of 620 students, 343 male and 277 female study at Bingöl University School of Physical Education and Sports (Besyo), Faculty of Arts and Sciences and Vocational Schools during the 2019-2020 academic year. In our research, “survey method” was used as a data collection tool. The volunteers participating in the study were informed before completing the questionnaires given to them and their consent was obtained by getting their approvals. In order to carry out this research, the ethical committee decision numbered 30 of 26.02.2020 was taken by the Ethics Committee of the Faculty of Sport Sciences of the Faculty of Sport Sciences, Non-Interventional. The survey consists of 2 sections and 22 questions in total. In the first part, there are 5 statements about demographic variables. In the second part, consisted of 17 statements the "Exercise Addiction Scale" developed by Tekkurşun-Demir et al. (19) was used in the research.

The data gathered through the Exercise Addiction Scale were analyzed via the statistical package program SPSS.22 program and the results were interpreted. Descriptive statistics including arithmetic mean, standard deviation, frequency and percentage distributions are presented in order to gain insight into demographic information and other group questions. Correlation (Pearson) test was applied to determine the relationship between playing time and exercise addiction levels on the daily digital platform. In order to determine the relation between exercise dependency general and exercise dependence sub-dimensions with some demographic variables, the normality of distributions (Kolmogorov-Smirnov) and then Skewness and Kurtosis tests were examined in the first place. In the research, individuals' "normal" expression scores change according to the Z value varies between -3 and +3, while "extreme values" are scores and the Z value is outside the range of -3 and +3. Yet, according to Shao (15), the normal distribution of the data to be used in the study depends on the values of skewness and kurtosis between ± 3. Independent Sample T (Independent Sample T) and Unidirectional Variance Analysis (OneWayAnova) tests were applied for the variables with normal distribution according to the test results, and Mann Whitney-U and Kruskal Wallis Test was applied for the variables that did not show normal distribution. If there is a difference between the variables, Tukey HSD and Dunnet T3 tests were used according to the homogeneity results from the Post-Hoc tests to determine which group or groups originated from this difference. The results were evaluated at 95% confidence interval and significance level at $p < 0.05$.

## FINDINGS

This is the section where the statistical results of the study will be explained. Statistical analysis based on the demographic characteristics of the people participating in the research will be included.

**Table 1.** Distributions of the Students Depending on Demographical Variances

| | Demographical Variances | N | % |
|---|---|---|---|
| Gender | Male | 343 | 55.3 |
| | Female | 277 | 44.7 |
| Faculty | Physical Education and Sports Academy (PESA) | 247 | 39.8 |
| | Faculty of Science and Letters | 154 | 24.8 |
| | Vocational High Schools | 219 | 35.3 |
| Time Spent On The Social Media | 1 hour and less | 302 | 48.7 |
| | 2-3 hours | 197 | 31.8 |
| | 4-5 hours | 80 | 12.9 |
| | 6 hours and over | 41 | 6.6 |
| Grade Average | 40-54 | 38 | 6.1 |
| | 55-74 | 320 | 51.6 |
| | 75-90 | 245 | 39.5 |
| | 91 and over | 17 | 2.7 |
| Total | | 620 | 100 |

When Table 1 is examined, 55.3% of the students participating in the study are male and 44.7% are female. As a result of examining the types of faculties / schools where the students study, 39.8% of the students study in PESA (Physical Education and Sports Academy), 24.8% in the Faculty of Science and Arts, 35.3% in Vocational Schools. As a result of examination of the time spent by the students on social media, 48.7% of them were 1 hour or less daily, 31.8% of them were 2-3 hours, 12.9% of them were 4-5 hours and finally 6.6% of them were social hours. It was determined that he had. Lastly, it was determined that 6.1% of students have averages between 40-54, 51.6% of them between 55-74, 39.5% between 75-90, and 2.7% of 91 and over.

**Table 2.** Comparison of exercise addiction sub dimensions and general exercise addiction levels of students depending on gender variance

| | | Gender | N | X | S.s | T | p |
|---|---|---|---|---|---|---|---|
| Exercise Addiction Sub Dimensions | Over Focus and Emotion Change | Male | 343 | 24,46 | 6,144 | 4,252 | .000*** |
| | | Female | 277 | 22,23 | 6,801 | | |
| | Procrastination of Individual-Social Needs and Conflict | Male | 343 | 16,17 | 5,756 | 4,408 | .000*** |
| | | Female | 277 | 14,10 | 5,842 | | |
| | Tolerance Development and Passion | Male | 343 | 12,25 | 4,104 | 6,395 | .000*** |
| | | Female | 277 | 10,00 | 4,526 | | |
| Exercise Addiction General | | Male | 343 | 46,87 | 12,040 | 5,776 | .000*** |
| | | Female | 277 | 40,94 | 13,220 | | |
| Total | | | 620 | | | | |

p<0.001***

When Table 2 is examined, a significant difference was found between the groups in the exercise addiction sub-dimensions and general exercise addicition levels according to the gender variable of the students participating in the study (p <0.05).

**Table 3.** Comparison of exercise addiction sub dimensions and general exercise addiction levels of students depending on faculty/vocational school variance

| | | Faculty/Vocational School | N | X | S.s | f | p | |
|---|---|---|---|---|---|---|---|---|
| Exercise Addiction Sub Dimensions | Over Focus and Emotion Change | [a]Pesa | 247 | 25.46 | 5.350 | 36.446 | .000*** | a > c<br>b > c |
| | | [b]Faculty of Science and Letters | 154 | 24.24 | 6.305 | | | |
| | | [c]Vocational Schools | 219 | 20.67 | 6.948 | | | |
| | Procrastination of Individual-Social Needs and Conflict | [a]Pesa | 247 | 16.27 | 5.005 | 26.555 | .000*** | a > c<br>b > c |
| | | [b]Faculty of Science and Letters | 154 | 16.77 | 6.570 | | | |
| | | [c]Vocational Schools | 219 | 13.02 | 5.642 | | | |
| | Tolerance Development and Passion | [a]Pesa | 247 | 12.62 | 3.702 | 36.288 | .000*** | a > c<br>b > c |
| | | [b]Faculty of Science and Letters | 154 | 11.72 | 4.521 | | | |
| | | [c]Vocational Schools | 219 | 9.36 | 4.494 | | | |
| Exercise Addiction General | | [a]Pesa | 247 | 48.31 | 9.913 | 46.517 | .000*** | a > c<br>b > c |
| | | [b]Faculty of Science and Letters | 154 | 46.54 | 13.151 | | | |
| | | [c]Vocational Schools | 219 | 37.97 | 13.383 | | | |
| Total | | | 620 | | | | | |

p<0.001***

When Table 3 is analyzed, there was a significant difference found between the groups in terms of exercise addiction sub-dimensions and general exercise addiction levels according to the faculty / college variable in which the students participated in the study (p <0.05). According to the Post-Hoc test results to determine between which groups the difference is, it has been determined that the difference in both the general levels of exercise addiction and the sub-dimensions of exercise addiction is between students studying in vocational schools and students studying in faculty of science and letters and PESA.

**Table 4.** Comparison of exercise addiction sub dimensions and general exercise addiction levels of students depending on the time spent on the social media

| | | Digital Game Playing Time | N | X | S.s | Sd | $X^2$ | p | |
|---|---|---|---|---|---|---|---|---|---|
| Exercise Addiction Sub Dimension | Over Focus and Emotion Change | [a]1 hour and less | 302 | 23.49 | 6.209 | 3 | 2.108 | .550 | |
| | | [b]2-3 hours | 197 | 23.19 | 6.560 | | | | |
| | | [c]4-5 hours | 80 | 24.43 | 6.863 | | | | |
| | | [d]6 hours and over | 41 | 22.75 | 8.024 | | | | |
| | Procrastination of Individual-Social Needs and Conflict | [a]1 hour and less | 302 | 14.01 | 5.135 | 3 | 22.479 | .000*** | d,c,b> a |
| | | [b]2-3 hours | 197 | 16.29 | 6.211 | | | | |
| | | [c]4-5 hours | 80 | 16.48 | 6.320 | | | | |
| | | [d]6 hours and over | 41 | 16.87 | 6.786 | | | | |
| | Tolerance Development and Passion | [a]1 hour and less | 302 | 10.67 | 4.295 | 3 | 11.251 | .010* | c > a<br>b > a |
| | | [b]2-3 hours | 197 | 11.85 | 4.432 | | | | |
| | | [c]4-5 hours | 80 | 11.86 | 4.339 | | | | |
| | | [d]6 hours and over | 41 | 11.39 | 5.224 | | | | |
| Exercise Addiction General | | [a]1 hour and less | 302 | 42.68 | 11.904 | 3 | 10.451 | .015* | c>a |
| | | [b]2-3 hours | 197 | 45.48 | 13.467 | | | | |
| | | [c]4-5 hours | 80 | 46.46 | 13.258 | | | | |
| | | [d]6 hours and over | 41 | 45.14 | 15.536 | | | | |
| Total | | | 620 | | | | | | |

p<0.001*** p<0.05*

When Table 4 is analyzed, there was a significant difference found among the groups in the sub-dimensions of exercise dependence according to the time period variable of the students participating in the study, and the postponement of individual-social needs, and conflict development, tolerance development and passion sub-dimensions and overall exercise addiction levels (p <0.05). According to the results of the Mann Whitney-U test performed to determine which groups the difference is, both in the general levels of exercise addiction and in the sub-dimensions of exercise addiction, the difference of individual-social needs and development of conflict with tolerance and passion, it was determined that students that spend daily 1 hour and less than one hour on social media and students that spend much more time on social media.

**Table 5.** Comparison of exercise addiction sub dimensions and general exercise addiction levels of students

| depending on grade average variance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Grade Average | N | X | S.s | Sd | $X^2$ | p | |
| Exercise Addiction Sub Dimensions | Over Focus and Emotion Change | [a]40-54 | 38 | 21.55 | 7.500 | 3 | 8.790 | .032* | d>a |
| | | [b]55-74 | 320 | 23.38 | 6.053 | | | | |
| | | [c]75-90 | 245 | 23.65 | 6.907 | | | | |
| | | [d]91 and over | 17 | 26.58 | 6.699 | | | | |
| | Procrastination of Individual-Social Needs and Conflict | [a]40-54 | 38 | 16.05 | 5.798 | 3 | 11.210 | .011* | d > b<br>d > c |
| | | [b]55-74 | 320 | 15.02 | 5.666 | | | | |
| | | [c]75-90 | 245 | 15.10 | 6.061 | | | | |
| | | [d]91 and over | 17 | 19.82 | 5.886 | | | | |
| | Tolerance Development and Passion | [a]40-54 | 38 | 11.78 | 4.598 | 3 | 4.727 | .193 | |
| | | [b]55-74 | 320 | 11.04 | 4.213 | | | | |
| | | [c]75-90 | 245 | 11.30 | 4.676 | | | | |
| | | [d]91 and over | 17 | 13.17 | 4.461 | | | | |
| Exercise Addiction General | | [a]40-54 | 38 | 43.97 | 13.833 | 3 | 7.870 | .049* | d > b |
| | | [b]55-74 | 320 | 43.73 | 12.148 | | | | |
| | | [c]75-90 | 245 | 44.31 | 13.639 | | | | |
| | | [d]91 and over | 17 | 52.52 | 12.268 | | | | |
| Total | | | 620 | | | | | | |
| p<0.05* | | | | | | | | | |

When Table 5 is examined, according to the grade average variable of the students who participated in the study, there was a meaningful difference between the groups in the sub-dimensions of exercise addiction and emotional change, procrastinating of individual-social needs, and conflict sub-dimensions and overall exercise addiction levels ($p < 0.05$). According to the results of the Mann Whitney-U test realized to determine which groups the difference is, both in the general levels of exercise addiction and in the sub-dimensions of exercise addiction, the average of the difference is with an average of 91 and above and ones that have lower averages in terms of delaying individual-social needs and conflict dimensions.

**Table 6.** Correlation analysis that reflects the relationship between students' digital game play time and exercise addiction levels

| | | | Exercise Addiction |
|---|---|---|---|
| Time spent on the social media | R | 1 | .099* |
| | P | - | .014 |
| | N | 620 | |
| p<0.05* | | | |

When Table 6 is analyzed, there was a positive but low level meaningful relationship determined between the time spent on social media and exercise addiction levels of the students who participated in the study ($p<0.05$).

## DISCUSSION AND RESULT

The study was done to examine the addiction levels of university students. The research group consists of 343 male and 277 female in total in the academic year of 2019-2020 in Bingöl University Physical Education and Sports Academy (PESA), Faculty of Arts and Sciences and Vocational Schools. In this section, similar studies will be discussed with the study. When the literature is examined, when the studies conducted with gender are examined, there are studies indicating that females have higher levels of exercise addiction than males in the studies performed on Athletes (9, 13). While these studies support our study; There are studies that do not find any significant difference in exercise addiction level (4, 5, 6, 14, 20, 22, 24). The reason for the difference between male participants and female participants is that the number of athletes in gyms and fitness centers is more than the female participants and as a result, it can be said that it may lead to the time allocated to males is higher than the time allocated to females.

According to the faculty / college variable where the students participating in the study studied, there was a significant difference between the groups in exercise addiction sub-dimensions and overall exercise addiction levels. When the literature was analyzed, there were no studies found comparing exercise addiction depending on faculties. However, there are studies related to regular sports in the literature. In the study of Tekkurşun Demir and Türkeli, it was specified that

the level of exercise addiction of the participants differed according to the regular sports. In this context, it was found that the average scores of those who do regular sports in the sub-dimensions of "over-focus and emotional change", "procrastinating individual-social needs and conflict", "development of tolerance and passion" and "trust" are meaningfully higher than those who do not do regular sports (18). As the reason for the high school addiction of students study in physical education, it can be said that the lessons learned in the departments are related to the exercise and the students' desire to look fit by virtue of their departments.

When the body of the literature was analyzed, there was no study researching the academic averages of students and exercise addiction. We can say that academic success and exercise have increased at the same rate. We can also say that exercise and sports contribute positively to human life and students' academic achievement.

When the body of the literature is analyzed, there was no study found examining the time spent on social media and exercise addiction. Looking at the results of the study in general, significant differences were identified. It has been monitored that, as exercise addictions increase, social media levels increase throughout the study. In this case, we can say that the students' desire to publish their work during the exercise via social media or the exercise time may be extended in order to share more on social media.

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