



# Evaluation of Social Media Disorder and Loneliness Levels of Students in the First 3 Years of the Faculty of Medicine

## Tıp Fakültesi İlk 3 Sınıfta Okuyan Öğrencilerin Sosyal Medya Kullanım Bozukluğu ve Yalnızlık Düzeylerinin Değerlendirilmesi

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**Abstract:** This study was conducted to determine the levels of social media use disorder among the first, second and third grade students of the medical faculty and evaluate some variables that are thought to be related and to determine the levels of loneliness. The study is a cross-sectional study conducted on the first, second and third year students of Eskişehir Osmangazi University Faculty of Medicine in the 2018-2019 academic year. In this study, the minimum number of students to be reached was determined as at least 384 people, when the frequency of social media use was 50%, the margin of error was 5%, and the confidence level was 95%. The study group was formed by 422 internet users. A questionnaire including some sociodemographic characteristics of students, variables thought to be associated with social media use disorder, Social Media Use Disorder Scale and UCLA Loneliness Scale Short Form were used to collect data. Mann Whitney U test, Kruskal Wallis analysis, Spearman correlation analysis and multiple linear regression analysis were used for analysis. The mean age of the students participating in the study was 19.78±1.33 and 46.4% were female students. The scores of the students on the Social Media Use Disorder Scale range from 0 to 63, with a mean score of 12.19±10.36 (median: 9.0 points). The level of social media use disorder was found to be higher in the students whose mother's education level was high school or below and whose academic grade average was lower than 70. It was determined that there was a weak positive correlation between the scores obtained from the SMKBO and the UCLA Loneliness Scale Short Form. Mother's education level, academic grade point average, time spent on social media in a day and loneliness level were determined as factors affecting the level of social media use disorder. It was concluded that further studies are needed to examine the effects of such technology addictions on mental health among university students.

**Keywords:** social media disorder, loneliness, students of faculty of medicine

**Özet:** Çalışmada tıp fakültesi birinci, ikinci ve üçüncü sınıf öğrencileri arasında sosyal medya kullanım bozukluğunun saptanması ve ilişkili olduğu düşünülen bazı değişkenlerin değerlendirilmesi ile yalnızlık düzeylerinin belirlenmesi amaçlandı. Çalışma, 2018-2019 eğitim ve öğretim yılında Eskişehir Osmangazi Üniversitesi Tıp Fakültesi birinci, ikinci ve üçüncü sınıf öğrencileri üzerinde gerçekleştirilen kesitsel tipte bir araştırmadır. Bu çalışmada ulaşılmaması gereken minimum öğrenci sayısı sosyal medya kullanım sıklığı %50, hata payı %5 ve güven düzeyi %95 olarak öngörüldüğünde en az 384 kişi olarak belirlendi, 422 internet kullanıcısı öğrenci çalışma grubunu oluşturdu. Verilerin toplanmasında öğrencilerin bazı sosyodemografik özelliklerini, sosyal medya kullanım bozukluğu ile ilişkili olduğu düşünülen değişkenleri içeren anket formu, Sosyal Medya Kullanım Bozukluğu Ölçeği ve UCLA Yalnızlık Ölçeği Kısa Formu kullanılmıştır. Analizler için Mann Whitney U testi, Kruskal Wallis analizi, Spearman korelasyon analizi ve çoklu lineer regresyon analizi kullanıldı. Çalışmaya katılan öğrencilerin yaş ortalaması 19.78±1.33 olup %46.4'ünü kadın öğrenciler oluşturmaktadır. Öğrencilerin Sosyal Medya Kullanım Bozukluğu Ölçeği'nden aldıkları puanlar 0-63 arasında değişmekte olup puan ortalaması ortalama 12.19±10.36'dır (ortanca: 9.0 puan). Anne öğrenim düzeyi lise ve altı olan, akademik not ortalaması 70'ten düşük olan öğrencilerin sosyal medya kullanım bozukluğu düzeyi daha yüksek olarak saptandı. SMKBO ve UCLA Yalnızlık Ölçeği Kısa Formu'ndan alınan puanlar arasında pozitif yönde zayıf bir korelasyon olduğu saptandı. Anne öğrenim düzeyi, akademik not ortalaması, bir günde sosyal medyada geçirilen süre ve yalnızlık düzeyi sosyal medya kullanım bozukluğu düzeyini etkileyen faktörler olarak saptandı. Üniversite öğrencilerinde bu tür teknoloji bağımlılıklarının ruh sağlığı alanındaki etkilerini inceleyecek ileri çalışmalara ihtiyaç duyulduğu kanaatine varıldı.

**Anahtar Kelimeler:** sosyal medya kullanım bozukluğu, yalnızlık, tıp fakültesi öğrencisi

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## **1. Introduction**

Nowadays, it is undeniable fact that the use of internet and social media has greatly increased, especially among young people. It is known that the use of internet and social media causes changes in various interaction patterns such as learning, communicating and sharing information (1). Social media; Whether they are geographically in the same place or not, know each other or don't know, it is a type of communication media that enables or enables social interaction among people (2).

It is estimated that approximately two thirds of internet users in the world are active social media users (3). According to the We Are Social 2018 report, it is stated that three billion one hundred and ninety six million people are social media users (4). As of 59 million internet users in January 2019 in Turkey, 52 million active users of social media and social media are reported that 44 million mobile users (5). Various studies have reported that the frequency of risky social media use varies between 3-47 % (6-8).

Among the reasons for the need of individuals to use social media; It can be counted that individuals with low social circle want to connect with others, develop their relationships and be in touch with people who are geographically distant from each other, or individuals with too many connections (such as family, friends) to reveal these relationships (9). In addition to developing communication and connection, if the environment of the individuals is not peaceful and there are some problems, there is a tendency to turn to social media to escape from this situation (10).

Internet and social media have become frequently used for academic and other purposes as a mass communication tool that has easy and fast accessibility especially among young people, particularly university students. These tools have become not only a source of

information, but also a good resource for other purposes such as social interactions, games, and entertainment (11). Social media has been one of the elements of popular culture, which internet technology adds to daily life and the number of users increases day by day (12).

People use social media frequently and for a long time in order to increase their life satisfaction by reducing many mental problems such as stress, anxiety and depression they experience in daily life. As a result of the positive feelings that arise when the individual feels good as a result of the increase in the frequency and duration of using social media, the person becomes more using the social media (13). Because of the use of social media that reaches addiction level, virtual communication is preferred instead of face-to-face communication, and this causes an increase in the feelings of loneliness of individuals (14).

Individuals with some emotional and psychological dysfunctions such as depression, stress and loneliness are more likely to be problematic social media users (15). On the other hand, excessive use of technology may show some behavioral addiction symptoms such as withdrawal, mood change, and tolerance development, causing problems for some users (16).

This study was conducted to determine the level of loneliness among the first, second and third grade students of the medical faculty and to determine the level of loneliness by evaluating some variables that are thought to be related.

## **2. Material and Method**

The study is a cross-sectional study conducted on the first, second and third year students of Eskişehir Osmangazi University Faculty of Medicine in the 2018-2019 academic year.

The ethic permission was acquired from Eskişehir Osmangazi University Ethics

Committee. Additionally, necessary administrative permissions were obtained from the Diaconate of the Faculty of Medicine.

The sample size of the study was estimated to be a population of at least 384 students based on the incidence of social media usage in at least 50% of the participants with a margin of the error of 5 % and within 95 % confidence interval.

In order to collect data, appointments were made for the appropriate days and hour with the administrations. Students were gathered in their classroom during the previously noted appointment times. Oral informed consent was obtained from the individuals who were informed about the subject and purpose of the study. The previously prepared questionnaire forms were distributed to the students and filled in under observation. This process took approximately 15-20 minutes. The study group consisted of a total of 422 students who have at least one social media account and agreed to participate in the study. Since the study was conducted in classrooms; fourth, fifth and sixth year medical faculty students who study in clinical settings were not included in the study.

For this study, a questionnaire was prepared based on literature data. The questionnaire consisted of three parts. In addition to sociodemographic characteristics and the variables that are thought to be related to social media use disorder in the first part.

The second part consisted of the Social Media Use Disorder Scale which evaluate social media usage disorder. This scale was developed in 2016, Van den by Eijn and colleagues (17), validity and reliability study was conducted in Turkey in 2018 by Saricam and Kardüz (18). The scale consists of nine questions in eight-point Likert type. The answers given to the questions are evaluated as "Never: 0 points" and "more than 40 times a day: 7 points". The scores that can be obtained from the scale vary between 0-63, and as

the scores gain, the level of social media use disorder increases.

The third part consisted of the Short Form of UCLA Loneliness Scale which was used to evaluate the loneliness levels of students. 'UCLA Loneliness Scale Short Form' was developed by Hays and Dimatteo in 1987 (19). Validity and reliability studies in Turkey by the Yıldız and Duy 2014 (20). The scale consists of 7 questions in four Likert type. The answers to the questions are evaluated as "Never: 1 point", "Always: 4 points". One of the scale items is scored inverse. The scores that can be obtained from the scale vary between 7-28, and as the scores obtained increase, it is accepted that the feeling of loneliness felt intensifies.

In our study, the family income of the students was evaluated as "High", "Moderate" and "Low" according to their own perceptions. "Enthusiastic, impetuous, hasty" were assessed as Type A personality while students who described themselves as "Calm, quiet, planned" were considered Type B personality.

The data obtained in the study were computerized and evaluated using SPSS version 15.0. The scores from Social Media Disorder Scale was evaluated regarding normal distribution, and the the Shapiro-Wilk test normal distribution test and graphs were used to show that the scores taken from both scales were normally distributed. Descriptive statistics, Mann-Whitney U-test, Kruskal-Wallis test and Spearman correlation test were used to analyze the data. Multiple linear regression analysis was also performed to determine the factors affecting the scale. The logarithm of the dependent variable Social Media Disorder Scale scores were taken into consideration and adapted to normal distribution. Multiple linear regression model was applied and the model was created with statistically significant values. The level of statistical significance was accepted as  $p \leq 0.05$ .

### 3. Results

Of the 422 students who consisted the study group, 196 (46.4%) of the working group are female and 226 (53.6%) are male. The age of the study group ranged from 17 to 29 and the mean was  $19.78 \pm$

1.33 years. The Social Media Disorder Scale score ranged from 0 to 63, with a mean  $12.19 \pm 10.36$  (median: 9.0 points). Table 1 shows the distribution of the study group according to sociodemographic and social media use habit characteristics.

**Table 1.** The distribution of students' Social Media Disorder Scale scores according to sociodemographic characteristics.

	n (%)	SMDS Median Score (min-max)	Statistical Analysis z/KW;p
<b>Sex</b>			
Female	196 (46.4)	10.0 (0.0-43.0)	1.402; 0.161
Male	226 (53.6)	9.0 (0.0-63.0)	
<b>Age groups</b>			
≤19	200 (47.4)	11.0 (0.0-63.0)	1.396; 0.163
≥20	222 (52.6)	9.0 (0.0-46.0)	
<b>Mother's Education Level</b>			
Middle school and below	254 (60.2)	10.0 (0.0-63.0)	2.796; 0.005
Universty	168 (39.8)	8.0 (0.0-43.0)	
<b>Father's Education Level</b>			
Middle school and below	168 (39.8)	8.0 (0.0-43.0)	0.473; 0.637
Universty	185 (43.8)	10.0 (0.0-63.0)	
<b>Mother's Working Status</b>			
Working	165 (39.1)	9.0 (0.0-43.0)	1.445; 0.148
Non-working	257 (60.9)	10.0 (0.0-63.0)	
<b>Father's Working Status</b>			
Working	348 (82.5)	9.0 (0.0-63.0)	0.172; 0.863
Non-working	74 (17.5)	9.0 (0.0-46.0)	
<b>Personality Type</b>			
Type A	207 (50.9)	11.0 (0.0-63.0)	1.747; 0.081
Type B	205 (49.1)	9.0 (0.0-46.0)	
<b>Family Type</b>			
Nuclear Family	384 (91.0)	9.0 (0.0-43.0)	0.316; 0.854
Extended Family	22 (5.2)	8.5 (0.0-63.0)	
Broken Family	16 (3.8)	8.5 (0.0-34.0)	
<b>Socioeconomic level</b>			
High	75 (17.8)	9.0 (0.0-39.0)	0.505; 0.777
Moderate	341 (80.8)	9.0 (0.0-63.0)	
Low	6 (1.4)	18.0 (0.0-32.0)	
<b>Number of Siblings</b>			
0	38 (9.0)	5.5 (0.0-43.0)	5.060; 0.167
1	139 (32.9)	10.0 (0.0-46.0)	
2	134 (31.8)	9.0 (0.0-63.0)	
3 and more	111 (26.3)	10.0 (0.0-43.0)	
<b>Total</b>	422 (100.0)	9.0 (0.0-63.0)	

It was found that 29.1% (n= 123) of the students who started having social media account at the age of 10 or below, 30.8% (n=130) of them said that their daily spent on socail media was 4 hours and more, 20.4 % (n=86) of the students have seven

and more social media account. Table 2 shows that the distribution of students' Social Media Disorder Scale scores according to sociodemogrphic and social media usage characteristics.

**Table 2.** The distribution of students' Social Media Disorder Scale scores according to social media usage characteristics.

	n (%)	SMDS Median Score (min-max)	Statistical Analysis z/KW;p
<b>Academic grade point average</b>			
<70	223 (52.8)	11.0 (0.0-63.0)	<b>2.538; 0.011</b>
≥70	199 (47.2)	8.0 (0.0-39.0)	
<b>The age at the first social media (year)</b>			
≤10	123 (29.1)	11.0 (0.0-63.0)	3.578; 0.167
11-13	173 (41.0)	9.0 (0.0-46.0)	
≥14	126 (29.9)	8.0 (0.0-38.0)	
<b>Time per day spent on social media (hour)</b>			
<2	101 (23.9)	5.0 (0.0-38.0)	<b>49.279; 0.00</b>
2-4	191 (45.3)	9.0 (0.0-46.0)	
≥5	130 (30.8)	14.5 (0.0-63.0)	
<b>Number of social media accounts</b>			
≤3	145 (34.4)	8.0 (0.0-38.0)	2.297; 0.317
4-6	191 (45.3)	9.0 (0.0-46.0)	
≥7	86 (20.4)	11.0 (0.0-63.0)	
<b>Total</b>	<b>422 (100.0)</b>	<b>9.0 (0.0-63.0)</b>	

It was determined that each of the members of the study group had at least one social media account, and the most subscribed social media account was

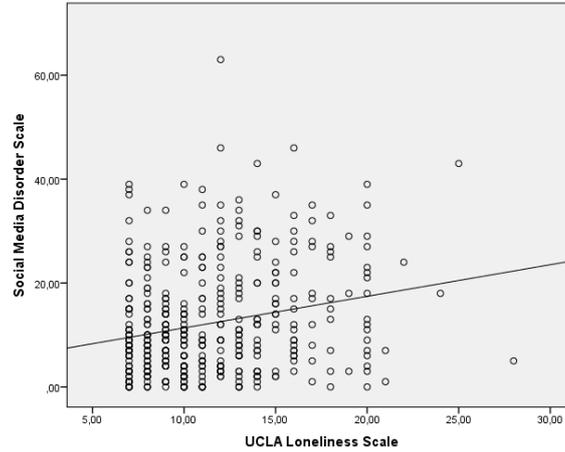
whatsapp with 21.25 %. Table 3 shows that the distribution of membership status of students on social network of students.

**Table 3.** The distribution of membership status of students on social media network of students.

Social media networks	n	%
WhatsApp	417	21.25
Instagram	349	17.78
Youtube	311	15.85
Twitter	197	10.04
Facebook	182	9.27
Snapchat	159	8.10
Skype	110	5.60
Messenger	97	4.94
Others	140	7.12
<b>Total</b>	<b>1962</b>	<b>100.0</b>

*\*Due to per person has multiple social media accounts, the number of social media accounts were shown .*

The students scored between 0-63 from the Social Media Disorder Scale and mean was  $12.19 \pm 10.36$ (median 9.0). The studens scored between 7-28 from UCLA Loneliness Scale and mean was  $11.37 \pm 3.84$  (median: 10.0). The Spearman Correlation analysis showed that there was a weak positive correlation between the scores of Social Media Disorder Scale and UCLA Loneliness Scale Short Form ( $r = 0.198$ ;  $p = 0.00$ ). Graphic 1 shows that distribution of the students' Social Media Disorder Scale and UCLA Loneliness Scale Short Form.



**Graphic 1.** The distribution of the students' Social Media Disorder Scale and UCLA Loneliness Scale Short Form.

In order to determine the relationship between UCLA Loneliness Scale Short Form and social media disorder, hierarchical linear regression analysis was performed to check the effect of other factors. After adjusting for mother's educational level ( $\beta=0.084$ ), academic grade point average ( $\beta=0.108$ ) and the time per day spent on social media( $\beta=0.154$ ), the last model

showed that the scores of the UCLA Loneliness Scale Short Form still had a positive relation with scores from Social Media Disorder Scale(  $\beta=0.022$  ). Table 4 shows that the results of the multiple linear regression model of the variables that affect students' Social Media Disorder Scale scores.

**Table 4.** The results of the multiple linear regression model of the variables that affect students' Social Media Disorder Scale scores.

Variables	MODEL 1 $\beta$ (%95 CI)	MODEL 2 $\beta$ (%95 CI)	MODEL 3 $\beta$ (%95 CI)
Mother's Education Level	-0.107** (-0.188 - -0.026)	-0.090* (-0.168 - -0.013)	-0.084* (-0.160 - -0.008)
Academic grade point average		-0.105** (-0.181 - -0.030)	-0.108** (-0.181 - -0.034)
Time per day spent on social media (hour)		0.143 (0.091-0.196)***	0.154*** (0.103 - 0.205)
UCLA Loneliness Scale Short Form			0.022*** (0.013 - 0.32)
R <sup>2</sup> :	0.017	0.103	0.149
F:	6.794**	14.976***	17.118***

\*: $p \leq 0.05$ , \*\*:  $p \leq 0.01$ , \*\*\*:  $p \leq 0.001$ , CI: Confidence Interval

#### 4. Discussion

In this study was carried out to evaluate the level of loneliness among the medical students who will become the future healthcare providers with social media use disorder and some variables that are thought to be related, it was determined that students' social media use disorder was low. Similar result has been reported

in various studies of university students (21-23).

Since it is easier and quicker for women to develop addictive behaviors on issues such as social communication, it is expected that the level of social media addiction is higher in women (24). However, in our study, no difference was found between men and

women in terms of the level of social media use disorder. In some studies, it has been reported that women's social media addiction is higher (25, 26). In a study conducted by Çiftçi, it was reported that social media addiction level was higher in men (27). It might be that the measurement methods used among the causes of different results reported in various studies were different, and were made in populations with different sociocultural characteristics.

In our study, it was determined that the students whose mothers graduated university have lower social media use disorder levels. However, there was no relationship between father's education level and social media use disorder. In another study conducted on high school students, it was reported that there was no relationship between social media addiction and parental education level (28). In the study of Gezgin and Çakır, it was reported that there was no relationship between nomophobia, which was reported as an addiction similar to social media addiction, and the education level of the parents (29).

It is known that young people who develop social media addiction use their social media platforms intensively and for a long time and spend most of their time online even during the lesson. This situation negatively affects the academic achievement of the students by causing them to not have enough time and care for their academic tasks and lessons (30,31). In this study, it was determined that the students with an academic grade point average of 70 and below had higher social media use disorder levels. In the study of Kirschner and Karpinski, it was reported that academic success decreased with the increase in time spent on Facebook (32).

Due to the fact that who are members of a large number of social media networks and actively use these accounts spend time on social media more frequently and for longer periods of time, social media addiction levels might likely to be higher (33). On the other hand, students with

social media addictions spend more time on these platforms, even if they don't want to check their social media accounts over and over again (14,34). In our study, it was found that as the time spent on social media increases, the level of social media use disorder increases.

The students are expected to determine the social media account they prefer to be members according to their purpose of use. Among the purposes of the site usage of the students are to communicate with their friends, to access information and to provide easy information sharing on academic issues such as projects and homework (35). It was observed that the social media platforms in which the students in the study group are the most members are WhatsApp, Instagram and Youtube, respectively. In a study conducted by Koçer on students of Erciyes University, the most used social media sites have been reported Facebook, Youtube and Twitter, respectively (35).

Loneliness is a pathway to many physical and mental illnesses and has been shown to be an important risk factor for medical school students (36, 37). In our study group, however, the loneliness levels of students were considered as low. In a study conducted on six different medical faculty students in Turkey by Karaoğlu et al., loneliness levels were also found to be low (38). Sociocultural differences may explain the lower loneliness levels in Turkish medical faculty students.

Because of internet and social media have increased their place in our lives, the face-to-face communication time between people has been shortened, the time spent on social media caused the illusion of socialization in individuals and turned the individual into himself and isolated from life (39, 40). Thus, it may result in people becoming more introverted and lonely by causing a gradual weakening in their relationships with family members and friends (27). In our study, a positive weak correlation was found between the level of social media use disorder and loneliness.

Similar result has been reported in a study by Balcı and Gölcü in Konya (41).

Limitations include the fact that the study was a cross-sectional study, the sample was made up of individuals from a similar age group and that only a university was made at the medical school.

## 5. Conclusion

In our study, the social media use disorder levels and loneliness levels of first 3 years of medical faculty students were concluded as low. A weak positive correlation between social media use disorder and loneliness was evident in the study.

Mother's education level, academic grade point average, time spent on social media in a day and loneliness level were determined as factors affecting the level of social media use disorder. It is thought that more accurate social media usage can be achieved by increasing the awareness of both the academic staff and the students in the university with the information meetings to be planned, by linking the use of social media with more academic processes. It was concluded that further studies are needed to examine the effects of such technology addictions on mental health among university students.

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