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Social Media Addiction and Emotional Intelligence in Patients with Major Depressive Disorder

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ABSTRACT

Background: The relationship between depression and severity of social media addiction is likely to be bidirectional. Nevertheless, current studies have addressed the depression score utilizing a scale in the general population instead of assessing this relationship in patients with major depressive disorder. Despite the fact that the negative relationship of social media addiction with emotional intelligence is acknowledged, the existence of this relationship in major depressive disorder has not been investigated yet. Hence, the objective of our study is to evaluate severity of social media addiction and emotional intelligence in major depressive disorder.

Methods: This research was performed with 158 participants between the ages of 18 and 56 in Kars Harakani State Hospital Psychiatry Outpatient Clinic. Sociodemographic data form involving the age, gender, marital status, education level and employment status of the participants, Beck Depression Inventory, Bar-On Emotional Quotient Inventory, and Social Media Addiction Scale were implemented to the participants.

Results: Creating the group to be none-less addicted and medium-highly addicted with regard to the social media addiction scale score, it was observed that the emotional intelligence of the medium-highly addicted group was significantly lower, and the depression score was higher ($P < .001$). Furthermore, the severity of social media addiction had a positive relationship with the depression score and a negative relationship with the emotional intelligence score ($r = 0.353$, $P < .001$; $r = -0.376$, $P < .001$).

Conclusion: Emotional intelligence in major depressive disorder is associated with both depression level and severity of social media addiction. Interventions, i.e., emotional intelligence skill training, might be practical for the aforementioned patients.

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INTRODUCTION

Major depressive disorder (MDD) is a mood disorder that affects the emotions, thoughts, and behaviors of individuals, may cause serious symptoms, and frequently emerges in young adulthood.[1] Depression has been associated with the deterioration of general health, an increase in mortality and morbidity.[2,3] Along with various known factors related to depression, the focus has been on the impact of social media use on psychological adjustment, and social media use has become the focus of interest.[4] The use of social media has been increasing recently, and this increase is due to the rise in the number and accessibility of social media platforms.[5] Previous studies have revealed that depression might be a factor in the severity of social media addiction.[6] Studies evaluating depression and the severity of social media addiction have utilized the scale and depression score in the general population as a sample instead of addressing patients with MDD as an outcome of clinical evaluation. In case there is a mutual association between depressive disorder and the severity of social media addiction, a critical problem will arise in terms of mental health in this process that social media use and addiction increase.

Emotional Intelligence is defined as the capacity to reason regarding emotions and the use of emotions to improve thinking[7] and is associated with interpersonal problem solving and enhanced social relationship.[8] Bar-on remarks on the challenge of defining emotional intelligence and describes it as a series of non-cognitive abilities, competencies, and skills that affect the individual's ability to be successful in overcoming environmental demands and pressures.[9] Concerning depressive symptoms, the dimensions of depressive symptoms and emotional intelligence appeared to have a positive relationship, whereas emotional repair demonstrated protective properties for negative mood.[10]

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Besides, the association between suicidality, which is a symptom of severe depression, and emotional intelligence was investigated. In this systematic review, it was noted that emotional intelligence is negatively related to suicidal thinking and behavior, and it was suggested that emotional intelligence might be a protective factor against suicide risk.[11]

It is not challenging to presume that the emotional intelligence of internet/social media users is associated with social media use characteristics and addiction. Current studies have concluded that emotional intelligence is inversely associated with the severity of internet addiction.[12-14] Nonetheless, these studies have been performed in the general population without mental illness, and there have been no studies in MDD patients.

The fact that previous studies have not been carried out in MDD patients might limit the interpretation of present findings referring to the relationship between the severity of social media addiction and MDD. Besides, there have been no studies that investigate emotional intelligence and severity of social media addiction in MDD. The objective of this study is to investigate the relationship between the severity of social media addiction and emotional intelligence among patients with depression.

MATERIAL AND METHODS

Participants

A preliminary power analysis was conducted with G*Power version 3.1.9.4 to establish the minimum sample size required for the research. The sample size was calculated as 82 patients with an α error of 0.05 and a power of 80% to determine a moderate effect. This study was carried out on 158 participants between the ages of 18 and 56 in the Psychiatry Outpatient Clinic of Kars Harakani State Hospital. As a result of the clinical interview, patients were included consecutively who met the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), diagnostic criteria for MDD, were diagnosed with MDD for the very first time, and did not receive treatment. A total of 200 newly diagnosed patients were interviewed. Since 40 of them were accompanied by anxiety disorders and 2 of them rejected to take part in the study, 158 patients continued. The criteria for selecting the patients were as follows: being over 18 years old; having at least one social media account; having a diagnosis of MDD identified for the first time without any accompanying psychiatric disorder including also bipolar disorder, depressive episodes, or dysthymic disorder or premenstrual dysphoric syndrome, with respect to the clinical interview; not receiving psychotropic treatment. Subsequent to the clinical interview, the patients were informed about the content and details of the research. After obtaining consent from the volunteers who agreed to participate in the study, the tools of the research were applied. In addition, all participants signed a written informed consent form. Ethical approval was acquired from the Ethics Committee of Kafkas University (Approval No: 2021/11-15; Date: December 28, 2021). The data were gathered between March 1, 2022, and September 1, 2023.

MAIN POINTS

- There have been no studies investigating emotional intelligence and severity of social media addiction in major depressive disorder (MDD).
- The relationship between the severity of social media addiction and depression has not been evaluated in MDD patients.
- This study is the first study to assess the relationship between the severity of social media addiction and emotional intelligence in MDD, and it was detected to be a negative significant relationship.
- It was found that there was a positive relation between depression score and severity of social media addiction, and a negative relation between depression score and emotional intelligence.
- Major depressive disorder patients can benefit from interventions such as emotional intelligence skill training as part of the treatment of both depression and the severity of social media addiction.

Data Collection Tools

Sociodemographic Data Form: A sociodemographic data form involving age, gender, marital status, education level, and employment status of the participants was applied.

Beck Depression Inventory: The scale consists of 21 items. It interrogates the physical, mental, and cognitive symptoms for the last week. It is a 4-point Likert-type scale. The increase in score indicates that the severity of the disease is high. The Turkish validity and reliability study was performed by Hisli.[15] In the validity and reliability study, Cronbach's alpha value was 0.89 for the whole scale. In our study, the Cronbach's alpha value for the whole scale was 0.88.

Bar-On Emotional Quotient Inventory: The inventory consists of a total of 5 dimensions and 88 items measuring 15 dimensions below them. It is a 5-point Likert-type scale. Personal awareness dimension evaluates the essence of the individual. Its sub-dimensions are independence, self-realization, determination, self-esteem, and emotional self-awareness. The interpersonal relationships dimension reveals interpersonal skills and functions. Its sub-dimensions consist of social responsibility, interpersonal relationship, and empathy. Adaptation to conditions and the environment dimension reveal how the person can handle the problematic situation by evaluating it in order to cope with environmental demands successfully. Its sub-dimensions are flexibility, realism, and problem solving. Stress management dimension indicates the individual's resistance to stress without losing themselves and experiencing psychological breakdowns. Its sub-dimensions

are stress resistance and control of impulse. The general mood dimension measures the ability to appreciate life as well as the perspective on life and feelings of satisfaction. Its sub-dimensions consist of happiness and optimism. The Turkish validity and reliability study of the scale was performed.[16] In the validity and reliability study, Chronbach's alpha value was 0.92 for the whole scale. In our study, the Cronbach's alpha value for the whole scale was 0.91. A high score gained from the scale score and subscale scores shows that emotional intelligence is high.

Social Media Addiction Scale: It is a scale developed in Turkish to evaluate severity of social media addiction of social media users. The 5-point Likert-type scale consists of 41 questions. Forty-one is the lowest score and 205 is the highest score that can be obtain from SMAS. Scale scoring is as follows: 41-73 points: no addiction; 74-106 points: less addicted; 107-139 points: medium addicted; 140-172 points: highly addicted; 173-205 points: very highly addicted.[17] In the scale study, Cronbach's alpha value was 0.96 for the whole scale. In our study, the Cronbach's alpha value for the whole scale was 0.97.

Statistical Analysis

All statistical analyses were performed using Statistical Package for the Social Sciences (SPSS®) for Windows version 21.0 (IBM SPSS Corp.; Armonk, NY, USA). In our research, descriptive statistics were utilized to calculate frequencies and percentage values for categorical variables, and mean and standard deviation values for continuous variables. The Kolmogorov–Smirnov test was used for normality analysis. The Student *t*-test was used to compare the means of 2 independent groups, and chi-square test was used to compare categorical values. The Pearson correlation coefficient was utilized as the correlation coefficient. $P < .05$ was considered to be statistically significant.

RESULTS

Of the participants, 95 (60.1%) were female, 63 (39.9%) were male, 48 (30.4%) were married, and 110 (69.6%) were unmarried. The average age of the participants was 26.27 ± 9.53, the education period was 12.85 ± 2.35 years. Of the participants, 69 (43.7%) were employees and 89 (56.3%) were non-employed (Table 1).

According to SAMS scoring, comparing the groups that were created as none-less addicted and medium-highly addicted, there was no significant difference between the groups in terms of education, gender, and marital status ($P > .05$). The medium to highly dependent group was significantly lower in terms of age, and in terms of employment status, consisted of more individuals who did not work ($P=.010$, $P=.013$, respectively). In the medium-highly addicted group, Bar-On EQ-i total score ($P < .001$), self-awareness total score ($P=.001$), self-realization ($P=.001$), self-esteem ($P<.001$) subscale scores, interpersonal social responsibility

Table 1. General Characteristics of the Participants

Variables	
Age, mean ± SD	26.27 ± 9.53
Education (years, mean ± SD)	12.85 ± 2.35
Gender, n (%) Male Female	 63 (39.9) 95 (60.1)
Marital status, n (%) Unmarried Married	 110 (69.6) 48 (30.4)
Working status, n (%) Employee Non-employed	 69 (43.7) 89 (56.3)
SMAS, n (%) Medium-highly addicted None-less addicted	 51 (32.3) 107 (67.7)
SMAS total score, mean ± SD	88.51 ± 38.33
Bar-On EQ-i total score, mean ± SD	262.57 ± 42.15
BDI, mean ± SD	34.33 ± 10.77

Bar-On EQ-I, Bar-On Emotional Quotient Inventory; BDI, Beck Depression Inventory; SMAS, social media addiction scale.

($P=.002$) subscale score, adaptation to conditions and environment total score ($P < .001$) and flexibility ($P < .001$), validity ($P < .001$), problem solving ($P < .001$), subscale scores, stress management total score ($P < .001$) and stress resilience ($P=.001$), impulse control ($P < .001$) subscale scores, general mood total score ($P < .001$) and happiness ($P=.002$), and optimism ($P=.008$) subscale scores were significantly lower compared to the none-less addicted group. Total score of BDI was significantly higher in the medium-highly addicted group ($P < .001$) (Table 2).

Evaluating the relationship between the severity of social media addiction and variables, there was a positive (r = 0.353, $P < .001$) significant relationship between the SMAS total score and BDI score. There was a negative ($r=-0.376$, $P < .001$) significant relationship between the SMAS total score and Bar-On EQ-i total score, negative ($r=-0.304$, $P < .001$) significant relationship with general mood score, negative ($r=-0.353$, $P < .001$) significant relationship with stress management score, negative ($r=-0.490$, $P < .001$), significant relationship with adaptation to conditions and environment score, negative ($r=-0.237$, $P=.003$) significant relationship with interpersonal relationships, negative ($r=-0.290$, $P < .001$) significant relationship with personal awareness score, and negative ($r=-0.208$, $P=.009$) significant relationship with age (Table 3).

DISCUSSION

In this study, emotional intelligence and severity of social media addiction were evaluated in patients with MDD. Creating the groups as none-less addicted and medium-highly addicted with regard to the social media scale score, it was observed that the emotional intelligence of the medium-highly addicted group was significantly lower

Table 2. Comparing Variables Between Groups (None–less) Addicted and (Medium–highly) Addicted

	SMA (None-Less Addicted) (n=107)	SMA (Medium-Highly Addicted) (n=51)	*P*
Variables			
Age	27.61 ± 9.77	23.47 ± 8.44	**.010**
Education (year)	12.62 ± 2.47	13.35 ± 1.99	.065
Gender, n (%) Male Female	 45 (42.1) 62 (57.9)	 18 (35.3) 33 (64.7)	.417
Marital status, n (%) Unmarried Married	 36 (33.6) 71 (66.4)	 12 (23.5) 39 (76.5)	.196
Working status, n (%) Employee Non-employed	 54 (50.5) 53 (49.5)	 15 (29.4) 36 (70.6)	**.013**
Bar-On EQ-i total score	271.08 ± 40.38	244.71 ± 40.52	**<.001**
Self-awareness	87.03 ± 18.06	77.35 ± 14.80	**.001**
Independence	15.76 ± 3.86	14.24 ± 5.32	.072
Self-realization	19.01 ± 4.39	16.59 ± 4.34	**.001**
Determination	17.88 ± 5.92	16.71 ± 5.15	.227
Self-esteem	17.63 ± 5.10	14.24 ± 5.16	**<.001**
Emotional self-awareness	16.84 ± 4.62	17.06 ± 4.03	.773
Interpersonal relations	69.31 ± 8.69	66.29 ± 9.92	.053
Social responsibility	24.96 ± 2.87	22.76 ± 4.44	**.002**
Interpersonal relations	24.02 ± 4.87	24.06 ± 5.33	.963
Empathy	20.05 ± 3.04	20.06 ± 3.18	.982
Adaptation to conditions and the environment	47.85 ± 7.79	40.24 ± 7.20	**<.001**
Flexibility	15.13 ± 3.37	12.76 ± 2.97	**<.001**
Realism	17.07 ± 3.51	14.29 ± 3.92	**<.001**
Problem solving	15.64 ± 4.07	13.18 ± 3.54	**<.001**
Stress management	31.77 ± 7.26	26.18 ± 6.78	**<.001**
Stress resistance	15.79 ± 4.65	13.68 ± 3.69	**.001**
Control of impulse	16.25 ± 4.48	13.00 ± 4.16	**<.001**
General mood	29.67 ± 7.47	24.82 ± 7.30	**<.001**
Happiness	19.44 ± 4.61	16.94 ± 4.94	**.002**
Optimism	10.51 ± 3.79	8.58 ± 4.35	**.008**
BDI	32.27 ± 11.55	38.65 ± 7.30	**<.001**

Bold values indicate statistical significance.
Bar-On EQ-I, Bar-On Emotional Quotient Inventory; BDI, Beck Depression Inventory; SMA, social media addiction.

and the depression score was higher. Furthermore, severity of social media addiction was positively significant with the depression score and negatively significant with the emotional intelligence score.

Various studies have revealed that depressive symptoms are associated with more frequent social media use.[18-20] Moreover, it is known that a high level of severity of social media addiction leads to psychological distress. It has been suggested that the severity of social media addiction may cause anxiety and depression.[21,22] Additionally, a meta-analysis study concluded that the severity of social media addiction is positively related to depression.[23] In our research, the depression level was positively associated with the severity of social media addiction in newly diagnosed MDD patients, and the depression level of those with medium-highly social media addiction was significantly higher than the none-less addicted group. Our research showed that the severity of depressive symptoms was associated with the severity of social media addiction in MDD patients. It has been shown that loneliness and social isolation due to excessive use of the Internet can cause depression in people with Internet addiction,[24] and depression and low self-esteem are 2 important factors contributing to Internet addiction.[25]

Table 3. Relationship of Variables with Social Media Addiction (n=158)

		SMA	BDI	EQ-I	GM	SM	ACE	IR	SA	Education
BDI	Pearson correlation coefficient	0.353**								
	P	**<.001**								
EQ-I	Pearson correlation coefficient	−0.376**	−0.663**							
	P	**<.001**	**<.001**							
GM	Pearson correlation coefficient	−0.304**	−0.585**	0.719**						
	P	**<.001**	**<.001**	**<.001**						
SM	Pearson correlation coefficient	−0.353**	−0.450**	0.658**	0.440**					
	P	**<.001**	**<.001**	**<.001**	**<.001**					
ACE	Pearson correlation coefficient	−0.490**	−0.540**	0.813**	0.573**	0.588**				
	P	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**				
IR	Pearson correlation coefficient	−0.237**	−0.409**	0.602**	0.443**	0.308**	0.489**			
	P	**.003**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**			
SA	Pearson correlation coefficient	−0.290**	−0.582**	0.829**	0.665**	0.531**	0.700**	0.424**		
	P	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**		
Education	Pearson correlation coefficient	0.130	0.160*	−0.035	−0.087	0.151	−0.065	−0.042	−0.027	
	P	.103	**.044**	.665	.276	.057	.419	.602	.740	
Age	Pearson correlation coefficient	−0.208**	−0.241**	0.256**	0.171*	0.330**	0.175*	0.215**	0.254**	−0.329**
	P	**.009**	**.002**	**.001**	**.031**	**<.001**	**.028**	**.007**	**.001**	**<.001**

Bold values indicate statistical significance.
ACE, Adaptation to conditions and the environment; BDI, Beck depression inventory; EQ-I: Emotional quotient inventory; GM, General mood; IR, Interpersonal relations; SA, Self-awareness; SM, Stress management; SMA, social media addiction.
*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).

The relationship between the severity of depressive symptoms and the severity of social media addiction may be due to loneliness, social isolation, and low self-esteem. The findings of our study are consistent with current studies. However, other studies were conducted on the general population group, whereas our study was conducted on newly diagnosed MDD patients. It can be interpreted that the relation between the severity of social media addiction and the depression level continues in the disease (MDD) dimension.

Hamissi et al[13] indicated that the emotional intelligence scores of the person had a negative relationship with internet addiction and suggested that individuals with high emotional intelligence could control their addiction to the internet. Other studies investigating emotional intelligence and internet addiction have also identified a negative relationship between emotional intelligence and internet addiction.[12,26] In our study, in parallel to these studies, a negative significant relationship. was noted between severity of social media addiction and emotional intelligence. Moreover, the depression level was positively associated with the severity of social media addiction and the emotional intelligence level of those with medium-highly social media addiction was significantly lower compared to the none-less addicted group. Our study is the preliminary to evaluate the relationship between emotional intelligence and severity of social media addiction in MDD. Present research studies evaluated the relationship between internet addiction and emotional intelligence in the general population. The negative relationship shown in the general population was also shown in MDD with our study. Besides, assessing the emotional intelligence subscales in our study, it was noted that having poor general mood, stress management, interpersonal relationships, personal awareness, stress management, and poor adaptation to the environment were associated with the severity of social media addiction. This may be due to the fact that people have low emotional intelligence prefer social media and online social communication rather than face-to-face interaction in real life to avoid negative moods and stress and cover their social needs.

In our research, reviewing the relationship between emotional intelligence total and subscale scores and depression level, there was a statistically significant negative relationship between emotional intelligence total and subscale scores and depression level. Previous studies also advocate the significant negative relationship between emotional intelligence score and depression level.[27-29] The negative relationship between emotional intelligence and depression may be associated with the emotional intelligence skill, which is the social and emotional capacity skill, and the deterioration of emotions related to depression may directly affect this skill. Depression has negative emotions and dissatisfaction with life. High emotional intelligence of the individual might increase the capacity to cope with negative emotions in depression.

In our research, there was a negative significant relation between severity of social media addiction score and age, and the mean age of those with medium-high level social media addiction was significantly less compared to the none-less level social media addiction group. In previous studies, a negative relationship was detected between severity of social media addiction and age[30,31] and it is consistent with the findings of our study. In our research, the rate of unemployment status in the group with medium-high level social media addiction was significantly higher than the none-less level social media addiction group. Employment and interventions for behavioral activation in MDD may also be practical in avoiding the severity of social media addiction along with depression.

Limitations

Our study has several limitations. The limitations arising from the cross-sectional design of our study and the utilization of self-reports as a data collection tool may have been reflected in our outcomes and longitudinal studies are required for more valid evidence. The daily social media usage periods of the participants or their preferred social media platforms were not examined. These variables may be associated with the onset and level of addiction. Additionally, since there was no control group consisting of the general population in our study, it was not revealed whether there was a difference in terms of variables between the MDD and the control group.

This study is the first study to assess the relationship between the severity of social media addiction and emotional intelligence in MDD, and this relationship was detected to be negatively significant. Besides, it was found that there was a positive relation between depression score and severity of social media addiction, and a negative relation between depression score and emotional intelligence. Interventions such as emotional intelligence skill training may be utilized as part of both depression and the severity of social media addiction treatment in these patients.

Ethics Committee Approval: This study was approved by the Ethics Committee of Kafkas University (Approval No: 2021/11-15; Date: December 28, 2021).

Informed Consent: Informed consent was obtained from the patients who agreed to take part in the study.

Peer-review: Externally peer-reviewed.

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