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The Relationship of Internet, Social Media, and Related Technology Use with Disease Severity and Functionality in Individuals with Serious Mental Disorders

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ABSTRACT

Introduction: The purpose of this study was to assess internet, social media, and related technology use in patients with serious mental disorders, and to examine their relationship with disease severity and functionality and gain insight about the thoughts of patients with severe mental disorders on benefits and risks of social media.

Methods: The study included 150 patients with bipolar disorder and 150 patients with schizophrenia spectrum disorder (82 with schizophrenia, 56 with psychotic disorders not otherwise specified and 12 with schizoaffective disorder) in remission. Information about demographics, clinical features, the use of social media and related technologies, and opinions on social media use were obtained via a data form prepared by the clinicians. Severity of disease and symptoms were measured using the Hamilton Rating Scale for Depression, the Young Mania Rating Scale, the Brief Psychiatric Rating Scale and, the Clinic Global Impression Scale. The Functioning Assessment Short Test was used to evaluate psychosocial functioning.

Results: Among the patients who participated in the current study, 65.3% (n=196) reported internet use and, 59.7% (n=179) reported social media use. The Functioning Assessment Short Test total scores and the Clinic Global Impression Scale scores were significantly higher in patients who did not use social media than in those who did. The use of social media, mobile phones, smartphones, short message services (SMS), e-mail was significantly higher in patients with bipolar disorder than in patients with schizophrenia spectrum disorder.

Conclusion: The use of social media, Internet and mobile devices cannot be underestimated among patients with serious mental disorders.

Keywords: Bipolar disorder, internet, schizoaffective disorder, schizophrenia, social media

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INTRODUCTION

Over five billion people worldwide use mobile devices, about five billion access the Internet, and more than 4.5 billion are active social media users (1). Social media includes platforms that support interaction on the internet such as Facebook, Twitter, Instagram, blogs, online games and discussion forums (2).

Recent studies have demonstrated that individuals with mental health issues tend to use popular social media platforms at rates comparable to the general population (3,4). One recent review found that peer-to-peer interactions, which are a common feature of social media, can potentially enhance engagement and retention through digital interventions among patients with psychosis (5). The use of social media can increase functionality by encouraging people to get information and connect with one another. At the same time, tweets relating to bipolar disorder were found to be more stigmatizing than those pertaining to other mental health conditions (6), which shows that, despite studies indicating the potential of social media to provide peer support, the use of these technologies also has risks, including privacy violations and stigmatization (7). Individuals with serious mental disorders (SMD) may have concerns that their psychotic symptoms will increase or that other users will find out about their illness when they use social media. Thus, for people with SMD, the decision to use social media can be considered a complex one (8).

Highlights

- **Among patients with mental disorders, 65.3% used internet, 59.7% used social media.**
- **Use of social media was higher in patients with bipolar disorder.**
- **Patients who used social media were the ones with higher levels of functioning.**
- **Patients who used social media had lower disease severity.**

Unfortunately, most social media use and mental health research to date has focused only on depression and anxiety, and little is still known about the social media use preferences of individuals living with serious mental disorders (9). In addition, the relationship between internet and social media use and the functionality of the patients has not been examined.

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Moreover, studies examining the relationship between the severity of disease and internet and social media use are limited (10,11).

The purpose of this study was to assess the utilization of social media and related technologies (such as mobile phones and the Internet), to examine the relationship between social media use and the severity of mental health disease and functionality, to compare social media use between two patient groups and to gain insight into the thoughts of mental health patients regarding the benefits and risks of social media use by investigating the social media use of a sample of individuals diagnosed with either bipolar I disorder (BD) or schizophrenia spectrum disorders (SSD).

METHOD

Participants

Patients in remission diagnosed with BD and SSD (schizophrenia, schizoaffective disorder, and psychotic disorders not otherwise specified) who were admitted to the Hospital outpatient unit and a hospital-owned community mental health center (Zeytinburnu Community Mental Health Center) in İstanbul, Türkiye were consecutively included in our study. Ethics committee approval was received from Bakırköy Prof. Dr. Mazhar Osman Psychiatry, Nourology and Neurosurgery Research and Training Hospital on 23.07.2019 with the approval number of 323.

In our study, a power analysis was performed using G-Power 3.1.10 software to determine the number of samples. The main hypotheses were examined by using an independent sample t-test and a chi-square analysis. The α and 1-β error probabilities were determined as 0.05 and 0.95, respectively, and power analysis calculations were made based on the independent sample t-test when calculating the sample size. The required minimum sample size was calculated by targeting the medium effect size (f 2=0.60) and under the condition that the α and 1-β error probabilities were 0.05 and 0.95 respectively. According to the independent sample t-test, when two groups included a similar number of patients (n=74), the minimum sample size was calculated as 148 samples for the analysis and the power was 0.95210217 (critical t=1.976). In a similarly performed analysis, when the patient number ratio of the two groups was 60% (n_1=78, n_2=58), the minimum number was calculated as 156 samples for the analysis and the power was 0.9494027 (critical t=1.975). Based on these findings, it was determined that it would be acceptable to conduct analyses with 150 patients for the two patient groups separately, foreseeing that the use of social media in BD and SSD may not create an equal number of groups.

Patients aged between 18–65 years who were under treatment for BD, schizophrenia, schizoaffective disorder, or psychotic disorder not otherwise specified (PNOS) and still in remission were included. The Young Mania Rating Scale (YMRS) scores of 5 or below and the Hamilton Rating Scale for Depression (HRSD) scores of 7 or below for patients with BD, the Clinic Global Impression Scale (CGI) scores of 3 or below for schizophrenia spectrum patients, and no hospitalization or no exacerbation that required a change in medication (dose or active ingredient) in the last six months were determined as remission criteria. Exclusion criteria included treatment for a psychotic disorder due to substance abuse, having mental retardation, diagnosis of autism spectrum disorders, or presence of a chronic neurological comorbid disease such as dementia, previous cerebrovascular disease, epilepsy, etc.

A total of 382 potential participants who were patients at the units were approached between June and November 2019. Eleven patients were excluded from the study because they also had a diagnosis of neurological disorder or a comorbid substance use disorder. Five patients were ineligible because they did not meet the criteria for remission. Sixty-six patients refused to participate in the study. The most common reason for refusal was lack of interest in participating in the study. After the exclusion, 300 participants were recruited in the study: 150 patients with BD, and 150 patients with SSD. Patients with SSD included three different diagnoses: 82 patients (54.7%) with schizophrenia, 56 patients (37.3%) with PNOS, and 12 patients (8%) with schizoaffective disorder. 58% (n=174) of the patients participating in the study were male and 42% (n=126) were female. The mean age was 41.21±11.53. Socio-demographic characteristics of each group are shown in Table 1.

All participants and their guardians or first-degree-relatives were informed of the study, and their verbal and written consents were obtained. The diagnoses of all patients included in the current study were confirmed according to Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5).

Instruments

A data form and scales selected by the clinicians involved in the present study were applied to the final cohort of 300 patients.

Data form: Created by the authors; it included questions inquiring about the demographics, clinical features, use of social media and related areas, and opinions on social media use. The following questions were asked to participants to evaluate their opinions on social media use:

Do you agree with the sentence below?

1. Using internet or social media makes me feel paranoid or suspicious.
2. Using internet or social media makes voices worse.
3. Using internet or social media helps me socialize more comfortably with people.
4. Using social media sites helps me communicate with friends and/or family.
5. I worry people will find out about my diagnosis if I use internet or social media.
6. I would like to receive text messages / e-mail from my doctor(s) to remind me to take medications or the appointments, to inquire about symptoms, medication side effects, or other problems.

The Hamilton Rating Scale for Depression (12,13) and the Young Mania Rating Scale (14,15) were administered to individuals with BD, and the Brief Psychiatric Rating Scale (BPRS) (16,17) to individuals with SSD to rate symptoms. The Functioning Assessment Short Test (FAST) (18,19) was used to evaluate psychosocial functioning in both patient groups, and the disease severity of all the participants was evaluated using the Clinic Global Impression Scale (20,21). A high score in the FAST indicates low functionality (18). All scales were administered by the same clinician.

Statistical Analysis

IBM Statistical Package for Social Sciences (SPSS) program for Windows v.23 software was used for the statistical analysis of the data. Kolmogorov-Smirnov test was used to determine the normal distribution of variables. A chi-square test was used to compare the study groups in terms of sociodemographic data, use of social media and related technologies, and patients' opinions on the effects of social media use. An independent sample t test was used to determine the differences in the FAST, YMRS, HRSD, CGI scores, age and education level obtained from patients in the context of social media use for both groups. For all analyses, $p<0.05$ was considered statistically significant.

RESULTS

There was no statistically significant difference among patient groups in terms of age, working status and education level. The rate of being

Table 1. Sociodemographic features of study participants

			Bipolar disorder n=150	Schizophrenia spectrum disorder n=150	Total n=300	χ^2 (p)
Gender	Female	n	76	50	126	9.250 **(0.002)**
		%	50.7	33.3	42	
	Male	n	74	100	174	
		%	49.3	66.7	58	
Working status	Working	n	45	33	78	2.495 (0.287)
		%	30	22	26	
	Unemployed	n	97	108	205	
		%	64.7	72	68.3	
	Irregular employment	n	8	9	17	
		%	5.3	6	5.7	
Marital status	Married	n	73	34	107	24.288 **(0.001)**
		%	48.7	22.7	35.7	
	Single	n	56	95	151	
		%	37.3	63.3	50.3	
	Divorced/widowed	n	21	21	42	
		%	14	14	14	
Education status	Uneducated	n	12	15	27	4.795 (0.309)
		%	8	10	9	
	Primary school graduate	n	46	60	106	
		%	30.6	40	35.3	
	Middle school graduate	n	34	29	63	
		%	22.7	19.3	21	
	High school graduate	n	34	31	65	
		%	22.7	20.7	21.7	
	University graduate or above	n	24	15	39	
		%	16	10	13	
Age (years)		n	150	150	300	t (p)
		Mean	40.96	41.45	41.21	-0.365 (0.715)
		SD	11.1	11.87	11.53	
Education Level (years)		n	150	150	300	t (p)
		Mean	8.24	7.44	7.84	1.677 (0.095)
		SD	4.22	3.97	4.11	

SD: Standard Deviation

married (χ^2=24.288, p=0.001) and female gender (χ^2=9.280, p=0.002) were higher in the patients with BD compared to the patients with SSD. Socio-demographic characteristics of each group are shown in Table 1.

Among the patients who participated in the present study, 65.3% (n=196) use the Internet, 59.7% (n=179) use social media, 50.7% (n=52) use computer, 80.7% (n=242) use mobile phones, 36.3% (n=109) communicate via e-mail, and 53.7% (n=161) communicate via short message service (SMS).

The use of social media (χ^2=10.097, p=0.001), mobile phones (χ^2=16.757, p<0.001), smartphones (χ^2=18.111, p<0.001), SMS (χ^2=20.390, p<0.001), e-mail (χ^2=17.652, p<0.001) was found to be significantly higher in patients with BD compared to patients with a diagnosis of SSD. No significant difference, however, was found in the frequency of use of social media, computer, and the Internet between the two groups. Table 2 describes the percentage of current social media, internet, smart phone, SMS, computer and e-mail use of the patients and the comparison of the two groups.

Table 2. Comparison of social media, internet and mobile phone usage data between patient groups

			Bipolar disorder n=150	Schizophrenia spectrum disorder n=150	Total n=300	χ^2 (p)
Social media use	Yes	n	103	76	179	10.097 **(0.001)**
		%	68.7	50.7	59.7	
	No	n	47	74	121	
		%	31.3	49.3	40.3	
Frequency of social media use	A few times a week or less	n	22	19	41	1.403 (0.496)
		%	21.4	25	22.9	
	Every day	n	21	19	40	
		%	20.4	25	22.3	
	More than once a day	n	60	38	98	
		%	58.3	50	54.8	
Internet use	Yes	n	106	90	196	3.768 (0.52)
		%	70.7	60	65.3	
	No	n	44	60	104	
		%	29.3	40	34.7	
Computer use	Yes	n	83	69	152	2.614 (0.103)
		%	55.3	46	50.7	
	No	n	67	81	148	
		%	44.7	54	49.3	
Mobile Phone use	Yes	n	135	107	242	16.757 **(p<0.001)**
		%	90	71.3	80.7	
	No	n	15	43	58	
		%	10	28.7	19.3	
E-mail	Yes	n	72	37	109	17.652 **(p<0.001)**
		%	48	24.7	36.3	
	No	n	78	113	191	
		%	52	75.3	63.7	
Purpose of social media use	To reach friends	n	26	17	43	1.672 (0.892)
		%	25. 2	22.4	24	
	To keep up with the news	n	27	18	45	
		%	26. 2	23.7	25.1	
	To spend time	n	30	20	50	
		%	29.1	26.3	27.9	
	Playing games	n	3	4	7	
		%	2.9	5.3	3.9	
	Watching videos-listening to music	n	15	15	30	
		%	14.6	19.7	16.8	
	Other	n	2	2	4	
		%	1.9	2.6	2. 2	
Smart phone use	Yes	n	116	81	197	18.111 **(p<0.001)**
		%	77.3	54	65.7	
	No	n	34	69	103	
		%	22.7	46	34.3	
SMS use	Yes	n	100	61	161	20.390 **(p<0.001)**
		%	66.7	40.7	53.7	
	No	n	50	89	139	
		%	33.3	59.3	46.3	

SMS: short message service.

Table 3 presents the opinions of patients on the effects of social media use. Table 4 depicts comparison of bipolar disorder patients who use social media and who do not use social media with regard to age, education level, YMRS, HRSD, CGI and FAST scores. Table 5 shows comparison of schizophrenia spectrum patients who use social media and who do not use social media with regard to age, education level, BPRS, CGI, and FAST scores. Patients who use social media were significantly younger (t= -6.013, p<0.001 for BD, t=-6.831, p<0.001 for SSD) and had significantly higher education level (t=6.293, p<0.001 for BD, t=2.911, p=0.004 for SSD) than those who did not use social media. Clinic global impression scale scores were significantly higher in patients who did not use social media compared to those who used social media (t=4.392, p<0.01 for BD, t= -4.344, p<0.01 for SSD). The FAST scores ranged from 0 to 69 and the mean score of the total FAST scores is 25.2±15.95. The FAST-Autonomy (t=-2.561, p=0.011), FAST-Occupational Functioning (t=-5.387, p<0.001), FAST-Cognitive Functioning (t=-3.247, p=0.001), FAST-Interpersonal

Table 3. Comparison of opinions of patients on the effects of social media

			Bipolar disorder n=150	Schizophrenia spectrum disorder n=150	Total n=300	χ^2 (p)
Using internet-social media makes me suspicious	Yes	n	19	25	44	0.959 (0.327)
		%	12.7	16.7	14.7	
	No	n	131	125	256	
		%	87.3	83.3	85.3	
Using internet-social media increases the voices I hear	Yes	n	4	11	15	3.439 (0.064)
		%	2.7	7.3	5	
	No	n	146	139	285	
		%	97.3	92.7	95	
Using internet-social media helps me communicate	Yes	n	110	98	208	2.258 (0.133)
		%	73.3	65.3	69.3	
	No	n	40	52	92	
		%	26.7	34.7	30.7	
Using internet-social media helps me socialize more comfortably	Yes	n	90	76	166	2.643 (0.104)
		%	60	50.7	55.3	
	No	n	60	74	134	
		%	40	49.3	44.7	
I'm afraid people will find out about my illness when I use these sites	Yes	n	13	11	24	0.181 (0.670)
		%	8.7	7.3	8	
	No	n	137	139	276	
		%	91.3	92.7	92	
I would like to receive a message/e-mail from my doctor	Yes	n	112	80	192	14.815 **(p<0.001)**
		%	74.7	53.3	64	
	No	n	38	70	108	
		%	25.3	46.7	36	

Table 4. Comparison of scale scores, age and education level by social media use in patients with bipolar I disorder

	Patients who use social media n=103 mean ± SD	Patients who do not use social media n=47 mean ± SD	t (p)
Age (years)	37.62±10.33	48.29±9.50	-6.013 **(p<0.001)**
Education level (years)	9.44±4.10	5.59±3.14	6.293 **(p<0.001)**
YMRS	0.6300±1.06035	1.0952±1.41092	-2.155 **(0.033)**
HRSD	0.9899±1.54850	1.5000±1.78408	-1.708 (0.090)
CGI	1.3010±0.66914	1.9149±1.01788	-4.392 **(p<0.001)**
FAST - Autonomy	1.3039±2.45671	2.5532±3.34799	-2.561 **(0.011)**
FAST - Occupational functioning	5.2353±5.43763	10.1277±4.46054	-5.387 **(p<0.001)**
FAST - Cognitive functioning	3.3431±3.13554	5.1489±3.19632	-3.247 **(0.001)**
FAST - Financial issues	0.8333±1.48313	1.1489±1.95580	-1.088 (0.278)
FAST - Interpersonal relationships	3.1471±4.32217	5.3404±3.99062	-2.947 **(0.004)**
FAST - Leisure activities	2.6078±2.03025	4.0000±1.74456	-4.059 **(p<0.001)**
FAST total	16.4608±13.05788	28.4894±11.53986	-5.414 **(p<0.001)**

CGI: Clinical Global Impression Scale; FAST: Functioning Assessment Short Test; HRSD: Hamilton Rating Scale for Depression; n: number of sample; SD: standard deviation; YMRS: Young Mania Rating Scale.

Relationships (t=-2.947, p=0.004), FAST-Leisure Activities (t=-4.059, p<0.001), and FAST-Total (t=-5.414, p<0.001) scores were significantly higher in BD patients who did not use social media compared to those who used social media. Young mania rating scale scores were found to be significantly higher in BD patients who did not use social media compared to those who used it (t=-2.155, p<0.05).

The FAST-Autonomy (t=-2.670, p=0.008), FAST-Occupational Functioning (t=-3.675, p<0.001), FAST-Interpersonal Relationships (t=-3.143, p=0.002), and FAST-Total (t=-3.932, p<0.001) scores were also significantly higher in SSD patients who did not use social media compared to those who used social media. No significant difference was found in the BPRS scores in SSD patients (t=-1.886, p>0.05) (Table 5).

Table 5. Comparison of scale scores, age and education level by social media use in patients with schizophrenia spectrum disorder

	Patients who use social media n=76 mean ± SD	Patients who do not use social media n=74 mean ± SD	t (p)
Age (years)	35.73±9.86	47.32±10.89	-6.831 **(p<0.001)**
Education level (years)	8.35±4.29	6.51±3.39	2.911 **(0.004)**
BPRS	5.6184±6.06843	7.5676±6.58367	-1.886 (0.061)
CGI	2.0000±1.10755	2.7297±0.94067	-4.344 **(p<0.001)**
FAST - autonomy	2.9079±3.65578	4.7568±4.76520	-2.670 **(0.008)**
FAST - occupational functioning	8.0132±6.28330	11.4595±5.12632	-3.675 **(p<0.001)**
FAST - cognitive functioning	4.8289±4.02786	5.7838±3.98377	1.459 (0.149)
FAST - financial issues	1.5000±2.39722	1.6081±2.27444	-0.283 (0.777)
FAST - interpersonal relationships	5.0658±4.39799	7.5405±5.22163	-3.143 **(0.002)**
FAST - leisure activities	3.6053±4.86094	4.2703±1.80788	-1.105 (0.271)
FAST total	25.3200±15.19349	35.3919±16.06990	-3.932 **(p<0.001)**

BPRS: Brief Psychiatric Rating Scale; CGI: Clinical Global Impression Scale; FAST: Functionality Assessment Short Test; n: number of sample; SD: standard deviation.

DISCUSSION

The present study indicates that there is a considerable level of social media (59.7%) and internet use (65.3%) in individuals with SMD. This finding reflects mounting evidence showing high rates of social media use among individuals with SMD. Previous studies have reported that individuals with SMD, including psychotic disorders or mood disorders, use social media platforms at rates ranging from about 43% to 93% (4,10,22–24) and they access the Internet at rates ranging from 59.3% to 79.5% (25–29). The discrepancies in these studies may be due to the age, the education levels of the participants and, socioeconomic differences between the countries or regions where the studies were conducted. The patients who were admitted to the hospital or the community mental health center where the present study was conducted were known to reside in a part of Istanbul that has relatively lower socioeconomic status. Socioeconomic factors such as family income, place of residence, and education level are known to affect internet access (30). In our study, no statistically significant differences in age and education level were found between patients with BD and SSD. In both patient groups, individuals who used social media were younger and had higher education levels than those who did not. This is consistent with previous reports that lower age is associated with more social media and internet use in individuals with mental disorders (23,26,29). Similarly, education level is related to more internet and social media use among individuals with SMD (26,31). This finding could also be a reflection of the trend seen in the general population that social media use is more common in younger individuals and those with higher education (1).

However, some literature suggests that internet and social media use in the SMD population may be lower than in the general population (22,32). In 2019, the rate of internet and social media use in the general population in Türkiye was 75.3% and 63%, respectively (33). The lower prevalence of internet use among individuals with SMD can be explained by the continuing presence of residual negative symptoms during the remission period, impaired cognitive processes, and lower socioeconomic levels compared to the general population (34,35). Further studies with a healthy control group are required.

Our results show that the most frequently used device was mobile phones (80.7%), which is similar to previous studies (11,22). The use of social media, mobile phones, smartphones, SMS, e-mail was found to be significantly higher in patients with BD compared to patients with a diagnosis of SSD. To our knowledge, no previous study has compared the use of social media in BD and SSD. Although no statistically significant difference in age and education level was found between patients with BD and SSD, the higher rate of social media and related technology use in BD patients can be explained by disease-related features. It is known that schizophrenia is a disorder with a chronic course whereas BD is a disorder with episodes and recovery periods. Studies have shown that global functionality is lower and neurocognitive impairment is more severe in patients with schizophrenia compared to those with BD (36,37). As in a previous study, no significant difference was found in the use of computers and the Internet between the two groups (38). Providing Internet and computers to patients' families or accessing these technologies at home may be advantageous for patients with SMD.

Nevertheless, there remains some uncertainty and concern regarding the potential risks of social media for individuals with SMD. First, there are concerns that the use of social media may increase patients' psychotic symptoms and that patients may experience stigmatization and therefore have less confidence in communicating via social media sites (7,39). One study found that participation in chat rooms may contribute to worsening of symptoms in young people with psychotic disorders (40), while another study including 80 patients with schizophrenia found that many current users disagreed that social media makes symptoms worse and agreed that these technologies help them socialize more (22). In the present study, more than 80% of patients who used social media did not agree that it made them more suspicious or increased their auditory hallucinations. Also, more than 90% of patients disagreed that they were afraid people would find out about their illness when they use these sites. In contrast, most of the users agreed that the use of social media helps them communicate and socialize more easily. In addition, the results of the current study suggest that the evaluated patients are open to using mobile health applications.

Improvements in missed appointment rates, medication adherence, and prodromal or other symptom assessments have previously been shown in studies using social media or text-based applications on cell phones for individuals with schizophrenia (22,41). In the present study, 74.7% of the patients diagnosed with BD and 53.3% of the patients diagnosed with SSD expressed interest in receiving text messages or e-mails from their doctors to remind them of their appointments or to inform them about drug use. The recent global pandemic has encouraged the rapid adoption

of these technologies for mental health (42). Thus, telehealth applications may increase treatment compliance.

On the other hand, the questions we asked about opinions of patients were not from a validated scale, they were close-ended questions prepared by us. Close-ended questions limit the respondent to the set of alternatives being offered, while open-ended questions allow the respondent to express an opinion without being influenced by the researcher (43). Therefore, selection bias may be present: Participants in this study may have given responses which are socially desirable, which could have led to an over-estimation of the participants reported rates of positive opinions on social media use.

There is limited information in the literature on the relationship between social media use and the severity of psychiatric symptoms in individuals with SMD (10,11). In the present study, disease severity measured by CGI was found to be significantly lower in patients who used social media. Cognitive and social impairments caused by serious and chronic mental disorders may continue during remission periods (34,36). As the severity of the disease increases, subsyndromal depressive symptoms, residual negative symptoms, or impaired social cognition may disincentivize social interactions and further decrease patients' motivation to interact. In one study conducted with schizophrenia patients, a negative correlation was found between the severity of disease and the use of social media, especially among patients with negative symptoms (10).

On the other hand, one study found that social media can enable individuals with SMD to cope with symptoms through social support and information seeking (3). In another recent study, the use of social media was associated with more positive emotions and recovery. A larger and supportive social network appears to be associated with greater well-being and a better chance of recovery (44). Thus, the relationship between the use of social media and the severity of disease can be associated in two different ways: the possible contribution of social media to recovery and the increased use of social media among patients who have fewer residual symptoms. Further studies are needed to examine the causal relationships among these variables.

Recent studies have indicated that the use of digital technologies is associated with participation in activities outside the home in places such as work, social environments, and other communities for individuals with SMD (11,45). An earlier review, which looked into naturally occurring online social networking in individuals with SMD, found that the Internet may be a promising platform to help these patients increase their social networks and functionality (46). The present study found that interpersonal relationships, leisure time activities, professional and cognitive functioning, self-determination, and total functionality (as measured by the FAST) were significantly higher in patients who used social media. Symptoms of disease, (e.g., social withdrawal and avolition), can have an impact on social media use similar to their impact on other areas of life in individuals with SMD (10). Sanchez-Moreno et al. reported that subthreshold depressive symptoms and cognitive impairment were the most important predictors of psychosocial dysfunction in the euthymic period in bipolar disorder patients (47). These real life impairments may decrease their motivation to use social media and engage in virtual social interactions, which could explain why functionality was found to be associated with social media use in patients with SMD.

Our study has several limitations. First, the patients included in this study lived in a specific area of Istanbul; therefore, the data cannot be generalized to the whole Turkish population or other geographical regions. Second, the causal relationships linking greater social media use to higher levels of functionality and lower levels of disease severity should not be inferred. Moreover, we did not have a control group to compare the rates and patterns of social media use with the general population. Information collected on social media use was based on self-reports, which could be biased. Participants in this study may have given responses which are socially desirable (i. e., there is a social desirability response bias), which could have led to an over-estimation of the participant reported rates of social media use in the current study.

In conclusion, it can be stated that in the present study, individuals with SMD who used social media were the ones with higher level of functionality and a lower severity of disease. Most of the social media users agreed that the use of social media helps them communicate and socialize more easily and disagreed that use of social media made them more suspicious or increased their auditory hallucinations. Social media use was higher in individuals with BD compared to those with SSD. To the best of our knowledge, this is the first study that comprehensively evaluates the use of social media and related activities in BD and SSD patients in a Turkish clinical sample. Our study provides preliminary data regarding social media use and its association with symptoms in individuals with SMD. More research is needed in this area to facilitate the future potential application of social media in the clinical management of individuals with SMD.

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Informed Consent: All participants and their guardians or first-degree-relatives were informed of the study, and their verbal and written consents were obtained.

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