Annals of Clinical and Analytical Medicine
Original Research

The relationship between fear of Covid-19 and affective symptoms of bipolar patients during the Covid-19 pandemic

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This study was presented 56th National Psychiatry Congress as an oral presentation, 2020

Abstract

Aim: This study aims to examine the relationship between fear of COVID-19 and affective symptoms of patients with bipolar disorder in Turkey. Another aim of the study is to reveal whether participants' fear of COVID-19 changes according to various socio-demographic characteristics.

Material and Methods: In the study, data were collected from 100 people with bipolar disorder using a face-to-face survey method by a set of scales including the Young Mania Rating Scale, the Hamilton Depression Rating Scale and the Fear of COVID-19 Scale. The data collection process was carried out in October 2020 and January 2021.

Results: The results of the study showed that 53% of the participants had a moderate level of fear of COVID-19, and 45% had a low level of fear. According to the results of the regression analysis, fear of COVID-19 explains 23.1% of the total variance in the mania state. In addition, female bipolar disorder patients were found to have a greater fear of COVID-19 than men.

Discussion: As a result of this study, it was revealed that the manic symptoms of bipolar disorder patients reduced the fear of COVID-19. In this process, detailed scans and interventions for this diagnostic group will be important.

Keywords

Bipolar Disorder, Fear of COVID-19, Pandemic, Mental Disorders

DOI: 10.4328/ACAM.20998 Received: 2021-12-15 Accepted: 2022-03-04 Published Online: 2022-03-13
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Introduction

Infectious diseases are a group of diseases that have existed for centuries and have important effects on the development of humanity [1]. The recent novel coronavirus-2019 (COVID-19) worldwide pandemic emerged as a pneumonia pandemic in China in December 2019 [2]. The first case of coronavirus emerged in Turkey on 11 March 2020, and the same date as the World Health Organization declared a pandemic [3]. The Turkish government enforced many measures to mitigate the spread of COVID-19, such as enforcing spatial distancing, the use of medical face masks, closing schools, encouraging self-isolation, and quarantining individuals returning from abroad [4]. While these measures exist to slow the spread of COVID-19, the potential adverse psychiatric effects should not be ignored. The difficulty of controlling COVID-19 can result in devastating economic, social and psychological effects. These effects can arise from the fear of being infected, infecting others, dying, and/or losing loved ones. Additionally, concerns such as the inability to receive the necessary medical care or the possibility of losing a job. as a result. can also weigh heavily on the mind of the individual [5]. The continual following of news and developments concerning COVID-19 (especially via social media, which may include misinformation) is also a factor that increase fear of COVID-19 [6].

Fear is a concept that is representative in the physical, interpersonal, cognitive and behavioral domains [1,7]. It is a natural response to danger and important for managing an appropriate response to the threat [8]. On the other hand, fear can have catastrophic results. With chronic, disproportionate and high level of fear, individuals may not think clearly and lose the control mechanism over the situation.

COVID-19 stress and fear of COVID-19 are increasingly researched constructs in the general population [1,2,4]. Although individuals with mental illness are more vulnerable to their psychological health than the general population [9], it is unfortunately overlooked during the COVID-19 pandemic.

BD is a chronic affective disorder characterized by dramatic changes in mood, thinking, behavior and attitude [10]. BD is thought to be more sensitive to serious life events, such as pandemics, earthquakes that can disrupt biological and social rhythms, by some mechanisms related to circadian rhythm regulation [11].

Bipolar disorders (BD) are chronic and recurrent disorders that affect >1% of the global population. BD is a chronic affective disorder characterized by dramatic changes in mood, thinking, behavior and attitude [10]. In patients with bipolar disorders, the lock-down associated with COVID-19 pandemic has a high probability to function as a trigger for a more severe and unstable illness course characterized by increased risk of affective lability, impulsivity, and risk-taking behavior, alcohol or substance use disorders, and higher rates of suicide attempts [12].

The sudden changes that occurred could have significantly impacted psychiatric patients' mental health, as well as having reduced their opportunity to access psychiatric services. Knowing the COVID-19 fear level in BD patients and its possible relationship with variables such as sociodemographic and affective symptoms will contribute to the planning of interventions for this patient group. This will inform evidence-based strategies for patient care in the clinic and help to mitigate long-term symptom exacerbation and adverse psychological outcomes in these individuals.

This study was conducted to determine what the COVID-19 fear level is in BD patients, whether it changes according to sociodemographic characteristics, and its relationship with manic and depressive symptoms, which are the affective symptoms of the disease.

Material and Methods

Procedure and Participants

This study was conducted in a community mental health center located in Istanbul province of Turkey. Istanbul is one of the critical cities in the COVID-19 pandemic due to its crowded population and its location on the transit route. This center serves patients with serious mental illnesses who are treated and followed up on an outpatient basis. During the pandemic period, for patients presenting to the center, psychiatric examinations and treatments in this center were conducted face-to-face by complying with infection precautions. Patients aged 65 years and older with comorbid problems and were not willing to come to the center due to the concerns of infection were served by phone. According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), 113 eligible individuals diagnosed with BD were consecutively interviewed by trained research interviewers. Inclusion criteria for the participants were defined as a) being treated at a community mental health center for at least 1 year b) Age 18 years and above. c) Have been clinically stable for the last 3 months (stabilization was defined as the absence of hospital admissions or a major change in treatment over the past 3 months).

Patients with a manic episode, moderate-severe depression, catatonia, active alcohol or substance abuse, and intellectual disability were excluded from study.

The interview team consisted of a psychiatrist and an occupational therapist. After receiving verbal informed consent, they were invited to answer a series of questions contained in the study scales. If the patient was unable to provide valid informed consent (based on the caregiver's response), additional informed consent was obtained from primary caregivers. After the psychiatrist determined the psychiatric symptoms of the patients, the occupational therapist applied the Fear of COVID-19 scale.

The study included 113 patients; 7 patients were excluded from the study because they did not want to participate, 4 patients' relatives did not give their consent, and 2 patients were thought to be in the exacerbation period. Demographic information of the participants was obtained from the electronic registration system. The COVID-19 Fear Questionnaire, Young Mania Rating Form, and Hamilton Depression Rating Scale were administered to all participants.

This study was carried out in a period when there was no curfew between October 2020 and January 2021, after obtaining the approval of the Institute Ethics Committee (AV/IEC/2020/193), in accordance with the principles of the Declaration of Helsinki.

Assessments

Fear of COVID-19 Scale: It will be used to determine the fear of

COVID-19. Consisting of 7 questions, the scale was designed in a 5-point Likert type. The maximum score that can be obtained from the scale is 35, and the lowest score is 7. The high score obtained from the scale indicates the high fear of COVID-19. The scale was developed by Ahorsu et al. The Turkish validity and reliability study was performed by Haktanır et al [6,12].

Young Mania Rating Scale:

Research was conducted on mania and depression in order to determine the mood of the patients. "Young Mania Rating Scale" was used in the determination of mania states. It was developed by Young R.C et al. and its Turkish validity and reliability study was performed by Karadag F. et al [13,14].

While filling out the scale, the last 48 hours of the patient are taken into consideration. The opinion of the clinician is more important than what the patient says. This was not applied in this study, but in a validity and reliability study participated, if the clinician could not make a decision for items with 0-4 points (for example, whether it was 2 or 3), he should give the higher score, and for items with 0-8 points, he should get the intermediate value (i.e., if it is not possible to decide whether 2 or 4 3 points) is recommended. It is not used to make a diagnosis, but to determine the severity of the current manic state. It is accepted that each upper step in the scale includes the lower steps before it. It is applied with an interview of 15-30 minutes. The patient's own statements are allowed. Apart from the evaluation at the time of the interview, information can be obtained from the service personnel or the patient's family. A total score and a score over 20 are usually considered a cut-off for a manic episode.

Hamilton Depression Rating Scale:

It is a 17-item scale based on the evaluator's rating, used to measure the severity of depression in patients. It was published by Max Hamilton in 1960 [15]. It is the most widely used method to measure the degree of depression. The items of the scale related to difficulty falling asleep, waking up in the middle of the night, waking up early in the morning, somatic symptoms, genital symptoms, weight loss, and insight were graded between 0 and 2, and other items between 0 and 4. It is used by the specialist to determine whether the symptom in each item is present in the patient and the degree of severity such as mild, moderate, severe, by asking the questions for that item and basing on the answers. The total score of the scale, ranging from 0 to 53, is obtained by summing the ratings, and an increase in the score indicates an increase in the severity of depression. The highest score is 53 points. A score of 0 to 7 indicates no depression, a score of 8 to 15 indicates mild depression, a score of 16 to 28 indicates moderate depression, and a score of 29 and above indicates severe depression. The validity and reliability study of the scale for Turkey was done by Akdemir et al [16].

Statistical Analysis

Data analysis was done with the SPSS version 22 program. Descriptive statistics (mean, standard deviation (SD) and frequency) were calculated for all demographic and clinical variables. The compatibility of numerical features with the normal distribution was examined using the Shapiro-Wilks test. The effects of demographic characteristics on COVID-19 fear score, Young Mania score and Hamilton Depression score were determined with the Analysis Covariance (ANCOVA) model. Age, gender, marital status, educational status, employment status and presence of a chronic disease were included in this model together and adjusted effects were determined. In addition, the COVID-19 score was categorized as in previous studies and divided into 3 [17]. Relationships between scale scores were analyzed using the Pearson correlation analysis. The limit of significance for all statistics was chosen as $p \leq 0.05$.

Results

Demographic Profile

A total of 100 people, 60 of whom were men (60%), participated in the study. The mean age of the participants was 42,12 years. In addition, out of 100 people, 73 were single, 15 were university graduates, 31 were high school graduates and 54 were primary school graduates, 27 were working and 29 had chronic diseases (Table 1).

COVID-19 Fear

After obtaining the total scale scores of the individuals, the results given in Table 1 were obtained by studying the relations between these scores and the demographic characteristics of the patientsCOVID-19 Fear Total Score was found to be significantly higher in women (P=0.048). In addition, Young Mania Total Score was found to be significantly higher in those who were single (P=0.050), high school graduates (P=0.025) and those with chronic diseases (P=0.050). The Hamilton Depression Total Score was found to be significantly higher in the unemployed (P=0.015) (Table 1).

In addition, 43% of the participants have a low level of fear of COVID-19. 55% are mild, 2% of them have a high level of fear of COVID-19 (Figure 1).

According to the results of the linear regression analysis, as the Young mania total score increases by 1 point, the fear of COVID-19 score decreases by 0.231 points (Table 2). No significant relationship was found between depression and fear of COVID-19 (p=0.737).

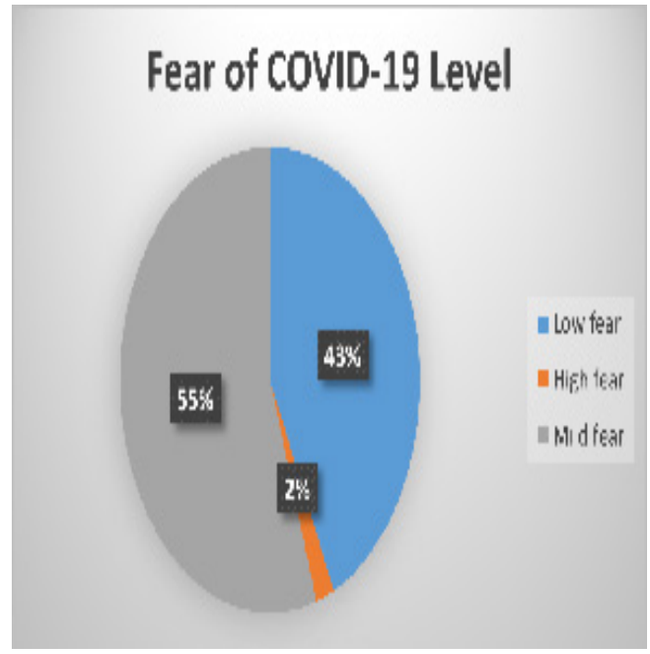

Figure 1. COVID-19 fear levels of BD patients

Table 1. Relationships between total scale scores and demographic characteristics of patients

	Demographic Variables	Category	N	Mean	SD	P*
Fear of COVID-19 Total Score	Gender	Male	60	14.43	5.604	0.048
		Female	40	16.95	5.354	
	Marital Status	Single	73	15.38	5.658	0.387
		Married	27	15.59	5.604	
	Education	Primary School	54	15.67	5.569	0.904
		High School	31	15.00	5.639	
		University	15	15.53	6.069	
	Occupational Status	Unemployed	73	16.7	6.019	0.097
		Working	27	13.74	3.957	
	Chronic Disease	No	71	15.13	5.448	0.527
		Yes	29	16.21	6.038	
Young Mania Total Score	Gender	Male	60	6.00	4.755	0.454
		Female	40	5.93	6.375	
	Marital Status	Single	73	6.82	5.882	0.050
		Married	27	3.67	2.987	
	Education	Primary School	54	5.52	5.280	0.025
		High School	31	7.71	6.045	
		University	15	4.00	3.606	
	Occupational Status	Unemployed	73	6.32	5.679	0.223
		Working	27	5.4	4.661	
	Chronic Disease	No	71	5.37	4.586	0.050
		Yes	29	7.45	6.962	
Hamilton Depression Total Score	Gender	Male	60	7.3	4.109	0.929
		Female	40	7.35	6.011	
	Marital Status	Single	73	7.58	5.291	0.692
		Married	27	6.4	3.643	
	Education	Primary School	54	6.44	3.922	0.072
		High School	31	8.55	6.433	
		University	15	6.87	4.324	
	Occupational Status	Unemployed	73	7.79	5.191	0.015
		Working	27	5.44	3.714	
	Chronic Disease	No	71	7.10	5.319	0.593
		Yes	29	7.31	3.901	

Table 2. Relationship between linear regression analysis and patients' fear of COVID-19 and their mood (n=100).

Variables	B	T	p	Ratio %95 CI
Mania	-.231	-2.251	.027*	-0.457-(-0.029)
Depression	.040	.336	.737	-0.196- (0.276)

* P<0.05. ** P<0.01.

Discussion

The aim of our study was to measure the levels of COVID-19 fear and any possible relationship with affective symptoms in patients with BD and to identify possible differences in terms of sociodemographic factors. To our knowledge, this is the first study to examine the relationship between fear of COVID-19 and affective symptoms in BD patients.

Our study showed that the majority of the BD patient group had a low-to-moderate degree of COVID-19 fear, and it has been shown that the state of mania reduces the fear of COVID-19.

We found that the fear of COVID-19 does not differ by age, marital status, educational status, professional status and the presence of chronic diseases, except for gender. Women had a higher fear of COVID-19 than men. Studies in healthy population have also shown that women have a greater fear of COVID-19 than men [21,22]. This may be related to the fact that the female gender is shown as a predictor of the negative psychological impact of the COVID-19 epidemic and that women are exposed to higher levels of stress, anxiety and depression, and its psychological impact is a greater epidemic. It is stated that the burden of traumas such as earthquakes, economic crises, and pandemics may play an important role in BD patients [18]. It is thought that BD patients may be more stressed in this process, which may complicate treatment and increase interpersonal stigma [19]. In the light of these considerations, it can be expected that BD patients will have a high fear of COVID-19. However, contrary to expectations, the fear of COVID-19 was found to be low to moderate in the vast majority of BD patients (43%-55%). This may indicate that BD patients may already be socially isolated and have low social functioning, so they are less affected by the COVID-19 pandemic and do not have a high level of fear.

On the other hand, having a low or high fear of COVID-19 may be related to the degree of compliance with protective measures. According to the results of a study, fear of COVID-19

is shown as a predictor of positive behavioral change (eg, social distance, improved hand hygiene) related to the epidemic [20]. In other words, the existence of the fear of COVID-19 had a positive effect on the fight against the epidemic. Moderate and low levels of fear of COVID-19 in BD patients raises doubts about compliance with pandemic precautions.

According to the results of our study, we found that the fear of COVID-19 was lower in BD patients with manic symptoms. This means that the increase in manic symptoms in BD patients reduces the fear of COVID-19. This brings to mind the risky behaviors frequently seen in BD patients. It is known that risky behaviors increase in BD patients compared to normative examples. These behaviors are more evident in manic periods. In this period, neurobiological mechanisms related to emotions, persistent impulsivity, cognitive deficits, and reward increase risk-taking [22].

In our study, no relationship was found between fear of COVID-19 and depression. On the contrary, studies conducted in healthy populations have found significant relationships between fear of COVID-19 and depression [6,24,25]. In a study, despite the fact that there seems to be a lesser association between fear and depression, cases of suicide have been reported in the population due to fear of COVID-19 [23]. This indicates that not only depression but also other factors related to stress should be investigated.

The absence of a control group is a limitation of the study. Repeating future studies with healthy controls will provide a comparative perspective and will be useful. In addition, the moderate and low level of fear of COVID-19 in BD patients raises doubts about compliance with pandemic precautions. It will be useful to investigate this issue in future studies.

Scientific Responsibility Statement

The authors declare that they are responsible for the article's scientific content including study design, data collection, analysis and interpretation, writing, some of the main line, or all of the preparation and scientific review of the contents and approval of the final version of the article.

Animal and human rights statement

All procedures performed in this study were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. No animal or human studies were carried out by the authors for this article.

Funding: *None*

Conflict of interest

None of the authors received any type of financial support that could be considered potential conflict of interest regarding the manuscript or its submission.

References

1. Özmen S, Özkan O, Özer Ö, Yanardağ MZ. Investigation of COVID-19 Fear, Well-Being and Life Satisfaction in Turkish Society. Soc Work Public Health. 2021;36(2):164-77.

2. Satici B, Saricali M, Satici SA, Griffiths MD. Intolerance of Uncertainty and Mental Wellbeing: Serial Mediation by Rumination and Fear of COVID-19. Int J Ment Health Addict. 2020;1-12.

3. Rasanathan K, Evans TG. Primary health care, the Declaration of Astana and COVID-19. Bull World Health Organ. 2020;98(11):801-8.

4. Saricali M, Satici SA, Satici B, Gocet-Tekin E, Griffiths MD. Fear of COVID-19, Mindfulness, Humor, and Hopelessness: A Multiple Mediation Analysis. Int J Ment Health Addict. 2020;1-14.

5. Montemurro N. The emotional impact of COVID-19: From medical staff to common people. Brain Behav Immun. 2020; 87:23-4.

6. Ahorsu DK, Lin CY, Imani V, Saffari M, Griffiths MD, Pakpour AH. The Fear of COVID-19 Scale: Development and Initial Validation. Int J Ment Health Addict. 2020;1-9.

7. Schimmenti A, Starcevic V, Giardina A, Khazaal Y, Billieux J. Multidimensional Assessment of COVID-19-Related Fears (MAC-RF): A Theory-Based Instrument for the Assessment of Clinically Relevant Fears During Pandemics. Front Psychiatry. 2020; 11:748.

8. Pappas G, Kiriaze IJ, Giannakis P, Falagas ME. Psychosocial consequences of infectious diseases. Clin Microbiol Infect. 2009;15(8):743-7.

9. Chang S, Zhang Y, Jeyagurunathan A, et al. Providing care to relatives with mental illness: reactions and distress among primary informal caregivers. BMC Psychiatry. 2016;16(1):80.

10. Vieta E, Berk M, Schulze TG, et al. Bipolar disorders. Nat Rev Dis Primer. 2018;4:18008.

11. Murray G, Gottlieb J, Swartz HA. Maintaining Daily Routines to Stabilize Mood: Theory, Data, and Potential Intervention for Circadian Consequences of COVID-19. Can J Psychiatry. 2021;66(1):9-13.

12. Haktanir A, Seki T, Dilmaç B. Adaptation and evaluation of Turkish version of the fear of COVID-19 Scale. Death Stud. 2020:1-9.

13. Karadag F, Oral ET, Yalcın F, Eren E. Young Mania Rating Scale reliability and validity in Turkey. Türk Psikiyatri Derg. 2001;13:107-114.

14. Young RC, Biggs JT, Ziegler VE, Meyer DA. A Rating Scale for Mania: Reliability, Validity and Sensitivity. Br J Psychiatry. 1978;133(5):429-35.

15. Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry. 1960; 23:56-62.

16. Akdemir A, Turkcapar H, Orsel S, Demirergi N, Dağ İ, Ozbay M. Reliability and validity of the Turkish Version of Hamilton Depression Rating Scale. Compr Psychiatry. 2001; 42:161-5.

17. Malik S, Ullah I, Irfan M, et al. Fear of COVID-19 and workplace phobia among Pakistani doctors: A survey study. BMC Public Health. 2021;21(1):833.

18. Mazza M, Marano G, Janiri L, Sani G. Managing Bipolar Disorder patients during COVID-19 outbreak. Bipolar Disord. 2020;22(8):870-1.

19. Stefana A, Youngstrom EA, Chen J, et al. The COVID-19 pandemic is a crisis and opportunity for bipolar disorder. Bipolar Disord. 2020;22(6):641-3.

20. Harper CA, Satchell LP, Fido D, Latzman RD. Functional Fear Predicts Public Health Compliance in the COVID-19 Pandemic. Int J Ment Health Addict. 2020:1-14.

21. Broche-Pérez Y, Fernández-Fleites Z, Jiménez-Puig E, Fernández-Castillo E, Rodríguez-Martin BC. Gender and Fear of COVID-19 in a Cuban Population Sample. Int J Ment Health Addict. 2020:1-9.

22. Liu Y, Ning Z, Chen Y, et al. Aerodynamic analysis of SARS-CoV-2 in two Wuhan hospitals. Nature. 2020;582(7813):557-60.

23. Mamun M. A, Griffiths M. D. First COVID-19 suicide case in Bangladesh due to fear of COVID-19 and xenophobia: Possible suicide prevention strategies. Asian Journal of Psychiatry. 2020; 51: 102073.

24. Alyami M, Henning M, Krägeloh CU, Alyami H. Psychometric evaluation of the Arabic version of the Fear of COVID-19 Scale. International journal of mental health and addiction. 2021;19(6), 2219-32.

25. Bitan D. T, Grossman-Giron A, Bloch Y, Mayer Y, Shiffman N, Mendlovic S. Fear of COVID-19 scale: Psychometric characteristics, reliability and validity in the Israeli population. Psychiatry Research. 2020; 289: 113100.

How to cite this article:

Emine Nur Çorum, Emrullah Dündar. *The relationship between fear of Covid-19 and affective symptoms of bipolar patients during the Covid-19 pandemic. Ann Clin Anal Med 2022; DOI: 10.4328/ACAM.20998*