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RESEARCH ARTICLE

Do patients with major depressive disorder and generalized anxiety disorder experience more somatosensorial amplification, hypochondriasis, and fear of COVID-19?

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ABSTRACT

Objective: Mental illnesses are important determinants in response to the pandemic. However, there are only a limited number of studies investigating the effects of COVID-19 in individuals with mental illnesses. We aimed to reveal the fear of COVID-19, somatosensorial amplification levels, anxiety, depression, and stress levels of patients with major depressive disorder (MDD) and generalized anxiety disorder (GAD).

Method: We evaluated 500 participants in three groups. This study enrolled 137 patients with MDD, 140 patients with GAD, and 223 healthy controls. Participants were evaluated with the Whiteley Index-7, Somatosensory Amplification Scale (SSAS), Depression Anxiety Stress Scale-21 (DASS-21), and The Fear of COVID-19 Scale.

Results: There was a statistically significant difference between the groups' SSAS, DASS-21, Whiteley Index, and The Fear of COVID-19 Scale scores. In the post hoc analysis, Whiteley Index and DASS-21 subscale scores were higher in patient groups than in the control group ($p<0.001$). Regression analysis revealed that Whiteley Index, COVID-19 Fear, and DASS-S had a significant effect on somatosensorial amplification.

Conclusion: The findings of our study show that MDD and GAD patients are susceptible to normal bodily sensations. COVID-19 fear and hypochondriasis appear to be essential determinants of somatosensorial amplification. Accordingly, there is a need to develop effective psychological interventions focused on these factors in MDD and GAD.

Keywords: Anxiety, COVID-19, depression, hypochondriasis, somatosensorial amplification

INTRODUCTION

Cases of pneumonia of unknown cause began to appear in Wuhan, China, in the last days of 2019. SARS-CoV-2, a new type of coronavirus that caused COVID-19 disease, was identified for the first time in January 2020 (1). It quickly spread worldwide and was declared a pandemic by the World Health Organization on March 11, 2020.

The COVID-19 pandemic affects not only physical health but also mental health, individual and social behaviors, and attitudes. The danger and threat posed by a visible or invisible enemy confronted unexpectedly and

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unprepared can lead to very different emotions, thoughts, and behaviors. Behaviors, such as ignoring its seriousness, inability to react adequately, from rejecting the threatening reality to maladaptive behaviors, stigmatization, and extreme spread of the panic, observed in the pandemic have highly different characteristics (2). The "dark side" of the pandemic activates unconscious dynamics, leading to various psychological responses of each individual. Many factors play an essential role in the emergence of unconscious conflicts (e.g., fears created by an invisible, unknown creature, disease prevention, unreliability of the treatment, insecurity, confrontation with the harsh external reality, uncertainties about the future and the end of the pandemic, meaninglessness, fundamental changes in lifestyle, stigma, obligatory social distancing, separation from loved ones, and financial and material losses) (3).

Changes in feelings, thoughts, and behaviors related to pandemics can be observed in different societal segments at different levels and intensities. Some psychiatric symptoms may occur in people who do not have a mental disorder. Changes in symptoms and signs, exacerbation, worsening in the clinical course may be observed in the individuals who already had mental illness before the pandemic (4,5). These may be related to the stress created by the pandemic, implemented restrictive measures, and reduced social support. In addition, causes such as the assignments of mental health professionals to fight against the pandemic, restrictions in hospitalization, and patients that do not want to go to hospitals due to concerns of being infected with the virus can lead to severe difficulties by putting obstacles in the way of the search for treatment (6).

Most of the studies, which aimed to identify the impact of the COVID-19 pandemic on mental health, include the general population, health workers, quarantined people, and individuals who have had COVID-19 infection (7). Current studies show that similar to previous outbreaks and pandemics, COVID-19 causes negative psychological consequences such as depression, anxiety, sleep disorders, addiction, eating disorders, and trauma-related disorders (8). COVID-19, which is currently on the agenda of the entire world, is thought to lead to an excessive focus on bodily sensations by increasing perceived stress related to the disease (9). A misinterpretation of bodily sensations as being infected with the virus may lead to a further increase in anxiety, frequent hospital applications. On the one hand, this may cause a significant burden on the health system, while on the other hand, it can lead to an increase in the likelihood of transmission of the disease.

Although it is emphasized that mental illness is an important determinant in response to the pandemic and the stress it causes, limited studies are investigating the effects of COVID-19 in individuals with mental illness (10). It is still unclear how preexisting mental illnesses were affected by the pandemic. Somatosensorial amplification is considered to increase the perception of internal and external threats to body integrity rather than an exaggeration of perceived and/or actual bodily sensations. A pandemic full of uncertainties and unknowns poses is a severe threat to physical health and life. To our knowledge, there are limited studies up to these days investigating the mind–body interaction associated with the COVID-19 pandemic in individuals with mental illness.

This study aims to identify the relationship between somatosensorial amplification, hypochondriasis, and COVID-19 fear in patients with major depressive disorder (MDD) and generalized anxiety disorder (GAD). We believe that the data obtained from the study will contribute to the urgent need for the extent to which the COVID-19 pandemic affects individuals with mental illnesses.

METHOD

Study Design

This descriptive, cross-sectional, case–control study was conducted in Turkey with patients who applied to Suleyman Demirel University Faculty of Medicine Psychiatry Outpatient Clinic between January and April 2021, who were being treated with the diagnosis of MDD and GAD according to DSM-5 diagnostic criteria, and a healthy control group. Participants who were informed about the study and who provided written consent were evaluated in terms of the criteria for inclusion in the study. This research was approved by Suleyman Demirel University Faculty of Medicine Clinical Research Ethics Committee (date: January 8, 2021, number: 14).

Participants

Inclusion criteria for the patient group were being over the age of 18 years, followed up in the psychiatry outpatient clinic for at least 6 months with MDD or GAD diagnoses, and being literate. Exclusion criteria were having psychotic and manic symptoms that impair the ability to evaluate reality and cognitive functions, presence of concurrent psychiatric disorders,

dementia, mental retardation, incomplete filling of data collection tools, and having neurological, kidney, liver, cardiovascular, and/or metabolic diseases that could explain the reported somatic complaints. Participants over 18 years of age who were volunteered to participate in the study and who did not have lifelong mental illness according to DSM-5 diagnostic criteria in the mental state examination and psychiatric history were accepted as the healthy control group. All participants were subjected to a comprehensive psychiatric evaluation by an experienced psychiatrist. Patients were diagnosed using the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders-5 (SCID-5). Two patients were excluded from the study because at that time they had psychotic symptoms, one patient was diagnosed with dementia, four patients had cardiovascular disease, two patients did not consent to the study, and four patients were missing data collection tools. Thus, 137 patients with MDD, 140 patients with GAD, and 223 healthy controls, a total of 500 participants, were included in the study (Fig. 1).

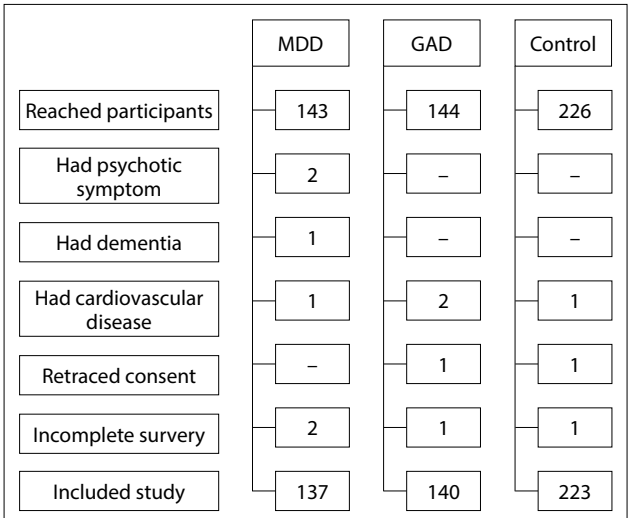

Figure 1. Flow chart of participants.

Data Collection Tools

Participants' age, gender, marital status, number of children, households they live with, employment status, personal COVID-19 experiences, previous and current medical comorbidities, psychiatric diseases, and clinical course were recorded in the sociodemographic and clinical data form. The participants also answered the Whiteley Index-7, Somatosensory Amplification Scale (SSAS), Depression Anxiety Stress Scale-21 (DASS-21), and The Fear of COVID-19 Scale.

Whiteley Index-7

In this study, the Whiteley Index-7, considered one of the most appropriate psychometric tools for screening hypochondriasis, was used. The first form of the Whiteley index was developed by Pilowsky (11) in 1967 and consisted of 14 dichotomic substances. Later, Fink et al. (12) modified the scale and developed a 7-item form that is more comfortable to use in practice. The Turkish validity and reliability study of the scale was conducted by Gulec et al. (13). The scale was graded in 5-point Likert-type as used in the studies of Berens et al. (14). High scores from the scale (0–28) were associated with higher levels of health anxiety.

Somatosensory Amplification Scale

SSAS was developed by Barsky et al. (15). Turkish validity and reliability study was conducted by Gulec and Sayar (16). It is a 5-point Likert-type self-report scale consisting of 10 items. Higher scores on the scale are associated with higher levels of bodily sensations.

Depression Anxiety Stress Scale-21

DASS-21 scale was used to determine individuals' depression, anxiety, and stress levels in the pandemic. The first form developed by Lovibond and Lovibond consists of 42 items (17). Later, it was modified and shortened, and its 21-item form was started to be used (18). Turkish validity and reliability study was conducted by Saricam (19). The 4-point Likert-type (0–3) scale has depression, anxiety, and stress subdimensions.

The Fear of COVID-19 Scale

The Fear of COVID-19 Scale developed by Ahorsu et al. (20) was used to determine the fear of COVID-19 in the pandemic. It is a 5-point Likert-type scale consisting of 7 items ranging in score from 7 to 35. High scores are associated with increased fear of COVID-19. Its Turkish validity and reliability study was conducted by Bakioglu et al. (21).

Statistical Analysis

Statistical analyses were made using the SPSS 21.0 program. In descriptive statistics, categorical variables were reported as numbers and percentages. Continuous data were presented as mean±standard deviation (mean±SD). Histogram, skewness, and kurtosis were used in addition to the Kolmogorov–Smirnov test to evaluate the normal distribution of categorical data. The Mann–Whitney U test was used for two-way group comparisons, and the Chi-squared test was used for quantitative data. When there was a statistically significant difference in the Kruskal–Wallis test, Bonferroni-corrected post-hoc tests were performed to determine which groups made the difference. The regression model was determined for variables with significant correlation, and diagnostic tests of this model were performed. p values less than 0.05 were

Table 1: Sociodemographic features of MDD, GAD, and control groups

Variables	MDD (n=137)		GAD (n=140)		Control (n=223)		p
	n	%	n	%	n	%	
Age (mean±SD)	37.58±14.09		39.05±13.37		39.90±11.81		0.144[a]
Gender							0.790[b]
Women	92	67.2	90	64.3	142	63.7	
Men	45	32.8	50	35.7	81	36.3	
Marital status							**0.014***[b]
Single	54	39.4	52	37.1	54	24.2	
Married	78	56.9	79	56.4	157	70.4	
Widow	5	3.6	9	6.4	12	5.4	
Have child/children							**0.048***[b]
No	62	45.3	61	43.6	75	33.6	
Yes	75	54.7	79	56.4	148	66.4	
Living together							0.081[b]
No	32	23.4	21	15	33	14.8	
Yes	105	76.6	119	85	190	85.2	
Residential area							0.626[b]
Rural	8	5.8	6	4.3	15	6.7	
Urban	129	94.2	134	95.7	208	93.3	
Education level							0.597[b]
Lower secondary education	61	44.5	70	50	101	45.3	
Secondary education and upper	76	55.5	70	50	122	54.7	
Working status							<**0.001****[b]
Yes	64	46.7	57	40.7	163	73.1	
No	73	53.3	83	59.3	60	26.9	
Monthly income							<**0.001****[b]
<€150	52	38	61	43.6	22	9.9	
€150–300	18	13.1	27	19.3	23	19.3	
€300–450	36	26.3	33	23.6	32	14.3	
>€450	31	22.6	19	13.6	146	65.5	
Psychiatric medication							0.555[b]
No	32	23.4	37	26.4	–	–	
Yes	105	76.6	103	73.6	–	–	
Duration of illness (month), (mean±SD)	40.2±48.8		41.4±42.7		–		0.490[a]
Psychiatric hospitalization							**0.035***[b]
No	125	91.2	136	97.1	–	–	
Yes	12	8.8	4	2.9	–	–	
Suicide attempt							0.576[b]
No	128	93.4	133	95	–	–	
Yes	9	6.6	7	5	–	–	
Family history of psychiatric disorders							<**0.001****[b]
No	114	83.2	120	85.7	218	97.8	
Yes	23	16.8	20	14.3	5	2.2	

MDD: Major depressive disorder; GAD: Generalized anxiety disorder; n: Number of participants; *: p<0.05; **: p<0.001; a: Kruskal–Wallis test; b: Chi-squared test. The bold type denotes statistical significance.

Table 2: COVID-19 experiences of MDD, GAD, and control groups

Variables	MDD (n=137)		GAD (n=140)		Control (n=223)		p
	n	%	n	%	n	%	
Duration of diagnosis of COVID-19 (days) (mean±SD)	81.5±52.1		70.7±42.3		120.8±51.1		**0.001***[a]
Had COVID-19							0.642[b]
No	113	82.5	121	86.4	190	85.2	
Yes	24	17.5	19	13.6	33	14.8	
Contact with COVID-19 patient							0.056[b]
No	101	73.7	107	76.4	146	65.5	
Yes	36	26.3	33	23.6	77	34.5	
Living together with people in the risk group							**0.002***[b]
No	83	60.6	98	70	115	51.6	
Yes	54	39.4	42	30	108	48.4	
The effect of COVID-19 on the financial condition							**0.007***[b]
Not/slightly negatively affected	67	48.9	77	55	86	38.6	
Moderately/highly negatively affected	79	51.1	63	45	137	61.4	
Thinking about coronavirus							**0.036***[b]
I have no idea	31	22.6	34	24.3	28	12.6	
The virus is of artificial origin	56	49.9	61	43.6	109	48.9	
The virus is of natural origin	50	36.5	45	32.1	80	38.6	
Worried about the COVID-19 vaccine							<**0.001****[b]
No	59	43.1	56	40	144	64.6	
Yes	78	56.9	84	60	79	35.4	

MDD: Major depressive disorder; GAD: Generalized anxiety disorder; n: Number of participants; *: p<0.05; **: p<0.001; a: Kruskal–Wallis test; b: Chi-squared test. The bold type denotes statistical significance.

considered significant for all tests. The STROBE statement was used to edit this report.

RESULTS

The sociodemographic characteristics of participants are shown in Table 1. The average age of patients with MDD (n=137) was 37.58±14.09 years (range 18–74 years), that of patients with GAD was (n=140) 39.05±13.37 years (range 19–69 years), and that of the control group (n=223) was 39.90±11.81 years (range 19–67 years). There was no statistically significant difference between the three groups regarding age, years of education, and gender (p>0.05). The COVID-19 pandemic experiences of the participants are presented in Table 2. There was no difference between the groups regarding contact history and infection status with COVID-19 infection (p>0.05).

The average SSAS score of the MDD group was 28.89±8.57, that of the GAD group was 28.50±6.67, and that of the control group was 26.26±7.40. The difference between the MDD and GAD groups and control groups was statistically significant (p=0.010, p=0.043, respectively). The average Whiteley Index score of the MDD group and the GAD groups was 13.21±6.98 and 13.67±5.89, respectively, and that of the control group was 7.74±4.92, where statistically significant differences were found between the MDD and the control groups (p<0.001) and GAD and the control groups (p<0.001). The Fear of COVID-19 score's average of the MDD, GAD, and the control groups was 18.74±7.44, 19.16±6.13, and 16.03±5.51, respectively. The differences between the MDD with control groups and GAD with control groups were statistically significant (p=0.03 and p<0.001, respectively).

The comparison of the scores obtained by the groups from SSAS, Whiteley Index, DASS-21, and The Fear of COVID-19 scales is presented in Table 3. A statistically significant difference was found between the groups in all scale scores. In a post hoc analysis, all scale scores were higher in the patient groups than in the control group (p<0.001).

The correlation analysis between the SSAS, Whiteley Index, DASS-21, and The Fear of COVID-19 scale and age and duration of illness of the patient groups are presented in Table 4. Age was found to be positively correlated with the Whiteley Index Score in MDD and the Whiteley Index

Table 3: Comparison of SSAS, Whiteley Index-7, COVID-19, and DASS-21 between the groups

Variables	MDD (n=137) Mean±SD	GAD (n=140) Mean±SD	Control (n=223) Mean±SD	p[a]	Post hoc test (p-value)		
					MDD–control	GAD–control	MDD–GAD
Whiteley Index	13.21±6.98	13.67±5.89	7.74±4.92	<**0.001****	<**0.001****	<**0.001****	1.000
SSAS	28.89±8.57	28.50±6.67	26.26±7.40	**0.005***	**0.010***	**0.043***	1.000
The Fear of COVID-19 Scale	18.74±7.44	19.16±6.13	16.03±5.51	<**0.001****	**0.030***	<**0.001****	0.732
DASS-A	13.00±9.13	17.07±8.15	6.39±6.15	<**0.001****	<**0.001****	<**0.001****	<**0.001****
DASS-D	15.53±9.98	14.57±10.26	8.90±7.63	<**0.001****	<**0.001****	<**0.001****	0.862
DASS-S	18.07±9.02	17.35±9.04	10.74±7.11	<**0.001****	<**0.001****	<**0.001****	1.000

MDD: Major depressive disorder; GAD: Generalized anxiety disorder; SSAS: Somatosensory Amplification Scale; DASS-21: Depression Anxiety Stress Scale-21; DASS-A: Depression Anxiety Stress Scale-Anxiety Subscale; DASS-D: Depression Anxiety Stress Scale-Depression Subscale; DASS-S: Depression Anxiety Stress Scale-Stress Subscale; SD: Standard deviation; n: Number of participants; SD: Standard deviation; *: p<0.05; **: p<0.001. a: Kruskal–Wallis test; The bold type denotes statistical significance.

Table 4: Correlations between SSAS, Whiteley Index, COVID-19, and DASS-21 scores in MDD and GAD groups

	SSAS		Whiteley Index		The Fear of COVID-19 Scale	
	p	r	p	r	p	r
MDD (n=136)						
Age	0.248	0.099	**0.009****	0.222	0.098	0.142
Duration of illness	0.630	0.042	0.750	0.027	0.945	-0.060
DASS-A	<**0.001****	0.433	<**0.001****	0.465	**0.007****	0.231
DASS-D	**0.032***	0.183	**0.004***	0.244	0.491	0.059
DASS-S	**0.004****	0.243	**0.025***	0.192	0.344	0.081
The Fear of COVID-19 Scale	<**0.001****	0.361	<**0.001****	0.376	–	–
Whiteley Index	<**0.001****	0.616	–	–	–	–
GAD (n=140)						
Age	0.434	0.067	**0.004***	0.244	<**0.001****	0.304
Duration of illness	**0.041***	0.173	0.433	0.670	0.205	0.108
DASS-A	0.076	0.150	**0.002****	0.261	**0.025***	0.189
DASS-D	**0.002****	0.264	**0.016***	0.203	0.189	0.112
DASS-S	<**0.001****	0.384	0.058	0.160	**0.011***	0.214
The Fear of COVID-19 Scale	**0.037***	0.177	**0.011***	0.214	–	–
Whiteley Index	**0.001****	0.279	–	–	–	–

MDD: Major depressive disorder; GAD: Generalized anxiety disorder; SSAS: Somatosensory Amplification Scale; DASS-21: Depression Anxiety Stress Scale-21; DASS-A: Depression Anxiety Stress Scale-Anxiety Subscale; DASS-D: Depression Anxiety Stress Scale-Depression Subscale; DASS-S: Depression Anxiety Stress Scale-Stress Subscale; *: p<0.05; **: p<0.001; r: Spearman's correlation coefficient. The bold type denotes statistical significance.

and The Fear of COVID-19 Scale score in GAD (r=0.222, p=0.009; r=0.244, p=0.004; r=0.304, p<0.001). The duration of the disease was found to be positively correlated with the SSAS score in the GAD (r=0.173, p=0.041). A positive correlation was found between SSAS and The Fear of COVID-19 Scale, DASS-A, DASS-D, DASS-S, and Whiteley Index scores in MDD (r=0.361, p<0.001; r=0.433, p<0.001; r=0.183, p=0.032; r=0.243, p=0.004; r=0.616, p<0.001, respectively). A positive correlation was found between SSAS and The Fear of COVID-19 Scale, DASS-D, DASS-S, and Whiteley Index scores in patients with GAD (r=0.177, p=0.037; r=0.264, p=0.002; r=0.384, p<0.001; r=0.279, p=0.001, respectively).

Table 5 presents the results of the multivariate linear regression analyses with somatosensorial amplification as the dependent variable. When the patient groups were considered together, the level of somatosensorial amplification was determined by the Whiteley Index (β=0.455, 95% CI=0.322–0.588), The Fear of COVID-19 Scale (β=0.140, 95% CI=0.020–0.260), and DASS-S (β=0.223, 95% CI=0.094–0.352) scores were found to be significant influencing factors.

Table 5: Multivariate linear regression model of SSAS dependent variable when patient groups are taken together

	B	SE	Beta	t	p	95% CI
Constant	16.184	1.375		11.772	<**0.001****	13.478–18.891
Whiteley Index	0.455	0.068	0.384	6.738	<**0.001****	0.322–0.588
The Fear of COVID-19 Scale	0.140	0.061	0.124	2.289	**0.023***	0.020–0.260
DASS-A	0.020	0.060	0.023	0.336	0.737	-0.098–0.139
DASS-D	-0.034	0.057	-0.045	-0.597	0.551	-0.147–0.079
DASS-S	0.223	0.065	0.263	3.407	<**0.001****	0.094–0.352

SSAS: Somatosensory Amplification Scale; DASS-A: Depression Anxiety Stress Scale-Anxiety Subscale; DASS-D: Depression Anxiety Stress Scale-Depression Subscale; DASS-S: Depression Anxiety Stress Scale-Stress Subscale; CI: Confidence interval; *: p<0.05; **: p<0.001; F=23.20; df=5; adjusted R2=0.28. The bold type denotes statistical significance.

DISCUSSION

This study found that somatosensorial amplification, hypochondriasis, fear of COVID-19, depression, anxiety, and stress levels were higher in patients with MDD and GAD than in the healthy control group. When the patient groups were considered together, the contribution of hypochondriasis on somatosensorial amplification was the most important. Also, stress and fear of COVID-19 were associated with somatosensorial amplification.

It is emphasized that psychopathologies such as anxiety and depression are associated with somatosensorial amplification. In a study evaluating the relationship between somatization and somatosensorial amplification, consistent with our findings, it was observed that depression and panic disorder patient groups manifested significantly higher somatization scores compared with the control group (22). Especially in sensitive individuals, negative attributes, expectations, and concerns about health increase hypervigilance and heightened attentional focus on bodily sensations. In our study, SSAS was positively correlated with anxiety, depression, and stress levels in MDD and depression and stress levels in GAD. When the patient groups were taken together, it was concluded that somatosensorial amplification occurred independently from anxiety and depression levels. Kumar et al. (23) reported a relationship between somatosensorial amplification and anxiety severity in GAD. A significant positive correlation was observed in a study conducted in Turkey between the severity of depressive symptoms and SSAS in MDD patients (24). In comparison with the control group, the unemployment rate was significantly higher in the MDD and GAD patient groups. Unemployment is a known risk factor for a variety of mental illnesses. Unemployment may have contributed to the patient group's increased health anxiety and somatosensory amplification.

Somatosensorial amplification is associated with somatization in patients with mental/body distress and anxiety, and depression. Many studies are aiming to elucidate the specific role of SSAS in somatization pathogenesis. Somatic symptoms may be another important component of mental illness besides the emotional and cognitive clinical components. In a community sample of more than 18 000 adults from the National Institute of Mental Health Epidemiological Catchment Area, somatization symptoms showed the strongest association with anxiety and depressive symptoms (25). A large-scale epidemiological survey conducted in the USA found a strong relationship between depression and anxiety and the increase in the number of medically unexplained somatic complaints (26). According to the national general population survey findings, 9.4% of the general population suffer from somatic, anxious, or depressive syndromes, with one-third of these cases being comorbid (27).

As reported in the literature, it was observed that somatosensorial amplification was strongly associated with hypochondriac beliefs in our study. Self-monitoring may result from health concerns, leading to a biased cognitive perception of somatic sensations. Sensitivity to bodily sensations may lead to a perception of threat and the emergence of anxiety. SSAS may act as mediators between hypochondriac beliefs and behaviors. In addition, similar to the data of our study, studies are investigating the relationship between functional somatic complaints in depression and anxiety disorder with somatosensorial amplification and hypochondriasis (23,28). A significant increase in health anxiety was reported in population-based studies conducted with various groups in the pandemic.

One of the critical findings from our study was that fear of COVID-19 is associated with hypochondriasis and somatosensorial amplification in patients with both MDD and GAD. Moreover, fear

of COVID-19 was an essential predictor of somatosensorial amplification in patient groups. The somatization of stress may occur due to the complex interaction of cultural and psychological dynamics and periodic serious events such as a pandemic. As in previous pandemics, it is observed that depression and anxiety are positively associated with hypochondriasis in the COVID-19 pandemic (29,30). The inability to make a definitive opinion about who, when, and how the COVID-19 will occur, how the clinic will progress, the methods of prevention, and treatment of the disease may lead to increased attention to physical health throughout society. An inward shift of attention may lead to increased bodily preoccupations and misinterpretation of trivial and mild somatic symptoms, and feeling uncomfortable. Somatic symptoms may be misinterpreted as signs of infection. Individuals with high somatosensorial amplification tend to experience their somatic symptoms more intensely, as well as a greater tendency for monitoring their environment for dangerous sources and avoiding harmful effects.

The findings of the present study must be interpreted in light of their limitations. The study was limited to a single center. The study sample consisted of patients who applied to the psychiatry outpatient clinic. The sample did not represent MDD and GAD patients who did not seek treatment were reluctant to seek psychiatric help and were in the early stages of the diseases. Accordingly, the findings cannot be generalized to MDD and GAD patients. The findings of the study, which are cross-sectional in nature, do not allow causal inferences. Not knowing the pre-pandemic somatization and hypochondriasis levels of the participants limit our understanding of the similarities and differences of their mental complaints during the pandemic period. Future studies should try to overcome the limitations of this study by evaluating these patients with a larger sample size from a longitudinal perspective.

As a result, according to our findings, depressed and anxious patients appear particularly sensitive to normal bodily sensations. In addition, COVID-19 fear and hypochondriasis appear to be important determinants of somatosensorial amplification. Bearing the limitations in mind, this study still advances our understanding of somatosensorial amplification and hypochondriasis in MDD and GAD. The factors identified in our study may be useful in understanding the illness behavior patterns in patients with depression and anxiety disorder.

Contribution Categories		Author Initials
Category 1	Concept/Design	G.O.U., K.E.D., O.U.
	Data acquisition	G.O.U., K.E.D.
	Data analysis/Interpretation	G.O.U., O.U.
Category 2	Drafting manuscript	G.O.U., K.E.D., O.U.
	Critical revision of manuscript	G.O.U., K.E.D., O.U.
Category 3	Final approval and accountability	G.O.U., K.E.D., O.U.
	Technical or Material Support	K.E.D., O.U.
	Supervision	G.O.U., O.U.

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