Prevalence and Factors Associated With PTSD-Like Symptoms Linked to the COVID-19 Pandemic Among Patients With Major Depressive Disorders Seeking Emergency Care

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Abstract: The aim of this study was to evaluate the psychological impact and coping strategies experienced by depressed inpatients during the second wave of the COVID-19 pandemic in Italy. We recruited 75 depressed inpatients. Logistic regression was used to determine predictors of PTSD-like symptoms measured with Impact of Event Scale–Revised. Predicting variables were age, sex, the Coping Orientation to Problems Experienced subscales scores, the Anxiety Status Inventory total score, and the Patient Health Questionnaire-9 total score. The prevalence of PTSD-like stress symptoms was 41.33%. Age, social and avoidance coping strategies, and anxiety levels were significant predictors of PTSD-like symptoms. Our findings suggest that the COVID-19 pandemic in depressed inpatients is associated with PTSD-like stress symptoms, anxiety, and maladaptive coping.

Key Words: COVID-19, MDD, inpatients, PTSD, coping, acute emergency care

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In Italy, COVID-19 virus circulated since February 2020, producing a state of emergency and the implementation of extraordinary measures to limit viral transmission. Major disasters, such as a pandemic, have important effects on the mental health of the general population (Balasubramanian et al., 2020) and are associated with a high prevalence of posttraumatic stress disorder–like (PTSD-like) symptoms (29.5%) (Moccia et al., 2020). Life changes due to fear of the infection and to extraordinary measures to limit viral transmission, such as restrictions of movement and social contacts, might facilitate relapses and need for emergency care of patients with a previous diagnosis of a psychiatric disease (Ferrando et al., 2021). To date, there is a lack of data regarding the impact of the COVID-19 stressors in patients with major depressive disorders (MDDs) in need of emergency care. Furthermore, coping with the stress associated with the COVID-19 outbreak may be more challenging for people with MDD (Hao et al., 2020), and there are no studies that investigated this important topic in inpatients with MDD.

In this study, we aimed to evaluate coping strategies and the occurrence of pandemic-related PTSD-like distress in COVID-19–negative MDD patients admitted to a psychiatric unit during the second wave of the pandemic in Italy.

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METHODS

This prospective study was carried out at the University Hospital "Policlinico Gaspare Rodolico" of Catania, Italy, from September 2020 to December 2020. Sequential recruitment technique was applied. Inclusion criteria included age between 18 and 65, have a diagnosis of MDD, being psychiatric inpatients, being able to read and understand questionnaires, clinical stability (questionnaires were administered in the same day of the discharge). We excluded patients with personality disorder, organic mental disorders, and a PTSD caused by other stressful events other than the COVID-19 pandemic.

We administered the following instruments:

1. The Impact of Event Scale–Revised (IES-R) is a 22-item self-report measure of the subjective distress caused by a traumatic event. A score of 33 is considered as candidate cutoff value for PTSD-like symptoms (Pietrantonio et al., 2003).
2. The Coping Orientation to Problems Experienced–New Italian Version (COPE-NVI) is a 60-item self-administered scale used to measure individual coping skills in the presence of stressful events, developed on the basis of the original COPE scale (Sica et al., 2008).

TABLE 1. Descriptive Statistics for the Demographic Variables

Age	45.33 (12.31)
Sex	
Males	33 (44%)
Females	41 (54.7%)
Transgender	1 (1.3%)
Illness duration*	11 (0–21)
Years of schooling	11.25 (3.93)
Marital status	
Married/cohabitant	26 (34.6%)
Separated/divorced	15 (20%)
Widowed	5 (6.7%)
Single	29 (38.7%)
Living with	
With parental family	22 (28.8%)
With own family	38 (50.9%)
With roommates	4 (5.01%)
Alone	11 (15.2%)
Employment status	
Employed	25 (33.3%)
Unemployed	50 (66.7%)

*Median (interquartile ranges).

TABLE 2. Summary of Logistic Regression Analysis for Variables Predicting the Occurrence of Pandemic-Related PTSD-Like Stress Disorder (IES-R Total Score >33) in Inpatient With MDD

	B	SE	Wald	Gl	Sign.	Exp(B)
Age	0.244	0.122	4.039	1	0.044*	1.277
Sex (ref. male)	−2.239	1.207	3.440	1	0.064	0.107
Illness duration	−0.142	0.107	1.758	1	0.185	0.867
Years of schooling	0.133	0.189	0.494	1	0.482	1.142
Marital status (ref. single)			4.415	3	0.220	
Married	1.877	2.215	0.718	1	0.397	6.536
Divorced	−1.370	1.686	0.660	1	0.417	0.254
Widowed	−3.961	2.998	1.746	1	0.186	0.019
Living with (ref. alone)			4.949	3	0.176	
Parental family	−1.017	2.253	0.204	1	0.652	0.362
Own family	−5.866	3.238	3.282	1	0.070	0.003
Roommates	0.449	2.920	0.024	1	0.878	1.567
Being employed	2.528	1.582	2.556	1	0.110	12.535
COPE–social support	0.234	0.119	3.877	1	0.049*	1.263
COPE–avoidance strategies	0.275	0.125	4.872	1	0.027*	1.317
COPE–positive attitudes	0.047	0.103	0.204	1	0.651	1.048
COPE–problem-oriented behavior	−0.167	0.143	1.369	1	0.242	0.846
COPE–transcendent oriented behavior	−0.023	0.094	0.062	1	0.804	0.977
ASI–total score	0.142	0.067	4.546	1	0.033*	1.153
PHQ-9–total score	−0.050	0.131	0.146	1	0.702	0.951
Constant	−26.083	9.715	7.209	1	0.007	0.000

*$p < 0.05$ (n = 75).

3. The Zung Anxiety Status Inventory (ASI) is a 20-item questionnaire that can be used to estimate anxiety severity. The scale scores can range from 0 to 80 (Zung, 1971).
4. The Patient Health Questionnaire-9 (PHQ-9) is a brief self-reported scale used to measure depression severity (Mazzotti et al., 2003).

Normality was assessed with the Kolmogorov-Smirnov test. Age, sex, the COPE subscales scores, the ASI total score, and the PHQ-9 total score were used as predicting variables of PTSD-like symptoms using a logistic regressions analysis. Results were considered statistically significant at the $p < 0.05$ level. Statistical analyses were performed with SPSS Version 25.

RESULTS

We recruited 75 depressed inpatients. Demographic variables are reported in Table 1. A total of 3.1% had a previous COVID-19 infection. The IES-R scale median score was 25 (IQR, 19–49), and 31 subjects scored above cutoff, suggesting PTSD-like symptoms.

Binary logistic regression indicates that age (Exp[B] = 1.277), social support coping strategies (Exp[B] = 1.263), avoidance coping strategies (Exp[B] = 1.317), and anxiety levels (Exp[B] = 1.153) are significant predictors of PTSD-like symptoms ($\chi^2 = 45.846$, $df = 18$, and $p < 0.00$). The whole model "explains" 73.1% of the variability of presence of PTSD-like symptoms. The model correctly predicted 87.5% of cases where there was no PTSD-like symptomatology and 88.5 of cases where there was PTSD-like symptomatology, giving an overall percentage correct prediction rate of 87.5% (Table 2).

DISCUSSION

In this pilot study, we found that PTSD-like stress symptoms are very common in inpatients with MDD. Higher prevalence of PTSD-like stress during the COVID-19 pandemic has been previously reported in health care workers (Rodríguez-Rey et al., 2020) and university students (Wathelet et al., 2021), and in the general population (Zhang et al., 2021).

Based on the results of the present study, the development of PTSD-like symptoms in MDD inpatients is associated with specific coping strategies. For instance, both avoidant and social support strategies were positive predictors. Our results are in keeping with previous studies, indicating the association of avoidant coping with the severity of depression (Rudnicki et al., 2001). Consistently with the results of the current study, it was demonstrated that both avoidant coping and COPE social support are associated with higher distress during a pandemic (Teasdale et al., 2012). Social support coping, which typically moderates the effect of a stressful event on the severity of depression (Tandon et al., 2013), may be maladaptive in case or restrictions that prevent social contacts generating, in this way, more anxiety. This was a pilot carried out at a single institution. Multicentric studies enrolling a larger patient population and including more variables are warranted.

Our results suggest that traditional and informal care (telehealth) focused on reducing anxiety, enhancing adaptive coping, and promoting general health might mitigate the traumatic effect of the pandemic in MDD patients reducing, in this way, the odds of psychiatric deterioration requiring hospital admission.

DISCLOSURE

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