ASSESSING THE FEAR OF COVID-19 IN PSYCHIATRIC PATIENTS: RESULTS FROM AN ITALIAN MULTICENTRIC STUDY

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Abstract

Objective: Even though the COVID-19 emergency has concluded, its consequences are still relevant. Recent evidence suggests that a significant proportion of individuals experience persistent symptoms long after the initial infection has resolved, classified as "Long COVID" condition. Fear of COVID-19 increases anxiety and stress levels in healthy individuals and exacerbates the symptoms of those with pre-existing psychiatric disorders; therefore understanding the impact of the pandemic on psychiatric disorders remains of utmost importance. The present study aimed at assessing the prevalence and predictive factors of fear of COVID-19 in a sample of patients with different psychiatric conditions.

Method: A sample of 269 psychiatric patients were recruited from two different tertiary clinics in Italy and assessed with the Fear of COVID-19 Scale (FCV-19S). In order to compare patients with a significant fear of COVID-19 or without (Fear+ vs. Fear-) and to identify the main features in terms of clinical dimension, exploratory and predictive analysis were performed.

Results. Female gender, age at illness onset, and insight levels emerged as positive predictors of FCV-19S. Conversely, current substance abuse emerged as a negative predictor of fear levels. Moreover, significantly lower FCV-19S scores were observed in patients with a diagnosis of schizophrenia spectrum disorders.

Conclusions. Specific sociodemographic and clinical factors predicted higher levels of fear of COVID-19 in psychiatric patients. Further studies are warranted to determine the potential long-term consequences of the COVID-19 impact on mental health.

Key words: covid19, mentalhealth, psychiatry, fear

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Introduction

The COVID-19 pandemic had, and is still having, a substantial impact on billions of people's habits. With the aim of containing the spread of viral infection, public health measures, such as social distancing or self-isolation, were first recommended by authorities, then taken from people because of the fear and anxiety of getting infected (Abuhammad et al., 2021). Previous experience with infectious disease outbreaks offers some insight into the psychological burden imposed on the general population across all phases of a pandemic continuum. Specifically, persistent fear and fear-related responses may result in a high incidence of psychological morbidities, exacerbation of psychiatric symptoms, and even indirect mortality, related to an increased risk of developing suicidal ideation (Ornell et al., 2020).

Hence, even though fear is a physiological response aroused by impending danger, it could be maladaptive when it is not proportionate to the actual threat (Steimer, 2002). Fear of COVID-19 increases anxiety and stress levels in healthy individuals and exacerbates the symptoms of those with pre-existing psychiatric conditions (Dell'Osso et al., 2021; Ornell et al., 2020). For instance, some habits used during the pandemic, such as frequent hand washing, use of gloves and masks, and social distancing may increase the risk of development of obsessive–compulsive disorder (OCD; Matsunaga et al., 2020), as well as an intensification of symptoms in patients with a previous diagnosis of OCD (Benatti et al., 2020; Krompinger et al., 2020).

In the last few years, growing evidence reported mental health consequences of the actual pandemic (Gruber et al., 2021; Vindegaard & Benros, 2020). Results suggest the COVID-19 pandemic adversely affects mental health across different countries with different income and measures (Lai et al., 2020), patient subpopulations (Hao X. et al., 2020), and quarantine status (Cao et al., 2020). In this perspective, a recent systematic review found that healthcare workers in direct contact with COVID-19 patients were at higher risk for depression, anxiety, insomnia, distress, and indirect traumatization than other occupational groups (da Silva & Neto, 2021). Furthermore, the likelihood of experiencing mental health concerns was disproportionately increased in those with pre-existing psychiatric disorders (Dell'Osso et al., 2021; Hao F. et al., 2020; Termorshuizen et al., 2020).

Several meta-analyses have pooled data on the prevalence of mental health outcomes in the general population (Arora et al., 2022; Wu et al., 2021; Cénat et al., 2021) however, the impact of the COVID-19 pandemic and related fear in populations with psychiatric disorders is still debated. In fact, evidence suggested that the COVID-19 pandemic did not impact pre-existing severe psychiatric disorders (Pan et al., 2021; Plunkett et al., 2021; Tundo et al., 2021). On the other hand, several authors indicated that people with a previous history of psychiatric disorder are at high risk of symptoms worsening during the COVID–19 pandemic, given their greater vulnerability to changes in daily routine due to quarantine and fear of illnesses compared to the general population (Druss, 2020; Yao et al., 2020). In addition, a recent study, using the COVID Stress Scale (CSS), evaluated the impact of pandemic-related stress on patients with pre-existing anxiety disorders, and found higher CSS total scores and higher scores on fears about danger and contamination, socioeconomic consequences, xenophobia, and traumatic stress symptoms scales in these patients (Asmundson et al., 2020).

It is known that excessive fear could impact the capacity of making logical decisions (Ahorsu et al., 2022), like avoiding hospitalization due to fear of the virus (Vanni et al., 2020) or attributing every physical sensation to COVID-19 (Coelho et al., 2020). However, fear of COVID-19 could also lead to efficient behaviors, like hands washing or social distancing, that help in preventing virus spread anxiety (Harper et al., 2021).

One of the most important instruments available to assess severity of the COVID-19-related fear is the Fear of COVID-19 Scale (FCV-19S; Ahorsu et al., 2022) that has been translated and validated into many languages and is characterized by good psychometrics properties, which were confirmed by several studies (Alyami et al., 2021; Reznik et al., 2021; Soraci et al., 2022). Higher overall scores indicate elevated levels of fear related to COVID-19 (Ahorsu et al., 2022).

Even though the COVID-19 pandemic emergency has concluded, its consequences are still relevant. Recent evidence suggests that a significant proportion of individuals experience persistent symptoms and complications long after the initial infection has resolved. This condition, commonly referred to as "Long COVID", has drawn attention due to its debilitating effects on mental health and well-being (Hovagemyan et al., 2023). Therefore, understanding the impact of the COVID-19 pandemic on psychiatric disorders remains of utmost importance.

In the present study, the FCV-19S was administered and used successively to compare two groups of patients on the basis of FCV-19S scores. To the authors' knowledge, this is the first study aimed at assessing the prevalence and predictive factors of fear of COVID-19 in a sample of patients with different psychiatric conditions.

Methods

The sample included 269 patients with psychiatric disorders attending two different tertiary clinics based respectively in Monza, IRCCS San Gerardo (n=224) and in Milan, ASST Fatebenefratelli Sacco-University Hospital (n=45), Lombardy region. Data collection took place between April and September 2020 (first Italian pandemic wave). Diagnoses were obtained through the administration of a clinical structured interview based on DSM-5 criteria (American Psychiatric Association, 2013; Structured Clinical Interview for DSM-5 Disorders, Clinician Version).

The severity of illness was assessed using the Hamilton Anxiety Rating Scale (HARS; Hamilton, 1959); Hamilton Depression Rating Scale (HDRS21; Hamilton, 1960), Yale-Brown Obsessive Compulsive Scale (Y-BOCS; Goodman et al., 1989), Positive and Negative Syndrome Scale (PANSS; Kay, S R et al., 1987), Self-report insight scale (Roncone et al., 2003), Global Assessment of Functioning (GAF; Hall, 1995), and the psychological General well-being index (PGWBI; Grossi & Compare, 2014). Moreover, FCV-19S (Ahorsu et al., 2022) was administered to investigate the impact of COVID-19 across different psychiatric disorders with promised evidence for assessing the Fear of COVID-19 (Alimoradi et al., 2022). Higher scores at FCV-19S represent higher levels of fear of COVID-19; in particular, according to Mohsen and cohauthors, a score $\geq$ 17.5 means a significant fear of COVID-19 (Mohsen et al., 2022).

For the purpose of the study, the sample was divided in two subgroups of patients based on FCV-19S scores, i.e., higher than 17.5, *Fear+*; less than 17.5, *Fear-* (Monhsen et al., 2022).

After obtaining written informed consent for using patients' information for research, socio-demographic and clinical variables were collected and included in a common database.

Selected analyzed variables included: (1) psychiatric service; (2) gender; (3) age; (4) marital status; (5) educational status; (6) employment; (7) psychiatric diagnosis; (8) age of illness onset; (9) positive family history for psychiatric disorders; (10) presence of comorbid medical disorders and (11) type of comorbid medical disorder; (12) presence of substance abuse; (13) presence of lifetime suicide attempts; (14) knowledge of COVID-19 standards; (15) compliance with COVID-19 standards.

In order to compare patients with or without a significant fear of COVID-19 (Fear+ vs. Fear-) and to identify the main features in terms of clinical characteristics and psychopathological dimension, an exploratory analysis was performed. Pearson Chi-squared and ANOVA tests were used. In the comparative analysis, a Bonferroni-Holm procedure was used to reduce the risk for type 1 error, due to a large number of tests analyzed. Next, we ran a hierarchical multiple regression analysis with FCV-19S as outcome. In the first step, we included sociodemographic predictor variables such as age, gender, marital status, occupational status, and scolarity (years). In the second step, we included medical comorbidity (yes or no). In the third step, psychiatric diagnosis and age at illness onset variables were included. In the final step, psychometric scales and

current substance abuse were included as predictors. We controlled for multicollinearity (VIF>5) and applied a Bonferroni's correction to interpret the results. All analyses were performed using Statistical Package for the Social Sciences (SPSS) 25 software for Windows (SPSS Inc, Chicago, IL, USA). The level of statistical significance was set at 0.05.

The study was conducted in accordance with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008 (PMC2566407). Patients provided their written informed consent to participate in this study and for the use of their anonymized data for research purposes.

Results

The whole sample included 269 patients with a psychiatric diagnosis. More in detail, 52 subjects were diagnosed with Unipolar Depression (19.3%), 24 with Bipolar Depression (8.9%), 89 with Schizophrenia spectrum disorders (33.1%), 31 with Personality Disorders (11.5%), 26 with Anxiety Disorders (9.7%), and 47 with Obsessive-Compulsive disorder (17.5%).

The whole sample showed a 50.6% male rate and a mean age of 49.10 ± 15.62 years. The mean years of education were 10.67 ± 3.2; 35.2% of the sample had a full-time/part-time occupation and 52.1% patients were single.

Regarding clinical features, the mean age at psychiatric disorder onset was 30.76 ± 14.04 years, 40.3% of patients had a positive psychiatric family history, 11% reported current substance abuse, and 51.9% current medical comorbidity; among these, the most represented were cardiovascular diseases (19.6%). Most of the patients knew and were compliant to COVID-19 standards (95.5% and 77.6%, respectively). A mean score of 17.9 ± 7.33 on FCV-19S emerged for the whole sample. The main socio-demographic and clinical variables of the samples are listed in **table 1** and **2**.

For the purpose of the study, the sample was then divided into two subgroups, Fear+ and Fear-, based on

Table 1. *Comparison of sociodemographic and clinical variables between groups*

	Fear - (n= 97)	Fear + (n= 172)	Total sample (n= 269)
Center (n, %)			
IRCSS San Gerardo	81 (83.5%)	143 (83.1%)	224 (83.3%)
ASST FBF Sacco	16 (16.5%)	29 (16.9%)	45 (16.7%)
Gender (M;F)	**66 (68%); 31 (32%)****	**70 (40.7%); 102 (59.3%)**	136 (50.6%); 133 (49.4%)
Age (years; mean ± ds)	47.02 ± 14.55	50.26 ± 16.17	49.1 ± 15.6
Years of education (mean ± ds)	10.77 ± 2.98	10.61 ± 3.32	10.67 8 ± 3.20
Marital status (n, %)			
Single	63 (66.3%)	76 (44.2%)	139 (52.1%)
Engaged/Married	**22 (23.2%)^**	**71 (41.3%)**	93 (34.8%)
Divorced/Separated	9 (9.5%)	21 (12.2%)	30 (11.2%)
Widowed	1 (1.1%)	4 (2.3%)	5 (1.9%)
Psychiatric Diagnosis (n, %)			
Unipolar depression	**3 (3.1%)****	**49 (28.5%)**	52 (19.3%)
Bipolar depression	9 (9.3%)	15 (8.7%)	24 (8.9%)
Schizophrenic Spectrum	**59 (60.8%)****	**30 (17.4%)**	89 (33.1%)
Personality disorders	10 (10.3%)	21 (12.2%)	31 (11.5%)
Anxiety disorders	**0 (0%)****	**26 (15.1%)**	26 (9.7%)
Obsessive-compulsive disorder	16 (16.5%)	31 (18%)	47 (17.5%)
Age at onset (years; mean ± ds)	27.4 ± 9.77^	32.6 ± 15.6	30.76 ± 14.04
Professional status (n, %)			
Worker	**27 (28.2%)***	**71 (42.2%)**	98 (36.7%)
Unemployed	16 (16.8%)	35 (20.3%)	51 (19.1%)
Student	8 (8.4%)	7 (4.1%)	15 (5.6%)
Retired	20 (21.1%)	40 (23.3%)	60 (22.5%)
Disability benefit	24 (25.3%)	19 (11%)	43 (16.1%)
Medical Comorbidity (Y/N, n, %)	48 (50%); 48 (50%)	91 (65.5%); 81 (47.1%)	139 (51.9%); 129 (48.1%)
Type of Medical Comorbidity (Y/N, n, %)			
None	48 (59.3%)	72 (50.3%)	120 (53.6%)
Cardiovascular diseases	15 (18.5%)	29 (20.3%)	44 (19.6%)
Autoimmune diseases	2 (2.5%)	7 (4.9%)	9 (4%)
Diabetes and Metabolic disorders	10 (12.4%)	14 (9.8%)	24 (10.7%)
Oncological disorders	2 (2.5%)	3 (2.1%)	5 (2.2%)
Osteoarticular diseases	1 (1.2%)	4 (2.8%)	5 (2.2%)
Neurological diseases	1 (1.2%)	6 (4.2%)	7 (3.1%)
Sexually transmitted diseases	0 (0%)	3 (2.1%)	3 (1.3%)
Respiratory diseases	1 (1.2%)	5 (3.5%)	6 (2.7%)
Polycomorbidities	1 (1.2%)	0 (0%)	1 (0.4%)
Current substance abuse (Y/N, n, %)	**19 (20%); 76 (80%)***	**12 (7%); 159 (93%)**	31 (11.7%); 235 (88.3%)
Positive family history (Y/N, n, %)	**30 (31.3%); 66 (68.8%)^**	**78 (45.3%); 94 (54.7%)**	108 (40.3%); 160 (59.7%)

Notes: Values for categorical and continuous variables are expressed in percentages and mean ± ds, respectively. Fear+: Scores ≥ 17.5 at Fear of COVID-19 scale; Fear- : Scores < 17.5 at Fear of COVID-19 scale. **^p<.05; *p<.005; **p<.001**

Table 2. *Comparison of psychometric questionnaires variables between groups*

	Fear - (n=97)	Fear + (n=172)	Total sample (n=269)
GAF (mean ± ds)	**54.11 ± 10.6****	**63.68 ± 8.21**	60.22 ± 10-23
HARS (mean ± ds)	**4.22 ± 4.1****	**7.43 ± 4.5**	6.41 ± 4.68
HDRS21 (mean ± ds)	5.34 ± 3.8	5.69 ± 4.2	5.58 ± 4..12
Insight (mean ± ds)	**7.49 ± 2.7****	**12.88 ± 2.43**	11.17 ± 3.55
PGWBI (mean ± ds)	**75.61 ± 16.17****	**65.08 ± 16.24**	68.42 ± 16.91
PANSS (mean ± ds)	**47.7 ± 12.91****	**42.38 ± 9.74**	44.31 ± 11.26
Y-BOCS (mean ± ds)	22.07 ± 4.48	23.14 ± 8.85	22.78 ± 7.59
Knowledge of COVID-19 standards (Y/N; n, %)	87 (90.6%); 1 (1%)	169 (98.3%); 0 (0%)	256 (95.5%); 1 (0.4%)
Compliance with COVID-19 standard (Y/N; n, %)	**54 (56.3%); 6(6.3%)****	**154 (89.5%); 6 (3.5%)**	208 (77.6%); 12 (4.5%)

Notes: Values for categorical and continuous variables are expressed in percentages and mean ± ds, respectively. Fear+: Scores ≥ 17.5 at Fear of COVID-19 scale; Fear-: Scores < 17.5 at Fear of COVID-19 scale; HARS: Hamilton Anxiety Rating Scale; HDRS21: Hamilton Depression Rating Scale; GAF: Global assessment of functioning; Insight: Self report insight scale; PGWBI: Psychological general well-being index; PANSS: Positive and Negative Syndrome Scale; Y-BOCS: Yale-Brown Obsessive-Compulsive Scale. ***p<.005; **p<.001**

FCV-19S scores according to Monhsen and colleagues (Monhsen et al., 2022).

Patients with Fear+ were more frequently women (59.3% vs 40.7%; p<.001), married (41.3% vs 23.2%; p<.05), had a full/part-time occupation (42.2% vs 28.2%; p<.005), had a higher age at illness onset (32.61 ± 15.65 years vs 27.44 ± 9.7 years; p<.005), and showed higher rates of family history for psychiatric disorders (45.5% vs 31.3%, p<.05).

All patients with a diagnosis of Anxiety disorder were Fear+ (100%), followed by 94.2% for the Unipolar depression diagnosis (p<.001); furthermore, 33% of patients with a diagnosis of Schizophrenia spectrum disorders were Fear+ (p<.001). Lastly, in the Fear+ group significantly lower rates of current substance use emerged (7% vs 20%, p<.05).

In regard to psychometric questionnaires, higher scores on HARS (7.43±4.5 vs 4.22±4.1; p<.001), GAF (63.68±8.21 vs 54.11±10.64 ; p<.001), and Insight scales (12.88±2.4 vs 7.49±2.7; p<.001) emerged in Fear+ group. Furthermore, the Fear- group reported higher scores on PANSS (47.7±12.9 vs 42.3±9.74; p<.001) and PGWBI (75.61±16.17 vs 65.08±16.24; p<.001) compared to the Fear+ counterpart. Finally, Fear+ patients were more compliant with COVID-19 standards (89.5% vs 56.3%; p<.001).

The results of the hierarchical multiple regression analysis explained more than half of the variance in the FCV-19S (R^2=0.687). After applying Bonferroni's correction, the following variables positively predicted Fear scores: gender (female, β= 1.659, p=.024), age at illness onset (β= .154, *p*<.001), insight (β = .977, p<.001), and GAF scores (β=.124, p<.002). Conversely, Fear of COVID-19 scores were inversely associated with PGWBI scores (β=−.080, p<.000) and current substance abuse (β=-3.485, p<.005). Lastly, age at recruitment (β= -0.45, *p*=.163), marital and occupational status (β=.310, *p*=.522 and β=-.212, *p*=.447, respectively), scolarity (β= .088, *p*=.441), medical comorbidity (β= .904, *p*=.209), and psychiatric diagnosis (β= -.700, *p*=.107) were not significant predictors of FCV-19S. The other variables were excluded in the regression models.

Discussion

The COVID–19 pandemic affected not only physical health but also mental health and well-being, leading to considerable psychosocial consequences. Furthermore, the likelihood of experiencing mental health concerns was disproportionately increased in those with pre-existing psychiatric disorders (F. Hao et al., 2020; Termorshuizen et al., 2020).

To the authors' knowledge, this is the first study aiming at determining the prevalence and predictive factors of fear of COVID-19 in a sample of patients with various psychiatric conditions. Overall, the whole sample showed significant levels on FCV-19S.

When the two subgroups based on FCV-19S were compared, our results highlighted that patients with Fear+ were more frequently women, married, and with a full/part-time occupation.

Consistently, previous evidence showed that workers experience higher levels of fear during COVID-19 pandemic (Wang et al., 2021; Maamri et al., 2023). Patients, in fact, while being exposed to the virus during their workday, may experience a negative perception in terms of a safe working environment.

Moreover, many other factors such as age (Rahman et al., 2020; Santamaría et al., 2021), female gender (Oducado et al., 2021), having children (Meraya et al., 2021), and job distress (Wang et al., 2021) have been identified in previous studies as affecting the population's levels of stress and fear. A recent study by Maamri and colleagues reported higher levels of fear of COVID-19 among females in line with previous studies (Cvetković et al., 2022; Maamri et al., 2023; Rahman et al., 2020). Another study by Fiorillo and colleagues based on an online survey conducted in the Italian population highlighted that symptom of stress, depression, and anxiety significantly worsened during the pandemic, and, in particular, female respondents and people with pre-existing mental health problems were at higher risk of developing severe anxiety and mood symptoms (Fiorillo et al., 2020).

Additionally, the majority of the Fear+ patients were married. The COVID-19 pandemic has led to many health issues and family-related changes, such as financial worries, loss of employment, reduced access to health services, and low social support, which might have been potential factors amplifying the fear for the health of family members (Meraya et al., 2021). Furthermore, according to Mertens and coauthors, the main factor of COVID-19 fear is worry for the loved ones (Mertens et al., 2020). Another possible

Figure 1. *Comparison of sociodemographic and clinical features between groups of fear of COVID-19*
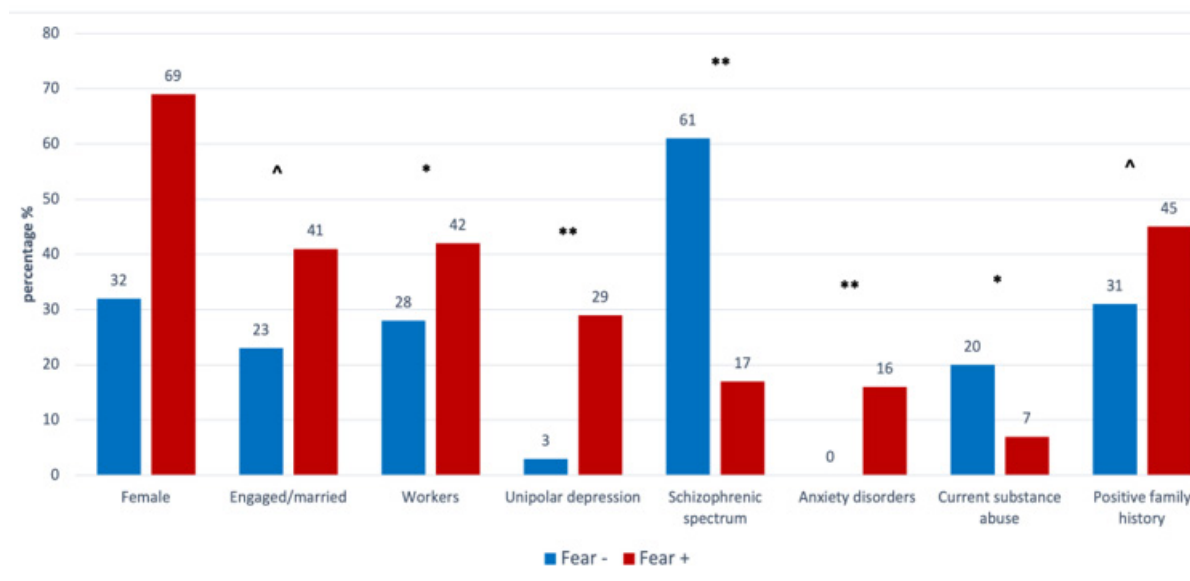
Notes: Fear+: Fear of COVID-19 scale ≥ 17.5; Fear- : Fear of COVID-19 < 17.5. ^$p<.05$; *$p<.005$; **$p<.001$

explanation could be related to the presence of children within the family. Maamri and colleagues found that having children living at home was an independent predictor of higher levels of fear of COVID-19 (Maamri et al., 2023).

A higher score of FCV-19S emerged in patients with positive family history for psychiatric disorders. An interesting study by Turner and colleagues showed that children of parents with an anxiety disorder were seven times more likely to develop an anxious condition than those with parents without an anxiety diagnosis (Turner et al., 1987). It is likely that a child who witnesses psychological suffering, and anxious or worrisome behavior in a parent or significant relative may begin to model that same behavior, perceiving many future threats and related fears (Barrett et al., 1996; Dadds et al., 1996).

All patients with a diagnosis of Anxiety disorder showed higher scores on the FCV-19S scale, followed by those with a unipolar depression diagnosis (94.2%). Consistently, higher scores on the HARS scale, which measures the severity of anxiety symptoms experienced, emerged in the Fear+ group compared to their counterparts. Recent research by Asmundson and colleagues has shown that patients with pre-existing anxiety disorders were more likely to experience fear, showing higher rates of self-isolation (Asmundson et al., 2020). In addition, new evidence showed that long COVID is associated with higher levels of psychiatric symptoms, new-onset of psychiatric disorders, and a current significant suicide risk (Gasnier et al., 2022).

Significant lower rates of current substance abuse emerged in the Fear+ group. In addition, the results of the regression analysis confirmed the negative predictive role of use of substance in FCV-19S scores. In this regard, a substantial body of evidence has documented changes in substance use during the COVID-19 pandemic (Acuff et al., 2022). During periods of distress and uncertainty, individuals often employ various coping mechanisms to alleviate both their physical and psychological distress (Ding et al., 2021). In our sample, some patients may have turned to substances as a form of self-medication to cope with their distressing emotions, potentially leading to reduced self-perceived levels of fear. Therefore, substance use

can serve as a temporary escape, numbing individuals to the stress and uncertainty posed by COVID-19 (Acuff et al., 2022; Ding et al., 2021).

In terms of age at onset, our sample showed a positive correlation between FCV-19S and age at illness onset, revealing a higher age at onset in those patients with higher FCV-19S scores. These findings could be related to the higher prevalence of later age at onset in anxiety disorders, such as generalized anxiety disorder (GAD), compared to other psychiatric conditions (Kessler et al., 2015).

Interestingly, in our sample, patients with a diagnosis of schizophrenia spectrum disorders reported significantly lower levels of fear of COVID-19. Additionally, higher PANSS scores were observed in the Fear- group, although they did not have a predictive role in FCV-19S scores. Consistently with present results, individuals with schizophrenia have, in general, lower self-control, lower insight, and lower self-care (Caponnetto et al., 2021; Dell'Osso et al., 2021). These elements may have influenced the greater difficulty shown in understanding correct information about COVID–19 and in preventing possible contagion with appropriate behaviors by patients with schizophrenic spectrum disorders from our sample. In particular, this result could be related also to lower rates of compliance to COVID-19 standards reported by Fear- patients. Moreover, it is known that Schizophrenic spectrum disorders usually have early-onset, potentially explaining the negative correlation of FCV-19S scores and age at onset.

Lastly, in relation to psychometric questionnaires, a predictive role of Insight scale emerged in FCV-19S scores. In this perspective, a higher perception of the COVID-19 risks could be due to a greater critical level of insight and awareness. Consequently, higher scores on insight scale may have contributed to a greater fear response. Coherently, the Fear- group reported higher scores of PGWBI. Therefore, higher scores on the PGWBI scale indicate greater awareness and psychological well-being, assessed in different domains, such as anxiety, depression, positive well-being, self-control, general health, and vitality.

The abovementioned results should be interpreted in light of some methodological limitations. First,

Figure 2. *Comparison of psychometric questionnaires between groups of fear of COVID-19*
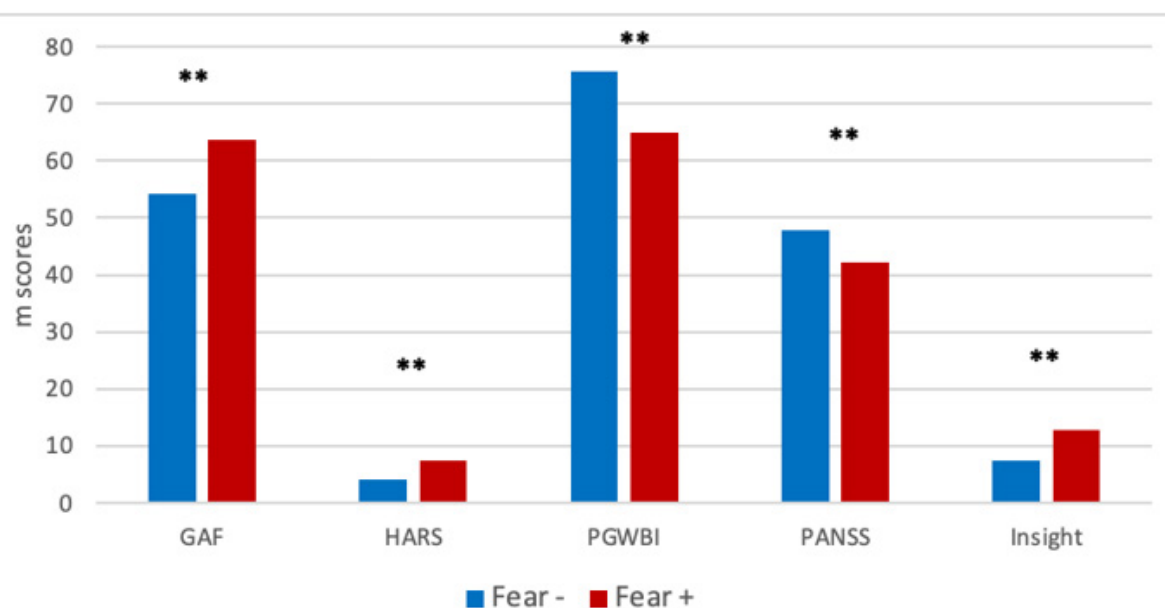
Notes: Fear+: Fear of COVID-19 scale ≥ 17.5; Fear- : Fear of COVID-19 <17.5; GAF: Global assessment of functioning; HARS: Hamilton Anxiety Rating Scale; PGWBI: Psychological general well-being index; PANSS: Positive and Negative Syndrome Scale; Insight: Self report insight scale;. ^p<.05; *p<.005; **p<.001

the cross-sectional nature of the study allowed only a one-time assessment. Secondly, some variables were obtained retrospectively, being susceptible to recall bias. Furthermore, the lack of data on participants' direct exposure to COVID-19 may limit the generalizability of our results. Specifically, we did not collect information on whether participants had been infected with COVID-19 or had witnessed infections in their relatives. These variables could impact the level of fear of COVID-19 among our cohort of patients. Future longitudinal studies are needed to assess the persistence of fear of COVID-19 and its long-term consequences on mental health.

Conclusions

In light of the present findings, specific sociodemographic and clinical factors were associated with higher levels of fear of COVID-19 among psychiatric patients. Female gender, age at illness onset, insight, and GAF scores emerged as positive predictors of FCV-19S. Conversely, current substance abuse emerged as a negative predictor of fear levels. These findings underscore the complex interplay between mental health conditions and fear of COVID-19. Future longitudinal studies are crucial to determine the long-term impact of COVID-19 on mental health and to develop strategies for mitigating these effects in psychiatric populations.

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