



## **Assessment of Psychological Stress among Quarantined COVID-19 Patients**

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### **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript*

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### **ABSTRACT**

Corona Virus Disease 2019 (COVID-19) has been causing a worldwide pandemic since the end of 2019. This study looked at the mental health of COVID-19 patients who had been quarantined. This cross-sectional study included fifty COVID - 19 patients who were under quarantine. Online self-reported questionnaires were used in the study. Demographic data and an inventory of pandemic-related stress factors (PRSF) were used to analyse COVID-19-related stress domains. The quarantined COVID - 19 patients had pandemic related stress among themselves. Lack of knowledge about infectiveness and virulence (78%), sleep disorders (94%), financial concerns (92 %) and feeling isolated and avoidance by others (90%) were the most common stressors. Eighty two percent of the patients felt that they were being protected by the family and relatives and only 48% felt that the government is taking the responsibility of protecting

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them. The findings show that COVID-19 patients in quarantine reported severe psychological distress. As a result, this study urge that required measures be taken to alleviate COVID-19 patients stress, with special focus paid to patients perceptions of stigma and coping techniques.

**Keywords:** *Psychological stress; quarantined COVID -19 patients; pandemic-related stress factors scale (PRSF).*

## 1. INTRODUCTION

SARS-CoV-2 (COVID-19), a novel beta-coronavirus discovered in December 2019, causes a severe systemic multi-organ illness. The condition is typically defined by a respiratory infection, but it can also result in other organ dysfunction, with long-term and sometimes fatal implications. The main source of infection for coronavirus disease 2019 (COVID-19) is patients infected with SARSCoV-2. Infected people who are asymptomatic can spread the virus to others, primarily through aerosols from the respiratory tract, but also through direct touch<sup>1</sup>. Children and infants, as well as elderly persons with underlying conditions, are more likely to become infected with the virus and develop severe disease. There are currently no particular medications available to treat this illness. Antiviral and traditional medicine treatment, isolation, symptomatic support, and constant monitoring of disease progression are all part of the treatment and nursing [1].

The general public and healthcare practitioners have been the focus of empirical attention on mental health during the corona virus pandemic (COVID-19) [2]. However, there is a scarcity of data on the mental health effects of COVID-19 patients in quarantine and their relatives. COVID-19 patients and their families are subjected to a number of important stressors like increasing family-care burdens and economic stressors, as well as social distance from their loved ones, which promote a sense of ambiguity about their health state [3]. Many patients and relatives suffer with multitasking, uncertainty, and stress, putting them at risk for greater psychological discomfort. However, the mental health needs of COVID-19 patients and their families are frequently ignored [4].

Furthermore, the existence of mood and anxiety problems may be strongly linked to the severity of physiological condition, particularly as measured by peripheral inflammatory indicators in the blood. Changed levels of peripheral C-reactive protein (CRP) [5], white blood cell (WBC) count<sup>17</sup>, and excessive cytokines [6] have

all been linked to depression and anxiety symptoms in studies.

Additionally, patients of viral infectious diseases have been linked to depression [7], anxiety [8], adjustment disorder [9], acute stress-related disorder and post-traumatic disorder, according to previous research. Collecting data relevant to infected patients acute psychological suffering could lead to a more accurate and comprehensive knowledge of the influence of a virus on mental health.

In a study on the psychological status of Ebola patients' caregivers, 29% of surveyed participants felt lonely and 45% sought psychological counseling [5]. According to research fear, stress, uncertainty, loneliness, and despair were all common in those constrained to stay at home, regardless of their COVID-19 diagnosis [10-12].

Therefore, we were intended to investigate the psychological stress among COVID-19 patients in quarantine (mild cases).

## 2. METHODOLOGY

**Design:** A quantitative, non-experimental, descriptive and cross-sectional study was conducted among fifty COVID - 19 patients who were under quarantine.

**Sample:** The target population of the study was all the COVID - 19 patients who were under quarantine. The study samples were the quarantined COVID -19 who were willing to participate in the study. The convenient sampling technique was used to select fifty COVID - 19 patients on self – quarantine. The patients who were willing to take part in a phone survey, were more than 25 years old, not diagnosed with any mental disorders and could answer questions on an online survey with mild symptoms were eligible to participate in the study. The purpose of the study was explained through phone and consent was obtained through Google Docs before the start of the data collection. The participants were given full freedom to

withdraw from the study anytime during the data collection.

**Tools/Instruments:** Online self-reported questionnaires were used in the study. The data was collected online using the tool with 2 sections including demographic information, stress and coping status of the quarantined COVID - 19 patients. Gender, age, marital status (single, married, divorced), and socioeconomic background (e.g., education level, occupation) were collected. Concerns and opinions on on-line psychological support were asked in open-ended questions with free-form response fields.

An inventory of pandemic-related stress factors was used to analyze COVID-19 related stress domains (PRSF). The PRSF includes questions about particular concerns about contagion (for example, fear about infecting family members), sentiments of being informed and protected by authorities, weariness, and social isolation. It was constructed from questions that have previously proven to be relevant in studies on the SARS and N1H1 pandemics [13] and the Cronbach's coefficient 0.73, For item assessment, a four-point Likert scale was utilized (0 for never to 3 for

always). All the questions in the tool were self-explanatory. The responses of often -2 and always -3 were taken for analysis.

**Procedures of Data Collection:** The tool was self-administered questionnaire which took approximately 45 minutes to complete. It was distributed to the patients through as Google docs by email, what's app etc. They were reminded about the completion of the tool 3 times and it was made certain to complete all the questions. The study was conducted between Apr. 2021 and June 2021.

**Statistical Analysis:** The socio demographic data, PRSF of the participants were analyzed using frequencies, percentage distribution and mean and standard deviation. Inferential statistics was used to find the relationship between PRSF with selected socio-demographic characteristics using Chi-square test.

### 3. RESULTS

The majority of patients were male, 68% of were married and 14% were retired. Fifty eight percent had one child, 52% were having diploma or

**Table 1. Distribution of demographic characteristics of quarantined COVID 19 patients**

Demographic characteristics	N	%
<b>Sex</b>		
Female	17	34
Male	33	66
<b>Marital status</b>		
Married	34	68
Single	16	32
<b>Occupation</b>		
Unemployed	13	26
Employed	30	60
Retired	7	14
<b>Children</b>		
Nil	18	36
1	29	58
≥ 2	3	6
<b>Education level</b>		
No formal Education	6	12
Under diploma	18	36
Diploma or higher	26	52
<b>Financial status</b>		
Low	17	34
Middle	20	40
High	13	26
<b>History of chronic illnesses</b>		
Yes	12	24
No	38	76

**Table 2. Pandemic related stress factors (PRSF) among quarantined COVID -19 patients**

Pandemic related stress factors(PRSF)	% response	
	Often	Always
Anxiety about infecting family	36	64
Lack of knowledge about infectiveness and virulence	22	78
Lack of knowledge about protection and prevention	52	48
Feeling protected by the government	44	56
Feeling protected by the family and relatives	18	82
Financial concerns	8	92
Mental exhaustion	24	76
Sleep disorders	6	94
Feeling isolated and avoided by others	10	90

higher level of education and 40% from a middle-income family. Twenty four percent were having chronic illness among the patients in quarantine (Table 1).

According to table 2, the quarantined COVID-19 patients had pandemic related stress among themselves in which lack of knowledge about infectiveness and virulence (78%), sleep disorders (94%), financial concerns (92%) and feeling isolated and avoidance by others (90%) were the most common stressors. Eighty two percent of the patients felt that they were being protected by the family and relatives and only 48% felt that the government is taking the responsibility of protecting them. The unexpectedness, loss of control (uncertainty), and sensation of powerlessness were the key contributors in the patients' impression of stress.

As per the result of the present study, the Covid -19 patients who were in self quarantine expressed the psychological stress which was mainly due to the lack of knowledge on the disease progress and social stigma associated with Covid -19.

#### 4. DISCUSSION

The corona virus disease (COVID-19), also known as the acute respiratory disease caused by the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2), began spreading in China at the end of 2019 and has since become an international health emergency without precedent in terms of its health, economic, and organizational consequences on people's lives (World Health Organization, 2020).

According to the qualitative report by Guo Q, Zheng Y et al. [14] concerning the patient reports of negative feelings such as fear, guilt, and

helplessness, qualitative analysis indicated consistent outcomes. COVID-19 patients highlighted two key concerns: stigma and the uncertainty of viral illness progression.

Similar study findings were reported from the study on anxiety and depression symptoms in covid-19 isolated patients and in their relatives by Dorman-Ilan [15] concluded that patients and family had equally high levels of anxiety, which are stronger in women and lower in ultra-orthodox individuals and suggested that patients and adult relatives anxiety issues should be addressed.

#### 5. CONCLUSION

The findings show that COVID-19 patients in quarantine reported severe psychological distress. As a result, we urge that required measures be taken to alleviate COVID-19 patients' stress, with special focus to be paid on the patients perceptions of stigma and coping techniques when offering psychological therapies.

#### CONSENT

A written consent from the participant students were collected before the study by explaining the purpose of the study, the role of the participants, confidentiality of the information and their right to withdraw from the study at any point of time of the study.

No harm to the patients was ensured by following the COVID – 19 precautions.

#### ETHICAL CONSIDERATION

Ethical clearance was obtained from the Institutional ethical committee.

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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