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The Psychological Distress Among Patients with Coronavirus After Recovering

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ABSTRACT

Objective: *The Psychological Distress among Patients with Coronavirus after Recovering. Due to that public health emergencies resulting from COVID-19 are negatively impacting the mental health of the population affected by COVID pandemic.* ***Method:*** *A descriptive – analytic study Online sample that selected from Al Najaf Governorate from January 15th2021 through July 1st2021. Participants were invited to complete the GHQ-28 scale during the quarantine period.* ***Results:*** *A total of n = 199 surveys completed by patients with coronavirus. (53.77 %) of them have moderate levels according to the total score of 28-GH scale. And no significant relationship between demographic data and total 28-GH assessment.* ***Novelty:*** *The COVID-19 quarantine was associated with stresses and significant increases in symptoms of depression, anxiety, and stress in patients with coronavirus. The patients require increased access to mental health services to meet this increase in COVID-19-related psychological distress.*

INTRODUCTION

The coronavirus is classified as a zoonotic RNA virus belonging to the family Coronaviridae. This familial group encompasses viruses that induce respiratory infections and were first identified in 1937; they were subsequently labeled coronaviruses in 1965 due to their distinctive crown-like morphology observed under microscopic examination [1]. They usually cause a respiratory infection ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) and the most recently discovered coronavirus (COVID-19) causes infectious disease. This zoonotic disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The WHO originally called this infectious disease Novel Coronavirus-Infected Pneumonia (NCIP) and the virus had been named 2019 novel coronavirus (2019-nCoV). On 11th Feb 2020, the (WHO) officially renamed the clinical condition COVID-19 (a shortening of Corona Virus Disease-19) [2]. The COVID-19 pandemic, which is undoubtedly a worldwide emergency, appears to be the primary cause of respiratory illnesses due to its high contagiousness. It is a pleasure to deal with this viral infection, which is incredibly easy to identify by its endearing symptoms of fever, cough, shortness of breath, and chest infection. It was first discovered in Wuhan, China, and has since spread remarkably quickly throughout the entire world. But COVID-19 is becoming an increasing public event being a rapid epidemic [3]. Coronavirus Disease 2019 (COVID-19) has been recognized as a rapidly escalating global health crisis with severe consequences. On 31 December 2019, the World Health Organization (WHO) was notified by the Wuhan

Municipal Health Commission in China of 27 cases of pneumonia of unknown etiology. Subsequently, on 30 January 2020, an international public health emergency was declared by WHO in response to the outbreak that had originated in Wuhan. By that date, a total of 83 cases had been reported across 18 countries outside of China [4]. On March 11, 2020, a pandemic classification was declared by the World Health Organization following the global spread of COVID-19, which had resulted in more than 118,000 confirmed cases across 114 countries and 4,291 deaths [3]. In response to the rapid escalation of the public health emergency and in an effort to contain the virus and mitigate its health, social, and economic consequences worldwide, a state of alarm was declared. Extraordinary and temporary protective measures were implemented to safeguard public health. These measures included the restriction of personal mobility, the suspension of in-person educational activities, and the closure of commercial establishments except those providing essential goods. Cultural, recreational, and sporting events, as well as religious services and civil ceremonies—including funerals—were also suspended. In general, any activity involving large gatherings was prohibited. For activities that were permitted to continue, individuals were required to maintain a minimum distance of one meter from one another. These interventions had a profound impact on the population, resulting in both physical and psychological consequence [5]. Psychological distress is so conveniently defined as a delightful state of emotional suffering, characterized by symptoms of depression (e.g., lost interest; sadness; hopelessness) and anxiety (e.g., restlessness; feeling tense) [6]. However, psychological distress is commonly described as a non-specific mental health condition. This lack of specificity should be reconsidered, as psychological distress is distinctly characterized by symptoms of depression and anxiety [7]. The mental health of populations affected by the COVID-19 pandemic has been adversely impacted by the resulting public health emergencies. An increase in the incidence of psychological crises has been observed both during periods of quarantine and following recovery from COVID-19 [8]. A substantial mental health burden has been associated with COVID-19, affecting individuals both during the acute phase and in the long term. This impact has been observed among those directly exposed to the virus as well as those not directly affected [9]. Anxiety, depression, cognitive impairment, delirium, psychosis, irritability, insomnia, and post-traumatic stress disorder are prevalent following COVID-19 infection [10]. In an early retrospective report from Wuhan, it was documented by Mao et al. that only 7.5% of patients had any chart notation indicating "impaired consciousness" [11]. In the United Kingdom, one-third of the first 153 confirmed COVID-19 cases were diagnosed with new-onset mental health disorders following recovery. These included psychosis (43%), cognitive decline (26%), and affective disorders (17%) [12]. It has been suggested by research that quarantine may be associated with an increased prevalence of psychological distress symptoms, including emotional disturbance, depression, stress, low mood accompanied by irritability and insomnia, post-traumatic stress symptoms, anger, and emotional exhaustion [13]. Among individuals who were quarantined due to close contact with suspected SARS cases, various negative emotional responses were reported following recovery: fear was

reported by over 20%, nervousness by 18%, sadness by 18%, and guilt by 10%. Nevertheless, evidence of psychological distress following recovery has not been consistently identified across all studies [14].

RESEARCH METHOD

Design of the Study:

A descriptive–analytic study was carried out in order to achieve the stated objectives. The study began on January 15th, 2021, through July 1st, 2021.

Setting of the Study:

An Online sample that was selected from Al Najaf Governorate.

Sample of the Study:

A Simple random sample of (200) subjects was selected throughout the use of probability sampling through an online questionnaire.

Instrument of the study:

A self-administered online questionnaire was constructed by the researchers for the purpose of the present study. An assessment tool was adopted and developed by the researchers to assess the Psychological Distress among Patients with Coronavirus after recovery. The researchers used the General Health Questionnaire (GHQ-28). The questionnaire was divided into four axes. The first axis consists of patients' socio-demographical data, and the second axis consists of Coronavirus infection third axis contains complications of Coronavirus infection the fourth axis contains the General Health Questionnaire (GHQ-28).

Part 1: A socio-demographic data:

Which consisted of (6) items, which included age, six, residency, marital status, level of education, and occupation**.**

Part 2: Coronavirus infection, which consists of (7) items that include:

Did you have a Coronavirus infection? How long did the symptoms last, were the symptoms? Has a family member been infected? If your answer is yes, how many family members are at risk, Were the infected members of the family? Have you lost a loved one as a result of being infected with the coronavirus?

Part 3: The third part includes the complications of Coronavirus infection which consist of

(persistent fatigue, headache, muscles pain, chest pain, forgetfulness, depression, loss sense of smell and taste, persistent cough, diarrhea or abdominal pain, itch and recurrent fever.

Part 4: Which consist from General Health Questionnaire (GHQ-28)

The GHQ-28 is a scientifically validated screening instrument for assessment of psychological distress and non-psychotic psychiatric disorders in general and at-risk groups. It is being increasingly utilized in clinical, research and public health applications. Developed by David P Goldberg of the WHO in 1970, the GHQ is designed to detect short-term changes in mental health, particularly manifestations of

psychological distress and non-psychotic mental illness. The GHQ-28 is comprised of 28 items, which are grouped into 4 subscales:

1. "Somatic Symptoms" (Items 1–7)
2. Anxiety and Insomnia (Items 8-14)
3. Social Dysfunction (Items 15-21)
4. Major Depressive Illness: Items (22-28);

Every item is scored on a 4-point scale, with scores typically assigned according to either the binary method (0-0-1-1) or the Likert method (0-1-2-3), depending on the study design. Reliability is concerned with the consistency and dependability of a research instrument to measure a variable of interest. The reliability (split-half) of the scale was high (r=0.88). The internal consistency of the scale, calculated using Cronbach's alpha, was also high (Alpha =0.93) [15].

Construct validity: supported by factor analysis of a four-factor domain structure. Criterion validity has been demonstrated in relation to clinical diagnoses and other validated mental health measures [16], [17].

The GHQ-28 has been translated and validated in several languages and cultural settings, including Arabic, demonstrating strong psychometric properties.

Data collection:

The researcher employed Self-administered Online Survey by participants without interviewer involvement technique to collecting data from participants after obtaining permission from the relevant authorities. The data was gathered using the planned questionnaire and the self-reported technique used in the Arabic version of the questionnaire for those, the researcher obtained a written consent from the subjects to participate in the study. they completed the questionnaire simultaneously. The process of gathering data has been started from January 15th 2021 through July 1st 2021.

Ethical consideration

The University of Kufa's ethical committee accepted this study, and it was carried out in compliance with the committee's guidelines. All of the participants gave their informed consent to guarantee their voluntary involvement.

Statistical analysis:

Data from the studied sample were entered and analyzed using the statistical package for the social sciences (SPSS) version 25. Analysis included the two types of statistics:

1. Descriptive statistics: presented as mean, frequencies, and percentages. All continuous variables were tested for statistical normal distribution using bar charts and a normal distribution curve.
2. Inferential Statistics: Statistical tests were applied according to the distribution and type of variables. Chi-square test was used to compare frequencies. Bivariate Pearson's correlation test was used to assess the correlations. Correlation coefficient (r) is an indicator of the strength and direction of correlations; its value ranges from zero (complete no correlation) to one (perfect correlation). The higher r value close to one indicated a stronger correlation, the positive (no sign) r value indicated a

direct (positive) correlation, and the negative signed r indicated an inverse correlation. A level of significance of ≤ 0.05 was considered a significant difference or correlation.

RESULTS AND DISCUSSION

Results

Table 1. Statistical distribution of patients by their Socio-Demographic Data.

Items	Sub-groups	Study group Total = 199	
		Frequency	Percentage
Age	16-25	146	73.4
	26-35	35	17.6
	36-45	13	6.5
	46-55	5	2.5
Gender	Male	56	28.1
	Female	143	71.9
Residence	Urban	169	84.9
	Rural	30	15.1
Educational Level	Illiterate	5	2.5
	read and write	10	5.0
	Primary school	60	30.2
	Secondary school	114	57.3
	Diploma or College	10	5.0
Marital status	Single	142	71.4
	Married	57	28.6
Occupation	Employee	56	28.1
	Housewife	22	11.1
	Worker	8	4.0
	Retired	1	0.5
	Not work	112	56.3

Table (1): shows statistical distribution of patients by their socio-demographic data, it explains that the highest percentage of the patients' subgroup are: patients with ages between (16-25) years old (73.4%), female patients (71.9%), single patients (71.4 %), those who live urban residents (84.9%), those who graduated in secondary school (57.3 %), do not work (56.3 %).

Table 2. Statistical distribution of patients by their Socio-medical Data.

Items	Sub-groups	Study group Total = 199	
		Frequency	Percentage
Duration of Symptoms /days	1-15	151	75.9
	16-30	45	22.6
	31-45	1	0.5
	46-60	2	1.0
	First Time	182	91.5

Infected with Coronavirus?	Second Time	15	7.5
	Third Time	2	1.0
Symptoms	Mild	74	37.2
	Moderate	121	60.8
	Severe	4	2.0
Family member infected?	Yes	149	75.9
	No	50	24.1
Family member	Children	26	13.1
	Young	47	23.6
	Elderly	76	38.2
	Not Found	50	25.1
Have you lost a family member?	Yes	44	22.1
	No	155	77.9

Table (2): shows statistical distribution of patients by their socio-medical data, it explains that the highest percentage of the patients' subgroup are: patients with duration of symptoms between (1-15) days (75.9%), those patients infected for the first time (91.5 %), those patients moderate symptoms (60.8 %), those who their family infected with COVID-19 (75.9%), those who elderly relative infected with COVID-19 (38.2 %), those who have not lost a family member (77.9 %).

Table 3. Descriptive Statistics of overall assessment for GH-28 Domains and overall assessment among generator patients.

GH-28 Domains	No.	M.S.	S.D.	Ass.
Somatic Domain	199	1.81	0.73	Moderate
Social Domain	199	1.87	0.82	Moderate
Depression Domain	199	2.00	0.70	Moderate
Anxiety Domain	199	1.83	0.75	Moderate
Global Mean of Score for GH-28	199	1.88	0.75	Moderate

MS: Mean of Scores; SD: Standard Deviation; Low: MS = 1-1.66; Moderate: MS = 1.67-2.33; High: MS ≥ 2.34; L.b.: lower border; U.b.: Upper border

Table (3) : shows descriptive statistics of overall assessment for GH-28 domains and overall assessment among generator patients. It explains the assessment of all domains (somatic, social, depression, and anxiety).

Table 4. Descriptive Statistics of patients' subgroups according to their total score of 28-GH assessment.

Patients' subgroups		Low	Moderate	High
	Frequency	**71**	**107**	**21**
	Percentage	**35.68**	**53.77**	**10.55**

Table (4) shows Descriptive Statistics of patients' subgroups according to their total score of 28-GH assessment, it shows that the percentage of patients with assessment regarding the total score of 28-GH scale was (35.68 %); (53.77 %) of them have moderate levels according to the total score of 28-GH scale, while (10.55%) of them have high levels according to the total score of 28-GH scale.

Table 5. Relationship between total 28-GH assessment of the patients and their demographic data.

Demographic Data	Chi Square	df	P value	Significance
Age	1.12	**6**	**0.54**	**NS**
Gender	3.39	**2**	**0.51**	**NS**
Residence	3.16	**2**	**0.20**	**NS**
Educational Level	3.86	**6**	**0.69**	**NS**
Marital status	1.32	**2**	**0.51**	**NS**
Occupation	12.84	**8**	**0.11**	**NS**

NS: Non-significant at P value >0.05

Table (5): shows relationship between total 28-GH assessment of the patients and their demographic data, it shows that there is no significant relationship between demographic data and total 28-GH assessment.

Discussion

The results of Table 1 show that more of the patients in the age group of the study sample were within (16-25) years (73.4%). The above table also shows that the majority of participants were female (71.9%). Also, regarding the subjects Residence, the results show that it was (84.9%) Urban, and the results show that more than half of them were in Secondary school (57.3%). Many of the patients involved in this study are single (71.4%). As well as for occupation more than a half do not work (56.3 %). This study is agreeing with Burke et al., 2020 (Increased Psychological Distress during COVID-19 and Quarantine in Ireland: A National Survey), unless level of education of participators was college (38.7%) and more than a half of them are employee (64%) [18].

The second table show that percentage of duration the Symptoms of COVID-19 in most patient was ranging (1-15) days (75.9%). This agrees with (The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application) [19]. The vast majority of participants were infected for the first time (91.5%) and the symptoms was moderate for (60.8%) of them. The (75.9%) of participants have a family member who have been infected were (38.2%) are Elderly. Finally, the percentage of lost a family member is (77.9%). The result of current study agrees with Elhadi et al., 2021 (Knowledge, attitude, and acceptance of healthcare workers and the public regarding the COVID-19 vaccine: a cross-sectional study) except the percentage of lost a family member is (8.5%) [20].

Table (3.) explains the assessment of all domains (somatic, social, depression, and anxiety) were moderate. This study disagrees with K Janyam, 2009 (The Influence of Job

Satisfaction on Mental Health of Factory Workers) that the assessment of all domains (somatic, social, depression, and anxiety) were low [21].

The patients' subgroups according to their total score of 38-GH assessment shows that the percentage of patients with assessment regarding the total score of 28-GH scale was (53.77 %) of them have moderate levels according to the total score of 28-GH scale. This study disagrees with K Janyam, 2009 (The Influence of Job Satisfaction on Mental Health of Factory Workers) that the total score of 28-GH scale was (33.5%) [21].

The results of data analysis, as presented in table (9) indicates that there is no significant relationship between demographic data and total 28-GH assessment. {Age ($P < 0.54$), Gender ($P < 0.51$), Residence ($P < 0.20$), Educational Level ($P < 0.69$), Marital status ($P < 0.51$), Occupation ($P < 0.11$)}.

CONCLUSION

Fundamental Finding : This study concludes that the majority of participants were female, predominantly aged between 16 and 25 years. Most individuals reported experiencing symptoms for a duration of 1 to 15 days and were undergoing their first episode of COVID-19 infection. The findings further reveal that patients infected with the Coronavirus exhibited moderate levels of psychological distress. **Implication :** The findings further reveal that patients infected with the Coronavirus exhibited moderate levels of psychological distress, underscoring the need for targeted mental health support during the early stages of illness. **Limitation :** This study concludes that the majority of participants were female, predominantly aged between 16 and 25 years, which may limit the generalizability of the results to broader age groups and more diverse populations. **Future Research :** Most individuals reported experiencing symptoms for a duration of 1 to 15 days and were undergoing their first episode of COVID-19 infection, indicating that future research should explore psychological distress across multiple infection episodes and longer symptom durations.

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