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Research Paper

Psychological Impact and Disease Severity among Patients with Coronavirus (COVID-19) Infection During Corona Virus Pandemic in Al-Shifaa Center in Baghdad City

Kawthar Faris Nassir[1], Zainab Jumaa Qasim[2], Nesif Jasim Al-Hemiary[3], Zahraa Riyadh J. Al Nedawi[4]

ABSTRACT:

BACKGROUND:

COVID-19 is a global healthcare pandemic that affects multiple body systems and is linked to various psychiatric issues.

OBJECTIVE:

This study aims to assess psychological symptoms, sleep disturbances, and insomnia associated with infection by covid-19, examining the severity of these symptoms based on the perceived threat of infection.

PATIENTS AND METHODS:

This observational, cross-sectional study of a convenient sample of patients, involved collecting medical data by distributing questionnaires under a psychiatrist's supervision. The data included demographics, co-morbidities, disease severity, psychological measurements, treatment response, and prognosis. The questionnaires included the Anxiety, and Stress Scale, and the Impact of Event Scale-Revised, along with clinical evaluations and tests, addressed sleep disturbances, insomnia, and the psychological impact of COVID-19.

RESULTS:

The study recruited 255 in-patients. A strong association between severe COVID-19 cases, exposure to the virus, and insomnia was found. Moderate to extremely severe psychiatric symptoms of anxiety, distress, and depression were more common in adults, decreasing after age 60. Although these symptoms were higher in men, there were no significant differences in the rates of insomnia, depression, anxiety, and distress between men and women (P-values: 0.33, 0.25, 0.88, and 0.88, respectively).

CONCLUSION:

There is significant psychological impact of the COVID-19 pandemic on patients regarding insomnia, anxiety, depression, and distress. The psychological impact is influenced by factors such as gender , age, and severity of COVID-19.

KEYWORDS: COVID-19, insomnia, psychological impact, depression, anxiety.

[1]PhD Iraqi board/ clinical pharmacy, FIBMS, Therapeutic Drug Monitoring Center-Baghdad Teaching Hospital, Baghdad, Iraq.
[2]PhD Iraqi board/ clinical pharmacy, Department of pharmacy, Baghdad college of medical sciences, Baghdad, Iraq.
[3]Prof. Psychiatrist, - University of Baghdad / College of Medicine, IBMS.
[4]MSc Pharmacology, Therapeutic Drug Monitoring Center-Baghdad Teaching Hospital, Medical City Baghdad, Iraq.

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INTRODUCTION:

Corona virus 2019 (COVID-19) represents a global unprecedented healthcare pandemic [(1)]. It is an enveloped RNA virus from the genus Beta coronavirus, this novel Beta coronavirus is like severe acute respiratory syndrome, coronavirus (SARS-CoV) and Middle East Respiratory Syndrome Coronavirus (MERS-CoV) based on its genetic proximity, and it likely originated from bat-derived coronaviruses with spread via an unknown intermediate mammal host to humans [(1)]. When the virus transmission was rapidly human-to-human and spread worldwide, the WHO declared the COVID-19 outbreak as a pandemic On March 11/ 2020 [(2)]

In most countries across the world, governments have imposed many restrictive measures to prevent the transmission of infection, such as lockdowns, voluntary self-isolation and social distancing and closure of educational institutes, workplaces, and entertainment venues with restricting social activities and almost all not essential individual movements were prohibited [(3)]. These measures have disrupted people's lives and their jobs and have implications for health

and wellbeing that lead to cause a situation of socio-economic crisis and psychological distress which rapidly occurred worldwide [4]. Indeed, this pandemic and the social confinement have produced unprecedented changes in our daily routines [5].

Many psychological problems and important consequences in terms of mental health including stress, anxiety, depression, frustration, poor sleep quality, and insomnia during COVID-19 outbreak emerged progressively [6]. Common psychological reactions issues like insomnia, anxiety, depression, and distress related to the mass quarantine driven by fear, isolation, and economic strain. Insomnia surged due to stress, altered daily routines, and prolonged screen exposure in addition to contributing factors like financial insecurities, and disruptions to work-life balance played crucial roles, while anxiety stemmed from uncertainty and health concerns, the levels escalated due to fears of infection, hospitalization, and the unknown trajectory of the pandemic in addition to social media influence the excessive exposure to pandemic-related news amplified feelings of worry and panic, particularly among younger individuals [6]. Depression was exacerbated by loneliness, financial hardships, and social disconnection, particularly affecting vulnerable groups like older adults and the economically disadvantaged. Psychological distress was amplified by bereavement and prolonged exposure to stress, especially for frontline workers that might explain the increased incidence of psychological problems and sleep problems [7].

This study aims to assess the degree of psychological symptoms, sleep disturbances and insomnia in response to the pandemic and examine severity of those symptoms according to degree of threats of being infected with COVID-19.

PATIENTS AND METHODS:

This is an observational, cross-sectional study in Al-Shifaa Center for the Corona Pandemic, a specialized isolation hospital for the treatment of COVID-19 in the Medical city, Baghdad, Iraq. The study included adult inpatients which were defined as confirmed cases of COVID-19 by the positive result of the reverse transcription polymerase chain reaction (RT-PCR). The data included 255 patients [187 male (73.33%), 77 female (30.19%)], with an average age of 46.96 (±16.46), that had been admitted to this hospital from 1 July, 2021 to 1 October, 2021.

Exclusion Criteria:

Patients under 18 years old, inability to provide informed consent, Non-COVID-19 patients or those without confirmed RT-PCR results, severe concurrent illnesses (e.g., advanced organ failure), history of severe psychiatric disorders, use of medications affecting mental health or sleep prior to hospitalization, incomplete or inconsistent questionnaire responses, and critically ill patients (e.g., ICU or ventilated).

Patients' follow-up and Measures:

The research team (two clinical pharmacists and three specialist physicians and one psychiatrist) were part of the medical team in the center. They prospectively collected some medical information from patients to assess the psychological impact of COVID-19 on inpatients, the questionnaires were distributed to the inpatients, and under the supervision of a psychologist.

The information included demographics, co-morbidity, disease condition, severity at admission, severity, psychological measurements and to have a clear picture about the disease, response to treatment and prognosis, patient clinical outcome, clinical evaluation, routine biochemical test and specific investigations were also done under the supervision of specialist physicians to cover sleep disturbance and insomnia and psychological impact of COVID-19 we use the questionnaire consists of many parts. The first part of the questionnaire assessed the psychological impact of COVID-19 using the Depression, Anxiety, and Stress Scale (DASS-21) and Impact of Event Scale-Revised (IES-R), both scales used previously in assessing the psychological impact related to COVID-19 and SARS.

Mental health status was assessed using the translated Arabic version of DASS-21. This scale is composed of three subscales, depression, anxiety, and stress. Each subscale is composed of seven items, and each response was rated from 0 to 3, where 0 indicates 'Did not apply to me' and 3 indicates 'Applied to me most of the time'. Depression subscale was assessed in items 3, 5, 10, 13, 16, 17, and 21. The total score depression subscale score was subdivided into normal (0–9), mild (10−12), moderate (13−20), severe (21–27), and extremely severe depression (28–42). Anxiety subscale assessed in items 2, 4, 7, 9, 15, 19, and 20. The total score of the anxiety subscale was subdivided into normal (0–6), mild (7–9), moderate (10–14), severe (15–19), and extremely severe anxiety (20–42). Stress subscale is constructed by items 1, 6, 8, 11, 12, 14, and 18. The total score of the stress subscale was subdivided into normal (0−10), mild (11–18), moderate (19–26), severe (27–34), and extremely severe stress (35–42). Furthermore,

The IES-R is an easily self-administered questionnaire that has been translated and validated in Arabic language to assess the symptoms of posttraumatic stress disorder PTSD after a traumatic event experience in the past seven days. This 22-item scale is composed of three subscales that measure mean avoidance, intrusion, and hyper-arousal.

Responses to each item were rated from 0 to 4, where 0 indicates not at all and 4 extremely. The total IES-R score was subdivided into 0–23 (normal), 24–32 (mild), 33–36 (moderate), and N 37 (severe psychological impact). While insomnia was measured by Insomnia Severity Index (ISI). The ISI is a brief self-report instrument measuring the patient's perception of his or her insomnia. The ISI targets the subjective symptoms and consequences of insomnia as well as the degree of concern or distress caused by those difficulties. Its content corresponds in part to the diagnostic criteria of insomnia(32). The ISI is composed of seven items that evaluate: (a) the severity of sleep onset (initial), (b) sleep maintenance (middle), (c) early morning awakening (terminal) problems, (d) satisfaction with current sleep pattern, (e) interference with daily functioning, (f) noticeable to others/impairing the quality of life and (g) level of distress caused by the sleep problem. Each item is scaled on a 5-point Likert scale from 0 to 4 to yield a total score ranging from 0 to 28. Interpretation of the results is as follows: absence of insomnia (0–7); subthreshold insomnia (8–14); moderate insomnia (15–21); and severe insomnia (22–28).

All data were recorded in the patient case sheet, the researchers will keep the confidentiality of the patient information, so that names or addresses will be collected, and other data will be de-identified. Thus, the cases will be anonymous. All patients that participant in the study signed their written consent forms before participating in the study and gave an agreement to use their results. The study was approved by the Higher Scientific committee of the Baghdad Teaching Hospital.

Statistical Analysis:

Data were edited, entered, and analyzed using Statistical Package for Social science (SPSS) version 16, result values are presented as numbers and percentages to compare values of all parameters and presented as mean ± standard deviation to estimate the age of patients, duration of starting symptoms, and duration of hospital stay the results were presented by using tables and figures.

Ethics and declarations:

Ethics approval and consent to participate. The study was carried out in accordance with the Declaration of Helsinki. Informed consent was obtained from all participants.

RESULTS:

The number of patients 255, most of patients were male (73.33%), the education level Primary education (19.60%), no studied (21.56%), other patients complete Secondary education and higher education as show in Table (1)

The severity of patient with COVID-19 classified into mild, moderate and sever, Patients with COVID-19 are considered to have severe illness if they have SpO_2 <94% on room air, (39.21%) of patients have severe illness and (18.03%) of patient are critical and need to respiratory care unit as show in Table (2).

In this study show that most patients were moderate to severe psychological effect (33.72%), (30.98%), (31.76%), (29.01%) and (38.03%), Insomnia Severity Index (ISI), Depression, Anxiety, and Stress Scale (DASS-21) and Impact of Event Scale-Revised (IES-R) respectively, as shown in the Table (3).

From the result of this study, there is a strong association between COVID-19 exposures and insomnia specially in the severe cases of COVID-19. There are severe and extremely severe symptoms of insomnia 69(69%), 30 (30%) respectively, and there is 44(97.8%) extremely sever symptom of insomnia in the critical cases of COVID-19, while in the moderate cases of COVID-19 there are moderate, severe, and extremely sever symptom of insomnia as 23 (32.9%), 15(21.4%), and 32(45.7%) respectively. In the mild cases of COVID-19 the severity of insomnia symptom will decrease to mild and moderate symptom 17(43.6%), 7(17.9%) respectively, as show in table (4).

Table 1: Demographic characteristics for patients.

Total numbers N (%)		255 (100%)
Age (years) Mean ± SD		46.96 ±16.46
18-30		44 (17.25%)
31-40		49 (19.21%)
41-50		58 (22.74%)
51-60		47 (18.43%)
61-70		31 (12.15%)
71-80		26 (10.19%)
Gender	Female (%)	77 (30.19%)
	Male (%)	187 (73.33%)
Body weight/kg Mean ± SD		87.62±5.12
Exposure and transmission N (%)		
Travelers returning from affected areas		47 (18.43%)
Exposure direct contact with patient (most of them same family)		83 (32.54%)
Contact with unknown sores		95 (37.25%)
health care provider and medical staff		30 (11.76%)
Education level N (%)		
No studies		55 (21.56%)
Primary education		50 (19.60%)
Secondary education		62 (24.31%)
University degree		40 (15.68%)
higher education (master's or PhD degree)		48 (18.82%)
Co-existing disease N (%)		
History of hypertension		26 (10.19%)
Diabetes with HbA1c > 7.6%		37 (14.50%)
History of ischemic heart disease		22 (8.62%)
Asthma		24 (9.41%)
bronchitis		34 (13.33%)
COPD		18 (7.05%)
History of transplant or other Immunosuppression		4 (1.56%)
Chronic kidney disease		12 (4.70%)
hepatitis B or C		7 (2.74%)

Table 2: Condition severity.

Condition severity	Mild N (%)	39 (15.29%)
	Moderate N (%)	70 (27.45%)
	Severe N (%)	100 (39.21%)
	Critical N (%)	46 (18.03%)
Need to respiratory care unit N (%)		46 (18.03%)
Duration of starting symptoms\days Mean ± SD		5 ±1.80
Duration of hospital stay\days Mean ± SD		19 ±3.40
Needed oxygen supply N (%)		172 (67.45%)

Table 3: Psychological impact of COVID-19 using the Insomnia Severity Index (ISI), Depression, Anxiety, and Stress Scale (DASS-21) and Impact of Event Scale-Revised (IES-R).

Severityof psychological measurements	Insomnia Severity Index (ISI)	Depression, Anxiety, and Stress Scale (DASS-21)			Impact of Event Scale-Revised (IES-R)
		Depression	Anxiety	Stress	
Normal	13(5.09%)	11 (4.31%)	14 (5.49%)	20 (7.84%)	19 (7.45%)
mild	17(6.66%)	16 (6.27%)	29 (11.37%)	40 (15.68%)	30 (11.76%)
moderate	31(12.15%)	72 (28.23%)	88 (34.50%)	65 (25.49%)	80 (31.37%)
severe	86(33.72%)	79 (30.98%)	81 (31.76%)	74 (29.01%)	97 (38.03%)
Extremely severe	108 (42.35%)	61 (23.92%)	43 (16.86%)	56 (21.91%)	28 (10.98%)

Table 4: Prevalence of Insomnia, Depression, Anxiety, Distress and IES-R and their relation to the age, severity of disease and gender.

Severity category		Severity of COVID disease			
		Mild	Moderate	Severe	Critical
Insomnia	Normal	13 (33.3%)	0 (0.0%)	1 (1.0%)	0 (0.0%)
	Mild	17 (43.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Moderate	7 (17.9%)	23 (32.9%)	0 (0.0%)	0 (0.0%)
	Severe	1 (2.6%)	15 (21.4%)	69 (69.0%)	1 (2.2%)
	Extremely severe	1 (2.6%)	32 (45.7%)	30 (30.0%)	44 (97.8%)
Depression	Normal	11 (28.2%)	0 (0.0%)	0 (0.0%)	4 (8.7%)
	Mild	16 (41.0%)	0 (0.0%)	0 (0.0%)	1 (2.2%)
	Moderate	3 (7.7%)	12 (17.1%)	42 (42.0 %)	24 (52.2%)
	Severe	6 (15.4%)	54 (77.1%)	14 (14.0%)	10 (21.7%)
	Extremely severe	3 (7.7%)	4 (5.7%)	14 (14.0%)	7 (15.2%)
Anxiety	Normal	2 (5.1%)	4 (5.7%)	6 (6.0%)	2 (4.3%)
	Mild	4 (10.3%)	4 (5.7%)	11 (11.0%)	10 (21.7%)
	Moderate	11 (28.2%)	47 (67.1%)	19 (19.0%)	12 (26.1%)
	Severe	5 (12.8%)	15 (21.4%)	47 (47.0%)	14 (30.4%)
	Extremely severe	17 (43.6%)	0 (0.0%)	17 (17.0%)	8 (17.4%)
Distress	Normal	9 (23.1%)	4 (5.7%)	4 (4.0%)	4 (8.7%)
	Mild	17 (43.6%)	0 (0.0%)	17 (17.0%)	6 (13.0%)
	Moderate	3 (7.7%)	7 (10.0%)	40 (40.0%)	15 (32.6%)
	Severe	7 (17.9%)	49 (70.0%)	11 (11.0%)	8 (17.4%)
	Extremely severe	3 (7.7%)	10 (14.3%)	28 (28%)	13 (28.3%)
IES-R	Normal	19 (48.7%)	3 (4.3%)	6 (6.0%)	1 (2.2%)
	Mild	8 (20.5%)	5 (7.1%)	6 (6.0%)	8 (17.4%)
	Moderate	3 (7.7%)	13 (18.6%)	63 (63.0%)	0 (0.0%)
	Severe	2 (5.1%)	29 (41.4%)	25 (25.0%)	37 (80.4%)
	Extremely severe	7 (17.9%)	20 (28.6%)	0 (0.0%)	0 (0.0%)

The rates of probable symptom of insomnia were non-significant differences (P-value=0.33) between men and women despite both sever and extremely sever symptom of insomnia was higher among men 54 (30.3%) and 81(45.5%) respectively than in women 32 (41.6%) and 27 (35.1%). In the comparison of age subgroups that showed the highest prevalence of extremely severe symptom of insomnia are more in age group that range (41-50 years) and (51-60 years) as 29 (48.3%) and 21 (43.8%) respectively with highest severe symptom of insomnia in age group that range (41-50 years) as 22 (36.7%), as show in figure (1).

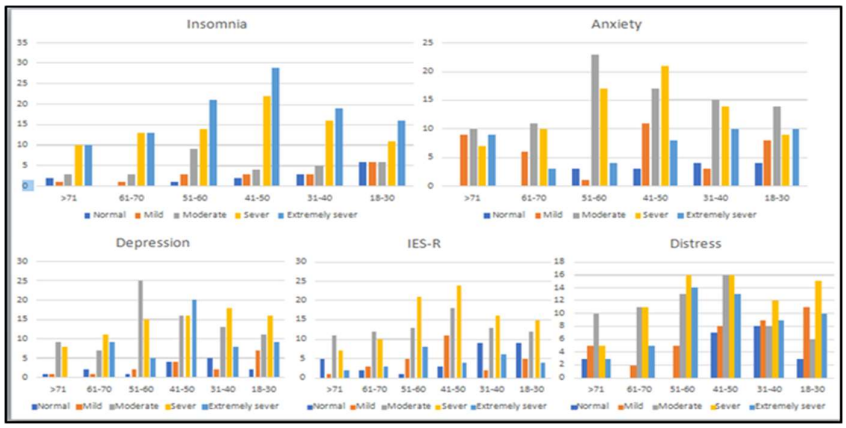

Figure 1: Prevalence of Insomnia, Depression, Anxiety, Distress and IES-R and their relation to the age.

Regarding depression, we note that in moderate cases of Covid-19 there are moderate to severe symptoms of depression as 12(17.1%) and 54 (77.1%), respectively, while in the severe and critical cases of COVID-19 there are 42 (42%) and 24 (52.2%) respectively Table (4). The rates of probable symptom of depression were non-significant differences (P-value=0.25) as show in Table (5) between men and women in spite of the rates of all moderate, severe, and extremely sever cases of depression were higher among men 59 (33.1%), 57(32%), and 38 (21.3%) respectively than in women 22 (28.6%), 27 (35.1%) and 20 (26%). In the comparison of age subgroups that showed the highest prevalence of extremely severe symptom of depression are higher in the age group that ranges (31-40 years) and (41-50 years) as 18 (39.1%) and 16 (26.7%) respectively with highest extremely severe symptom of insomnia in the age group that ranges (41-50 years) as 20 (33.3%).

In contrast to anxiety, there are moderate symptoms of anxiety in moderate cases of Covid-19, 47(67.1%) and there are severe symptoms of anxiety in severe cases of Covid-19 47 (47.1%) (Table-4), with the highest moderate cases in the age group that ranges (51-60 years) as 23 (47.9%) and severe cases of anxiety in the age group that ranges (41-50 years) as 21(35%) (Figure-1). The rates of probable symptom of anxiety were non-significant differences (P-value=0.88) (table-5) between men and women in spite of the rates of all moderate, severe, and extremely severed cases of anxiety were higher among men 63(35.4%) ,55 (30.9%), and 30(16.9%) respectively than in women 26 (33.8%), 26 (33.8%) and 12 (15.6%).

Regarding distress, we note that in moderate cases of Covid-19 there are severe symptoms of distress as 49 (70%) and in severe cases of Covid-19 there are moderate and extremely severe symptoms of distress 40 (40%) and 28 (28%) respectively (Table 4). The rates of probable symptom of distress were non-significant differences (P-value=0.886) (table 5) between men and women.

Table 5: Association Severity of Insomnia, Depression, Anxiety, Distress and IES-R and their relation to the gender.

Severity category		Gender		P value
		Men (178)	Women (77)	
Insomnia	Normal	11 (6.2%)	3 (3.9%)	.333
	Mild	11 (6.2%)	6 (7.8%)	
	Moderate	21 (11.8%)	9 (11.7%)	
	Severe	54 (30.3%)	32 (41.6%)	
	Extremely severe	81 (45.5%)	27 (35.1%)	
Depression	Normal	10 (5.6%)	5 (6.5%)	.255
	Mild	14 (7.9%)	3 (3.9%)	
	Moderate	59 (33.1%)	22 (28.6%)	
	Severe	57 (32.0%)	27 (35.1%)	
	Extremely severe	38 (21.3%)	20 (26.0%)	
Anxiety	Normal	12 (6.7%)	2 (2.6%)	.880

	Mild	18 (10.1%)	11 (14.3%)	
	Moderate	63 (35.4%)	26 33.8%)	
	Severe	55 (30.9%)	26 (33.8%)	
	Extremely severe	30 (16.9%)	12 (15.6%)	
Distress	Normal	16 (9.0%)	5 (6.5%)	
	Mild	30 (16.9%)	10 (13.0%)	
	Moderate	42 (23.6%)	23 (29.9%	.886
	Severe	50 (28.1%)	25 (32.5%)	
	Extremely severe	40 (22.5%)	14 (18.2%)	
IES-R	Normal	21 (11.9%)	8 (10.4%)	
	Mild	20 (11.3%)	6 (7.8%)	
	Moderate	49 (27.7%)	30 (39.0%)	.787
	Severe	68 (38.4%)	25 (32.5%)	
	Extremely severe	19 (10.7%)	8 (10.4%)	

*P-value >0.05 is considered significant.

All moderate, severe, and extremely severe cases of distress were higher among men 42 (23.6%), 50 (28.1%), and 40 (22.5%) respectively than in women 23 (29.9%), 25 (32.3%) and 14 (18.2%). In the comparison of age subgroups that showed the highest prevalence of severe symptom of distress are more in age group that ranges (41-50 years) and (51-60 years) as 16(26.7%) and 16(33.3%) respectively with highest extremely severe symptom of distress in the age group that ranges (51-60 years) as 14(29.2%)

The finding of this study demonstrates that there are strong associations between severe cases COVID-19 exposures and prevalence of insomnia; moreover, all moderate, severe, and extremely severe cases of psychiatric symptoms - including anxiety, distress and depression - were more prevalent among adults. The association between age and psychiatric symptoms declined after the age of 60 years, and the prevalence was higher in men compared to women.

DISCUSSION:

Initially, experts thought COVID-19 was primarily a respiratory illness, and typically affects the respiratory system, nose, throat, and lungs, like flu viruses causing symptoms such as coughing and shortness of breath, but it is proved that it is much more than just a flu. It's clear that this new germ can harm many systems and organs in human body, like lungs, heart, circulatory system, liver, pancreas, kidneys, brain, as well as it is associated with multiple psychiatric problems [8].

The coronavirus (COVID-19) pandemic resulted in significant increases in sleep problems, as well as psychiatric symptoms of anxiety, depression, and stress, the prevalence rates for all these conditions are significant during the COVID-19 pandemic within the general population and in health-care workers [9].

A meta-analysis(9) of 44 studies conducted in 13 countries revealed a 36.7% prevalence rate of sleep problems and there were 25.6% with anxiety and 23.1% with probable depression (11). Another meta-analysis of thirteen studies were included with a combined total of 33,062 participants that found depression was assessed in 10 studies, with a prevalence rate of 22.8% and anxiety was assessed in 12 studies, with a pooled prevalence of 23.2%. The previous studies demonstrated that the psychological risks and effects vary with age and countries. From the result of this study there is strong associations between severe cases of COVID-19 and insomnia, all moderate, severe, and extremely severe cases of psychiatric symptoms of anxiety, distress, and depression; which were more prevalent among adults. The association between age and psychiatric symptoms decreased after the age of 60 years. Furthermore, it was higher among men than women. This difference in the results can be attributed to a multitude of factors, including biological, social, and psychological differences. From a social perspective, this disparity may stem from disruptions in daily routines that typically serve as timekeepers for regulating sleep and wake cycles. Activities such as waking up for work, eating meals, engaging in recreation, and maintaining social relationships were disrupted during the pandemic, potentially affecting men more than women. Financial stress and emotional burden may have also played a role, as men often face societal expectations to be primary earners, leading to heightened stress during economic downturns. [12] Additional contributing factors include depression, health anxiety (worrying about contracting or transmitting COVID-19), and employment-related concerns, such as fear of job loss. These stressors uniquely affected individuals, often compounding one another. Moreover, biological factors, such as differences in immune system

responses or underlying health conditions, may partially explain the disparity in COVID-19 case rates. Combined, these factors underscore the complex interplay of biological, psychological, and social determinants during the pandemic in addition to other reasons each of which is a unique cause of insomnia and mental health disorders throughout the COVID-19 pandemic [13].

Various studies have documented increased rates of insomnia and mental health disorders due to stress increases the levels of cortisol, a hormone that operates inversely to melatonin, the sleep hormone. Cortisol rises in the early morning to energize the body for the day, and lowers in the evening, as melatonin production begins to prepare the body for sleep. When cortisol levels remain elevated, melatonin production gets disrupted, as does the restfulness of sleep [14].

The results of this study almost coincide with many studies in different countries like Wang *et al.,* 2020, where it was found that in total 53.8% of participants rated the psychological impact of the COVID-19 outbreak as moderate or severe, 16.5% reported moderate to severe depressive symptoms, those who reported moderate to severe anxiety symptoms was 28.8% of the adults, while 8.1% of the respondents showed reported moderate to severe stress levels [15]. Perhaps the reasons for the difference in results are attributed to population differences; this study focused on hospitalized patients (likely with severe illness), while Wang et al. included the general population. Cultural attitudes toward mental health may affect symptom reporting, in addition to the assessment tools, timing early in the pandemic or late, environmental factors, variations in healthcare system strain, and economic impact that influenced psychological outcomes [15].

Another study (Poll N. et al.) in March 2020 about psychological distress (e.g., depression, hopelessness, and nervousness) which include online survey of a nationally representative sample in the United States (n >1000) was found (36 %) of Americans felt that the new coronavirus pandemic was having a serious impact on their mental health. [16].

This study demonstrates that the prevalence of insomnia as well as that all moderate, severe, and extremely sever cases of psychiatric symptoms of anxiety, distress, and depression were higher among men than among women, and this may be due to the proportion of men participating in this study is greater than that of women from 255 patients (male 187 (73.33%), female = 77 (30.19%), or due to the fact that the rate of men infected with the COVID-19 virus is higher than women, while another study (S. Liu et al) on healthcare workers demonstrated that a higher percentage of prevalence of psychological burdens of depressive, anxiety, stress, and insomnia symptoms during the COVID-19 outbreak were in female[17].

Limitations of this study

Our research was done only in one medical center, so the data cannot be generalized to all medical centers and hospitals for treatment of COVID in Iraq. However, Future research is warranted to examine the mental health impact and coping mechanisms during the COVID-19 pandemic in the medium and long term.

CONCLUSION:

This study found significant psychological impact of COVID-19 infection on patients in relation to insomnia, anxiety, depression, and distress. The impact was more prevalent among men, and severe cases of infection. Impact was less among patients whose age was more than 60 years.

Data availability

Data is available from the corresponding author on reasonable request.

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