

Assessment of Prevalence of Stress, Anxious and Depressed among the Covid-19 Pandemic Patients Attending Primary Healthcare Centers in Makkah Al-Mukarramah Saudi Arabia at Saudi Arabia 2022

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Abstract

Background

Coronavirus disease 2019 (COVID-19) pandemic has had a significant impact on public mental health, psychological and social implications due to COVID-19 pandemic are particularly relevant in community Saudi and primary health care (PHC). The objective of this study is to assessment the level of prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients in Makkah at Saudi Arabia. Stress, anxious and depressed among are prevalent mental

illnesses among patients during the crisis like the Coronavirus Disease 2019 (COVID-19) pandemic may increase the current prevalence of these illnesses. As the Novel Corona Virus Disease (COVID-19) was declared by the world health organization a pandemic in March 2020, thousands worldwide were had psychological and social implications during the pandemic, in particularly patients Saudi Arabia to investigate the psychological impacts of the COVID-19 pandemic about patients on stress, anxious and depressed.

Aim of the study: To Assessment of prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients in Makkah Al-Mukarramah Saudi Arabia at Saudi Arabia 2022.

Method: Descriptive cross-sectional approach was used targeting patients stress, anxious and depressed during the Covid-19 Pandemic, accessible in in Makkah Saudi Arabia. Data were collected from participants using a pre-structured questionnaire. Psychological impact was assessed using the Arabic version of stress, anxious and depressed Scale. Our total participants were (200).

Results: depression score the majority of the subjects had severe were (25.0%), followed by respectively Extremely Severe, mild, Moderate were (23.0%, 19.0%, 18.0%) and the data ranged from (3- 42) by mean +SD (21.015±7.022) also no significant relation while p -value =0.0477 but X^2 (9.6).

Conclusion: Stress, anxious and depressed are prevalent among the general population during the COVID-19 pandemic lockdown in Saudi Arabia. Medical Authorities should focus on providing appropriate knowledge about the disease using appropriate methods, and specialized interventions to promote the mental well-being of the Saudi patients during the COVID-19 pandemic , paying particular attention to high-risk groups.

Keywords: Stress, anxious, depressed, PHC, prevalence, Covid-19 Pandemic.

Introduction

Coronavirus Disease 2019 (COVID-19) has headed global news. The story started back in December 2019 in Wuhan, China, when an outbreak of cases infected with a novel, deadly virus was reported. Later, the causing microorganism was found to be a new type of coronavirus, and the disease was labelled COVID-19(1). Since the start of COVID-19 pandemic and its rapid spread, nearly every country in the world has been affected. According to as of October 2020, there are more than forty millions confirmed cases and more than one million deaths. (2). With more than 110 countries affected, the World Health Organization (WHO) declared, on the 11th of March 2020, the Disease (COVID-19) a pandemic (3). As of the 1st of May 2020, 3175,207 confirmed COVID-19 cases and 224,172 related deaths have been reported worldwide (4). In response to the

COVID-19 pandemic, a state of lockdown in several countries has been set to prevent the spread of infection which resulted in huge economic losses, breaks in the global supply chains, wide media coverage, political division, disrupted travel plans, school closures, and future uncertainty. These consequences led to a global atmosphere of psychological distress of stress, anxious and depressed (5), also this situation created a serious challenge to all countries in order to monitor and slow down the virus spread and avoiding associated disease and death. Countries and organizations established a comprehensive guidance strategy that includes public health and social measures such as personal measures to limit the person-to-person spread, physical and social distancing measures, limitation of mass gatherings, travels, movement of persons, and protection of individuals using masks, (6)etc. However, the COVID-19 continues to have a significant effect on all aspects of society, including mental like stress, anxious and depressed and physical health due to the lockdown rule and restrictions such as closing schools/ universities, shopping centers, restaurants, (7). People are forced to stay home for an extended period of time. Many individuals around the world are going through this crisis and have felt such a lack of control over their lives due to lockdown restrictions in their country (8)

In Saudi Arabia, the first case was detected on 2 March 2020, after which there has been a rapid rise in cases (9). As of 13 April 2020, educational institutes (schools and universities) . Commercial centers, restaurants, beaches, and resorts were closed, and a 24-h curfew has been implemented in many cities in Saudi Arabia(10). Residents are authorized to leave for essentials, like food and medications, between 6 a.m. and 3 p.m. on the requirement that they stay within the limits of their living area, and only one passenger per vehicle is allowed (11). Like many other countries, Saudi Arabia has suspended national and international travel, and citizens returning from abroad were placed under a mandatory 14-day quarantine (12). The Saudi government temporarily banned Umrah pilgrimages to the holy cities of Mecca and Medina for Saudi citizens and the kingdom's residents due to concerns over coronavirus(13). Even though COVID-19 has emerged very recently, due to the unusual nature of this pandemic, several studies have already been accomplished to examine its psychological consequences of stress, anxious and depressed, primarily in Saudi Arabia (14,15) .

Literature Review

Studies from China, the first affected country, suggests that the fear of this pandemic can bring about mental illness such as stress disorders, stress, anxious and depressed, somatization, and behaviors such as increased alcohol and tobacco consumption (16). Furthermore, the application of strict lockdown measures in that country affected many aspects of people's lives, causing a wide

variety of psychological problems, such as panic disorder, anxiety, and depression (17).

Egypt and Saudi Arabia, in particular, are among the most afflicted Arab countries on the human and financial levels (18). Living in severely hit areas by the COVID-19 was shown to be associated with psychological distress, study in Egypt and Saudi Arabia reported that there is relationship between closures and psychological disorders the stress, anxious and depressed. (19). A recent study using the Generalized Anxiety Disorder and The Center for Epidemiology Scale for depression carried out in China with 7236 people showed that 20.1% of participants suffered moderate to severe depressive symptoms, and 35.1% suffered moderate to severe anxiety symptoms(20).

The ambiguities of COVID-19, being labeled as a deadly disease, the disruption to daily activity, and believing being at risk from COVID-19 were identified as factors that increase the level of depressed and anxious and depressed among youth. This finding is supported by previous research studies (21, 22). Another study found that the depressed level of young people who had been quarantined was four times higher than that of their counterparts who had not been (23). Families can play a significant role in minimizing the effect of staying at home. Parents need to let young people express their feelings and depressed about the current situation. They also need to make an effort to increase family time to provide youths with a sense of security.(24) . Another study finding is similar to the study by Gavidia (AJMC, 2020), which used a similar scale as PSS reported that 88% of students and employees are experiencing high-stress levels over the past 4 to 6 weeks.(25) On the other hand, about 93% of employees are suffering from high levels of stress, and only 7% are suffering from low levels of stress. None of the employees surveyed reported any stress. This might be because of the closure of universities and other entertaining places . (26) However, another study conducted by Kazmi et al. (2020) showed precisely the opposite as to our results. This study reported that 50% of students showed severe stress, whereas stress was least in the employees, and 17% reported moderate to extremely severe stress (27). The reason for this difference between the study and this study might be because before COVID 19, there were social gatherings, entertainment places were open. Therefore, stress levels between students and employees were less compared to the results after the lockdown (28).

In Spain, another study administered the Spanish version of the Impact of Event Scale-Revised, an instrument examining psychological distress caused by a traumatic life event in terms of three symptomatic responses (avoidance, intrusion, and hyper arousal). Results from 3055 participants showed that 36.6% experienced psychological distress because of the COVID-19 pandemic. Avoidance was the most commonly cited symptom, with the psychological impact consistently higher for young people and women compared to men (29).

RATIONALE

Depression, anxiety, and stress are prevalent among the general population during the COVID-19 pandemic lockdown in Saudi Arabia. We identified the specific subgroups of the general population at higher risk: females, those living alone during the COVID-19 pandemic lockdown, people with a history of smoking or chronic medical problems, and healthcare providers. Medical Authorities should focus on providing appropriate knowledge about the disease using appropriate methods, and specialized interventions to promote the mental well-being of the Saudi population, paying particular attention to high-risk groups. For instance, patients are known to be at a higher level of risk and community mental health care should be made accessible to people who are at increased risk.

AIM OF THE STUDY

To Assessment of prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients in Makkah Al-Mukarramah Saudi Arabia at Saudi Arabia 2022.

OBJECTIVES

- To Assessment of prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients in Makkah Al-Mukarramah Saudi Arabia at Saudi Arabia 2022.

METHODOLOGY (MATERIALS AND METHODS)

Study Area

The study has been performed in Makkah it is the holy city for all Muslims in patients attending primary healthcare centers which is one of the general health sector in Makkah. There are very cooperative doctors in the department and the size of the clinics is good to ensure confidentiality and privacy of patients.

Study population:

The study has been conducted regarding prevalence of stress, anxious and depressed among the Covid-19 Pandemic, patient attending primary healthcare centers Makkah City, Saudi Arabia in during the April to June, 2022 the period of study in 2022 and accept to participate in the study.

Study design:

A cross-sectional study has been conducted to prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients attending primary healthcare centers in Makkah AlMokarramah during data collection period.

Eligibility Criteria

a. Inclusion criteria:

All stress, anxious and depressed patients < 18 to >60 attending the primary healthcare centers in Makkah AlMokarramah during the data collection period .

b. Exclusion criteria.

- Participant stress, anxious and depressed among the Covid-19 Pandemic patients who refused to participate in the study .
- Patients with language barriers .

Sample size

Using EPI info version 24, the study sample size has been determined based on the following assumptions:

Regarding, there is not an official release the all eligible participant with stress, anxious and depressed among the Covid-19 Pandemic patient will be included in the study. The recommended sample is (200) to detect stress, anxious and depressed among the Covid-19 Pandemic patients attending PHC clinic at 95% confidence level, 5% estimation error and study response rate 50%. Then to compensate for the nonresponses and not completed questionnaires 10% was added to the sample. A total of (200) subjects participated in the study..

Sampling technique

Systematic random sampling technique is adopted. After that, by using random number generator, then simple random sampling technique has been applied to select the participant. Also, convenience sampling technique will be utilized to select the participants in the study. By using systematic sampling random as dividing the total stress, anxious and depressed among the Covid-19 Pandemic patients by the required sample size; (200).

Data collection tool

The researcher use depression anxiety and stress scales which is a validated questionnaire available in multi-languages including Arabic and English. The researcher use depression and anxiety scales only as it is the area of focus in the research. The questionnaire consisted of information about the study, the participant rights. The researcher name and contact informations (phone number, email). It had two parts: the first part consists of personal data and sociodemographic data. The second part has the evaluation of stress, anxious and depressed among the Covid-19 Pandemic patients.

Data collection technique

The researcher submitted the questionnaire to eligible participant among the Covid-19 Pandemic patients attending clinic in Makkah during the data collection period, the questionnaire had been

conducted by the researcher. After that, the researcher collected the questionnaire papers for data entry and analysis.

Data entry and analysis

The researcher use The Statistical Package for Social Sciences (SPSS) program version 24.0V for data entry and analysis with the help of a statistician.(type of variants and tests performed)

Significance: the researcher has been selected a P-value equal or less than 0.05 as a level of significance and has been consider results significant if P-value less than 0.05.

2.11 Ethical considerations

- Permission from the joint program of family medicine in Makkah has been obtained.
- Permission from the research committee in Makkah has been obtained.
- Permission from the Directorate of Health Affairs of Makkah has been obtained.
- Written and verbal consent has been obtained from all participants.
- All information has been confidential and privacy of patients will be considered as much as possible.
- **2.14 Budget**
- The research has been self-budgeted

Results

Table 1: Distribution of socio-demographic participant of the stress, anxious and depressed among the Covid-19 Pandemic data(age, gender, Level of education, Nationality) characteristics among

	N	%
Age		
<30	84	28
30-50	105	35
>50	111	37
Range	20-62	
Mean±SD	38.541±8.564	
Gender		
Female	201	67
Male	99	33
Nationality		
Saudi	237	79

Non-Saudi	63	21
Marital status		
Single	252	84
Married	48	16
Education		
Illiterate	66	22
Primary	57	19
Preparatory	63	21
Secondary	54	18
Postgraduate	60	20
Occupation		
Governmental sector	60	20
Private sector	57	19
Military sector	36	12
Retired	69	23
Non-employed	45	15
House wife	33	11
Do you have chronic illness		
Yes	174	58
No	126	42
Personal Income		
Less than 6000 SR	111	37
6000-12000SR	135	45
More than 12000SR	54	18

A total of (200) participated in the study. Of these Only(37.0%)of the participated were(>50)years while(35.0%)were(30-50)and the data ranged from(20 to 62)by mean +SD(38.541±8.564), (67.0%)were females (33.0%) males. (79.0%) Saudi while(21.0%)non-Saudi. Approximately more than half of participant single (84.0%)and (16.0%)were married. The majority of the participated had Illiterate degree education were (22.0%) ,followed by Preparatory education were(21.0%). (23.0%)were employed in Retired, followed by(22.4%)Retired and(20.0%)were Governmental sector and finally Private sector were(19.0%).

Regarding the you have chronic illness The majority of the participated answer Yes were(58.0%), regarding the personal income more than the participant 6000-12000SR were (45.0%), followed by

income Less than 6000 SR were(37.0%)while income more than 12000 SR were(18.0%).

Table 2: Distribution of the depression score among the Covid-19 Pandemic .

		Depression		Score	
		N	%	Range	Mean±SD
Normal		45	15	3-42.	21.015±7.022
Mild		57	19		
Moderate		54	18		
Severe		75	25		
Extremely Severe		69	23		
Total		300	100		
Chi-Square	X ²	9.6			
	P-value	0.0477			

Regarding depression score the majority of the subjects had severe were (25.0%), followed by respectively Extremely Severe, mild, Moderate were(23.0%, 19.0%, 18.0%) and the data ranged from(3- 42)by mean +SD (21.015±7.022) also no significant relation while p-value =0.0477 but X² (9.6).

Figure 1 Distribution of the depression score among the Covid-19 Pandemic

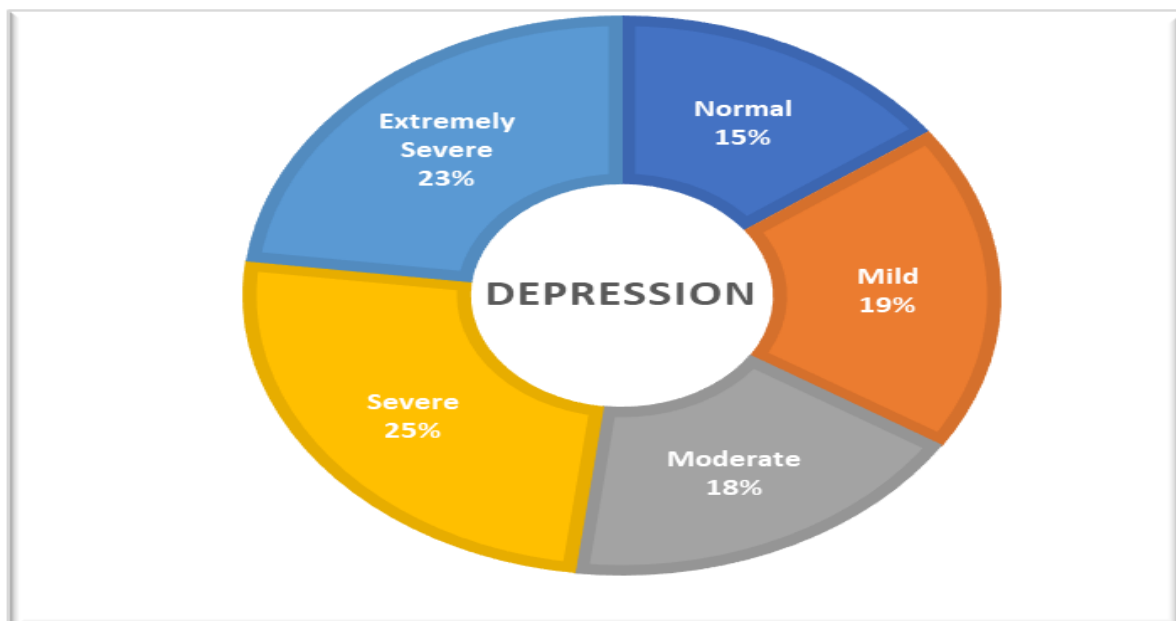


Table 3: Distribution of the anxiety score among the Covid-19 Pandemic .

		Anxiety		Score	
		N	%	Range	Mean±SD
Normal		54	18	5-38.	18.972±5.277
Mild		33	11		
Moderate		48	16		
Severe		69	23		
Extremely Severe		96	32		
Total		300	100		
Chi-Square	X ²	38.1			
	P-value	<0.001*			

Regarding anxiety score the majority of the subjects had Extremely Severe were (32.0%), followed by respectively Severe, normal, Moderate were(23.0%, 18.0%, 16.0%) and the data ranged from(5-38)by mean +SD (18.972±5.277) also a significant relation while p-value =0.001 but X² (38.1).

Figure 2 Distribution of the anxiety score among the Covid-19 Pandemic

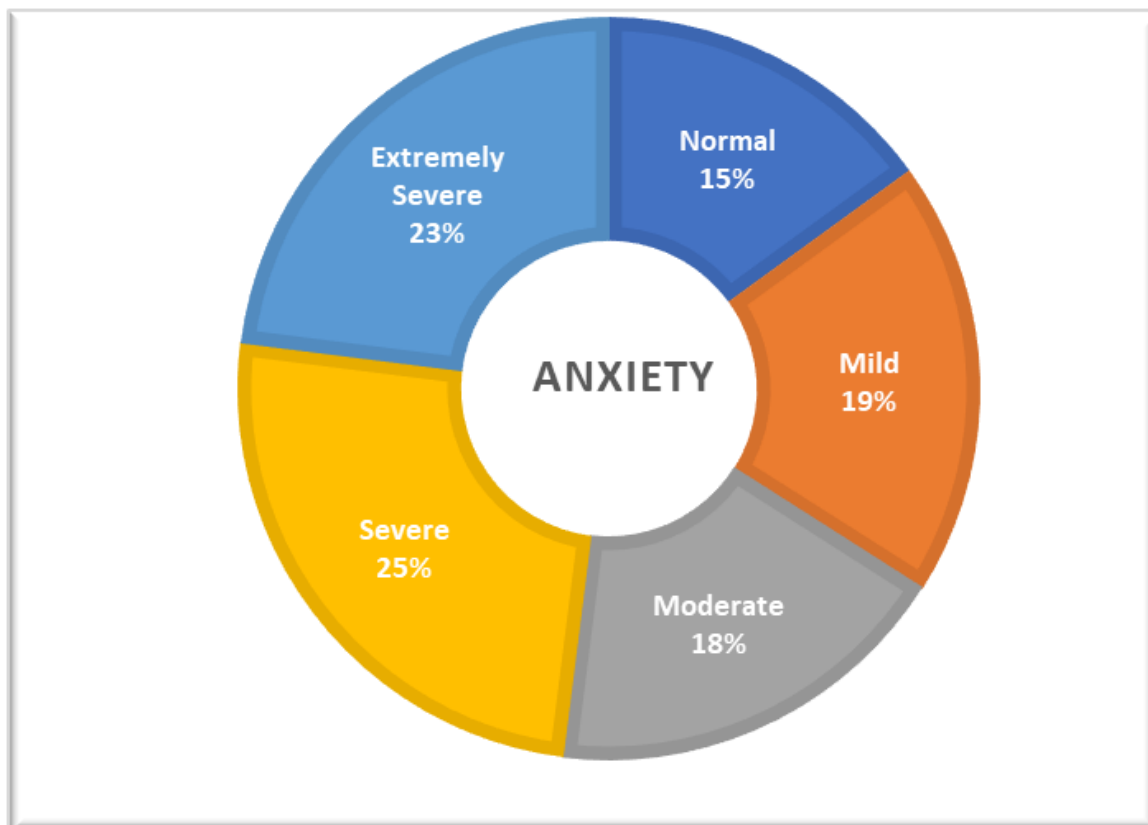
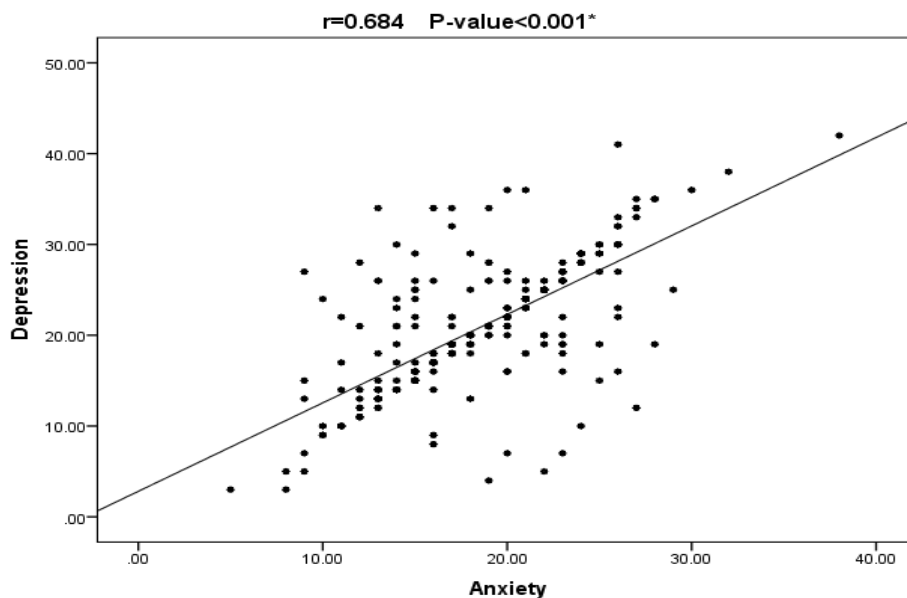


Table 4 : Distribution of the correlation between depression and anxiety .

Correlation	Depression	
	r	P-value
Anxiety	0.684	<0.001*

Show that is a significant correlation between depression and anxiety were $r= 0.684$ and $p\text{-value} =0.001$

Figure 3 Distribution of the correlation between depression and anxiety .**Table 5 : Description of the relation between Socio-demographic data and Depression**

		N	Depression		For T	ANOVA or T-test	
			Mean	± SD		Test value	P-value
Age	<30	84	21.571	± 7.874	F	2.342	0.098
	30-50	105	21.543	± 1.956			
	>50	111	19.748	± 9.019			
Gender	Femail	201	22.149	± 4.425	T	3.630	<0.001*
	Male	99	18.323	± 10.017			
Nationality	Saudi	237	20.127	± 7.446	T	-5.193	<0.001*

	Non-Saudi	63	23.746 ± 3.984			
Level of education	Illiterate	66	26.091 ± 4.022	F	71.369	<0.001*
	Primary	57	25.509 ± 6.302			
	Preparatory	63	21.841 ± 4.451			
	Secondary`	54	16.667 ± 3.365			
	Postgraduate	60	13.567 ± 6.347			
Occupation	Governmental sector	60	25.400 ± 2.465	F	26.622	<0.001*
	Private sector	57	20.544 ± 4.888			
	Military sector	36	24.556 ± 3.707			
	Retired	69	21.826 ± 9.117			
	Non-employed	45	13.644 ± 3.657			
	House wife	33	17.182 ± 7.321			
chronic illness	Yes	174	23.580± 4.275	T	7.968	<0.001*
	No	126	17.167 ± 8.271			

Regarding age results show no significant relation between depression and age were $F=2.342$ and $P\text{-value}=0.098$, increase (in <30and 30-50 years), the mean +SD respectively were $(21.571\pm 7.874, 21.543\pm 1.95)$. Regarding gender, table show a significant relation between depression and gender were $T=3.630$ and $P\text{-value}=0.001$, increase(in female than male), the mean +SD respectively were $(22.149\pm 4.425$ than $18.323\pm 10.017)$. Regarding nationality show a significant relation between depression and nationality were $T=-5.193$ and $P\text{-value}=0.001$, increase (in non- Saudi than Saudi), the mean +SD respectively were $(23.746\pm 3.984$ than $20.127\pm 7.446)$.). Regarding level of education there is a significant relation between depression and education were $F=71.369$ and $P\text{-value}=0.001$, increase(in illiterate and primary), the mean +SD respectively were $(26.091\pm 4.022, 25.509\pm 6.302)$,). Regarding the occupation, Personal and Family income show a significant relation between depression and occupation, increase in respectively (Governmental sector and Military sector) the mean +SD respectively were $(25.400\pm 2.465$ than $24.556\pm 3.707)$ $F=26.622$ and $P\text{-value}=0.001$. Regarding chronic illness, shows a significant relation between depression and chronic illness were $T=7.968$ and $P\text{-value}=0.001$, increase(in answer Yes than No), the mean +SD respectively were $(23.580\pm 4.275$ than $17.167\pm 8.271)$.

Table 6 : Anxiety of the relation between Socio-demographic data and Depression

		N	Anxiety	For T	ANOVA or T-test	
			Mean ± SD		Test value	P-value
Age	<30	84	18.226 ± 5.396	F	1.681	0.188
	30-50	105	19.257 ± 2.948			
	>50	111	18.126 ± 5.922			
Gender	Femail	201	19.433 ± 3.832	T	4.566	<0.001*
	Male	99	16.758 ± 6.266			
Nationality	Saudi	237	18.097 ± 5.124	T	-3.133	0.002*
	Non-Saudi	63	20.254 ± 3.663			
Level of education	Illiterate	66	21.394 ± 4.367	F	21.716	<0.001*
	Primary	57	20.614 ± 4.362			
	Preparatory	63	18.571 ± 3.880			
	Secondary`	54	16.556 ± 4.187			
	Postgraduate	60	15.233 ± 4.942			
Occupation	Governmental sector	60	21.083 ± 3.941	F	10.109	<0.001*
	Private sector	57	19.140 ± 4.253			
	Military sector	36	19.556 ± 3.184			
	Retired	69	18.478 ± 5.913			
	Non-employed	45	15.333 ± 4.084			
	House wife	33	16.364 ± 4.999			
chronic illness	Yes	174	19.902 ± 3.896	T	5.892	<0.001*
	No	126	16.683 ± 5.569			

Table 6 show regarding age show no significant relation between anxiety and age were F=1.681 and P-value=0.188, increase(in < 30-50 years than <30 years), the mean +SD respectively were (19.257±2.948, 18.226±5.396). Regarding the gender has a significant relation between anxiety and gender were T=4.566 and P-value=0.001, increase(in female than male), the mean +SD

respectively were (19.433 ± 3.832 than 16.758 ± 6.266). Regarding the Nationality shows a significant relation between anxiety and nationality were $T = -3.133$ and $P\text{-value} = 0.002$, increase (in non- Saudi than Saudi), the mean \pm SD respectively were (20.254 ± 3.663 than 18.097 ± 5.124). Regarding education has a significant relation between anxiety and education were $F = 21.716$ and $P\text{-value} = 0.001$, increase (in illiterate and Primary), the mean \pm SD respectively were (21.394 ± 4.367 and 20.614 ± 4.362). Regarding occupation show a significant relation between anxiety and occupation, were respectively ($F = 10.109$, 0.555 and $P\text{-value} = 0.001$, increase (in Governmental sector)) the mean \pm SD were (21.083 ± 3.941). Regarding chronic illness has a significant relation between anxiety and chronic illness were $T = 5.892$ and $P\text{-value} = 0.001$, increase (in answer Yes), the mean \pm SD were (19.902 ± 3.896).

Discussion

The aim of the current study was to assessment of prevalence of stress, anxious and depressed among the Covid-19 Pandemic patients in Makkah Al-Mukarramah Saudi Arabia at Saudi Arabia 2022. Psychiatric or psychological factors play a role in disorders; stress, anxious and depressed among the Covid-19 Pandemic patients stress, for example, can affect among Covid-19 Pandemic patients our study found A total of (200) participated in the study, of these Only (37.0%) of the participated were (>50) years the data ranged from (20 to 62) by mean \pm SD (38.541 ± 8.564), (67.0%) were females, (79.0%) Saudi, more than half of participant single (84.0%), The majority of the participated had Illiterate degree education were (22.0%), (23.0%) were employed in Retired. (See Table1)

The prevalence of depression was found to range from 25.0% in Saudi Arabia to 32.0% of anxiety. These results are consistent with previously reported prevalence rates (30). In previous studies, the reported rates of depression in Egypt, Oman and Iraq [31] were lower than those identified in this study. However, the depression rates in Jordan and Saudi Arabia [20] were higher than the identified rates in this study. The inconsistency of some prevalence rates of stress, anxious and depressed with previous literature may be related to different survey methods, recruitment of participant people with different age groups, and use of different tools. The findings of the current study were similar to those of previous studies, which suggests that the COVID-19 pandemic has no significant impact on the selected of stress, anxious and depressed variables. (see Table2,3)

In the current study, several factors were associated with DAS prevalence rates. Some of these variables were also reported in previous literature, including female gender, having a friend and/or family member diagnosed with mental illness, and using the internet. Young females have higher levels of DAS (32). Mental illnesses affect not only the diagnosed person but also the surrounding

people, such as depression and Anxiety acts as a psychosocial stressor in initiating or causing a relapse of Covid-19 Pandemic patients problems, as many studies have shown that psychological problems can change the immunity.(29) Conversely, depression could be a consequence of disorders due to their long course and effects on self-esteem and body appearance. All these factors make the Covid-19 Pandemic patients more sensitive to depression and anxiety. When stressed, the body releases more cortisol than normal lead to Covid-19 Pandemic problems (20). Similar study reported differences in levels of anxiety and depression between males and females, supported by many epidemiological studies around the world and in Saudi Arabia , which have revealed that women visit depression and anxiety clinics more often than men due to women's greater sensitivity to health-related issues.(14)

in the current study depression and Anxiety among Covid-19 Pandemic patients visiting depression and Anxiety clinic attending primary healthcare centers in Makkah AlMokarramah 2022, depression scale the majority of the subjects had severe were(25.0%), followed by respectively Extremely severe, were(23.0%). also anxiety scale the majority of the participants in the extremely severe were(32.8%) .

However, other local studies have reported much higher rates of depression and anxiety in patients. One possible reason for this discrepancy in prevalence rates may be the use of different assessment tools. For example, the study conducted in the Qassim region used the Beck Depression Scale, while the current study used scales(33) This study has further described current distribution of depression and anxiety based on age, gender, nationality, marital status and education and income. The current study also assessed whether Depression and Anxiety among Covid-19 patients visiting PHC clinic an Makkah AlMokarramah . A significant relation between the Socio-demographic and the presence of depression, anxiety .Socioeconomic status, as indicated by education and income, also showed significant association with depression.

Nevertheless(see Table 5,6)

However, the age-specific rates indicate that gender differences diminish with age and there is virtually no difference at age < 60 which is in agreement with Gutiérrez-Lobos et al. (34)

. Some studies have revealed , similar study the prevalence of depressive symptoms was almost similar to another local study, which was conducted in PHC clinic in Riyadh, which revealed a prevalence of 12.6%.(29) Conversely, the percentage of depression in this study was less compared to studies conducted in Oman(35) (24%) and Sudan (22%).(36)

5. Conclusions

The current study addressed the current gap in the literature regarding the effects of COVID-19 on the mental health of patient. This was the first study of its kind to collect data using a standardized method and one of the few studies to investigate the prevalence of DAS during the COVID-19 pandemic. Healthcare providers, policymakers, and decision-makers should consider the findings and recommendations of this study to establish new emergency plans to address the psychological needs of patient and to prevent and manage emerging mental illness in the future.

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