

Assessment of the Psychological Impact of the COVID-19 Pandemic on Population in Makkah Al-Mokarramah, Saudi Arabia 2022: A Cross-Sectional Study

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Abstract:

Background

Population attending primary health care center are under psychological pressure tremendous pressure, against the coronavirus disease 2019 (COVID-19) pandemic are , which puts them at an increased risk of developing psychological problems. The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an emerging infection causing a widely spread pandemic of Coronavirus disease 2019 (COVID-19). The current COVID-2019 pandemic is prompting fear of falling sick, psychological problems and dying, helplessness and stigma, urgent and timely understanding of mental health status is needed to help the community. Today, people are struggling with a pandemic COVID-19, which was first seen in Wuhan, China. COVID-19, like other pandemics, affected a large number of people in a very short time after it appeared and caused many people to die. The COVID-19 pandemic affects people psychologically because the spread of it still continues, death rates increase day by day, life comes to a halt and its control time is unpredictable.

Aim of the study: To Assessment of the psychological impact of the COVID-19 pandemic on population in Makkah Saudi Arabia 2022.

Method: A cross-sectional, was conducted in February 2022 among population in primary health care center in Makkah, during the COVID-19 pandemic. Psychological problems were assessed using the generalized depression, anxiety Disorder Scale and stress Patient Health Questionnaire and Severity Index; analyses were used to explore the factors that were associated with psychological problems, also a self-administered questionnaire was designed and has been send to the study participants. Our total participants were(200).

Results: shows participants were (35.0%) in the age group 25-35 years, majority of them were female (65.0%), the Relatives/neighbors infected with COVID-19 pandemic the majority of answer Yes were (75.0%), also regarding the nationality most of participants Saudi were(85.0%), Family income the majority of participant are Middle were(56.0%).

Conclusion: Psychological problems are pervasive among population during the COVID-19 pandemic. Receiving negative information and participating in work appear to be important risk factors for psychological problems. The psychological health of different population should be protected during the COVID-19 pandemic with timely interventions and proper information feedback.

Keywords: Assessment, psychological, impact, Perceptions, Covid-19, pandemic population, Makkah, Saudi Arabia

Introduction

During any outbreak of an infectious disease, the population's psychological reactions play a critical role in shaping both spread of the disease and the occurrence of emotional distress and social disorder during and after the outbreak. Despite this fact, sufficient resources are typically not provided to manage or attenuate pandemics' effects on mental health and wellbeing.(1) while this might be understandable in the acute phase of an outbreak, when health systems prioritize testing, reducing transmission and critical patient care, psychological and psychiatric needs should not be overlooked during any phase of pandemic management. (2) Infectious diseases remain one of the biggest threats to the health and well-being of the human race. Since December 2019, novel COVID-19 infection has spread rapidly all over worldwide and internationally (3). According to the statistics released by the World Health Organization, there have been 16,523,815 confirmed cases of COVID-19 infection in 216 countries, with at least 655,112 deaths as of July 29, 2020. The pandemic resulted in not only the risk of death from the viral infection but also psychological consequences among people, particularly because of the long-term nature of the pandemic, which is still developing.(4) Previous research has revealed a profound and wide range of psychological impacts of infectious outbreaks on survivors, family members of infected patients, medical staff,

and the general public (5). The psychological consequences of COVID-19 pandemic have been reported to include depressed mood, anxiety, poor sleep, and increased fear and stress levels(6), with posttraumatic stress disorder (PTSD) and depressive disorders being the most prevalent long term psychological conditions during COVID-19 pandemic(7)

The transmission rate of COVID- 19 is broadly considered to be of an intermediate level, with an estimated to be approximately 2.2, compared to an of 3 given for the SARS outbreak in 2003.[3]However, those that contract the disease can become severely ill and require hospitalization and possibly ventilator support. Various studies have reported that the fatality rate of COVID- 19 ranges between 7.2% and 67% and is largely affected by age, underlying diseases, and severity of pneumonia.(8) Nevertheless, it has been reported that younger individuals with no known underlying diseases have also contracted the infection and

became critically ill, with reported hospitalization rates that range between 20.7% and 31%.(9) Moreover, it was reported that asymptomatic patients can potentially transmit the disease through close contact during the incubation period, which is the primary mechanism implicated in the observed rapid and widespread community transmission.(10)

Considering the effects of pandemics on the groups of population living in the community, the general population high risk of infection, inadequate protection, loss of control, lack of experience in managing the disease, overwork, negative feedback from patients, perceived stigma, significant lifestyle changes, quarantine and less family support.(11,12) These factors increase the incidence of psychological problems among healthcare workers, such as fear, anxiety, depression and insomnia, which can negatively affect work efficiency and long-term well-being.(13) it can be seen that it affects directly patients, and their relatives, healthcare staff, and all other people who are at risk of disease (14) have difficulty in sleeping and feel embarrassed. Another group negatively affected by the pandemic of COVID-19 is young people. (15) in their study on the relationship between MERS pandemics and stress in university students concluded that 77% of the students has low, 18.4% has medium level of anxiety.(16)

Literature review:

Moghanibashi, (2020). reported study conducted during the pandemic in Iran where it reported the level of severe anxiety to be 19.1% and another study in Spain where it reported the level depression, stress, anxiety to be 9.9%, 7.8%, 11.6% respectively (17) . Contrary to the findings of our study, a recently published study in china where 53.8% reported their psychological impact of the outbreak moderate or severe, 16.5% and 28% reported depressive and anxiety symptoms ranged from moderate to severe, while 8.1% reported moderate to severe stress levels.(18)

However, when school closures take longer, students' learning and social relationships are negatively affected. Schools provide face-to-face education. But because face-to-face education cannot take place because of the epidemic, the country's education administrators want students to be accessible through distance or online education. Ozamiz, et al (2020) the studies published recently and during MERS outbreak in Saudi Arabia and studies conducted during the current COVID-19 pandemic in Singapore and India (20). In addition to that, we found that females and students had higher scores across all DASS subscales, as was consistent with a previous study done in China those participants had a higher score in the stress and anxiety and depression subscale, (21) Considering the psychological damage caused by pandemics to healthcare staffs in the past, COVID-19 pandemics will also have psychological negative effects on healthcare staff. As a matter of fact, during the COVID-19 pandemic, healthcare workers have been found to experience psychological problems such as anxiety, depression, fear, anger and trauma (22), this is in agreement with associated with higher scores on the IES-R the depression subscale, the economic impact of the pandemic cannot be overlooked which had left families with lower-income fearing of losing their jobs and homes, to mitigate this damage the Saudi government has released several initiatives, including offering free health care for everybody and financial incentives for the private sector (23). The high prevalence of psychological problems that was found in this studies is consistent with recent findings from two other Chinese research studies with relatively small samples. (24) The prevalence of self-reported symptoms of anxiety, depression and insomnia in these two previous surveys was 44.7%, 50.7% and 36.1% 32 and 44.6%, 50.4% and 34.0%, 17 respectively. Another study confirmed the severe mental health conditions in healthcare workers and indicated that medical health workers reported more symptoms compared with non-medical health workers. (25) In addition, compared with the general population (eg, 34.43% of the general population experienced psychological distress), (26)

Rationale

Psychologically the most affected people by the COVID-19 pandemic are those who suffer from this pandemic. In the studies examining the psychological effects of COVID-19 on population, as seen in other epidemics that most patients face negative psychological conditions such as posttraumatic stress disorder, anxiety, depression, loneliness, distress, fear, anger and fear of being tagged the causal relationships should be interpreted with caution. Although a relatively large number of populations participated in this study, the limited number of participants in the Makkah of Saudi Arabia areas might have caused the findings to be underpowered. More studies are needed to explore the longitudinal trajectories of anxiety, depression and insomnia symptoms in population during the COVID-19 pandemic in Saudi Arabia. Moreover, the number of population

who participated in this survey was limited, which may limit the generalizability of findings. The results were based on self-reported questionnaires that investigated psychological problems, which might be different from clinical diagnostic interviews.

Aim of the Study

To Assessment of the psychological impact of the COVID-19 pandemic on population in Makkah Saudi Arabia 2022

Objectives:

To Assessment of the psychological impact of the COVID-19 pandemic on population in Makkah Saudi Arabia 2022

Subjects and methods :

Study design:

This cross-sectional survey has been conducted among population in the city of Makkah. The study carried for 2 month February 2022, from the 1st till 30 the March 2021, among Adult Saudi Population attend to the PHC centers in Makkah, participants aged between 25 and 55 years old, the study investigators will share the survey link in social media and their primary contacts

Study setting / study area:

A study participant has been recruited on Makkah Al-mukarramah including PHC centers under supervision of Directorate of Health Affairs of Makkah in Saudi Arabia. The study has been carried out in the city of Makkah, Makkah is the holiest spot on Earth. It is the birthplace of the Prophet Mohammad and the principal place of the pilgrims to perform Umrah and Hajj. The most important cities in Saudi Arabia. It is the holy city for all Muslims, and is located in the western region. It is located in the western area in Kingdom of Saudi Arabia .Contains a population around 1.978 million.

Study population:

The study has been conducted among population in the PHC centers in the Makkah Al-Mokarramah at Saudi Arabia. Including Al-Ka'akya, Al-Adl, Al-Zahir primary healthcare centers.

Selection criteria:

Inclusion Criteria :

- All Saudi people who are more than 25 years of age. A study participant has been recruited from Makkah Al-Mukarramah.

Exclusion criteria:

- Saudi younger than 25 years

- Participants who did not consent to participate in the study, and/or did not answer the questions of the study.
- Patients with language barriers .

Study Sample:

The sample size has been calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is 200 of population Saudi Population attending in PHC and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been 200. Computer generated simple random sampling technique was used to select the study participants.

Sampling technique:

Systematic random sampling technique is adopted. By using systematic sampling random as dividing the total population by the required sample size; (200)

Data collection methods:

The self-administered questionnaire is designed based on previous studies and frameworks to assess of the psychological impact of the COVID-19 pandemic on population in Makkah Saudi Arabia.

The questionnaire was developed in English and was then translated into Arabic. The questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. The survey is estimated to take 10 min to complete .

To collect the information, a set of questions were constructed and developed .

The questionnaire consisted of two main sections; the first section focuses on Socio demographic and background information such as age, education level, outcome and gender of the participants .Psychological impact of the COVID-19 pandemic of the participants.

A Pilot study

Was carried out at the questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. This study has been conducted and all suggestions taken into consideration.

Data analysis

The Statistical Package for Social Sciences (SPSS) software version 24.0 has been used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic statistics using test for the association and the difference between two categorical variables were applied. A p-value ≤ 0.05 has been considered statistically significant.

Ethical consideration :

- Permission from family medicine program was obtained .
- Permission from the regional Research and Ethical Committee was be given to conduct our study.
- All the subjects has been participate voluntarily in the study .
- Privacy of information and confidentiality has been maintained .
- Full explanation about the study and its purpose was carried out to obtain their participation.

Budget: Self-funded

Results :

Table 1. Distribution of the demographic characteristics of the participants (n=200)

	N	%
Age		
25-35	70	35
35-45	42	21
45-55	38	19
>55	50	25
Sex		
Male	70	35
Female	130	65
Education		
Secondary school	30	15
Diploma	68	34
Bachelor's degree	44	22
University	58	29
Relatives/neighbors infected with COVID-19 pandemic		
Yes	150	75

No	50	25
Nationality		
Saudi	170	85
Non Saudi	30	15
Marital status		
Married	154	77
Divorced	20	10
Widow	26	13
Family income		
Low	68	34
Middle	112	56
High	20	10

Table 1 shows that most of the participants were (35.0%) in the age group 25-35 years, followed by age >55 were (25.0%), regarding gender the majority of them were female (65.0%) while male (35.0%), regarding level of education the majority of participant are Diploma were (34.0%), followed by University education were (29.0%) , regarding the Relatives/neighbors infected with COVID-19 pandemic the majority of answer Yes were (75.0%) while No were(25.0%), also regarding the nationality most of participants Saudi were(85.0%) while non-Saudi were (15.0%), regarding the marital stats most of participants married were(77.0%)while widow were(13.0%), regarding Family income the majority of participant are Middle were(56.0%) followed by low were (34.0%).

Table 2 .Distribution of the demographic characteristics during of the COVID-19 pandemic of the participants

	N	%
Number of children		
One child	24	12
Two children	62	31
Three to five children	88	44
More than five	26	13
Type of work		
Office place	156	78

Working online from home	44	22
Covid-19 had an impact on income		
No, it did not affect income	156	78
Yes, it did	44	22
Probability of losing job during the pandemic		
High risk	134	67
Low risk	44	22
No risk	22	11

Table 2 shows regarding the Number of children most of participants three to five children were (44.0%), followed by two children were (31.0%), regarding type of work the majority of them were Office place (78.0%) while Working online from home were (22.0%), regarding Covid-19 had an impact on income the majority of participant are No, it did not affect income were (78.0%), followed by Yes, it did were (22.0%), regarding the Probability of losing job during the pandemic the majority of participants High risk were (67.0%) while Low risk were(22.0%).

Table 3 . Distribution of the psychological impact of the COVID-19 pandemic of the participants

	N	%	Chi-square	
DASS depression			X²	P-value
Normal	22	11	31.6	<0.001*
Mild	48	24		
Moderate	66	33		
Severe	38	19		
Extremely severe	26	13		
DASS anxiety			59	<0.001*
Normal	18	9		
Mild	44	22		
Moderate	80	40		
Severe	26	13		
Extremely severe	32	16		
DASS stress			92.8	<0.001*
Normal	30	15		

Mild	26	13		
Moderate	90	45		
Severe	44	22		
Extremely severe	10	5		
PTSD				
Yes	132	66	19.845	<0.001*
No	68	34		

Table 3 shows the psychological impact of the COVID-19 pandemic of the participants Regarding DASS depression most of participants Moderate depression were (33.0%), followed by Mild depression were (24.0%) while Severe were (19.0%), while is a significant correlation were p-value =0.001 and X^2 31.6.

Regarding DASS anxiety most of the participants Moderate anxiety were (40.0%) while Mild anxiety were (22.0%), followed by extremely severe anxiety were (16.0%), while a significant correlation were p-value =0.001 and X^2 59.

Regarding DASS stress most of the participants Moderate stress were (45.0%) while Severe stress were (22.0%), followed by normal stress were (15.0%), while a significant correlation were p-value =0.001 and X^2 92.8.

Regarding PTSD most of the participants Yes were (66.0%) while No were (34.0%), while a significant correlation were p-value =0.001 and X^2 19.845.

Figure 1 Distribution of the psychological impact of the COVID-19 pandemic of the participants

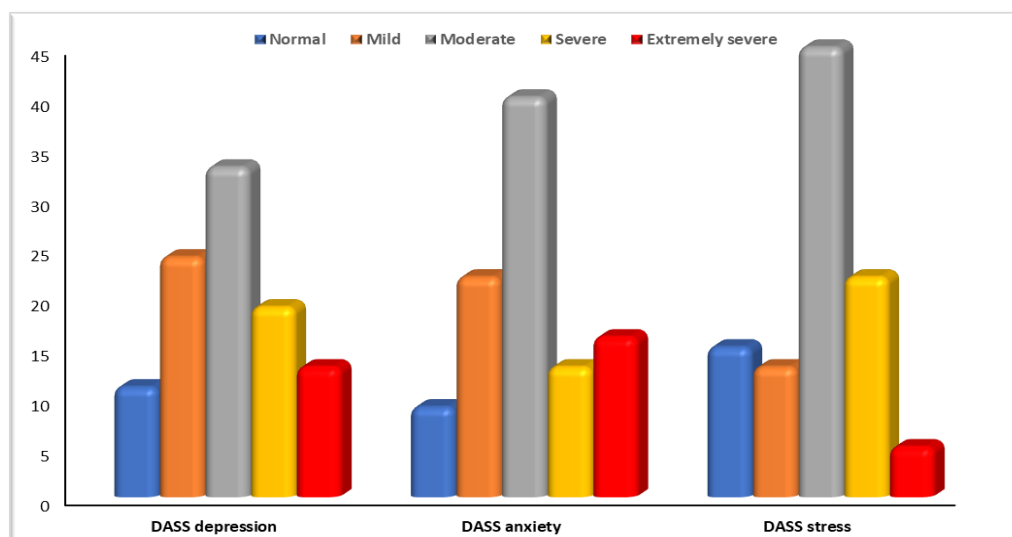
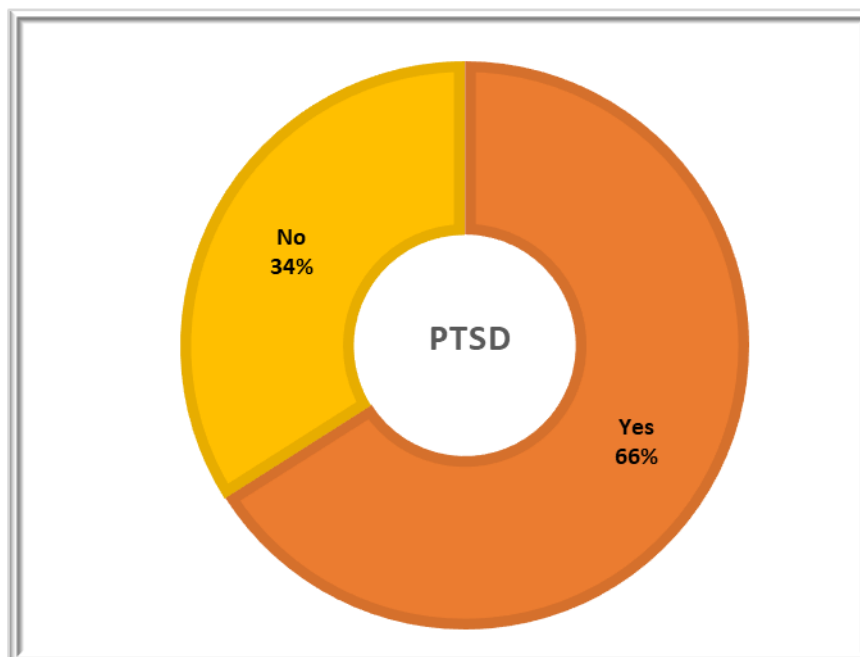


Figure 2 Distribution of the posttraumatic stress disorder (PTSD) impact of the COVID-19 pandemic of the participants



Discussion

The purpose of this study was to assess the psychological impact of the COVID-19 pandemic on the population in Makkah Al-Mokarramah, Saudi Arabia, 2022. The present results show that self-reported psychological problems are prevalent in the population during the COVID-19 pandemic. Moreover, different kinds of population exhibited a distinct prevalence of anxiety, depression, insomnia and overall psychological problems, attention to neutral or negative information about the pandemic, receiving negative feedback from the population, and uncertainty or unwillingness to join front-line work and so on. The findings help provide information for psychological interventions among the population in other countries and religions.

In our study, it shows that most of the participants were (35.0%) in the age group 25-35 years, followed by age >55 were (25.0%), regarding gender the majority of them were female (65.0%) while male (35.0%), regarding level of education the majority of participants are Diploma holders (34.0%), followed by University education (29.0%), regarding the relatives/neighbors infected with COVID-19 pandemic the majority of answers were Yes (75.0%) while No were (25.0%), also regarding the nationality most of the participants were Saudi (85.0%) while non-Saudi were (15.0%), regarding the marital status most of the participants were married (77.0%) while widows were (13.0%), regarding family income the majority of participants are middle (56.0%) followed by low (34.0%). (See table 1)

The high prevalence of psychological problems that was found in this study is consistent with recent findings from two other Chinese research studies with relatively .(24,27) The of self-reported symptoms of anxiety, depression and insomnia in these two previous surveys was 44.7%, 50.7% and 36.1%³² and 44.6%, 50.4% and 34.0%,¹⁷ respectively. Another study confirmed the severe mental health conditions in healthcare workers and indicated that medical health workers reported more symptoms compared with non-medical health workers.(28) In addition, compared with the general population (eg, 34.43% of the general population experienced psychological distress), (29) healthcare workers have a much higher risk of psychological problems (eg, anxiety, depression and insomnia) during the epidemic.(30) This may be related to the higher risk of infection on account of being exposed to patients with COVID-19 and tedious work involved in caring for them and reminds us of the importance of providing psychological support to healthcare workers during a pandemic.

psychological impact of the COVID-19 pandemic of the participants Regarding DASS depression most of participants Moderate depression were (33.0%), followed by Mild depression were (24.0%) regarding DASS anxiety most of the participants Moderate anxiety were (40.0%) while Mild anxiety were (22.0%), regarding DASS stress most of the participants Moderate stress were (45.0%) while Severe stress were (22.0%), regarding PTSD most of the participants Yes were (66.0%) while No were (34.0%)(See Table3)

However, few studies have investigated their psychological impact of the COVID-19 pandemic on population during pandemic, and further research is warranted to provide more evidence.(31) During the COVID-19 pandemic, many medical residents do not directly participate in the care of patients with COVID-19 (eg, many medical residents may only be on stand-by at home during the COVID-19 pandemic), and thus, they reported less anxiety, depression, insomnia and overall psychological problems.(32)

These findings indicate that based on the socio demographic, occupational and institutional disparities, different psychological interventions should be delivered to population during COVID-19.(22)

Conclusion

Throughout the early stage COVID-19 pandemic in Saudi Arabia, the results showed that one-fourth of the general population experienced moderate to severe psychological impact, and having a mental disorder are all associated with high scores in stress, anxiety, and depression subscales. Following specific precautionary measures appeared to have a protective effect on the individual's mental health. Our findings can be used to construct a psychological intervention directed toward the general and vulnerable population and to implement public mental health strategies in

combination with pandemic response efforts in early stages of the event. During the COVID-19 pandemic in Saudi Arabia, more than on population psychological health. Our findings suggested that resilience and positive coping lead to better psychological and mental health status in population. In contrast, negative coping is a risk factor for psychological and mental health. This study can be used to formulate psychological interventions to improve the mental health of during the COVID-19 pandemic.

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