

## A Study of the Covid-19 Pandemic from the Perspective of Effects on Mental Health

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### Abstract

The world has faced excessive losses of human lives and the economy due to the COVID-19 Pandemic. Consequently, many psychological and mental health problems have occurred among the people of the world. This study focuses on identifying the effects of COVID-19 on mental health in terms of depression as well as anxiety symptoms. The content of previous research, news, and editorials about the 14 countries like China, the UK, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan was analyzed. Google, Google Scholar, and Doaj.org databases were the sources for the search of the literature in this study. However, the search period was from the outburst of COVID-19 to July 31<sup>st</sup>, 2021. The study reveals that depression and anxiety symptoms prevail in the population of 14 countries. Such symptoms have a separate ratio and vary from country to country. Brazil has the highest anxiety and depression symptoms among the 14 countries. Few studies identified the mental health effects of COVID-19 more on females and youngsters. The imposition of lockdown, fear of economic losses, and strict measures to prevent the spread of the infection are identified as the reasons for the anxiety and depression.

**Keywords:** Covid-19 Pandemic, mental health, psychological health, depression and anxiety symptoms.

## 1. Introduction

This pandemic has proved to be a global challenge. It is a universal challenge for the healthcare systems, social values, and economic prosperity. We are not aware of when this situation of pandemic will end and also cannot estimate what number of people will be influenced by this virus. Besides, it is also difficult to say how many lives will be claimed by the virus (Mamun et al., 2020). COVID-19 is not only a threat to physical health. It additionally endangers mental as well as psychological health. The psychological and mental health of a human being is a condition of well-being whereby he or she understands his or her capacity to handle the usual stress of life. The mental health impact owing to COVID-19 is extensively witnessed (Lima et al., 2020). Nonetheless, as the world appears to pay attention to the infectious part of the COVID-19 pandemic, an ascent has been seen in mental health disorders. New terminologies appeared in the media, scientific, and academic papers. Such terminologies are social distancing, quarantine, and social isolation (Brooks et al., 2020). Later on, the world took this situation of the pandemic as a serious problem. The people used such terminologies in their daily discourse. The governments introduced the system of lockdown under their respective powers. Fear of death and transmission of Coronavirus from person to person has become common in societies throughout the globe. Furthermore, due to lockdown financial issues, fear of losing employment caused many psychological and mental health problems. The Academia, media, and other surveying bodies reported the impacts of COVID-19 in terms of panic, anxiety, depression, sleeping disorder, stress, psychological distress, frustration, anger, and emotional exhaustion. However, depression refers to a prevalent mental health problem. A persistently low mood, a decline in enjoyment, or a lack of interest in activities are all signs of depression. According to the National Institute of Mental Health (n.d.), depression is a serious but common mental illness. In addition, anxiety is a natural feeling that can manifest itself in physical signs like sweating and trembling (Felman, 2023). According to the American Psychological Association, anxiety is a type of emotion featured by body tension, anxious thoughts, and physical changes such as high blood pressure.

The coronavirus pandemic carries novel difficulties for individuals. The virus not only spreads infection, and illness and becomes a cause of mortality, but in addition, it also influences on behavior and social and mental conditions of the human being (Pahore et al., 2021). The disease-controlling measures consisting of social distancing, isolation, and quarantine have been adopted. Such measures affect human behavior and lead them toward psychological, emotional, and social disorders including suicide, depression, fear, and anxiety (Pedrosa et al., 2020). Forced quarantine and lockdowns in order to fight against COVID-19 further intensified the situation, as it caused server types of panic, nervousness, anxiety, fanatical practices and depression, and post-traumatic stress disorders (PTSD) over the long time. This in addition provided power by an “infodemic” spread by means of various foundations of web-based media (Dubey et al., 2020).

As the COVID-19 pandemic quickly spread throughout the world, it is actuating an extensive level of dread, stress, and worry in people everywhere and among specific groups specifically, like more old age persons, care providers, and individuals with feeble medical issues. As far as mental health is related, the important psychological influence of COVID-19 is an increase in stress and anxiety

rates. The new measures which have been introduced have affected the routine life and livelihoods of the people. It has caused depression and loneliness. People use drugs and harmful alcohol in order to relieve their stress. Self-harm such as suicidal behavior also ensued due to these special measures for controlling COVID-19.

The impacts in terms of psychological and mental health vary from country to country as every country has its own different social, economic, political, and cultural conditions. Eventually, in this study data regarding the mental health indicators and their level have been collected from secondary sources regarding the 14 countries i.e. China, United Kingdom, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan. So, the following aims and objectives have been designed.

### ***1.1 Aim and objectives***

The study aims to mention an overview of the mental health impacts of COVID-19 as shown in previous research, news, and editorials. This study also has the objective of knowing symptoms of anxiety, and depression, and their rate caused due to COVID-19.

## **2. Methods**

The content analysis method was used. Previous research, news, and editorials regarding the 14 countries including China, the UK, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan were searched to ascertain the impacts of COVID-19 on mental health. However, Google, Google Scholar, and Doaj.org databases were utilized for the search of the literature spending from the outbreak of the COVID-19 Pandemic to July 31st, 2021. While searching the content for this study, the objectives of the study were kept in mind. A total of 33 researches, news, and editorials were searched and included in this analysis.

## **3. Results**

The data have been described in two parts. In the first part, the content related to the impacts of the coronavirus on mental health especially concerning anxiety, depression, loneliness, and psychological disorders has been described. While in the second part special focus has been given on the level of anxiety and depression among the 14 selected countries and shown in the tabular form.

According to Ran et al. (2020) during COVID-19 prevalence of psychological symptoms has increased. Severely affected areas had higher numbers of GHO (General Health Questionnaire) i.e. anxiety and depression symptoms. The risk of higher cases was due to larger family members and common outdoor visits. In some affected areas, extra uptake care and protection measures caused mental illness. The pandemic of COVID-19 first erupted in China. Many studies were carried out to identify the different influences of this pandemic on Chinese society. In this regard, our focus is the study carried out by Wang et al. (2020). In this study, the researchers involved 1210 respondents from 194 different cities in China. This study identified the depression ratio in the Chinese

population due to COVID-19 as 16.5% in terms of moderate to severe. While the anxiety ratio was reported as 28.8% under the same conditions of moderate to severe.

Knolle et al. (2021) examined that in European countries like the United Kingdom and Germany, people had faced worsening psychological, mental, anxiety, and depression symptoms respectively. It is observed that pandemic effects relating to mental health have increased in the population of both countries, but a higher rate of mental disorders like anxiety and depression have occurred in Germany as compared to the United Kingdom. Respondents from the United Kingdom had a higher clinical ratio and higher prevalence rate. Regarding the percentage of the United Kingdom population regarding depression and anxiety indicators Jia et al. (2020) in their study identified that 64% of respondents had symptoms of depression and 57% had symptoms of anxiety. Additionally, about the symptoms of anxiety and depression in Germany, Bäuerle et al. (2020) discovered in their study a noteworthy surge in the prevalence of the ratio of symptoms of anxiety, depression along with psychological distress and fear about COVID-19. The ratio individually is 44.9% anxiety, 14.3% depression, 65.2% psychological distress, and 59% fear about COVID-19. In this study, this ratio of anxiety and depression was identified to be higher in younger people and females.

A longitudinal study conducted by Pieh et al. (2021) revealed that Austria received the first case of Coronavirus on 25th February 2020. In March 2020, the Government of Austria levied a lockdown. This resulted in mental health issues and such issues increased in the general population at some scale. Later on, a comparison was made between Pre and after-lockdown. It was found that depressive anxiety symptoms were more than previous records. So, this study has discussed the impacts of lockdown in Austria and also compared the same pre and after-lockdown conditions. A study by Vahedian-Azimi et al. (2020) was conducted as a general cross-sectional survey in Tehran, the capital of the Islamic Republic of Iran from February to March 2020 involving four groups of participants. This study reports the occurrence and compares the rigorousness of stress, anxiety, as well as depression. This study further showed COVID patients and medical students had higher rates of stress along with anxiety, and depression in the comparison of other groups of this study. Furthermore, depressive cases were higher in female medical staff and community populations as compared to male members of the medical staff and community. Another research conducted by Shahriarirad et al. (2021) from the Iranian perspective shows the prevailing depression and anxiety symptoms in the Iranian population as 15.1% and 20.1% respectively. However, this study shows such symptoms were more common in female respondents in comparison to male participants.

A meta-analysis and systematic review were conducted by Singh et al. (2021) who stated that COVID-19 spread rapidly in overpopulated cities of India. Mental health problems and psychological disorders hit general public health and Health Care Workers. The ratio of the occurrence of stress among the study population as per this study is 60.7%, anxiety 34.1%, depression 32.7%, and sleep disturbance 26.7%. This study showed different reasons for the mental problems during the times of the prevalence of COVID-19 in HCWs. Such elements as per this study are higher work hours, direct contact with patients, and fear of spreading the disease to their family members.

Amit et al. (2021) in the perspective of Italy and Israel examined that Italy and Israel have similar health service models. Both countries have the most developed and advanced health facilities as well. Despite these facts, very severe measures were taken regarding COVID-19 in Italy as well as in Israel in the month of March 2020. COVID-19 viral situations in both countries were greatly different. Before the epidemic, the Italian data from the National Statistical Institute indicated an anxiety rate of 4.2% and depressive symptoms occurrence of 5.4%. After the epidemic, it became 29.7% depressive symptoms and 23.2% anxiety level in the general population. In Israel, data from the Israeli Central Bureau of Statistics shows before COVID-19 the existing ratio of anxiety was 3.6% and depression was 10.5 to 12%. In April 2020 results suggest one-third of the adult Israeli population became the victim of mental disorders. Regarding the impacts of COVID-19 in Japan Nagasu et al. (2021) studied that COVID-19 has drastic effects on psychological distress in the general population. It is mainly due to socio-economic status (SES) and lifestyle factors. More than half participants felt psychological distress. In this context, Stickley et al. (2020) carried out a survey and included 2000 Japanese adults as participants. This study reveals that the occurrence of the anxiety in Japanese adult population due to COVID-19 is 10.9%, while 17.3% of adults showed symptoms of depression.

About the United States of America, Bhattacharjee & Acharya (2020) in their study have discussed Coronavirus as a public health emergency as declared by Health and Human Services (HHS). Enormous deaths of Americans almost 100,000, created fear in the minds of the general population in America. 72% of Americans were of the view that their lives have been affected by the onset of COVID-19 which resulted in many psychological disorders i.e. depression and stress. Moreover, dubious information about disease transmission has been proven to be another major cause of the ill mental health of Americans. Lockdowns in the country increased the unemployment rate and slashed down the economy of the country. In this context loss of employment and fear of losing employment proved to be leading elements of mental disorders. However, Liu et al. (2020) involved 898 U.S adults in an online survey and the results of this survey revealed that the participant's depression level was 43.3%, PHQ-8 score  $\geq 10$ , and anxiety level was 45.4%, GAD-7 score  $\geq 10$  due to COVID-19 in the U.S.A. Whereas, from the Russian perspective, Karpenko et al. (2020) explained that COVID-19 heavily influenced the mental health of the Russian people. The first case of the pandemic in Russia appeared on 2nd March 2020 in Moscow. Consequently, the Russian president declared a holiday in the country. Citizens were restricted to their houses from 30th March 2020 to 12th April 2020. In this regard, they were only allowed to go to the nearest shops, and visits to nearby or far-distance travel were not allowed. Violation of rules prescribed to be punished with a penalty of 4000 roubles (US\$57) for each violator. These circumstances created mental health problems among the population. Such mental problems were observed to be depression, anxiety, and psychological distress. Regarding the prevailing anxiety and depression levels among the Russian population a study conducted by Mosolova et al. (2021) on healthcare workers (HCWs) whereby 2195 HCWs were involved, it was revealed that in the Russian population rate of anxiety and depression was 32.3%, and 45.5% respectively.

Ramiz et al. (2021) discussed that the Coronavirus outburst in France was observed in March 2020. This simple appearance of COVID-19 in French society altered the daily routine of French people and caused mental disorders including sleep disorders, anxiety, and depression. The situation further deteriorated with the imposition of the lockdown whereby masses were put into quarantine. They were only allowed to go outside to cater to basic needs and for medical purposes. The occurrence of anxiety level in French people according to this study is 20.1% and depression is 27.6%. In Brazil, heavy influences of COVID-19 were observed on mental health as provided by Goularte et al. (2021). This study examined that in Brazil COVID-19 as the result of the appearance of the first case, the government announced a health emergency on 3rd February 2020. Almost by 19th May 2020, COVID-19 spread in all areas of Brazil. Most psychiatric and mental illnesses during the prevalence of COVID-19 in Brazil according to this study were identified to be anxiety 81.9%, anger 64.5% depression 68%, somatic symptoms 62.6%, and sleep problems 55.3%. Such psychological problems seemed to be common and with a higher ratio in youngsters, less educated people, and persons with less income.

Relating to Pakistan and COVID-19, Khan et al. (2020) state that in February first case of coronavirus appeared in Pakistan. As an increase in the positive cases, the government in Pakistan followed the culture of lockdown. Strict measures were introduced to prevent the spread of the disease. The survey indicates that the lockdown created psychological problems in the general public of Pakistan. The salaried class of people in Pakistan was affected heavily. Almost 30 million had lost their jobs during the shutdown of the country. 68% of the population was revealed to be afraid of transmitting the disease. More than half of the population was significantly affected by social media and news channels spreading fear which causes mental disorders. Amin et al. (2020) identified from the Pakistani perspective the level of anxiety and depression among Pakistani doctors and this was 43% individually. Moreover, Baloch et al. (2021) observed minimal to moderate, severe, and most extreme levels of anxiety among their participants at 25.3%, 9.1%, and 6.9% from the Pakistani perspective.

Masterson (2021) tells about the point of view of Audrey Kearney, Liz Hamel, and Mollyann Brodie from the KFF survey team who state how the pandemic affects mental health. Such ways are worry and stress about the spread of the virus, fear of losing of job, child care loss, and loss of a loved one when they die due to the pandemic. Similarly, Zandifar & Badrfam (2020) in a letter to the editor cited Xiang et al. (2020) and stated that pandemics and epidemics cause serious reservations such as death fear and a rise in the ratio of patients. When people are quarantined a feeling of anger and loneliness is generated among the population. Salari et al. (2020) pointed out the potential and power of COVID-19 in affecting mental health and stated that the virus has the potential to affect the mental health of various communities. So, it is necessary to protect the mental health of individuals and an intervention may be developed which may improve the mental health of groups with the definition of vulnerability.

#### 4. Discussion

This study aims to analyze the content of previous research, news, and editorials, about 14 countries comprising China, the UK, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan from different databases to identify the impact of COVID-19 on Mental Health. Therefore, in this second phase of the data analysis special focus has been given first to mention the dates of the first COVID-19 case occurrence in the abovementioned countries. Secondly, under Table 2 anxiety and depression symptom levels among the population of the above countries are discussed. Data regarding anxiety and depression levels have been collected as a secondary from different sources.

Table 1. Showing the date of the first case of COVID-19 appeared in different countries

<b>First Case of Corona (Covid19)</b>	<b>Country Name</b>
<b>17<sup>th</sup> November 2019</b>	China
<b>31<sup>st</sup> January 2020</b>	United Kingdom
<b>27<sup>th</sup> January 2020</b>	Germany
<b>25<sup>th</sup> February 2020</b>	Austria
<b>19<sup>th</sup> February 2020</b>	Iran
<b>27<sup>th</sup> January 2020</b>	India
<b>21<sup>st</sup> February 2020</b>	Israel
<b>31<sup>st</sup> January 2020</b>	Italy
<b>16<sup>th</sup> January 2020</b>	Japan
<b>31<sup>st</sup> January 2020</b>	United States of America
<b>2<sup>nd</sup> March 2020</b>	Russia
<b>27<sup>th</sup> December 2020</b>	France
<b>26<sup>th</sup> February 2020</b>	Brazil
<b>26<sup>th</sup> February 2020</b>	Pakistan

It is revealed that the first-ever case of COVID-19 in the world occurred in China on 17<sup>th</sup> November 2019. This first-ever occurrence of the case caused long-term impacts on the world in almost all aspects of life, including social, economic, political, and health (both physical and mental health). The data further shows that on 16<sup>th</sup> January 2020 cases of COVID-19 appeared in Japan. The United States of America which has the world's first-class health services observed the first case on 31<sup>st</sup> January 2020. While in Pakistan COVID-19's first case appeared on 26<sup>th</sup> February 2020. After, this date governments including federal as well as provincial imposed lockdowns in Pakistan. Such lockdowns left numerous effects on the mental health of the Pakistani people as well.

Table 2. Showing Anxiety and Depression Symptoms Levels in different countries

Country Name	Anxiety Symptoms Level	Depression Symptoms Level	Study
<b>China</b>	28.8%	16.5%	Wang et al., 2020
<b>United Kingdom</b>	57%	64%	Jia et al., 2020
<b>Germany</b>	44.9%	14.3%	Bäuerle et al., 2020
<b>Austria</b>	19.7	21.6%	Pieh et al., 2021
<b>Iran</b>	20.1%	15.1%	Shahriarirad et al., 2021
<b>India</b>	34.1%	32.7%	Singh et al., 2021
<b>Israel</b>	1/3 Adult Population	1/3 Adult Population	Amit et al., 2021
<b>Italy</b>	23.2%	29.7%	Amit et al., 2021
<b>Japan</b>	10.9%	17.3%	Stickley et al., 2020
<b>USA</b>	45.4%	43.3%	Liu et al., 2020
<b>Russia</b>	32.3	45.5%	Mosolova et al., 2021
<b>France</b>	20.1%	27.6%	Ramiz et al., 2021
<b>Brazil</b>	81.9%	68%	Goularte et al., 2021
<b>Pakistan</b>	43%	43%	Amin et al., 2020

Coronavirus is a contagious disease. It has an important effect on mental and psychological health as exposed by many studies conducted in the different parts of the world. Feelings of anxiety, worry, and stress have been reported by the studies as the manner of the effects of COVID-19 on mental health. Every government throughout the world introduced lockdown as an effort to control the spread of the virus. Due to lockdown, quarantine, and self-isolation, enormous people faced mental disorders just as anxiety, stress, depression, psychological distress, anger, frustration, and sleep disorders. Besides, due to mental health problems masses suffered economic losses too.

This study, in this context, indicates the mental health problems as such symptoms of anxiety as well as depression across 14 countries i.e. China, UK, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan. The content analysis of the secondary sources in the shape of research articles, news reports, internet sources, and editorials is being made. The data of the above-mentioned countries are shown in Table 2. This revealed that in China, anxiety symptoms are 28.8% and depression symptoms are 16.5%. In contrast with other countries, the United Kingdom and Germany both have higher medical facilities and technologies but in the United Kingdom anxiety symptoms are 57% and depression symptoms are 64%. However, in Germany, 44.9% anxiety and 14.3% depression symptoms are observed from the content analysis of the different sources. In Austria, anxiety symptoms are 19.7% and depression symptoms are 21.6%. Anxiety and depression symptoms in Iran are recorded from different sources are 20.1% and 15.1% respectively. In India, anxiety, and depression levels are collected as 34.1% and 32.7% individually. Our data express that in Israel 1/3 adult population showed



symptoms of anxiety as well as depression during the days of COVID-19. While, in Italy, the ratio is 23.2% relating to anxiety symptoms and 29.7% regarding depression symptoms. In Japan, anxiety, and depression symptoms are 10.9% and 17.3% respectively. In the USA, anxiety and depression symptoms are counted as 45.4% and 43.3% respectively. In Russia anxiety and depression symptoms are 32.3% and 45.5% due to strict restrictions by the Government created mental illness. In France, anxiety, and depression symptoms are 20.1% and 27.6% due to changes in the daily routine of French people. The main symptoms were sleeping disorders. In Brazil the highest anxiety and depression symptoms are reported i.e. 81.9% and 68%, this is due to social distancing, financial issues, less education, and a history of psychiatric illness. In Pakistan anxiety as well as depression symptoms are 43% individually in the population of doctors. However, generally, anxiety and depression were also revealed in the Pakistani population in a good proportion. It is due to poverty, people who depend on their salaries and daily wages lose their jobs, and they are afraid of transmitting disease. Besides, social media and news channels are found to be a powerful source of spreading fear and anxiety in the Pakistani population.

## 5. Conclusion

This content analysis is about the impacts of COVID-19 on mental health especially the symptoms of anxiety and depression due to COVID-19 among different categories of population (Male, Female, Doctors, and Youngsters) of 14 countries. The data for this study were searched from previous research, news reports, and editorials which were available on Google, Google Scholar, and Doaj.org. The study concludes that the symptoms of anxiety and depression prevailed among the population of the countries selected for this study i.e. China, UK, Germany, Austria, Iran, India, Israel, Italy, Japan, America, Russia, France, Brazil, and Pakistan. Such symptoms have a separate ratio and vary from country to country. Moreover, the highest percentage of anxiety (81.9%) and depression (68%) symptoms were discovered in Brazil. However, the results of the previous studies show that these studies were either conducted on the general population or the special categories of populations such as males, females, doctors, and youngsters. Few studies revealed that the symptoms of anxiety and depression due to COVID-19 were more in the female participants. Besides, a few studies identified that this ratio is higher in females as well as younger populations. Few studies compared the anxiety and depression levels among their participants before and after the outbreak of the pandemic. The imposition of lockdown and measures to control the spread of the virus is identified to be the major reasons for anxiety and depression. Besides, fear of economic losses and jobs is also one of the reasons for anxiety and depression as identified by this content analysis. It is clear from this study that pandemic not only affected the population of the underdeveloped countries but also the population of most developed countries has been equally affected.

It is recommended that more studies on this pattern of knowing the symptoms of anxiety and depression due to COVID-19 be conducted. We saw a huge literature present on the different databases about different countries. Therefore, in this context, the prevailing symptoms of anxiety, depression, and other psychological impacts may be discovered on a large scale by adopting

different methodologies. Besides, such studies on a regional basis are suggested to be conducted. Especially, from the perspective of South Asian countries. Additionally, recommended that the world should introduce methods of controlling pandemics like coronavirus which may least affect the mental health of people and may not cause economic losses to the public.

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