

# Psychological Impact of Covid-19 Pandemic: Lockdown Induced Anxiety and Its Impact on Sleep Quality in Adults Between 18-50 Years of Age

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## Research Article

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# Abstract

**BACKGROUND:-** COVID 19 pandemic is the global health emergency and most critical health calamity of the century<sup>4</sup>.The COVID-19 belongs to the family of virus that causes illness such as common cold to severe infection causing Middle East respiratory syndrome (MERS)-CoV and severe acute respiratory distress syndrome (SARS)CoV1.

**RESULTS:-** 30 questions were asked combining of 5 components of which 4 were demographic questions and 1 willingness to participate. Total 196 subjects were chosen randomly between the age group of 18 years to 50 years from all over the Maharashtra. The subjects were both male and female.

**CONCLUSION :-** In Our study the total sample size was 196. Population was significantly affected in all the components. Out of 196, 49% population was affected in sleep quality, and 57 % population was affected in anxiety.

## Introduction

The COVID 19 pandemic is the global health emergency and most critical health calamity of the century<sup>4</sup>.The COVID-19 belongs to the family of virus that causes illness such as common cold to severe infection causing Middle East respiratory syndrome (MERS)-CoV and severe acute respiratory distress syndrome (SARS)CoV1<sup>2</sup>.

The most common clinical features of the COVID-19 are fever, dry cough and fatigue. The initial clinical sign for detection of Covid-19 is pneumonia along with other respiratory symptoms and over a period of time involvement of systems such as gastrointestinal are also seen in COVID-19 patients, asymptomatic infection is also seen<sup>3</sup>.

The corona virus was first reported in the wuhan city of China in late 2019<sup>1</sup>.On 30 January 2020 the WHO emergency committee declared a global health emergency based on the rapidly increasing cases into Chinese and international borders<sup>3</sup>. International borders were quickly closed by Indian government and enforced immediate lockdown. To which WHO praised as 'Tough and Timely'<sup>5</sup>.

The lockdown had serious impact on daily routine of people. COVID-19 pandemic has led to the slowing down of the activities all over the world. Corona virus has created significant knock-on effects on daily life of people. The majority of the modifications were restricting in terms of social contact, creativity, and pleasant relationships. In effect, these have altered chronobiological cycles, which are influenced by a variety of zeitgebers, including food, social interaction, and physical activity<sup>8</sup>.

Schools, colleges, offices, businesses and other sectors were closed for a time period which led to disruption of daily activities and trade globally<sup>6</sup>.

Disruption in the daily life of people lead to consequences related to mental health and physical health. The fear of transmission of virus in general population lead to development of psychiatric symptoms such as depression, confusion, stress, anxiety, sleep deprivation among the individuals who never experienced mental illness<sup>7</sup>.

The temporary closure of schools, colleges, businesses, IT sector and other industries lead to unemployment and distributed daily routine of people. The quarantine period, fear of getting infected from virus, lack of outdoor activities has affected psychosocial functioning of people. The lack of work and routine lead to disrupted sleeping patterns and altered eating habits and also impacted mental health of people<sup>7</sup>.

Aside from the constant anxiety of getting COVID-19 as it spreads across the country, there is also concern about jobs, the economy, and the health and safety of loved ones. The pandemic has also been referred to as an information epidemic, because most people have continual access to news about bad repercussions, much of it via electronic media, and as a result, they spend more time in front of their screens. In a nutshell, the lockdown resulted in home confinement and a lack of positive stimuli during a period of high anxiety. Stress has an adverse association with sleep in general, but not always. Sleep reactivities alter the impact of stress on sleep quality, timing, and length<sup>8</sup>. Those with a high response acquire sleeplessness during stressful conditions, but those with a low reaction do not. As a result, home confinement as a result of lockdown increases the risk of insomnia and disrupted sleep<sup>8</sup>. Living in the midst of a pandemic Individuals attempting to cope with uncertainty are put under stress when they are uninformed of many aspects of this unusual scenario. Sleep is also hampered by ruminating thoughts that cause cognitive arousal and an unpleasant bodily reaction. Worry causes cognitive activation, which can interfere with sleep. There was also a link between loneliness and insomnia. Loneliness can lead to emotions of vulnerability, causing arousal and disrupting sleep. Poor sleep, on the other hand, increases frustration associated with feelings of isolation and may cause interaction with others to be disrupted due to an irregular sleep wake routine<sup>9</sup>.

## Methods

1. Study Design: - cross sectional study
2. Type of Study: - It will be a descriptive, non-interventional, cross sectional survey study
3. Source of Data: - All the data significant to the study will be collected from the digital platform using Google forms.
4. Duration of Study: - This study will be carried out in duration of 15 days
5. Study Population: - general population

## Methodology

In the current cross sectional study, subjects aged 18 to 50 years of general population , including both sexes without taking subjects below 18 and above 50 years of age, prevalence of psychological impact of COVID 19 pandemic lockdown induced anxiety and its impact on the sleep quality in adults is done. The clearance was been taken from the Institutional Ethical Committee Subject's will be selected according to the inclusion and exclusion criteria using google forms will be circulated by social media platform and the demographic data and willingness for participation in the study will be asked. Further Questionnaire will be used based on the anxiety self-rating scale to find the anxiety among individuals and sleep questions scale will be used to find the disturbance in sleep as the questionnaire will be used for correlational study.

Inclusion Criteria: - subjects of age between 18 to 50 years.

Exclusion Criteria: - subjects of age below 18 years and above 50 years will be excluded.

## Results

A study was conducted by using a self-questionnaire on anxiety and sleep quality. The aim of the study was to find the prevalence of psychological impact of COVID 19 pandemic-lockdown induced anxiety and its impact on sleep quality in adults between age 18-50 years.

30 questions were asked combining of 5 components of which 4 were demographic questions and 1 willingness to participate. Total 196 subjects were chosen randomly between the age group of 18 years to 50 years from all over the Maharashtra. The subjects were both male and female.

For content validity the questionnaire was forwarded to 5 expertise in the specialization of physiotherapy, psychology, community health, sociology, social work. The content validity was found to be satisfactory by construct validity.

## Discussion

In present study a questionnaire was sent to 196 adults which were based on anxiety and sleep quality question to general population. The aim of the study was to find the prevalence of psychological impact of COVID 19 pandemic-lockdown induced anxiety and its impact on sleep quality in adults between age 18-50 years. 44 questions were asked combining of all the 2 components anxiety and sleep. In the present study total 196 subjects were chosen randomly between the age group of 18 years to 50 years from all over the Maharashtra. The subjects were both male and female.

There was total 196 subjects the mean age was 26.57 years and the std dev was 8.043 years. The subjects were from different profession. The subjects were both male and female. Out of 196 64.18 % were female while 35.82 % were male.

Result showed that out of 196 subjects 88.56 % said their work schedule and daily routine changed which is very high and only 11.44 % said their work schedule and daily routine did not change during lockdown. This shows that lockdown has significant effect on the day-to-day activities of the general population.

In the study 'psychological impact of COVID-19 lockdown: An online survey from India' during the survey, a total of 1871 responses were collected, of which 1685 (90.05%) responses were analyzed. About two-fifth (38.2%) had anxiety and 10.5% of the participants had depression. Overall, 40.5% of the participants had either anxiety or depression. [1]

In our study questions were asked related to anxiety such as do you feel tense, nervous, restless or agitated? Out of 196 subjects only 26.37 % said never 2.49 % always 3.98 % frequently 7.96% half the time and 59.20 % respondent sometimes. This shows that only a small percentage of subjects 26.37 % never feel anxiety while rest of them do get anxious at some point of time. When asked whether they feel afraid for no apparent reason out of 196 subjects 43.78 % said never 16.91 % always 59.20 % sometimes 7.46 % half the time and 3.98 % responded frequently.

In another study 'Mental health implications of COVID-19 pandemic and its response in India' it is found that the major mental health issues reported were stress, anxiety, depression, insomnia, denial, anger and fear. Children and older people, frontline workers, people with existing mental health illnesses were among the vulnerable in this context. [2]

When questions were asked related to sleep quality like do you have difficulty falling asleep, staying asleep or waking up early the result showed that out of 196 subjects 11.44 % said frequently, 7.46 % half the time, 32.84 % never 42.79 % sometimes and 5.47 % responded always. This shows that only 32.84 % subjects find it easy to sleep while others find it difficult to sleep and this suggest that there is a strong correlation between anxiety and sleep. Those who are anxious finds it difficult to sleep.

In another study 'Effects of Covid-19 Lockdown on Mental Health and Sleep Disturbances in Italy' the total sample was 1515. The median age was 42 years (IQR = 23) and females accounted for 65.6%. 42.2% of respondents referred to having suffered from trouble sleeping. Among them, 19.9% resulted to have no clinical insomnia, 62.7% to suffer from subthreshold insomnia, 16.3% to suffer from a moderate clinical insomnia and only 1.1% from a severe clinical insomnia.[3]

In our study the result showed that out of 196 responses 6.47 % subjects frequently having difficulty with concentration and memory of thinking, 9.95 % half of the time, 39.80 % never 41.29 % sometimes and 2.49 % always. This is the result of anxiety when people are anxious, they find it difficult to concentrate. Anxiety has great impact on sleep, memory of thinking and concentration.

In our study we asked question related to sleep quality, do you have difficulty falling asleep? Out of 196 subjects 4.98 % said almost always, 8.96 % often, 49.25 % rarely, 36.82 % responded sometimes. We also asked do you fall into deep sleep and out of 196 subjects 18.91 % said almost always, 26.87 % often, 25.37 % rarely and 28.86 % responded sometimes. We also asked do you wake up while sleeping out of

196 subjects 4.98 % said almost always, 10.45 % often, 52.24 % rarely, and 32.24 % responded sometimes. Most of the subjects were finding it difficult to sleep or deep sleep due to anxiety. When people are anxious, they keep thinking while going to the bed and this aggravates sleeping problem in anxious people. We found strong correlation between anxiety and sleep during our study.

In the paper 'Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic' a systematic review and meta-analysis the prevalence of anxiety was found in 17 studies with a sample size of 63,439 as 31.9% (95% confidence interval: 27.5–36.7).[4]

In our study result showed that good sleep makes people feel refreshed. When we asked a question do you feel refreshed after sleep out of 196 subjects 42.29 % said almost always 29.35 % often 4.48 % rarely and 23.88 % responded sometimes. Sleep has a significant role in the wellbeing of human. If a person gets enough sleep, he/she can feel refreshed all day.

In another study 'Sleep quality and COVID-19-related stress in relation to mental health symptoms among Israeli and U.S. adults' it is found that Participants reported high rates of depression and anxiety symptoms, adjustment difficulties, and poor sleep quality. In both countries, COVID-related stressors were associated with both anxiety and depression, and these associations were mediated by sleep disturbances.[5]

In our study we asked questions such as does poor sleep gives you headache? Out of 196 subjects 15.92 % said almost always, 17.91 % often, 27.36 % rarely and 38.81 % responded sometimes. When asked poor sleep makes you irritated out of 196 participants 17.41 % said almost always, 24.28 % often, 19.40 % rarely and 38.81 % sometimes. When asked is your fatigue relieved after sleep out of 196 subjects 32.34 % said almost always 22.89 % often 11.94 % rarely and 32.84 % responded sometimes. The sleep quality shows that when people do not get enough sleep, they get headache and makes them feel irritated. When a person gets enough sleep their fatigue is relieved.

## **Conclusion**

In the present study newly, formed Questionnaire was taken in which 5 Components were included. These results support the role of anxiety in sleep quality. There is a strong correlation between anxiety and sleep.

In Our study the total sample size was 196. Population was significantly affected in all the components. Out of 196, 49% population was affected in sleep quality, and 57 % population was affected in anxiety.

## **Declarations**

Conflict of Interest: The authors declare that there are no conflicts of interest.

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## Results Images

Results images are available in the Supplementary Files section.

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Results.docx](#)