

## Quality of sleep during the corona virus (COVID-19) outbreak

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### ABSTRACT

The aim of the study was to study the “Quality of sleep during the Corona virus (COVID-19) outbreak”. The study was conducted during lockdown in India, and a sample of 136 was collected through snowball sampling with the help of social platforms. The Sleep Condition Indicator (Espie, 2014) was used to collect the data along with demographic details. It was concluded that there existed no significant difference in the sleep quality of males and females during the lockdown ( $t=1.83$ ;  $p= 0.069$ ;  $p>0.05$ ), however significant difference existed in the sleep quality of people aged between 18-24 years and 25- 32 years ( $t=-2.19$ ;  $p=0.038$ ;  $p<0.05$ ), unmarried and married ( $t=-2.15$ ;  $p= 0.03$ ;  $p<0.05$ ), and employed and unemployed ( $t= 3.03$ ;  $p= 0.003$ ;  $p<0.01$ ). People with poor sleep quality were suggested to practice progressive muscle relaxation, sleep hygiene, give and take emotional support from partner and listen to soothing music at bedtime.

**Keywords:** *Quality of sleep, COVID-19 outbreak*

The world witnessed the spread of Corona Virus (COVID-19) with the beginning of a new decade- 2020. The main focus has been on the physical impact of the infection. However, attention to the psychological consequences of it are also being addressed now (Viswanath, 2020). Government all over the world imposed lockdown for preventing the community spread and transmission of the corona virus, as a result of which people were homebound, because of which circadian rhythms were disturbed along with other related lifestyle behaviours (Sinha, Pande & Sinha, 2020). It has also been found that discrimination and accusing the infected people added to the overall problems (Sarangi, 2020).

In the times of common stress, human beings have an increased need for communicating with each other. Neuropeptide oxytocin is released after the social interaction, which leads to reduced stress (Devries, Grasper & Detillion, 2003). Social support also affects the sleep quality positively (Grey, Uchino, Trettevik, Cronan & Hogan, 2018).

During the corona virus outbreak, the people have been exposed to unexpected levels of stress. It is well researched that stressful events may precipitate insomnia (Grima, Bei & Mansfield, 2019). Sleep disturbances have been linked to anxiety, depression and suicidal ideations. Sleep disturbances should be treated properly in order to reduce the symptoms of psychiatric disorders and the risk of suicide. It is even more important to recognise and treat

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sleep related problems in stressful times, like corona outbreak. It is important to identify and treat such issues not only the in the psychiatric population, but also others. Clinicians need to be educated as to how they should screen the people who have sleep disorders for suicidal tendencies.

Anxiety, depression and insomnia have also impacted the overall health and the quality of life of people (Kang et al. 2019).

Currently, a reassuring treatment of COVID-19 is yet to be developed, and many people all over the globe as still under quarantine. Lack of control and feeling lonely due to social isolation can lead to stress and panic (Shuja, Akeel & Jaffar, 2020). Also, over reporting by the press and overwhelming information from other social media platforms has led to fear among the people, and in some places like Hong Kong, resulted in panic buying (Usher, Dusking & Bhullar, 2020).

### REVIEW OF LITERATURE

Yu et al. (2020) did a study “Prevalence of Sleep Disturbances during COVID-19 Outbreak in an Urban Chinese Population: A Cross-Sectional Study”. It was a cross sectional study done on 1138 adults of Hong Kong for a period of 2 weeks. Data was collected on sleep disturbances, mood, stress, control supplies, perceived risk of corona virus and sources of information for acquiring COVID. Recent sleep and the sleep quality before the COVID outbreak were compared. Insomnia Severity Index (ISI) was used to measure the severity of insomnia. Insomnia’s prevalence came out to be 29.9%. Also, the insufficient stock of masks was related to reduced sleep quality, difficulty getting asleep, and short sleep. Also, a major proportion of the participants stated that they felt that their sleep had reduced in quality since the outbreak of COVID. It was concluded that stock of masks played a major role in maintaining the sleep quality in the population of Hong Kong.

Grossman, Hoffman, Palgi and Shrira (2020) did a study “COVID-19 related loneliness and sleep problems in older adults: Worries and resilience as potential moderators” to investigate the worries related to COVID-19 along with resilience as possible moderating factors for loneliness-sleep problems. The data was collected during the lockdown period on the web from 243 Israeli older adults, whose age were between 60 and 92 years. It was concluded that loneliness related to COVID-19 was correlated with the sleep problems. This correlation was even stronger for the ones who had related worries and whose resilience was low.

Gupta et al. (2020) did a study “Changes in sleep pattern and sleep quality during COVID-19 lockdown” to understand the alterations in the sleep, routine, physical activity and the symptoms of anxiety and depression. They collected the data through online platforms. Insomnia Severity Index, Perceived Stress Scale, Patient Health Questionnaire and International Physical Activities Questionnaire were used to collect the data. The sample size was 958. It was found out that there was a shift to later bedtimes and waking up times, which led to a reduction on the night sleep and increase in the day time sleep. Working people were more effected. Reduced duration of sleep was also associated with depressive symptoms. The lockdown due to COVID-19 effected the sleep schedule of the people, and in the duration and the quality of night sleep.

### *Objectives*

The study has the following objectives:

1. To understand the gender differences in the sleep quality

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2. To understand the differences in the quality of sleep of different age groups
3. To understand the differences in the quality of sleep based on employment status
4. To understand the differences in the quality of sleep based on marital status

### *Hypotheses*

The hypotheses of the study are as follows:

H<sub>1</sub>: There will be significant gender differences in the sleep quality

H<sub>2</sub>: There will be significant differences in the sleep quality of people of different age groups

H<sub>3</sub>: There will be significant differences in the sleep quality of employed and unemployed people

H<sub>4</sub>: There will be significant differences in the sleep quality of married and unmarried people

## **METHODOLOGY**

The sample was collected through online portal during the COVID-19 lockdown, through snowball sampling technique. The sample was collected from a total of 136 people, which consisted of males (48) and females (88), married (28) and unmarried (108), people aged between 18-24 (83) and people aged between (53), and employed (60) and unemployed (64). The data was collected using the The Sleep Condition Indicator (Espie, 2014). The results were analysed using the SPSS, and t-test was used.

## **RESULTS AND INTERPRETATION**

*Table 1. Difference in the sleep quality of males and females*

Group Statistics	Gender	N	Mean	Std. Deviation	t
Sleep Quality	Male	48	27.02	6.255	1.83
	Female	88	24.85	6.785	

( $p = 0.069$ ;  $p > 0.05$ )

*Table 2. Difference in the sleep quality of people between 18-24 years and 25-32 years*

Group Statistics	Age	N	Mean	Std. Deviation	t
Sleep Quality	18 to 24 years	83	24.67	6.674	-2.19*
	25 to 32 years	53	27.09	6.428	

( $p = 0.038$ ;  $p < 0.05$ )

*Table 3. Difference in the sleep quality of employed and unemployed people*

Group Statistics	Employment status	N	Mean	Std. Deviation	t
Sleep Quality	Employed	60	27.23	6.088	3.03**
	Unemployed	64	23.72	6.772	

( $p = 0.003$ ;  $p < 0.01$ )

*Table 4. Difference in the sleep quality of married and unmarried people*

Group Statistics	Marital status	N	Mean	Std. Deviation	t
Sleep Quality	unmarried	108	25.00	6.589	-2.15*
	married	28	28.00	6.509	

Table 1 shows that the p value is greater than 0.05, and hence the hypothesis has been rejected as there are no significant gender differences in the quality of sleep. The sleep quality of males and females during the COVID lockdown has been similar. However, in

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table 2 it can be seen that the difference in the sleep quality of the people aged between 18-24 years is significantly poorer than the ones aged between 25-32 years ( $p < 0.05$ ). In table 3 also it can be seen that the sleep quality of the people who are employed is significantly better than the ones who were unemployed during the outbreak of corona virus ( $p < 0.01$ ). And in table 4 it can be seen that the sleep of the married people was significantly better than the unmarried people ( $p < 0.05$ ). So H<sub>2</sub>, H<sub>3</sub> and H<sub>4</sub> have been accepted.

Liu et al (2020) in their study “Effects of progressive muscle relaxation on anxiety and sleep quality in patients with COVID-19” did an experimental study on 51 patients who were admitted in isolation wards. They were given JPMR for 30 minutes each day for 5 consecutive days. They concluded that progressive muscle relaxation had caused significant reductions in anxiety and improvement in the sleep quality of the patients. They therefore suggested that progressive muscle relaxation can be used to reduce anxiety and improve the sleep quality during the COVID-19 outbreak.

People with unsatisfactory sleep quality can also be suggested to practice sleep hygiene, as it has been reported to be effective in adolescents and young adults (Voinescu & Tatar, 2015), work on emotional support to and from the partner as it has also been linked to better sleep (Selcuk, Stanton Slatcher and Ong, 2016) and listen to soothing music at bedtime (Lai & Good, 2006).

## CONCLUSION

The aim of the study was to study the “Quality of sleep during the Corona virus (COVID-19) outbreak”. The study was conducted during lockdown in India, and a sample of 136 was collected through snowball sampling with the help of social platforms. The Sleep Condition Indicator (Espie, 2014) was used to collect the data along with demographic details. It was concluded that there exists no significant difference in the sleep quality of males and females during the lockdown, however people aged between 25 to 32 years, married and employed people have better quality of sleep than ones who are aged between 18 to 24 years, unmarried and unemployed. People with poor sleep quality were suggested to practice progressive muscle relaxation, sleep hygiene, give and take emotional support from partner and listen to soothing music at bedtime.

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### **Conflict of Interest**

The author declared no conflict of interest.

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