

Insomnia and perceived stress among Indian young adults during COVID-19 pandemic

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ABSTRACT

The purpose of the study was to determine the severity of insomnia and perceived stress among young adults of age group 18- 30 during COVID-19 pandemic in India. The online survey method was adopted and the samples were collected through random sampling. Perceived Stress Scale (Cohen et al, 1983) and Insomnia severity index (ISI) (Charles M.Morin et al,1993) were used to study the mentioned variables for the study. The data's were established through SPSS Version 23. Insomnia is a highly prevalent condition and carries significant burden in terms of functional impairment, health care costs, and increased risk of depression especially during the COVID-19 lockdown. Perceived stress is the perception of stress and the degree to which one's situation is appraised as stressful and focuses on the role of appraised stress levels in the etiology of diseases and behavioral disorders. The results of the study can be used to come up with possible interventions for stress management which can decrease the likelihood of insomnia and the study opens way to more researches to be conducted in this field with the changed life pattern during the COVID-19 era. The present study is highly relevant and significant in this context.

Keywords: *Insomnia, Stress, COVID-19, Pandemic*

The outbreak of the novel coronavirus disease (COVID-19) on December 2019 has infected more than 80,000 individuals in China, and it has since been declared a global pandemic. In the wake of this global health crisis, stringent public health measures have been implemented to curtail the spread of COVID-19.

As India navigates the nationwide lockdown that pushed millions of people into the confines of their homes, distress and anxiety are on the rise, manifesting primarily in the form of sleep disorders. Medical experts report that the number of consultations calls over erratic sleep cycles have shot up since the country went into lockdown on March 25 to stem the spread of COVID-19. This disease has brought the added baggage of stress and other psychological disorders.

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Perceived stress are the feelings or thoughts that an individual has about how much stress they are under at a given point in time. Perceived stress includes feelings about the unpredictability of one's life, how often one has to deal with irritating hassles, how much change is taking place in one's life, and confidence in one's ability to handle their problems. It does not measure the types or frequencies of stressful events which has happened to a person, but rather how an individual feels and perceives about the general and overall stress of their life and their ability to handle such stressful situations. Adults and individuals may suffer similar negative life events but appraise the impact and severity of these to different extents as a result of factors such as personality, coping resources, and social support.

Since the first case, in early December, the perceived vulnerability to coronavirus infection (COVID-19) has radically changed in all countries. Quarantines have negative psychological effects, often deemed as marginal, including symptoms related to anxiety, depression, acute stress, and even manifestations of post-traumatic stress disorder. The restriction of mobility can act as a psychosocial stressor due to prolonged confinement, difficulties in obtaining daily-life necessary supplies, potential financial losses, and access to conflicting and inadequate information on the Internet. Yet, few studies have quantified perceived stress during quarantines. In Australia, Taylor et al. (2020) evaluated the frequency of and factors associated with psychosocial stress and observed that 34% of participants presented high levels of perceived distress, compared to 12% of the general population. They also reported that the psychosocial distress leads to insomnia.

'Insomnia' is a type of sleep disorder that makes it difficult for a person to fall asleep and stay asleep. There are several different types of insomnia that can interfere with your ability to sleep in the night and function properly during the day. Insomnia as we all know is a major health issue associated with enormous psychological burden. Insomnia seems to be affecting more people during the COVID-19 pandemic. Zhao.X & Lan. M (2019) conducted a study in non-diseased general public in China and found that owing to the increase in perceived stress during the 2019 COVID-19 pandemic, the sleep quality in the non-diseased general public deteriorated. These findings suggested that both the sleep quality and the perceived stress levels of the non-diseased general public required attention during the COVID-19 pandemic. Stress levels rise during a virus outbreak due to worry about health, financial consequences, changes in social life and the daily routine. Reduced physical fatigue and exposure to the sun, as well as increased use of electronic devices may also affect sleep homeostasis. Rutledge et al. (2009) and Sadeh, Keinan, & Daon (2004) has demonstrated in their study that higher psychological stress is related to shorter sleep duration. A study conducted by Åkerstedt, Kecklund, & Axelsson (2007) has also shown that the former is related to poorer sleep quality. Perceived stress and insomnia play a major role during this lock down.

Quantifying the stress over jobs, working from home, a pandemic that shows no signs of ebbing and an uncertain future, a pan-India survey has revealed that 44 per cent of 1,500 respondents were getting less than six hours of sleep during the lockdown. Wenjun.C (2020) in his analysis among college students indicated that economic effects, and effects on daily life, as well as delays in academic activities, were positively associated with anxiety symptoms and lead to insomnia. In a study conducted by Drwila. D & Krotos.A (2019), one tenth of students of Poland perceives high level of stress, and one fifth of the respondents suffer from insomnia. There was found to be a strong positive correlation between level of insomnia and level of stress.

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The severe status during any infection outbreak may develop many mental health issues, including stress, anxiety, depressive symptoms, anger, insomnia, fear, and sleep disorders. Here we try to find that there is a relationship between perceived stress and insomnia during this lock down period.

Need and significance

The present study was to identify severity of insomnia and perceived stress among young adults of age group 18- 30 during COVID-19 pandemic in India. Periods of epidemics are sources of severe physical and mental health problems, bouts of negative emotions and relatedly abrupt disruptions in regular sleep habits/ patterns. Ongoing COVID-19 studies are playing less attention to the risk factors of insomnia and stress. In our study, we documented stress, insomnia and its contributing factors in a Indian general public sample. The study can provide insights to these factors and open ways to prevent symptoms of insomnia and stress in young adults during the COVID era. The result will help us to find the strategies to overcome stress and insomnia related issues of lockdown and help to make the young adults more resilient.

MATERIALS AND METHODS

A descriptive study was adopted here by the random sampling technique. The samples were selected from different states of India among the age group of 18- 30. In total, 131 young adults were selected with 93 males and 38 females. Samples were randomly selected. Online questionnaire method was used to collect data from the samples. The samples who had been forced to quarantine from the month of February were selected for the study.

The Perceived Stress Scale (PSS; Cohen et al, 1983) was used to measure perceived stress among adults. It is a self-reported questionnaire that is designed to measure “the degree to which individuals appraise situations in their lives as stressful”. It is 10 item questionnaires rated on 5 point likert scale. The PSS has adequate internal and test-retest reliability with Cronbach’s alpha of the PSS-10 $>.70$ in all 12 studies in which it was used, the test-retest reliability of the PSS-10 was assessed in four studies, and met the criterion of $>.70$ in all cases, the criterion validity of PSS was evaluated in a 67 few studies, in which the PSS was seen to be strongly correlated with the mental component of health status.

The Insomnia Severity Index (ISI M C Morin, 2006) is used to measure insomnia among adults. It is a brief instrument that is designed to assess the severity of both night time and daytime components of insomnia. The ISI -7 item self-report questionnaire assesses the nature, severity, and impact of insomnia. The scale has good internal consistency with cronbach $\alpha = 0.90$ and 0.91 , face and content validity; correlated with sleep diaries, polysomnography, and interviews; cutoff score of 10 had an 86.1% sensitivity and 87.7% specificity for detecting insomnia cases in the community sample. Three versions are available—patient, clinician, and significant others—but the present paper focuses on the patient version only.

RESULT AND DISCUSSION

Table 1. Frequency, Mean, Standard deviation, t –value and the level of significance comparing perceived stress and Insomnia among male and female young adults.

Variables	Groups	N	Mean	SD	t	Sig
Perceived Stress	Males	38	18.5	4.5	-.93	.35
	Females	93	19.2	3.6		
Insomnia	Males	38	8.8	5.8	-.28	.77
	Females	93	9.2	6.1		

***p<0.001 **p<0.01 *p<0.05

Table 1 shows the frequency of the variables, mean, standard deviation, t-value and significance of perceived stress and Insomnia among male and female young adults.

The calculated significant value is 0.3 for perceived stress and .77 for insomnia. From the table, it can be inferred that there is no significant difference between perceived stress and Insomnia among male and female young adults.

Mean scores of Insomnia reveals that females have greater severity of insomnia when compared to males. It can be inferred that both perceived stress and severity of insomnia are greater in females when compared to males. Stay-at-moms are not much better off, however. There are many factors keeping females up at night it could be household works, parents pressure, work stress, postponed exams and unscheduled online classes coming across leisure periods etc. that could leads to sleep problems.

Table 2 Shows the frequency, mean, and correlation coefficient value comparing and level of significance perceived stress and insomnia among young adults.

Variables	Groups	N	Mean	SD	t	Sig
Perceived Stress	Males	131	19.007	3.9	.256**	.002
	Females					
Insomnia	Males	131	9.1	6.0		
	Females					

***p<0.001 **p<0.01 *p<0.05

Table 2 shows the frequency of variables, mean, standard deviation, correlation coefficient and its significant value between perceived stress and insomnia. Correlation among variables perceived stress and insomnia is .256. This value indicates that there is a positive correlation significant at 0.01 significance level between perceived stress and insomnia.

The results reveal that when perceived stress increases, the severity of insomnia also increases. Insomnia has long been known to be linked with stress. The results establish a clear association between insomnia and stress, here insomnia and stress are positively correlated. The COVID crisis has added new stressors that could push these figures higher. The stress we are experiencing now is not the same as the sort we experienced on a normal day-to-day basis before the crisis hit, the sort caused by work, family, and personal relationships. As like that working from home or being stuck inside may be having a direct impact on the quality of sleep, and also these stress leads to falling asleep and waking up frequently in the middle of the night. So, its clear that there is a positive correlation between stress and insomnia especially during this lockdown.

CONCLUSION

We conducted this study to determine the severity of insomnia and perceived stress among young adults of age group 18-30 during COVID 19 pandemic in India. The online survey method was adopted and the samples were collected through random sampling. Perceived Stress Scale (Cohen et al, 1983) and Insomnia severity index (ISI) (Charles M.Morin et al, 1993) were used to study the mentioned variables for the study. The data were established through SPSS Version 23.

The result indicates that insomnia and perceived stress are positively correlated which indicates that when one variable increases, the other variable increases as well. For some, the stress of lockdown and the uncertainties of the pandemic are simply too much, leading to little or no sleep. Such a situation is more common in young adults why because at this age they start to build their lives, so the changing living condition around them leads to Insomnia.

The study further reveals that females have greater perceived stress and Insomnia when compared to males. In this lock down most of the responsibilities are handled by women. Therefore, stress and Insomnia are most common in women during this time

Scope of the study

A psychosocial intervention has to be adopted in which there must be provision of expert counselling services and the furnishing of life skills training such as stress management and coping skills, the formation and sustenance of proper sleep patterns, problem-solving and decision-making skills, as well as conflict management skills. Life skills training on how to assist vulnerable adults could also be made available during the COVID pandemic. The implementation of the intervention outlined above would significantly improve the overall quality of life of young adults during this pandemic.

Limitations

The findings of this study have to be seen in light of some limitations. (1) The same size of the females and males were not equal and might have influenced the results of the study. (2) Sample size was too small (3) The questionnaires were distributed in Google Forms and thereby the sincerity of the subjects while answering the forms cannot be ensured.

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Conflict of Interest

The author declared no conflict of interest.

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