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CORONASOMNIA: A PANDEMIC WITHIN THE PANDEMIC

Community Medicine

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ABSTRACT

Background: SARS-CoV-2 induced COVID-19 Pandemic has not only disrupted many lives but continues to impact the mental, emotional and physical well-being of people. Coronasomnia as the term suggests refers to insomnia kindled by the chronic stress of the pandemic.
Objectives: this study aimed to identify the sleep disturbances occurring due to the COVID-19 Pandemic, factors influencing them, and their association with relevant sociodemographic characteristics.
Material and Method: this was a questionnaire-based study and convenience sampling method and snowballing sampling techniques were used. Statistical analysis was done using descriptive statistical tests such as Chi-square, P-value. For categorical data, percentages were used and interpreted using graphs.
Result: A total of 882 individuals between the age group 18-65 participated in this study. Among them, 385 (43.6%) were male & 497 (56.3%) were female. Of the total enrolled patients, 512 experienced sleeping difficulties during the pandemic, the majority of which were females. Participants who had been infected by or had family members who were infected by the COVID-19 virus experienced significant sleeping difficulties. Decreased sunlight exposure and increased screen time were significantly associated with sleeping difficulties as well. intermittent/disrupted sleep was predominant (22.1%) complaint. Lack of routine (23.6%) and a significant increase in the level of stress (20.8%) played a pivotal role here.
Conclusion: the COVID-19 pandemic has posed an ominous threat to everyone's health. It sank its fangs, destroying not only our physical but also our mental health. The remarkable increase in stress levels, disrupted routines, and constant sense of confinement have left a crippling effect on society. Yoga, exercise, music, and meditation are some of the various ammunition which can be used to overcome these adversities.

KEYWORDS

INTRODUCTION

As we continue to navigate the intricacies of the current covid pandemic and our newfound lifestyle, it is only natural to worry while experiencing uncertainty and a loss of control[1]. In addition to any direct effects of Covid-19 on people's health indirect effects like the perception of confinement (due to lockdown restrictions)[2,3], economic hardships (due to impact on jobs and businesses), loss of immediate family or friends (impact of grief), etc. affected health and wellbeing of people.

One of the important indirect effects found in every population during and after the covid pandemic wave is sleep disturbance.[4] Around four in ten people have reported trouble in sleeping during the pandemic.[5] Traumatic events experienced during COVID-19 have caused stress levels to skyrocket and sleep hours to plummet[6] Since sleep disturbances were so common that factors leading up to them were combined to create a mnemonic "FED-UP" in a study.[7](Financial stress, Emotional stress, Distance with others(social distancing[8]), Unpredictability, Professional concerns)

Digital technology has also acted as a double edge sword in covid pandemic-induced sleep disturbances.[6] On one end it has helped cushion disruption to school education or office work[9] all the while increasing dependence on digital devices[10] causing screen timings to soar. As humans function through an internal clock (circadian rhythm)[2]; disruption of a routine and less or no exposure to sunlight has also triggered sleep disturbances.[6,11]

After going through many pieces of research, we came across the term 'Coronasomnia' defined as sleep disturbance in this pandemic[3] which is being considered very different from regular insomnia.

MATERIAL AND METHODS

After obtaining ethical clearance from the Institutional Ethics Committee, this cross-sectional survey was carried out among 882 participants from Delhi NCR India following the Helsinki Declaration of 1975, as revised in 2000. This study included individuals who were willing to participate between the age group 18-65. Individuals were recruited through a convenience sampling method and snowballing sampling techniques. Participants are invited to participate through social media and other networking platforms. A pre-structured, pre-tested, pre-validated online questionnaire containing 15 questions assessing sleep disturbances, factors influencing them, and relevant sociodemographic data of individuals from urban settings were collected between May, 21- June 21. Data were compiled using Microsoft excel and inferential statistics applied (chi-square). For all associations, P-value < 0.05 was considered statistically significant. For categorical data, frequency and percentage were used and interpreted using bar graphs.

RESULT

A total of 882 individuals between the age group 18-65 participated in this study. Among them, 385 (43.6%) were male & 497 (56.3%) were female. The mean age of participants is 27.53.

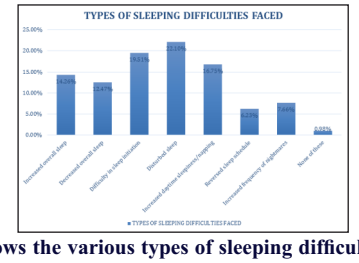

Figure 1 shows the various types of sleeping difficulties faced by participants during the pandemic. The majority of participants experienced frequent sleep intervals (22.10%) followed by difficulty in sleep initiation (19.51%)

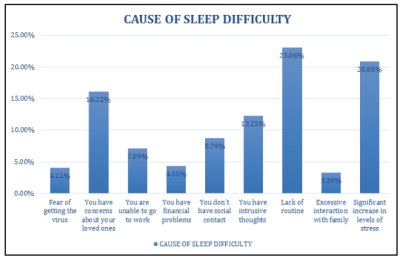

Figure 2 depicts the various causes of sleeping difficulty. The majority of participants experienced disrupted sleep due to lack of routine (23.03%) followed by an increased amount of stress (20.88%)

SOCIO-DEMOGRAPHIC FACTORS		SLEEPING DIFFICULTY		FREQUENCY	PERCENTAGE	CHI-SQUARE	P-VALUE
		Yes	No				
GENDER	Male	189	196	385	43.6%	22.51	0.00001
	Female	323	174	497	56.3%		
	Total	512	370	**882**	100		
INFECTED WITH COVID-19	Yes	188	96	284	32.1%	11.41	0.000727
	No	324	274	598	67.8%		
	Total	512	370	**882**	100		
FAMILY MEMBERS INFECTED WITH COVID-19	Yes	499	324	823	93.3%	33.6804	0.00001
	No	13	46	59	6.6%		
	Total	512	370	**882**	100		
EXPOSURE TO SUNLIGHT	Yes	265	246	511	57.9%	19.1193	0.000012
	No	247	124	371	42.06%		
	Total	512	370	**882**	100		
INCREASED SCREEN TIME	Yes	451	292	743	84.2%	13.5954	0.000227
	No	61	78	139	15.7%		
	Total	512	370	**882**	100		

Of the total participants, 512 experienced sleeping difficulty due to the pandemic. Among the symptomatic participants, sleeping difficulty was more predominant in the female population. A significant association emerged between sleeping difficulty and participants infected with COVID-19 virus, and also between sleeping difficulty in participants with family members infected by the virus. Out of the 512 participants, 451 individuals witnessed and increase in their screen time and 265 had decreased exposure to sunlight. Both of these emerged as significant risk factors for sleeping difficulty.

SLEEPING DIFFICULTY		AFTER PANDEMIC		FREQUENCY	P-VALUE	CHI-SQUARE	CORRELATION
		Yes	No				
BEFORE PANDEMIC	Yes	271	42	313	0.00001	162.1877	0.428819
	No	241	328	569			
	Total	512	370	882			
CONSUMTION OF MEDICATION							
BEFORE PANDEMIC	Yes	19	43	62	0.00001	124.5383	0.3757
	No	16	804	820			
	Total	35	847	882			

Positive correlation is seen with the use of sleeping inducing medication and also with increased difficulty in sleeping during the pandemic.

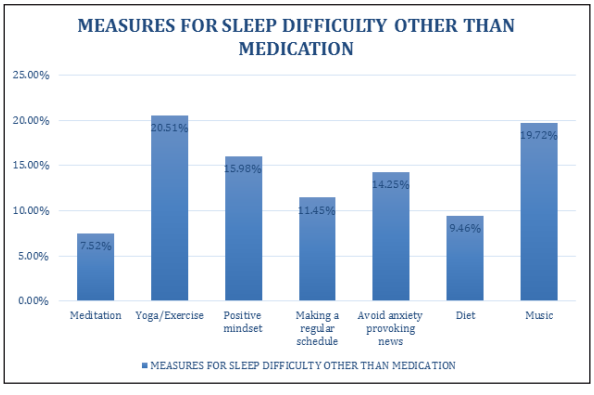

Figure 3 depicts different coping strategies adopted by participants to deal with sleeping difficulties during the pandemic with a preponderance of exercise/yoga (20.51%) followed by music (19.72%)

DISCUSSION

This study aimed at exploring the impact of the COVID19 Pandemic and its associated stressors on sleeping habits. Our study showed that infected females encountered more significant sleep disturbances as compared to infected males (p-value <0.00001, chi-square 22.51). A similar observation was published by Federico Salfi et al, where women consistently had higher scores on sleep scales than men,[12] Zainab Alimoradi et al uncovered prevalent sleep problems with women during this pandemic[13] and Tasnim Ara et al[14] published similar results. To identify the reason behind this we discovered 23.06% of our participants experienced sleeping difficulty due to a lack of daily routine. Participants infected with COVID-19 experienced significant sleep disturbances (p-value <0.000727, chi-square 11.417). This finding corroborates well with some of the previously published studies.[5, 15, 16, 17] Participants were asked to respond about their disturbed sleep when any of their family members were infected. This study found a significant association between the two. Most studies performed during the pandemic have focused on covid infected individuals with very little information present on the impact it has on a household. This holds a lot of scope for research. Reduced outdoor light exposure and increased screen time have been significantly associated with disturbed sleep in our study. This finding is supported by Andrea N Smit et al in their research who explain how decreased morning daylight combined with increased evening artificial light favors later bedtimes and wake-up times[18]. Similar findings were published by Kira E. Riehm et al.[10] Our study shows a significant shift with a positive correlation (0.428819) in the sleeping habits due to the pandemic (p-value <0.00001, chi-square- 162.1877) with a majority of participants experiencing frequent sleep intervals (22.10%) followed by difficulty in sleep initiation (19.51%). Research published by Sara Marelli shows the difficulty in sleep initiation increased from 15% to 42% after the pandemic.[9] To counter these sleep disturbances a significant association developed between participants and consumption of sleep medicine or hypnotics(p-value <0.00001, chi-value-124.5382, correlation). Many participants found comfort through yoga/exercise (20.51%), music (19.72%). There are limited studies on how to cope with the additional stressors intruding in our lives along with the virus and probing into these could be highly beneficial in the long run.

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Conflict Of Interest:
None

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