Assessment Of Effect Of COVID -19 Pandemic On Sleep And Mental Health

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Abstract

Background: Poor sleep quality and increased psychological distress were also well-documented during earlier pandemics.The present study was conducted to assess effect of COVID -19 pandemic on sleep and mental health.

Materials & Methods:58 subjects of both genders were subjected to assessment of depression, anxiety and sleep disturbance and stress was done by Patient Health Questionnaire -9 scale (PHQ-9), Generalized Anxiety Disorder -7 (GAD-7) and Pittsburg Sleep quality Index (PSQI) and Perceived Stress Scale -4 (PSS-4) respectively.

Results: Out of 58 patients, males were 34 and females were 24.We found that depression, anxiety, stress and sleep disturbance was seen in males 25, 22, 26 and 15 and female16, 12, 18 and 10. Occupation was student in 8, 14, 17 and 17, labourer22, 10, 17 and 4, officer11, 10, 10 and 4. Behaviour was smoker in 5, 6, 7 and 9, alcoholic in 6, 3, 4 and 8, smoker+ alcoholic12, 11, 3 and 7. Co-morbidities were hypertension in 5, 3, 6 and 5 and diabetes in 4, 4, 4 and 6 respectively.

Conclusion: There was high prevalence of depression, anxiety, stress and sleep disturbance in COVID-19 pandemic.

Keywords: COVID- 19, pandemic, Sleep.

Introduction

A public health emergency of international concern-novel coronavirus disease (COVID-19) outbrokein Wuhan, China on 31 December 2019, which has been spread to 24 countries outside of China and infected 37,558 patients globally by 9 February 2020.[1] The outbreak of COVID-19 in China has caused mental health problems among the public in Chinaand Japanand medical workers in Wuhan.[2] The National Health Commission has released guideline for local authorities to promote psychological crisis intervention for patients, medical personnel, people under medical observation and civilians during the COVID-19 outbreak.[3]

There are dramatic changes in physical activity, sleep, utilisation of time and mental health.Public health emergencies during epidemic / pandemic like SARS, MERS and Ebola outbreak were associated with increased psychological distress in the affected population. Maladaptive behaviors, emotional and defensive reactions were some of the psychological responses to pandemic.[4] Social isolation was found to be strongly associated with anxiety, depression, self-harm, and suicidal tendencies. Studies indicated that social distancing for a longer duration could

affect the mental health negatively.[5,6] Isolation, boredom, frustrations, worries about contracting the infection, lack of freedom,concerns for family/friends are some of the factors that could affect mental well-being during quarantine. Poor sleep quality and increased psychological distress were also well-documented during earlier pandemics.[7]The present study was conducted to assess effect of COVID -19 pandemic on sleep and mental health.

Materials & Methods

The present study comprised of 58 subjects of both genders. All gave their written consent for the participation in the study.

Data such as name, age, gender etc. was recorded. Sociodemographic characteristics, comorbidity and assessment of depression, anxiety and sleep disturbance and stress was done by Patient Health Questionnaire -9 scale (PHQ-9), Generalized Anxiety Disorder -7 (GAD-7) and Pittsburg Sleep quality Index (PSQI) and Perceived Stress Scale -4 (PSS-4) respectively. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total- 58		
Gender	Males	Females
Number	34	24

Table I shows that out of 58 patients, males were 34 and females were 24.

Table II Assessment of parameters

parameters	Variables	Depression	Anxiety	Stress	Sleep disturbance	P value
Gender	Male	25	22	26	15	0.02
	Female	16	12	18	10	
Occupation	Student	8	14	17	17	0.04
	Labourer	22	10	17	4	
	officer	11	10	10	4	
Behaviour	Smoker	5	6	7	9	0.05
	Alcoholic	6	3	4	8	
	Smoker+ Alcoholic	12	11	3	7	
Co-morbidity	Hypertension	5	3	6	5	0.17
	Diabetes	4	4	4	6	

Table II, graph I shows that depression, anxiety, stress and sleep disturbance was seen in males 25, 22, 26 and 15 and female 16, 12, 18 and 10. Occupation was student in 8, 14, 17 and 17, labourer22, 10, 17 and 4, officer11, 10, 10 and 4. Behaviour was smoker in 5, 6, 7 and 9, alcoholic in 6, 3, 4 and 8, smoker+ alcoholic

12, 11, 3 and 7. Co-morbidities were hypertension in 5, 3, 6 and 5 and diabetes in 4, 4, 4 and 6 respectively. The difference was significant (P< 0.05).

Graph IAssessment of parameters
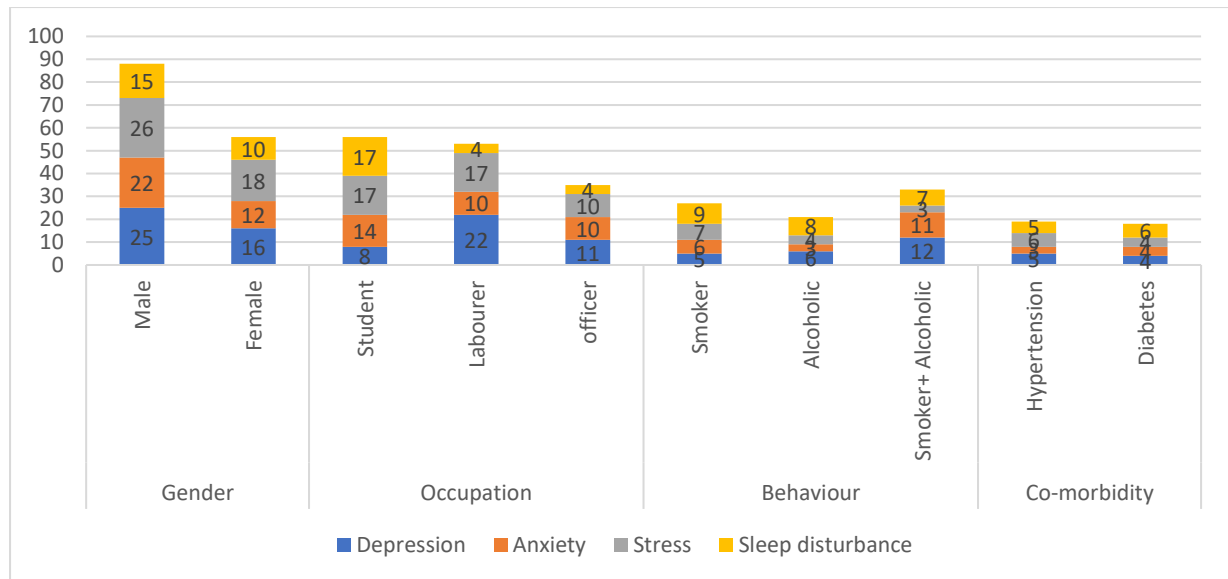
Discussion

Coronavirus Disease 2019 (COVID-19, also known as 2019-nCoV), a cluster of acute respiratory illness with unknown causes, has occurred in Wuhan, Hubei Province, China since December 2019.In addition to physical damage, COVID-19 also has a serious impact on the mental health of the public.[8,9] In January 20, China confirmed human-to-human transmission of COVID-19 and some medical staff in Wuhan had been infected. Since then, the public has shown anxiety-related behaviors, causing a significant shortage of medical masks and alcohol across the country.[10] The present study was conducted to assess effect of COVID-19 pandemic on sleep and mental health.

We found that out of 58 subjects, males were 34 and females were 24. Yadav et al[11] found that the mean age of the study participants in the study was 24± 16.33 years with a range from 18 to 60 years. There were 55.93 % males and 44.07 % females. Depression was 47.46 %, anxiety 52.55% and sleep disturbance 13.55% and low stress in 28.82%, moderate in 65.42% and high stress in 5.76% found among study participants.

We found that depression, anxiety, stress and sleep disturbance was seen in males 25, 22, 26 and 15 and female16, 12, 18 and 10. Occupation was student in 8, 14, 17 and 17, labourer22, 10, 17 and 4, officer11, 10, 10 and

4. Behaviour was smoker in 5, 6, 7 and 9, alcoholic in 6, 3, 4 and 8, smoker+ alcoholic12, 11, 3 and 7. Co-morbidities were hypertension in 5, 3, 6and 5 and diabetes in 4, 4, 4 and 6 respectively. Huang et al[12] found that the overall prevalence of GAD, depressive symptoms, and sleep quality of the public were 35.1%, 20.1%, and 18.2%, respectively. Younger people reported a significantly higher prevalence of GAD and depressive symptoms than older people. Compared with other occupational group, healthcare workers were more likely to have poor sleep quality. Multivariate logistic regression showed that age (< 35 years) and time spent focusing on the COVID-19 (≥ 3 hours per day) were associated with GAD, and healthcare workers were at high risk for poor sleep quality. Our study identified a major mental health burden of the public during the COVID-19 outbreak. Younger people, people spending too much time thinking about the outbreak, and healthcare workers were at high risk of mental illness. Continuous surveillance of the psychological consequences for outbreaks should become routine as part of preparedness efforts worldwide.

Gao et al[13]in their study a total of 4872 participants from 31 provinces and autonomous regions were involved in the current study. Besides demographics and social media

exposure (SME), depression was assessed by The Chinese version of WHO-Five Well-Being Index (WHO-5) and anxiety was assessed by Chinese version of generalized anxiety disorder scale (GAD-7). multivariable logistic regressions were used to identify associations between social media exposure with mental health problems after controlling for covariates. The prevalence of depression, anxiety and combination of depression and anxiety (CDA) was 48.3, 22.6% and 19.4% during COVID-19 outbroke in Wuhan, China. More than 80% of participants reported frequently exposed to social media. After controlling for covariates, frequently SME was positively associated with high odds of anxiety and CDA compared with less SME.

The limitation the study is small sample size.

Conclusion

Authors found that there was high prevalence of depression, anxiety, stress and sleep disturbance in COVID- 19 pandemic.

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