



Assessment of anxiety and quality of sleep during lock down period among general population due to COVID-19 pandemic in selected areas of Himachal Pradesh: A descriptive survey

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Abstract

Background: The COVID-19 pandemic is measured as the main critical universal health calamity of the era and the utmost challenge that the human race faced since the 2nd world war. COVID-19 has unquestionably put forth an extremely terrible consequence on the daily life of the total human civilization leading to increased levels of anxiety and changes in sleep pattern.

Methods: A quantitative approach with descriptive survey research design was used. 225 samples of general population were included and selected by convenient sampling technique. The tools used for data collection were selected sample Characteristics Performa, self -structured anxiety scale (10items) and self –structured quality of sleep scale (9items).

Results: The result revealed the measure of level of anxiety and the quality of sleep during lockdown period due to COVID-19. About 24% of people were having no anxiety whereas 14.2% of people reported levels of severe anxiety, and other 14.2 % of general population had extreme level of anxiety. In aspect to quality of sleep 14.7% of people reported good Quality of sleep and 28.4% of people had very poor Quality of Sleep. A positive relation between level of anxiety and Quality of sleep as ‘r’ value (0.40) was found to be significant.

Conclusion and Implications for practice: The positive correlation was found in this study between level of anxiety and quality of sleep and provides additional evidentiary support for developing and applying nursing interventions that reduce anxiety and promotes quality of sleep.

Keywords: covid-19, pandemic, anxiety, quality of sleep, lockdown

Introduction

Corona virus got its title from the manner that it appears beneath the microscope. The virus comprise of a core of hereditary material enclosed by an capsule with protein spikes. This provides it the look of a crown. The word Corona indicates “crown” in Latin language. (Righetti *et al.*, 2020) ^[6] In the month of December 2019, a novel contagious respiratory illness had its outbreak in Wuhan, Hubei region, China and was referred by the World Health Organization as COVID-19 (Novel Corona Virus disease 2019). A latest category of corona virus, named as SARS-CoV-2 (Severe Acute Respiratory Syndrome Corona Virus -2) has been considered to be responsible for incident of this disease. (Schoeman & Fielding, 2019) ^[7] Corona Virus has zoonotic spread, denoting that the virus spreads between animals and humans. The basis of the SARS-CoV-2 (COVID-19) is not determined till now, but research studies are continuing to recognize the zoonotic cause to the outburst. The medical presentation of COVID-19 shows the following manifestations: Respiratory distress syndrome, pyrexia, cough, breathlessness, dyspnea, tiredness and sore throat. (Righetti *et al.*, 2020) ^[6] It is significant to state that the victims of SARS-CoV-2 disease can show signs of

psychiatric features, like difficulty in sleeping, low mood, impulsive outbursts. Throughout the preceding SARS and MERS epidemics, it was found that infected persons usually presented the manifestations of delirium (27.9%), sadness (32.6%), dementia (34.1%) insomnia (41.9%) and infrequently psychotic symptoms (0.7%).(Home - PMC - NCBI, n.d.) A COVID-19 investigative testing kit has been made and is accessible in medical testing laboratories. The benchmark for diagnosing COVID-19 is Reverse Transcription Polymerase Chain Reaction (RT-PCR). Though, recent data put forward that RT-PCR is simply 30-70% efficient for diagnosing the acute illness, it is mostly due to erroneous use of lab kits or less viral load in the blood at initial phases of testing. The accessibility of testing varies from nation to nation. As of 15 May 2020, over 4,444,670 incidences have been recognized internationally in 188 countries with a sum of over 302,493 deaths. (Righetti *et al.*, 2020) ^[6] From continuous statistical rise in cases to six months nationwide lockdown, COVID-19 is spreading its roots rapidly across the world. In India with more and more diagnostic testing and focus on vaccine trials, no clarity on disease control is established. Since past Six months India acquired the second highest position of

incidence worldwide after US with a count of 57.32 lakh cases, 86,508 citizens testing positive per day and a sum of 91,149 deaths, as per Union Ministry of Health reports. (Corona virus | Six Months since Lockdown: Strides in Testing, Vaccine Development but COVID-19 Crisis Far from over, Say Scientists - The Hindu, n.d.) In Himachal Pradesh too there was a quick increase in incidences, in the month of November. The state now has paced up with other top five states with the maximum proportionate rise in active cases. Shocked by speedily rising incidences, the union government sent highly skilled-manpower to numerous states. Himachal Pradesh was one of them. As India's comprehensive Covid-19 statistics are declining gradually since September, many areas are still reporting a hike in number of fatalities and illness due to the fatal virus. (Himachal Pradesh Imposes Night Curfew in 4 Districts as Covid-19 Cases Rise - Coronavirus Outbreak News, n.d.) Thus so far there is no accurate information of any clinically accepted antiviral drugs or vaccines that are efficient against COVID-19. It speedily transmitted around the world, posing massive health, monetary, ecological and societal challenges to the entire human race. The Corona Virus outburst extremely disrupted the universal financial system. Nearly all the nations are stressed to hold back the transmission of the virus by investigating & caring patients, quarantining suspected people through contact screening, restricting larger crowds, implementing full or partial lock down. This survey depicts the effect of COVID-19 on anxiety and quality of sleep among general population. Various research studies suggest that early identification of patients by health professionals and infection control practices are effective in reducing the COVID-19 cases. Plans for infection prevention and control (IPC) comprises of universal precautions such as: hand washing; use of personal protective equipments to evade direct contact with infected person's blood, body fluids, discharge (including pulmonary secretions) and skin to skin contact. Safe Practices include proper Bio medical waste disposal; clean-up and disinfecting the surfaces and environment. (Righetti *et al.*, 2020) [6] As nations initiate actions to control the movements to decrease the cases of person infected with COVID-19, the new realism of functioning from home, temporary unemployment, online classes of students, and lessen outing and leisure activities with relatives, friends and mentors has affected the mental health of the individuals. Adapting to newer lifestyle changes, and controlling the fear of getting affected with the virus and being anxious about people who are in direct contact with us and are at high risk, are not easy for all of us. These situations might be predominantly complicated for citizens with pre-existing mental health conditions. (#Healthy At Home - Mental Health, n.d.) COVID-19 patients are exhibiting insomnia, fear along with panic anxiety symptoms during lockdown period. Many researchers from the field of Psychiatry are been studying the flow of such people, including general population and health care personnels. "There is mood disturbances related to continuous fatigue and anxiety and may result in depression. It happens because of sudden isolation, financial crisis, joblessness and the restrictions imposed on them. Although, people with good familial support are affected less, but there are chances where they can test positive for COVID-19 that can cause anxiety and poor quality of sleep among general Population. (After Recovery, Patients Report Sleeplessness and Anxiety - The Hindu, n.d.)

As it was seen that there were many psychiatric problems those were occurring due to the lockdown due to covid-19 and also less number of studies have been conducted in Indian setting focusing on the assessment of anxiety and quality of sleep among general population, therefore the researcher decided to conduct this study.

Aim

The purpose of this study was to explore the QOS and level of anxiety among general population in selected areas of Himachal Pradesh and to provide necessary data for the development of nursing interventions to improve the QOS and reduce level of anxiety of people in vulnerable population.

Methods and Materials

Research Design

The research approach preferred for this study was quantitative approach and under that the design used was descriptive survey research design.

Population and Setting

The study was conducted among people who were living in their homes during lockdown Period and were residing in selected areas of Himachal Pradesh.

Sample and Sampling technique

In the present study 225 people were selected using convenient Sampling technique.

Data Collection Tools and Techniques

Based on the objectives of the study the tool were divided in the following sections, and the data was collected online in the month of June and July 2020 by using Google forms.

1. Sample characteristics Performa: It contained 7 items including: age, gender, marital status, educational status, socio-economic status, place of stay and occupation.
2. Self-structured anxiety scale: It comprised of 10 items for assessment of level of anxiety of people residing in their homes during lockdown period.
3. Self –structured Quality of sleep scale. It comprised of 9 items for assessment of quality of sleep among people residing in their homes during lockdown period.

All the tools were incorporated in the study by establishing the content validity by 5 experts in the field of psychiatric Nursing. Experts were requested to judge the items for their clarity, relevance, meaningfulness and content.

Ethical Consideration

Ethical permission was obtained before conducting the research with ethical approval number IEC-4205 and the name of the institution is blinded for peer review. Research participants were enrolled in the study after taking online informed consent using Google forms and they were assured about the confidentiality of their responses.

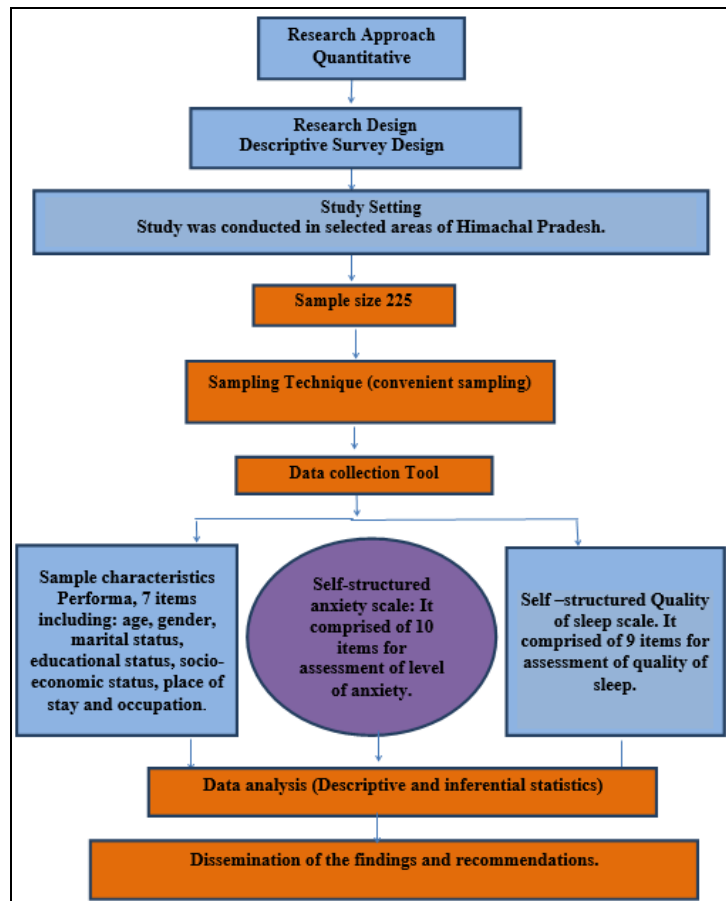


Fig 1: Schematic Representation of the Study.

Data Analysis

SPSS Version16.0 was used for statistical analysis. The Sample characteristics, Level of Anxiety and QOS of general population were analyzed using descriptive and inferential analysis. Cronbach's alpha reliability analysis was conducted on data related to level of anxiety and QOS. The correlations between level of anxiety and QOS were analyzed using Pearson correlation analyses. The significance level was set at 0.05.

Results and Discussion

Frequency and Percentage Distribution of Sample Characteristics

The sample consisted of 225 participants. The age of participants ranged from 10 to 40 years. Out of these 90(40.4%) were in 10-20 years, 122 (54.2%) in 21-30 years and 12(5.3%) in the age group of 31-40 years. In relation to gender 161 (71.6%) were female and 64 (28.4%) were male. For marital status 56(24.9%) people were married, 111(49.3%) were unmarried and 58(25.8%) were divorced. Slightly over half 109(48.4%) of the participants were graduate, 22(9.8%) were post graduate, 69 (30.7%) were in higher secondary section, 23(10.2%) belong to secondary section and 2(0.9%) were educated up to primary level. In Socioeconomic status 30(13.8%) were in below poverty line, 182(80.9%) were in middle class, 12(5.3%) were in higher class. In place of stay 129(57.3%) were residing in rural areas and 96(42.7%) were residing in urban areas. Reflecting on occupation 38(16.9%) of people were govt. employees, 60(26.7%) of people worked in private sector, 6(2.7%) of people had their own business whereas 121(53.8%) of people had some other sources of income.

Frequency Percentage and Descriptive Statistics of the Level of anxiety and Quality of sleep

Table 1: Measure of Level of Anxiety, N=225

Score Level	Frequency	Frequency (%)
No Anxiety (0-10)	54	24
Mild Anxiety (11-15)	48	21.3
Moderate Anxiety (16-20)	59	26.2
Severe Anxiety (21-25)	32	14.2
Extreme Anxiety (26-30)	32	14.2

Maximum Score: 30

Minimum Score: 0

The data presented in table-1 shows the score of level of anxiety revealed that about 54(24%) people had no anxiety, 48(21.3%) had mild anxiety, 59(26.2%) were reported with moderate anxiety, whereas 32(14.2%) each reported severe and extreme levels of anxiety.

Table 2: Measure of Quality of Sleep (QOS): N=225

Score Level	Frequency	Frequency (%)
Very Good QOS (31-36)	0	0
Good QOS (24-30)	33	14.7
Average QOS (16-23)	87	38.7
Poor QOS (11-15)	41	18.2
Very Poor QOS (0-10)	64	28.4

Maximum Score: 36

Minimum Score: 0

The data presented in Table-2 shows the measures of Quality of sleep reflected that 33(14.7%) of people had good quality of sleep, 87(38.7%) had average quality of sleep, 41(18.2%) had poor quality of sleep and 64(28.4%) of

people reported very poor quality of sleep.

Table 3: Descriptive Statistics Table: N=225

Descriptive Statistics	Mean	S. D.	Median Score	Range	SEM
Level of Anxiety	16.31	7.7	17	29	0.51
Quality of Sleep	15.60	6.64	16	25	0.44

Table 4: Pearson Correlation between Quality of sleep and level of anxiety.

Correlation	Level of Anxiety <i>r</i> (<i>p</i> value)	Quality of Sleep <i>r</i> (<i>p</i> value)
Level of Anxiety <i>r</i> (<i>p</i> value)	---	0.40 (0.00**)
Quality of Sleep <i>r</i> (<i>p</i> value)	0.40 (0.00**)	---

** - Highly significant ($p < 0.01$)

The results indicate a positive correlation between level of anxiety and QOS as ($r = 0.40, p = 0.00^*$)

Association with sample characteristics

The results revealed that level of anxiety score was independent of selected sample characteristics except with age and gender as the calculated value of chi square were 33.3, 60.09, were more than the tabulated values i.e. 15.5 and 9.48 respectively. It also signifies that the score of Quality of sleep was depending on the selected sample characteristics with age, gender, educational status, place of stay and occupation as the calculated values of chi square were 17.59, 18.01, 88.9, 13.6 and 48.85 were more than the tabulated values, 12.59, 7.81, 21.02, 7.81 and 16.91 respectively.

Discussion

Many researches have been conducted on this global pandemic to study the impact of SARS- CoV on mental health. Various research studies support the current findings of the present survey. A similar study was conducted in December 2019 by Dorota Szczesniak, Anna Gladka. *et al* Which stated the impact of Corona Virus on Mental health of people on public health perspective. The current was also conducted with the aim to assess the level of anxiety and quality of sleep among general population so that future directions can be applied for reducing anxiety and improving quality of sleep. A cross-sectional survey was conducted by William Wilson, Jeffrey Pradeep Raj. *Et al* in April 2020, to assess prevalence and predictors of stress, anxiety and depression among health care workers. The results revealed that high level stress and anxiety symptoms were reported as 17.7% of health care workers had anxiety symptoms requiring further evaluation which were consistent with the findings of present study. As the study reflected that 14.2% of people were reported with severe and extreme levels of anxiety.

Another study was conducted by Mustafa Kursat sahin, serbet Aker. *et al* in May 2020 to assess the prevalence of depression, anxiety, distress and insomnia among health care workers during COVID pandemic in Turkey. The study stated that 50.4 % of health care workers were having the symptoms of Insomnia and 60.2% exhibited the symptoms of anxiety. The findings were similar to the findings of the current survey as, 28.4% people were having very poor quality of sleep and 26.2% of people reported moderate level of anxiety.

Conclusion

This survey assessed the level of Anxiety and quality of

The data presented in Table-3 shows the descriptive statistics for level of anxiety had a mean of 16.31 and standard deviation was 7.7 and in case of quality of sleep the mean was 15.60 and the standard deviation was found 6.64.

Correlations

sleep during lock down period among general population due to COVID-19 Pandemic in selected areas of Himachal Pradesh. This survey revealed that during pandemic the quality of sleep was not too good among general population; also the results reported increased levels of stress. It was also concluded that health personnel’s need to strengthen their services, as the need of hour is, physiological as well as psychological wellbeing. More focus should be given to promote mental well-being by provision of meditation practices through mass media. Frequent counseling session can also be provided to the needy people.

Limitations

1. Assessment of level of Anxiety and quality of sleep was limited to responses as elicited by self-structured “anxiety scale” and “Quality of sleep scale” by using Google forms.
2. The subjects were selected from General population in selected areas of Himachal Pradesh, only.

Recommendations

On the basis of the study findings, the following recommendations were made;

1. An interventional study can be conducted to evaluate the effectiveness of information booklet among community people to reduce anxiety.
2. A similar study can be conducted among health profession also assess quality of sleep and anxiety levels related to job burnout during this COVID-19 pandemic.
3. A study can also be conducted among school teachers to assess their stress level during COVID-19 pandemic.

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