International Journal of Community Medicine and Public Health
James C et al. Int J Community Med Public Health. 2021 Dec;8(12):6031-6034
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20214610

Original Research Article

Prevalence of depression, stress, anxiety among information technology professionals during COVID-19 lockdown, 2020 in Kerala

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Received: 30 September 2021
Revised: 05 November 2021
Accepted: 11 November 2021

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ABSTRACT

Background: COVID-19 pandemic has completely changed the work pattern of information technology professionals who had to shift from the work from office to work from home pattern. The comforts of home, that they used to enjoy, was now taken up by an office space at home and this has potentially altered the mental health status of these professionals.
Methods: A cross sectional study was conducted among IT professionals within the age group 21-45 years working in Kerala. 218 subjects were included in the study. A self-prepared structured questionnaire was used to collect basic demographic information and depression anxiety and stress scale (DASS 21) scale was used to assess depression anxiety and stress among IT professionals using Google form. Informed consent was obtained in the beginning of the questionnaire. The data was entered in Microsoft Excel and analysed using SPSS software.
Results: Out of the total study participants 50.5% (110) were males and 49% (108) were females. 42.7% were married and 57.3% were unmarried and none of them were divorced or living separated. Most of the study participants (62.8%) had monthly income below 50,000. Out of the total study participants, 72 (33%) of them were working in IT field for less than 2 years, 52 were working for last 2-4 years, 51 were working for last 4-8 years and only 43 individuals were working for more than 8 years. 67% of them had their working hours raised during COVID lock down. In our study while 21.6% had a previous history of psychiatric illness for which they have consulted a doctor/psychologist. Out of all the study subjects, 4.1% were mildly depressed, 6.9% were moderately depressed, 5.5% were severely depressed and 1.8% had extremely severe depression. Most of the study subjects (81.7%) were not anxious, 9.2% were mildly anxious, 6.8% were moderately anxious, 2.3% were severely anxious. 76.9% had no stress, 6.1% were mildly stressed, 11.5% were moderately stressed, 4.6% were severely stressed and 0.9% had extremely severe stress. Depression among IT professionals during COVID-19 lockdown was found to be significantly associated with past history of psychiatric illness. Anxiety was found to be significantly associated with past history of psychiatric illness and unmarried relationship status. The stress among IT professionals during lockdown was found to be significantly associated with previous history of psychiatric illness and unmarried relationship status.
Conclusions: 18.3% of the IT professionals had some degree of depression and 23.1% was facing stress 18.3% was anxious. Past history of psychiatric illness was associated with increased depression anxiety and stress. Unmarried relationship status was associated with associated with increased anxiety and stress.

Keywords: Anxiety, COVID-19, Depression, Information technology professionals, Stress

INTRODUCTION

In December 2019 the first case of novel corona virus was reported from Wuhan city, China. In India the first case was reported on 30th January 2020 in Kerala. Soon cases were reported from other states in our country and the number of cases reported were showing a rapidly rising pattern. To curb the spread of COVID-19, many industries all over the world switched over to the work from home policy.

Work getting shifted from offices to homes has blurred the lines between work related stress and comforts of the homes which they used to enjoy earlier. There has been a wave of increasing problems which are faced by the people, which were previously absent. They have also faced concern regarding large scale unemployment, difficulty in finding a new job, fear of corona virus pandemic. Work at home scenario has led to increased working hours at home to complete the work on time leading to additional burden. Each of these having the potential to contribute or catalyst the development of depression, stress and anxiety.[1] Considering all these it is a need to study about the mental health problems in IT workers during lockdown.

Objectives

To study the prevalence of depression, stress, anxiety among IT professionals during COVID-19 lockdown. To study the factors associated with depression, stress and anxiety.

METHODS

A cross sectional study was conducted among IT professionals within the age group 21-45 years working in Kerala. Sample size was calculated using the formula $N=4pq/d^2$. Where p=46 (based on a study by Padma et al on health problems and stress in IT employee) q=54, d=20% of p N=118.[2] Therefore, the minimum sample size required was 118. A final sample size of 218 subjects were included in the study.

The study was conducted by the Department of Community Medicine, Government Medical College Kottayam, Kerala. A self-prepared structured questionnaire was used to collect basic demographic information and depression anxiety and stress scale (DASS 21) scale was used to assess depression anxiety and stress among IT Professionals.3 The study subjects included professionals 21-45 years working at home in the information technology field for at least 2 months. IT professionals who were working at home even before the COVID-19 lockdown was excluded from the study. Google form was sent to IT professionals and was circulated in their WhatsApp groups. The study period was from August 2020 to December 2020. Before data collection, approval for the study was obtained from the Department of Community Medicine. Informed consent was obtained in the beginning of the questionnaire. The data was entered in Microsoft Excel and analysed using SPSS software.

RESULTS

On analysing the basic demographic data of the study population, out of the total study participants 50.5% (110) were males and 49% (108) were females. 42.7% were married and 57.3% were unmarried and none of them were divorced or living separated. Most of the study participants (62.8%) had monthly income below 50,000, 25.2% had their monthly income between 50,000 and 100000 and 11.9% had more than 100000 monthly income. 72 (33%) of them were working in IT field for less than 2 years, 52 were working for last 2-4 years, 51 were working for last 4-8 years and only 43 individuals were working for more than 8 years. 67% of them had their working hours raised during COVID lock down and 33% had working hours same as (or less than) before lockdown. In our study 78.4% did not have a history of diagnosed psychiatric illness while 21.6% had a previous history of psychiatric illness for which they have consulted a doctor/psychologist.

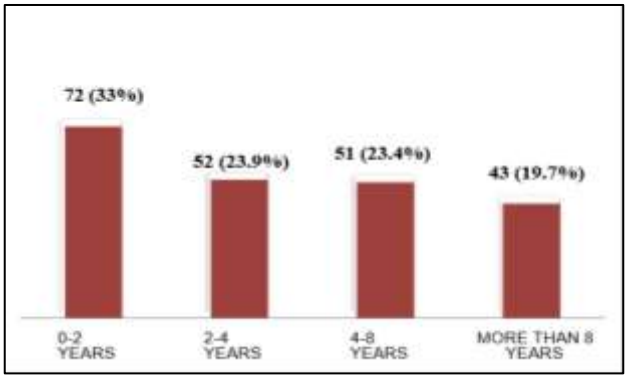

Figure 1: Period of service of study population in IT field.

Table 1: Distribution of study population based on work load during COVID-19 lock down.

Working hours	Frequency	%
Increased	146	67
Same as before or reduced	72	33
Total	218	100

Table 2: Distribution of study population based on whether they have past history of psychiatric illness.

Response	Frequency	%
No	171	78.4
Yes	47	21.6
Total	218	100

Out of all the study subjects, 81.7% had no depression, 4.1% were mildly depressed, 6.9% were moderately

depressed, 5.5% were severely depressed and 1.8% had extremely severe depression. Most of the study subjects (81.7%) were not anxious, 9.2% were mildly anxious, 6.8% were moderately anxious, 2.3% were severely anxious. 76.9% had no stress, 6.1% were mildly stressed, 11.5% were moderately stressed, 4.6% were severely stressed and 0.9% had extremely severe stress.

Table 3: Distribution of study sample based on prevalence of depression anxiety and stress.

Scale	Depression	Anxiety	Stress
Normal	178 (81.7%)	178 (81.7%)	166 (76.9%)
Mild	9 (4.1%)	20 (9.2%)	15 (6.1%)
Moderate	15 (6.9%)	15 (6.8%)	25 (11.5%)
Severe	12 (5.5%)	5 (2.3%)	10 (4.6%)
Extremely severe	4 (1.8%)	0	2 (0.9%)
Total	218 (100%)	218 (100%)	218 (100%)

Factors associated with depression, anxiety and stress was analysed using Chi square test (has been described in Table 4, Table 5 and Table 6). Variables considered for analysis were sex of the person, whether married or not, income, no. of years of experience in IT field, self-reported change in working hours due to COVID-19, self-reported past history of psychiatric illness.

Table 4: Factors associated with depression in the study population.

Factor associated	Depression present	Depression absent	P value	χ^2 value
Previous mental illness	22 (46.8%)	25 (53.2%)	<0.001	32.39
No mental illness	18 (10.5%)	153 (89.5%)		

Table 5: Factors associated with anxiety in the study population.

Factor associated	Anxiety present N (%)	Anxiety absent N (%)	P value	χ^2 value
Unmarried	29 (23.2)	96 (76.8)	0.032	6.46
Married	11 (11.8)	82 (88.2)		
Previous history of mental illness present	16 (34)	31 (66)	0.002	9.850
No previous history of mental illness present	24 (14)	147 (86)		

Depression among IT professionals during COVID-19 lockdown was found to be significantly associated with past history of psychiatric illness. Anxiety was found to be significantly associated with past history of psychiatric illness and unmarried relationship status. The stress among IT professionals during lockdown was found to be significantly associated with previous history of psychiatric illness and unmarried relationship status.

Table 6: Factors associated with stress in the study population.

Factor associated	Stress present N (%)	Stress absent N (%)	P value	χ^2 value
Unmarried	38 (30.4)	87 (69.6)	0.009	6.914
Married	14 (15.1)	79 (84.9)		
Past history of psychiatric illness present	20 (42.6)	27 (57.4)	0.001	11.536
No previous history of psychiatric illness present	30 (18.7)	139 (81.3)		

DISCUSSION

According to a study by Verma et al in 2020 to find out the prevalence of depression, anxiety and stress among general Indian public during COVID-19 lock down found that, 25.1% of the participants were depressed, 28%were anxious and 11.6% were stressed.[4] This value is more than what we have obtained in our study as this study included a wide range of participants from different states of our country and also included people who were unemployed who are more likely to be depressed stressed and anxious

Married respondents had lower level of Depression anxiety and stress than those that were single with p value of <0.01 in a study conducted in Vietnam during COVID-19 lockdown period.[5]

In a study by Pan, et al published in lancet 2021. People with depressive and anxiety experienced a detrimental effect on their mental health following COVID-19 pandemic.[6]

CONCLUSION

18.3% of the IT professionals had some degree of depression and 23.1% was facing stress 18.3% was anxious. Past history of psychiatric illness was associated with increased depression anxiety and stress. Unmarried relationship status was associated with associated with increased anxiety and stress.

This study thus brings to light the burden of depression, anxiety and stress among professionals in the information technology work field and the importance of close monitoring of patients with past history of psychiatric illness during the COVID-19 pandemic.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee Department of Community Medicine, Government Medical College, Kottayam

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Cite this article as: James C, Gopika G, Diju IM, Aswathy TR, Karthika J, Jayakumar D, et al. Prevalence of depression, stress, anxiety among information technology professionals during COVID-19 lockdown, 2020 in Kerala. Int J Community Med Public Health 2021;8:6031-4.