



## PSYCHOLOGICAL EFFECTS OF COVID-19 LOCKDOWN ON WORKING FROM HOME INFORMATION TECHNOLOGY (IT) PROFESSIONALS BY USING DASS 21 SCALE: A CROSS SECTIONAL WEB BASED STUDY.

### Community Medicine

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### ABSTRACT

**Introduction:** The coronavirus disease 2019 (COVID-19) pandemic is exacting a huge toll on individuals, families, communities, and societies across the world. Our Prime Minister announced a nationwide lockdown in order to control this pandemic and contain the infection from spreading further. IT companies are therefore completing their projects by allowing employees to work from home during this lockdown. It has long been known that the workplace and mental health of workers have a complex relationship. **Materials and Methods:** The study utilized a cross-sectional design and was conducted among 186 IT Professionals of Nagpur. Mental health screening tool -Depression Anxiety Stress Scale (DASS)-21 were used. **Results:** The study showed that positive score for depression, anxiety & stress are 40.65%, 41.75% & 30.76% respectively on DASS-21 scale. **Conclusion:** The lockdown has not hampered the work capacity and IT professionals feel satisfaction while doing work from home.

### KEYWORDS

COVID 19, pandemic, Lockdown, working from home, DASS-21, Psychological effects.

### INTRODUCTION

The coronavirus disease 2019 (COVID-19) pandemic is exacting a huge toll on individuals, families, communities, and societies across the world. Daily lives have been profoundly changed, economies have fallen into recession and many of the traditional social, economic, and public health safety nets that people rely on in times of hardship have been put under unprecedented strain.

The World Health Organization (2001) defined Pandemic as “an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people”. This definition does not include anything about population immunity, virology or disease severity.

The Covid-19 disease was initially thought of as a viral infection and on 31 December, 2019 World Health Organization's China office first heard the reports of an unknown virus (hence the name novel coronavirus) behind large number of Pneumonia cases, in Wuhan city of Eastern China. This disease which started as an epidemic mainly limited to China was declared as a pandemic on 11th March 2020 by the WHO.

On 24 March 2020, our Prime Minister announced a nationwide lockdown in order to control the pandemic and contain infection from spreading further. IT companies are therefore completing their projects by allowing employees to work from home during this lockdown.

The World Health Organization (WHO) in 2011 gave this definition of mental health-“It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community.” More than 450 million people suffer from some type of mental disorder. Mental health disorders account for 13–14% of the world's total burden from ill-health. Among the mental health disorders; depression, anxiety, and stress form a large proportion. India is estimated to have 10–20 persons out of 1,000 suffering from severe mental illness and three to five times more have an emotional disorder. India has a 1-year prevalence rate of depression from 5.8 to 9.5. The prevalence rate for anxiety disorders is around 16.5. In India, prevalence of moderate level of stress was reported at 9.5% in a study which also found most stressors were work related.

It has long been known that the workplace and mental health of workers have a complex relationship. Work as itself can often have a positive impact on the mental health of a person—job security, time structure, social contact, and organizational abilities can often elevate a person's state of well-being. Depression and anxiety patients can have an occupational role dysfunction and stress at the workplace can lead to an unhealthy environment.

Therefore, this study aims at assessing the mental health of IT Professionals during lockdown amid Covid-19 pandemic in India.. This study aims at finding the psychological effects viz. Depression, Anxiety and Stress among IT Professionals by using DASS 21 Scale.

### METHODS

This is a cross-sectional web based study. The survey used Snowball technique of sampling. To enable data gathering, online Google forms were created and utilized. Participants were explained the objectives of the study and only those who gave consent were given the option to take up the form. In order to assess Depression, Anxiety and Stress among IT Professionals in Nagpur, Depression Anxiety and Stress Scale (DASS- 21) was administered. Subjects who reported to be on psychiatric treatment were excluded. A section of demographic profile (Age, Gender, religion, marital status and Employment) was added. Google forms were created and randomly circulated among 300 IT Professionals of Nagpur who had done work from home during the months of March to May 2020. A total of 182 completed forms were obtained at the end of the study.

DASS21 is a 21 item self-report questionnaire design to measure the severity of range of symptoms common to both depression & anxiety. The scale has scores from 0 (did not apply to me at all) to 3(applied to me very much). The essential function of DASS is to assess the severity of the symptoms of depression, anxiety & stress the scores obtained by DASS-21 can be doubled to make it equivalent to the values of the full version. The cut-off scores for conventional severity labels (normal, mild, moderate & severe) are as follows:

**Table – 1 DASS-21 Scale**

|                  | Depression | Anxiety | Stress |
|------------------|------------|---------|--------|
| Normal           | 0-9        | 0-7     | 0-14   |
| Mild             | 10-13      | 8-9     | 15-18  |
| Moderate         | 14-20      | 10-14   | 19-25  |
| Severe           | 21-27      | 15-19   | 26-33  |
| Extremely severe | 28+        | 20+     | 34+    |

The cutoffs used in this study were as suggested by the Black Dog Institute, Australia. as shown in Table below, however, we combined the various severities and classified them as symptomatic and asymptomatic.

| <i>DASS-21 score cut offs used for the study</i> |            |         |        |
|--------------------------------------------------|------------|---------|--------|
| Subscale                                         | Depression | Anxiety | Stress |
| Asymptomatic                                     | ≤9         | ≤7      | ≤14    |
| Symptomatic                                      | ≥9         | ≥7      | ≥14    |

All data collected was logged and keyed in Microsoft Excel (2010) and was analyzed. Frequencies for the other variables were studied and presented as categories.

## RESULTS

Out of 300 people to whom online questionnaire was distributed, only 60.66% (182) filled the questionnaire.

Table 2 shows Out of them 65.9% were males and 34.1% were females. Male to Female ratio was 1.9:1.

Based on age distribution: 9.8% of the study sample were between 19 years and 24 years, 72.52% were between 25 years and 30 years, 14.28% were between 31 years and 36 years and only 3.29% above 37 years. Majority of the study sample were between the age of 25 years and 30 years.

Based on lockdown hampered on work: 41% participants' work hampered due to lockdown.

Based on work satisfaction from home during lockdown: 59% participants were satisfied by doing work from home during lockdown.

**Table – 2 Socio-demographic Profile Of Respondents (n = 182)**

| Variable                                             | Number (N) | Percentage (%) |
|------------------------------------------------------|------------|----------------|
| <b>Gender</b>                                        |            |                |
| Male                                                 | 120        | 65.9           |
| Female                                               | 62         | 34.1           |
| <b>Age(in years)</b>                                 |            |                |
| 19-24                                                | 18         | 9.8            |
| 25-30                                                | 132        | 72.52          |
| 31-36                                                | 26         | 14.28          |
| >37                                                  | 6          | 3.29           |
| <b>Marital status</b>                                |            |                |
| Married                                              | 80         | 44             |
| Single                                               | 102        | 56             |
| <b>Lockdown hampered on work</b>                     |            |                |
| Yes                                                  | 74         | 41             |
| No                                                   | 108        | 59             |
| <b>Satisfied with work from home during lockdown</b> |            |                |
| Yes                                                  | 108        | 59             |
| No                                                   | 74         | 41             |

Table 3 shows DASS-21 severity score as explained earlier.

**Table – 3 Classification Of Subjects As Per Dass-21**

|            | Normal | Mild   | Moderate | Severe | Extremely severe |
|------------|--------|--------|----------|--------|------------------|
| Depression | 59.34% | 9.89%  | 14.28%   | 10.98% | 5.49%            |
| Anxiety    | 58.24% | 6.59%  | 17.58%   | 4.39%  | 13.18%           |
| Stress     | 69.23% | 12.08% | 9.89%    | 5.49%  | 3.29%            |

Table 4 shows that DASS-21 score were dichotomized for the purpose of this study into asymptomatic and symptomatic groups based on their subscale scores as explained earlier.

**Table – 4 Dass-21 Score Cut Offs Used For The Study (n=182)**

| Subscale     | Depression  | Anxiety     | Stress      |
|--------------|-------------|-------------|-------------|
| Asymptomatic | 108(59.34%) | 106(58.24%) | 126(69.23%) |
| Symptomatic  | 74(40.65%)  | 76(41.75%)  | 56(30.76%)  |

## DISCUSSION

In our study, psychological effect on IT professionals (182) during COVID 19 lockdown, we came to know that 40.65% had depression 41.75% had anxiety and 30.76% had stress during work from home.

In our study, males (120) were more in number than females (62). Other studies on IT professionals reflect similar findings. Studies in Europe reported that females accounted for only 25% of the technology professional and it was found 20% in U.S technology workforce. The gender difference may be largely due to cultural and social influences.

Because of the variety of roles that women assume – wife, mother and caretaker during the peak periods of their professional and academic carrier, it might lead them to opt professions which are less time consuming and less stressful unlike IT profession.

When professionally stressed individuals were assessed based on the age, significant difference was noted, with the age group of 26-30

being highly stressed compared with other age groups. Study done among IT professionals in Pakistan reported similar findings that age group between 25 years and 28 years to be highly stressed compared to other age groups. In our study also with the age group 25 years to 30 years being highly depressed, anxiety and stressed.

In our study, females were at higher risk for depression, anxiety and stress. Studies have found that work family conflict (i.e., work interference with family or family interference with work) is experienced more often by women than by men. Depression is found to be one of the most consistent and strongest outcome of work family conflict.

In the Indian context with women being expected to handle household responsibilities as primary responsibility, women software engineers might experience more work family conflict increasing the prevalence of risk for developing depression women population.

## LIMITATIONS

1. Stress can be due to many factors, in our study screening was performed only for professional stress
2. No other causal factors for stress and risk for depression were assessed
3. Since depression is multifactorial, we have not looked at other possible triggering factors other than Professional stress

## CONCLUSIONS

This study was undertaken to study the depression, anxiety, and stress levels in Information Technology professionals during COVID 19 Lockdown and to know whether this lockdown hampered their work and are they satisfied in doing work from home during lockdown. Out of total study participants lockdown hampered on work in 40.65% IT professionals and 59.34% IT professionals were satisfied in doing work from home during this COVID 19 pandemic lockdown. Only longitudinal studies can demonstrate if a causal effect does actually exist. Studies on how health of workers is affected by their work is as closely related and needed as studies on how a workers' health is affected by their work.

## RECOMMENDATION

The following are some recommendations made in an effort to promote mental health in workplaces:

- Preventive strategies like training in stress management, frequent screening to identify professional stress and depression at the initial stages and addressing these issues adequately might help the IT professionals cope with their profession better without affecting their lifestyle and health.
- Legislation and policy regarding mental health; not only in the public domain but also with regards to the workplace should be set up and strictly adhered to

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**Conflict of interest:** There are no Conflict of interest

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