

A Cross Sectional Study on Covid-19 Related Anxiety Disorders amongst the Population Working from Home during the Pandemic in the State of Karnataka, South India

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ABSTRACT

BACKGROUND

Covid-19 has caused significant distress worldwide. It not only causes physical symptoms but also takes a toll on the mental well-being of an individual. A plethora of people develop the psychological disorders due to the pandemic. This study was an attempt to explore the occurrence of anxiety and its severity levels among the people working from home during the pandemic period.

METHODS

A cross sectional online survey was conducted by sharing Zung self-administered anxiety questionnaire using Google form. Informed consent was obtained from 105 participants and snowball sampling method was used in the study. The chi square and P-value were also calculated to determine the level of significance and association between different variables.

RESULTS

Out of 105 participants, 15 (14.28 %) were found to have anxiety disorder. Males were found to have higher anxiety levels than females. Higher numbers came from those living in a joint family and who were married.

CONCLUSIONS

Early identification of psychological distress and timely intervention will improve quality of life of an individual and will also reduce the severity of the psychological sequelae.

KEYWORDS

Pandemic, Anxiety, Covid-19, Mental Health

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BACKGROUND

A pandemic is defined as an epidemic occurring worldwide. Since time immemorial, the episodic outbreaks of the infectious diseases have had caused profound detrimental effects on the society. Such outbreaks not only mar one's physical health but also takes toll on an individual psychological well-being.

The novel strain of Coronavirus identified from Wuhan city; Hubei province of China has been declared as the pandemic by World Health Organization (WHO) in March 2020¹ after the outbreak of SARs infection globally. Such public health emergencies may affect the health, safety and well-being of both individuals and communities at large.² Such sudden crisis may lead to multiple psychological issues arising due to vivid factors like death of a close family member, fear of contraction of the disease, being in isolation or home confinement for long duration, loss of job, financial crisis, stigma of suffering from the disease, substance abuse, unavailability of medical treatment, sensational news by media^{2,3} etc.

Some group of people are more prone to develop such psychological issues than others in the society.² Those who are at higher risks of being affected negatively due to the ongoing pandemic are medical health workers,² migrant labourers, field workers like farmers, civil engineers, factory workers, small shop owners, elderly population and a special group of people who have been confined to work from home.

This group of population works on their official working hours from their homes online and strive hard to meet their deadline. In our country, where socialising is an integral part of our society, the sudden curb on it has seen negative impact on the individual mind.

With no option to step out of home or meet friends and relatives, no get together and trips or other modes of unwinding oneself from the work pressure, the occurrence of psychological distress has been observed as a rising trend amongst this group.

During this period of uncertainty² and unavailability of the vaccines along with constant rise of cases, it is the need of hour to assess the ongoing stress among this special group of individuals who are battling with anxiety related disorders. The most common psychological distress that are commonly observed are anxiety disorders, depression,^{4,5} increased substance abuse, psychosis, emotional dysregulation, etc. Anxiety refers to the fear of unknown, which is characterised by various physical features such as shortness of breath, dizziness, tremors of hands, palpitations, nausea, epigastric discomfort, headache, excessive sweating, insomnia, increased urinary frequency, headache etc.

Wang et al.⁶ (2020) and WHO (2020)¹ in their respective studies have already emphasised on the need to address the Covid related mental health issues.

Roy et al.⁷ (2020) in their study too found the occurrence of high level of anxiety among the Indian youths. To the best of our knowledge, so far, no study has explored the anxiety related issues experienced by the group of people working from home during the pandemic, and thus our study was an

attempt to advance our understanding of the level of anxiety experienced by them and contribute in planning for effective mental health management of this unrecognised section of people.

METHODS

A descriptive type of statistical study was used. A cross sectional study was conducted online involving 105 participants. Online Google forms were created and mailed to the participants after obtaining informed consent from them. The survey was conducted from 31st October to 2nd November 2020 and snowball sampling technique was used.

Inclusion Criteria

1. Those who were working from home exclusively.
2. Above 18 years of age.
3. Those who gave informed consent.
4. No history of any substance abuse.

Exclusion Criteria

1. Those who were not willing to participate in the study.
2. Those who had pre-existing psychiatric disorders.
3. Those who had medical comorbidities like epilepsy, hypo or hyperthyroidism, diabetes, bronchial asthma, ischaemic heart disease etc.

Measures

A semi-structured and self-rating questionnaire was created. The questionnaire contained an informed consent, socio demographic details like age, gender, marital status, type of family, past history of medical illness and psychiatric disorders. The psychometric tool, Zung Self Rating Anxiety Scale was used to assess anxiety and its severity level.

Zung Self Rating Anxiety Scale

It was designed by William WK Zung to quantify the level of anxiety. It is a self-reporting questionnaire comprising 20 questions. Each question has four options. The participant must mark the option that closely resemble the symptoms they experience. The scoring of the option ranges from 1 to 4. The lowest score being 20 and highest was 80 score.

A score of 20 to 44 is considered as the normal range, 45 to 59 as mild to moderate severity, 60 to 74 as moderate to severe grade and above 75 as the extreme anxiety level.

Statistical Analysis

The data were entered and analysed using SPSS software. Percentage were calculated and chi square test was applied for level of significance. P-value less than 0.05 was considered significant.

RESULTS

Sl. No.	Sex	Frequency	Percentage
1	Male	72	68.57
2	Female	33	31.43
3	Total	105	100

Table 1. Gender Distribution of the Participants in the Study

Sl. No.	Gender	Frequency	Normal	Anxiety Disorder	Percent	P-Value
1	Male	72	60	12	11.42	0.465
2	Female	33	30	3	2.85	
3	Total	105	90	15	14.28	

Table 2. Gender Distribution of Participants Identified to have Anxiety Disorder

(Chi square value - 0.53)

Sl. No.	Marital Status	Frequency	Normal	Anxiety Disorder	Percent	P Value
1	Married	57	46	11	19.29	0.1097
2	Unmarried	48	44	4	8.33	
3	Total	105	90	15	27.62	

Table 3. Marital Status of the Participants Who Developed Anxiety Disorder

(Chi square value - 2.55)

Sl. No.	Type of Family	Frequency	Normal	Anxiety Disorder	Percent	P Value
1	Nuclear	96	84	12	12.5	0.2263
2	Joint	9	6	3	33.33	
3	Total	105	90	15	45.85	

Table 4. Type of Family of the Participants Who Manifested with Anxiety Disorder

(Chi square value - 2.91)

Sl. No.	Gender	Frequency	Normal	Mild Anxiety	Moderate
1	Male	72	60	10	2
2	Female	33	30	3	0
3	Total	105	90	13	2

Table 5. Gender Distribution of Participants with Varying Anxiety Levels

There are not many studies done to explore the incidence of anxiety disorders among the population working from home online during the Covid-19 pandemic. Thus, our study is an attempt to advance our understanding about the occurrence of the anxiety disorder in the aforesaid group. We conducted an online cross-sectional study by creating Google form and shared the Zung self-rating anxiety questionnaire with the participants after obtaining the informed consent from them. A total of 105 participants gave consent for study, out of whom 72 (68.57 %) were male and 33 (31.43 %) were female candidates. Out of 105 participants, 15 (14.28 %) candidates were found to have varying degrees of anxiety disorder. Amongst the 72 male participants, 60 (83.33 %) scored within the normal range while 12 (16.66 %) participants were screened positive for anxiety disorder. Moreover, out of these 12 male participants who were identified with anxiety illness, 10 were diagnosed with mild to moderate grade anxiety and 2 had moderate to severe anxiety. In case of female participants, 3 (9.99 %) were found to experience anxiety while 30 (90.90 %) scored within the normal range. Chi-square with Yates correction and P-value was also calculated to assess any chance of association between the genders and anxiety. P-value was found to be 465 and chi-square statistic being 0.532. The P-value was insignificant at $P < 0.05$.

Our study also found that the rate of occurrence of anxiety was higher among the male population (16.66 %)

than females (9.99 %). The marital status was also assessed and was observed that the incidence of developing anxiety was higher among the married (19.29 %) group than the unmarried (8.33 %). The chi square statistic with Yates correction was 2.55 and P-value was 0.1097. Thus, $P < 0.05$ was not significant. In addition to this, those residing in the joint families (33.33 %) developed more anxiety than the nuclear families (12.5 %) with P value being 0.226 and chi square with Yates correction, 2.91. Once again, not significant at $P < 0.05$.

DISCUSSION

In a meta-analysis conducted by Salari et al.⁸ (2020), their study stated that the prevalence of anxiety was 31.9 % in a sample size of 63,439 populations, prevalence of stress in sample size of 9074 populations was 29.6 % and the prevalence of depression was 33.7 % in sample size of 44,531 populations. Our sample size comprising 105 participants, found 15 (14.28 %) people working from home to experience anxiety disorder which is quite a significant number.

In an online cross sectional study conducted by Rehman et al.⁹ (2020) on 403 participants to assess the incidence of stress, anxiety and depression on general population during lockdown period found that both males and females suffered equally in contrast to our study where we found that males experienced anxiety in higher proportion than females. However, a similarity between both the studies was also observed too. Both studies found that the majority of the participants had experienced mild grade of anxiety symptoms and very few had moderate and severe anxiety.

An online pilot study conducted by Islam et al.⁵ (2020) in Bangladesh to assess the prevalence of panic and generalised disorder found that those who were above 30 years of age, highly educated, being married and lived in joint families experienced higher anxiety symptoms. In our study too, two similarities were observed. Firstly, the incidence of anxiety was higher amongst the married group and secondly, amongst those who stay in joint families.

In two studies carried out separately, one by Wang et al.⁶ (2020) in China and second, a meta-analysis by Sofia et al.⁴ (2020) in their study reported 28.8 % and 23.2 % population respectively to have experienced anxiety related disorders and females suffering more than males, which was in contrast to our study where males outnumbered females in experiencing more anxiety.

Teufel et al.¹⁰ (2020) in an online cross-sectional survey on 15,704 participants in Germany revealed following observations: 44.9 % participants were found to have generalised anxiety disorder, 14.3 % had depression and 65.2 % screened positive for some psychological distress. Their study also stated that females and younger people had higher mental burden, unlike to our study where men were found to have higher proportion of anxiety than women.

In another online cross-sectional survey by Alkhamees et al.¹¹ (2020) in Saudi Arabia, the psychological impact on the general population was assessed. The study was done on 1160 participants and found that 23.6 % suffered from some

form of psychological distress. 28.3 %, 24 % and 22.3 % were observed to have depression, anxiety and stress symptoms and women outnumbering men in developing aforementioned psychological disorders, again in contrast to our study where we had more numbers of men inflicted with anxiety disorders.

Waleed Burhamaah et al.¹² (2020) in their study web cross-sectional survey on 4132 participants explored the psychological burden of the Covid-19 burden and associated lockdown in Kuwait and stated that prevalence of anxiety was 25.28 % and depressive symptoms was 30.13 %. About 69.31 % females screened positive for some level of psychological disorders, most were married (59.37 %). Similarly, our study too found that married people had higher anxiety woes than singles, however, gender proportion of those inflicted with anxiety in our study did not match with their study.

Our findings show that the incidence of anxiety was higher among the male gender, more so who were married and live in the joint family. Most of the studies conducted state that women are more commonly affected than men. Nonetheless, the other findings in different studies mentioned above showed similar results as ours in terms of the marital status and type of nuclear family. The reasons why a person on first place actually develops any psychological distress during the pandemic period could be attributed to multiple psycho social factors such as loss of job, fear of losing job due to sudden layoff by companies, pay cut, death of family member from the deadly corona virus, health crisis, interpersonal conflicts, financial crisis, increased work load, sensational news on television or newspapers, inability to work under pressure, change in routine activities, being in isolation, inability to meet loved ones, loneliness, boredom, distortion of the facts by social media, excessive use of drugs for recreation etc. In addition to this, being the sole breadwinner to run huge family and sudden decline in the resources to meet the demands of family may also increase the woes. Other factors like poor internet connection while working, constant noise in the background during office hours thus impairing the concentration and work performance are some other reasons that further worsens anxiety. The World Health Organisation (2020)¹ has even issued the guidelines to address the pandemic related mental health issues. This study is a small attempt to identify the anxiety disorder among this unrecognised group of people and highlight the need to recognise and address their concerns and help the mental health policymakers to plan guidelines to address the unmet needs of this section of people.

CONCLUSIONS

It is the need of the hour to recognise the emotional and behavioural problems of an individual, help him in seeking immediate attention from mental health professionals and improve the overall quality of life. There is an urgent need to raise the awareness in the society and address the stigma associated with mental illness and extend psychosocial

support to the people battling with anxiety and help the individual to recover from the ailment quickly.

Limitations

The sample size was small. Use of online forms deterred us from reaching larger section of society, especially the rural areas. Moreover, our study being a cross-sectional observation study hindered us from following up the participants for longer duration and assess any changes in their psychopathology. In addition to this, we had used a self-rating questionnaire, the chances of overestimating and underestimating one's symptoms may affect the overall interpretation of results.

Data sharing statement provided by the authors is available with the full text of this article at jebmh.com.

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