



## IMPACT OF LOCKDOWN DURING COVID-19 PANDEMIC ON PSYCHOLOGICAL WELLBEING AMONG HEALTHY WORKING ADULTS

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**Abstract:** The aim of this study was to assess the impact of lockdown during COVID-19 pandemic on psychological wellbeing among healthy working adults. This qualitative, cross-sectional study was conducted in Kanyakumari District, Tamilnadu, and the southernmost state of India. A convenient sample of 610 healthy working adults was participated and completed a self-administered questionnaire. The data collection tool contains two sections including baseline information, assessment of psychological wellbeing. Chi-square  $\chi^2$  test was used to test the association between demographic variables and scores of psychological wellbeing. One way ANOVA test was used to compare the mean score between groups. Descriptive statistics were used to describe the frequencies of variables. A significant P value was set at 0.05 at 95% confidence interval. The majority of participants (31.8%) belonged to 41-50 years of age. More than half (56.9%) of participants were females. The study findings revealed that 16.4% were had poor psychological wellbeing, 53.8% were had an average level, 21.3% had a good level and 8.5% were had an excellent level of psychological wellbeing. Additionally, gender, age, monthly income, history of quarantine, tested positive for the Corona Virus had a strong association with Psychological wellbeing. The study results concluded that the lockdown during the COVID-19 pandemic had a strong association with the psychological wellbeing of working adults. It also suggested having highly prioritized actions for early recognition of psychological problems, expanding counseling activities by the health authorities to avoid negative outcomes due to the Covid-19 pandemic lockdown.

**Keywords:** Lockdown, COVID-19, Corona virus, Psychological wellbeing, Working adults

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### 1. Introduction

As the coronavirus pandemic rapidly is inducing a considerable degree of fear around the world, anxiety and worry are common among people such as older adults, health care professionals and people with underlying health conditions (WHO, 2020). The coronavirus has a major impact on declining of economy across the world in 2020 due to the COVID-19 pandemic lockdown (Schwartz, 2020; Horowitz, 2020). This economic crisis has adversely affected many people's psychological wellbeing and made new barriers to the one who previously suffering from psychological disturbances and other mental health issues (Panchal et al., 2020; Raju et al., 2020). In circumstances of pandemic, some emotional experiences can play an accentuated role. For example, social relationships are important for wellbeing in general, but even more so at times of threat (Taylor, 2006).

During the pandemic outbreak, the Government of India took rigorous actions to restrict the cases in the earlier

stage itself, by initiating a major lockdown and also by shifting the immigrants to the special quarantine facilities prepared by the Indian Military (Shah et al., 2020). On 24 March, the Prime Minister of India ordered a nationwide lockdown for 21 days, affected the entire 1.3 billion population of India (Regan, 2020; Aljazeera, 2020).

COVID-19 affects economy as well as well-being of everyone. It also created a high levels of fear and panic behavior due to stagnation of resources (Shigemura et al., 2020). Millions of migrant workers left jobless by India's strict coronavirus lockdown. About 80% of these migrant workers are men who sent their earnings back to their villages to support their families (Srivastava and Nagaraj, 2020).

A press report stated that, due to repeated lockdown in India, people will suffered with massive mental health crisis because of unemployment, alcohol abuse, economic hardship, domestic violence and indebtedness. It will affect most of the population where poor people are the



most vulnerable and marginalized groups (Naik, 2020). A survey reported that 61% of Indians are experienced mental health-related issues because of the uncertainty and looming financial crisis during the lockdown. Similarly, women were struggled more than men because of their increased responsibilities and also handled multiple tasks without any domestic helpers (IANS, 2020).

According to the recent survey reports of researchers stated that 343 people were died by suicide since March, 2020 with 125 of them due to fears of infection, loneliness, lack of freedom of movement and inability to go home. The study also cited that the financial distress and alcohol withdrawal were the factors for suicide attempt (Thejesh, 2020). So, this study was aimed to analyze the psychological wellbeing of people living with a big question in their mind, when will the outbreak end and life get back to normal? And was to assessed by framed questionnaires to know the impact of lockdown during COVID-19 pandemic on psychological wellbeing among healthy working adults.

## 2. Material and Methods

This is a quantitative Descriptive study to assess the psychological wellbeing of healthy adults from Kanyakumari District, Tamilnadu, and the southernmost state of India. There are 610 healthy working adults were participated in the survey. The data were collected by using electronic questionnaire. The inclusion criteria were the participants who are healthy and interested to participate in the survey, aged between 21-60years without any medical or psychological illness. The participants were instructed that their involvement in the study wasn't mandatory. Before the entry of questionnaire, the researcher reassured the subjects that their privacy will be protected, and any obtained information will be kept strictly confidential. It might take about 10 to 15 minutes. Data collection was done for a period of about 1 ½ months through online as it was a pandemic period. (May 2020- June 2020).

### 2.1. Tool for Data Collection

A self-structured questionnaire was designed by the researcher based on review of pertinent literature were used for data collection. The tool contains 2 sections including baseline information, assessment of psychological wellbeing. Baseline information: it includes eight items, which provides basic information about the participants.

The tool for assessing psychological wellbeing contains 10 statements and it was prepared according to the components of Ryff model of Psychological wellbeing. Each statement had four options like Never, Rarely, sometimes and always. The total score ranges from 0-30. Total scores were classified as follows: 0-25% poor (Very less happiness in life), Average 26%-50% (less happiness in life), Good 51%-75% (Good happiness in life), Excellent -76%-100% (Very good happiness in life). The

higher score indicating good psychological wellbeing. Reliability of self-structured questionnaire was verified using Reliability statistics Cronbach's Alpha Reliability test. The reliability was 0.89 and the questionnaire was found to be reliable.

The data were collected through electronic questionnaire - online. The participants were informed about the purpose of the study and informed consent was obtained from each participant. Participants were assured that they can withdraw themselves from the study at any time, findings would not be linked to individuals, and that all study events and materials would maintain confidentiality. Participants were not considered to be at risk of harm. They were informed that the duration would be approximately 10-15 minutes.

### 2.2. Statistical Analysis

For data analysis, the statistical software SPSS (Statistical Package for Social Sciences) version 16.0 was used, facilitating the process of organizing data into tables for the sake of better visualization of the results and their interpretation. Chi square  $\chi^2$  test was used to test the association between demographic variables and score of psychological wellbeing. Independent t test and One way ANOVA test was used to compare the mean score between groups. Descriptive statistics were used to describe frequencies of variables. A significant P value was set at 0.05 at 95% confidence interval.

### 2.3. Ethical Consideration

The study was carried out with the permission of Local Research Ethics Committee (Protocol number: REC/2020/142-N) dated 13.05.2020.

## 3. Results

610 working adults were participated in the study. Table 1 showed Majority of study participants (31.8%) were belongs to 41-50 years of age. More than half (56.9%) of participants were females. Most of the participants (53.1%) were undergraduates. 12.8% participant's family members were quarantined because of corona virus symptoms and 1.5% of participant's family members were tested positive for corona virus (Table 1).

Association of demographic variables with psychological wellbeing score was tested by using  $\chi^2$  test, which was presented in Table 1. The  $\chi^2$  test stated that age, ( $\chi^2=7.967$ ,  $P=0.007<0.05$ ) gender, ( $\chi^2=5.026$ ,  $P=0.000<0.05$ ), monthly income ( $\chi^2=8.327$ ,  $P=0.000<0.05$ ), marital status ( $\chi^2=1.668$ ,  $P=0.013<0.05$ ), family members quarantined ( $\chi^2=2.376$ ,  $P=0.022<0.05$ ) and family members tested positive ( $\chi^2=46.108$ ,  $P=0.000<0.05$ ) were had strong association with psychological wellbeing. Whereas, religion ( $\chi^2=5.772$ ,  $P=0.170>0.05$ ), and family type ( $\chi^2=2.325$ ,  $P=0.0401>0.05$ ) were not shown any association at 0.05 level of significance.

**Table 1.** Frequency, percentage distribution of demographic variables and association of psychological wellbeing score with the demographic variables

Sl. No	Variables	Frequency (n=610)	%	Association with psychological wellbeing score	
				$\chi^2$	P value
1	Age				
	21-30 years	62	10.2		
	31-40 years	189	31	7.967	0.007*
	41-50 years	194	31.8		
51-60 years	165	2			
2	Gender				
	Male	263	56.9	5.026	0.000*
Female	347	43.1			
3	Education				
	School education	80	13.1		
	Undergraduate	324	53.1	2.812	0.521
Post Graduate and above	206	33.8			
4	Occupation				
	Government employee	42	6.9		
	Private	312	51.1	9.731	0.909
	Own business	186	30.5		
	Abroad	47	7.7		
others	23	3.8			
5	Monthly Income				
	< Rs.10,000/-	82	13.4		
	Rs. 10,001- 20,000/-	164	26.9	8.327	0.000*
	Rs. 20,001- 30,000/-	149	24.4		
	Rs. 30,001- 40,000/-	125	20.5		
>Rs. 40,000/-	90	14.8			
4	Religion				
	Hindu	213	34.9	5.772	0.170
	Christian	343	56.2		
Muslim	54	8.9			
5	Marital status				
	Married	522	85.6	1.668	0.013*
Unmarried	88	14.4			
6	Family Type				
	Joint family	122	20	2.325	0.401
Nuclear family	488	80			
7	Any family members were quarantined?				
	Yes	78	12.8	2.376	0.022*
	No	532	87.2		
8	Any of your family members tested positive for corona virus?				
	Yes	9	1.5	46.108	0.000*
No	601	98.5			

\*Significant with 0.05 level of confidence.

### 3.1. Psychological Wellbeing Score among Working Adults According to Age

The range of psychological wellbeing score according to age was presented in Figure 1. It indicated that among 610 participants 62 were had poor psychological score and they were aged between 51-60 years. 143 were had average psychological wellbeing; they were aged

between 31- 40years.

49 participants were had good psychological wellbeing, 22 participants were had excellent psychological wellbeing and their age between 41-50 years.

The mean, median, standard deviation, Minimum and maximum scores according to age were presented in Table 2. It represented that among 610 participants, the

majority of participants were from the age group of 41-50 years also the mean score was good (15.61) for them. On the other side participants from the age group of 51-60 years had less psychological wellbeing as their mean score was less (12.08).

**3.2. Psychological Wellbeing According to Monthly Income**

The range of psychological wellbeing according to the monthly income was presented in Figure 2. It confirmed that majority of participants from each income groups were stated that they had average level of psychological

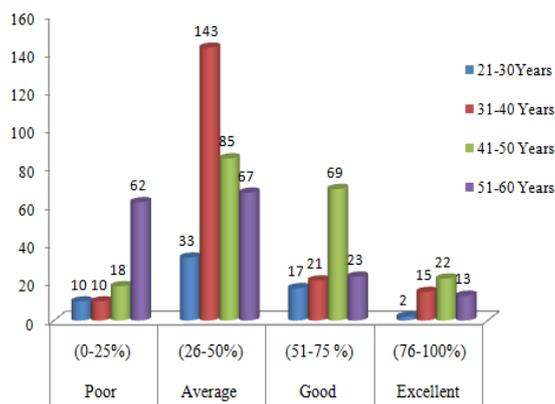
wellbeing. Participants whoever had the monthly income of more than Rs.40000 were expressed good psychological wellbeing than other income groups. The mean, median, standard deviation, Minimum and maximum scores according to monthly income were presented in Table 3. It represented that among 610 participants majority (164) were belongs to the income group of Rs. 10001-20000/-. The participants whoever had the monthly income of More than Rs.40000 were had good psychological wellbeing score (mean=17.63, SD=7.133) than other income groups.

**Table 2.** Mean, standard deviation of psychological wellbeing score among working adults according to age

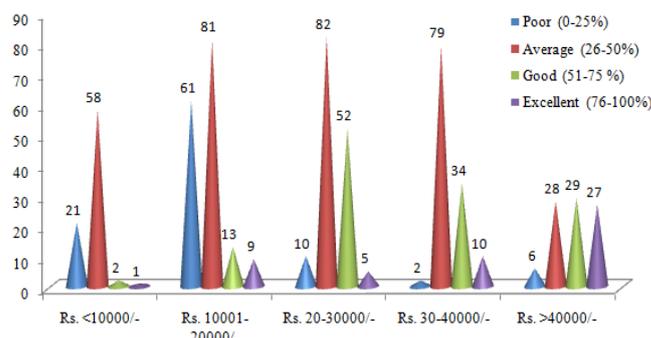
Age	Mean	Median	Std Dev	Minimum	Maximum	Numbers
21-30YRS	13.82	13.00	4.233	6	24	62
31-40 YRS	14.43	15.00	4.642	5	28	189
41-50 YRS	15.61	15.00	5.493	4	30	194
51-60 YRS	12.08	12.00	6.495	5	30	165
Total	14.11	14.00	5.589	4	30	610

**Table 3.** Mean, standard deviation of psychological wellbeing score among working adults according to monthly income

Monthly Income	Mean	Median	Std Dev	Minimum	Maximum	Numbers
Rs. <10000/-	12.71	15	3.936	5	24	82
Rs. 10001-20000/-	11.65	13	5.795	5	26	164
Rs. 20-30000/-	14.70	15	3.919	4	26	149
Rs. 30-40000/-	15.03	14	4.971	6	30	125
Rs. >40000/-	17.63	18	7.133	6	30	90
Total	14.11	14	5.589	4	30	610



**Figure 1.** Frequency and Range of psychological wellbeing score among working adults according to age.



**Figure 2.** Frequency and Range of psychological wellbeing score according to monthly income.

**3.3. Psychological Wellbeing According to Gender**

Mean, standard Deviation of psychological wellbeing score among working adults according to gender was presented in Table 4. This indicated that Male participants (mean = 14.62, SD= 5.589) were had better psychological wellbeing than female (mean = 13.73, SD= 5.562) participants.

Overall psychological wellbeing among working adults was depicted in Figure 3. Which indicated that more than half of participants (53.80%) were stated that, they had average level of psychological wellbeing. 21.3 % were had good psychological wellbeing, followed that 16.4% were had poor psychological wellbeing, but very less (8.5%) were reported that they had excellent

psychological wellbeing during corona pandemic lockdown.

Table 5 shown the mean, standard deviation, standard error of mean and t-value for scores on psychological wellbeing of working adults. Independent t test was used to compare the means of psychological wellbeing score with the gender, where the mean difference in regards to gender  $P > 0.05$  (0.178) and type of family  $P > 0.05$  (0.076) were statistically not significant between groups. In regards to marital status, the psychological score between two groups were statistically significant  $P < 0.05$  (0.0043). It indicated that the unmarried participants had better psychological wellbeing than married working adults.

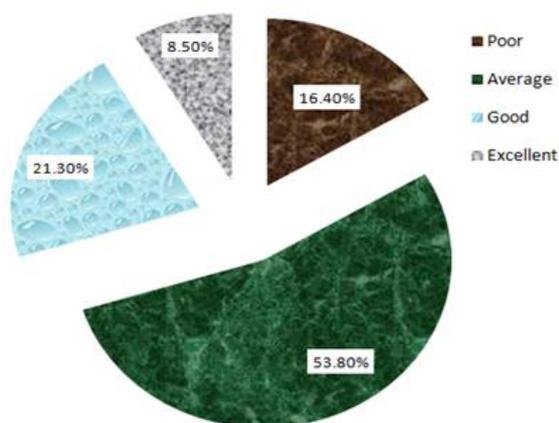
**Table 4.** Mean, standard deviation of psychological wellbeing score among working adults according to gender

Gender	Mean	Median	Std Dev	Minimum	Maximum	Numbers
Female	13.73	14	5.562	4	28	347
Male	14.62	13	5.596	4	30	263
Total	14.11	14	5.589	4	30	610

**Table 5.** Mean differences of selected variables using independent t test

Variables		Mean	Std Dev	SEM	t value	P value
Gender	Female	13.73	5.562	0.345	1.817	0.178
	Male	14.62	5.596	0.299		
Marital status	Married	13.88	5.614	0.246	4.112	0.043*
	Unmarried	15.48	5.268	0.562		
Type of family	Joint family	14.49	6.632	0.600	3.156	0.076
	Nuclear family	14.02	5.300	0.240		
Family members	Yes	11.94	5.148	0.583	6.509	0.011*
Quarantined?	No	14.31	5.592	0.243		
Family members Tested positive?	Yes	6.89	1.764	0.588	0.21	0.021*
	No	14.22	5.557	0.227		

\*Significant at 0.05 level; SEM= standard error of mean.



**Figure 3.** Overall range of psychological wellbeing score among working adults.

The factor related to COVID-19, the question was asked did you or any of your family members' quarantined because of the symptoms of COVID-19? The t test value indicated that there is a significant difference between the groups  $p > 0.05$  (0.011). It revealed that the

participants who were not quarantined expressed better psychological wellbeing than the participants quarantined. The participants those who tested positive for corona virus also showed significant difference in mean score with the participants who were not positive for corona virus test  $P > 0.05$  (0.021).

One way ANOVA test was used to compare the mean differences of other variables. This test indicated that a significant difference between the mean score of participants with different age. ( $F = 17.182, P = 0.000 < 0.05$ ) Moreover the same test was used to analyze the mean differences of other variables which also confirmed that education ( $F = 8.653, P = 0.000 < 0.05$ ), occupation ( $F = 26.531, P = 0.000 < 0.05$ ) and income ( $F = 47.979, P = 0.000 < 0.05$ ), were had significant difference between groups, but religion was not shown any significant difference between groups ( $F = 20.18, P = 0.110 > 0.05$ ).

**4. Discussion**

The present study was aimed to identify the impact of Lockdown during COVID-19 pandemic on psychological wellbeing among healthy working adults and to

investigate the association of psychological well-being with demographic variables.

For the last few months the majority of people irrespective of their age group are experiencing a prolonged state of physical isolation from their friends, family and community networks. The economic crisis also led to negative psychological effects including confusion, anger and post-traumatic distress (Walter, 2020). It was found that the hypothesis that healthy working adults would have low level of psychological wellbeing during corona pandemic and was confirmed with the study results. According to the latest International Labor Organization (ILO) data report, the COVID-19 economic crisis is hitting young people harder and faster than any other group because of disruption in employment and income losses, and greater difficulties in finding a job (Lin, 2020). In India many workers lost their jobs due to shut down of construction sites. With no money, tens of thousands abandoned cities, took a long journey for hundreds of kilometers by foot to their hometowns and villages in the absence of public transport, which was reflected their level of distress (Sharma, 2020).

The findings of the study results revealed that the age of participants had greater association with psychological wellbeing among adults. The clear cut analysis revealed that the participants between the age of 21-30 years and above 50 years were showed less psychological wellbeing than the participants aged between 31- 50 years.

A study report stated that after the age of 50 years people tend to have physical problems and it may influence their psychological wellbeing (Stonea et al., 2020). Jivraj et al., (2014) reported that from the last few decades well-being of individuals experiencing the final stage of life declined in with aging. Another study report explained that the lockdown during corona pandemic causes poor sleep this risk is likely to be highest in people of late working age and older - the over 50s (Ives, 2020).

This study results revealed that gender difference play an important role on the association with psychological wellbeing, where men were had better psychological wellbeing than women. American psychological association (APA, 2020) discovered that women are more likely than men on a great deal of psychological stress. According to the latest report from United States found a dramatic change for worsen the mental health of women. The reason explained was the families stuck at home, the amount of housekeeping work like cooking and tidying increases, while outside sources of help like cleaners are also not available during lockdown (Werber, 2020).

The result of present study also revealed that monthly income is having association with psychological wellbeing of working adults. This finding is correlated with another study stated that lowest income categories have more psychological disturbance (Caron, 2010; Jitender, 2011). A report from India says, India is set to lose around 130 million jobs due to the Covid-19

pandemic, and 40% of those would be blue-collar jobs. This economic crisis increases the number of suicide, depression and anxiety among general population (Sharma, 2020).

The study also found that the people those who were in quarantine had low psychological wellbeing than those who are not in quarantine. Few related studies also reported that quarantined people had high prevalence of symptoms of psychological distress and disorder (Rubin, 2020; Wang et al., 2011). A study conducted by Upadhyay et al., (2020) also reported that this quarantine reduces the social connection and create worries about family members which leads to causes of depression, anxiety and stress among the individuals.

The study results also found that people who ever tested positive also had association with the psychological wellbeing. It was supported by a lancet study, conducted in London reported that the hormone Cortisol produced from the body was response to stress. Press association, (2020) explained that excessive levels of cortisol was found during illness condition which also equally dangerous because it increase the risk of infection and leads to poor outcomes. So this may be a reason for the poor outcomes for Covid-19 patients.

#### **4.1. Limitations**

To sum up, this research was done with certain limitations that should not be left unmentioned. These were like limited sample number and it was not a randomized samples. Since participation was voluntary, the data was completed by self-reporting. This means that the accuracy of the responses could be compromised and the researchers are unable to verify the validity. There was a lack of time to extend the study as it is needed to be. The study was restricted to the location only in a southern most district of South India.

#### **4.2. Recommendations**

A similar study can be replicated on a larger sample to help validate and generalize the findings to the entire population of the country. Another study can be done in the study settings after a couple of months or years so as to analyze changes in psychological status after the normalcy of life. A comparative study can be conducted with other states or with other country populations.

### **5. Conclusion**

This is the first reported study to assess the psychological wellbeing of working adults in South India. The findings conclude that the psychological wellbeing of working adults was influenced by the lockdown due to COVID-19 pandemic. The mental status of women was affected more than the men. Additionally gender, age, monthly income, history of quarantine, tested positive for Corona Virus had strong association with Psychological wellbeing. The planning of effective interventions and policies are very important to limit the psychological health issues among working adults.

Early recognition mental health related problems are essential, and expanding counseling activities and

providing adequate facilities and resources should be highly prioritized by authorities.

### Author Contributions

All the authors declare that they have all participated in the design, execution, and analysis of the paper and that they have approved the final version.

### Conflict of Interest

The authors declared that there is no conflict of interest.

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