Influence of Demographic Variables on Stress Level of Employees during COVID-19 Pandemic

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Abstract

Individuals from all areas of life were affected by the COVID-19 outbreak, which prompted authorities to advise people to self-quarantine in their homes to prevent the virus from spreading. The lockdown had a severe psychological impact, contributing to difficulties such as rage, tension, and sadness anxiety and stress. The study titled, ''Influence of Demographic Variables on Stress Level of Employees during COVID-19 Pandemic' is conducted with the aim of assessing how the demographic profile affects the level of stress due to COVID 19. Total of 306 responses were collected using convenient random sampling and a self-administered questionnaire as data collection tool. For the purpose of data analysis we have used descriptive statistics, independent t test and ANOVA. The factors selected for the purpose of the study are number of dependents, employment status, family type, number of family members and number of earners in the context of the employees. Analysis of assessment on the basis of number of dependents shows that the p-value of the ANOVA test is 0.001, which shows a significant difference. On the basis of analysis conducted for the employment status of the employees, it was examined that unemployed participants have a higher level of stress. Participants with temporary employment and participants with permanent employee status show lesser stress. On the basis of type of family, it shows a significant difference in family type that means participants who were living separately were less stressed and the participants who were living in the joint family were more stressed. The affect of number of family members of the employees was evident from the analysis the number of family members were directly proportional to stress and so was the analysis pertaining to number of earners of the family.

Keywords: COVID-19, Stress, Number of dependents, employment status, family type, number of family members, number of earners.

1. Introduction

Corona virus syndrome is a worldwide health issue. The pandemic's widespread dissemination has had a tremendous influence on our lives. Many of us have dealt with issues that cause frustration, weariness, and

emotional arousal in both adults and children. To combat COVID-19, countries around the world established inward and outward travel restrictions with the goal of preventing the epidemic's spread. Around the country, public health experts, government officials, and hospitals are incorporating a variety of interventions, including social distancing, mask use, self-isolation, and quarantine, as well as upgrading health care facilities to monitor the disease and allowing companies to work from home. Social distancing is a crucial public health tool to limit COVID-19 transmission, but it can also make us feel detached from our loved ones, relatives, and leave us melancholy, as well as increase stress and anxiety due to the loss of contact and family get-togethers. The pandemic of COVID-19 has had a significant impact on our lives. Many of us are coping with difficulties that are stressful, intolerable, and result in intense emotions in both adults and children. Considering the influence of demographic variable on the stress level of employees, this particular study shows how the demographic profile of the employee is a reason behind the stress level during the COVID-19 pandemic.

1.1 Objectives of the study

1. To assess the stress level of employee during COVID 19 pandemic on the basis of number of dependents of the employees

2. To assess the stress level of employees during COVID 19 pandemic on the basis of employment status of the employees.

3. To assess the stress level of employees during COVID 19 pandemic on the basis of family type of the employees.

4. To assess the stress level of employees during COVID 19 pandemic on the basis of number of family members of the employees.

5. To assess the stress level of employees during COVID 19 pandemic on the basis of number of earners in the family of the employees.

2. Literature Review

2.1 COVID -19

Because the corona virus is so new, there isn't much literature on how to define it. WHO has provided the most widely accepted and universal definition of COVID-19 (World Health Organization). COVID-19 is a novel corona virus that has never been encountered before in human life. COVID-19 causes mild side effects such as chronic cough, weariness, and fever in the majority of patients. The director of public health will be in charge of the COVID-19 response. The WHO declared the new coronavirus disease 2019 (COVID-19) an "emergency of international concern" on January 30, 2020, and a pandemic on March 11, 2020. As of April 8, 2020, the disease had claimed the lives of 79235 persons worldwide, according to the WHO's Situation Report - 79. COVID-19 is a newly discovered coronavirus strain that has never been detected in humans. The COVID-19 virus has been linked to a respiratory ailment outbreak in Wuhan, Hubei Province, China. Corona viruses are a diverse group of viruses that can cause illnesses ranging from the common cold to more severe and life-threatening conditions such as severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS) (MERS). The first part

of the name is a shortened version of the word Corona Virus Disease, and the second part is the number 19, which represents the year the disease was first discovered. The COVID-19 pandemic, according to (Salari, et al., 2020), has the potential to affect mental health in people and populations. As a result, in the present situation, it is critical to identify individuals at risk of psychological problems from various classes and layers of society, so that the general public's mental health can be maintained and improved through the application of effective mental health outcomes, techniques, and treatments.

2.2 Stress

In medical literature, Hans Selye is credited with coining the term "stress." Stress, he believes, is a combination of physical and mental factors that occur in a body part. General adaptation syndrome (GAS), later renamed stress response, was described by Selye as a three-part pattern of psychological stress reaction. Stress is a problem that affects people all around the world. I was seen by everyone in their past and throughout human history. The World Health Organization has declared "stress" to be the health epidemic of the twenty-first century. Stress has the potential to harm our health and wellbeing. More than half of individuals interviewed in a recent US survey said that stress had a detrimental influence on their job and personal lives. The World Health Organization (WHO) defines stress as a reaction people have when faced with demands and pressure that are inappropriate for their knowledge and abilities, offering a challenge to their ability to cope. It's not even close to being an illness. (Z, 2005) defined stress as a scenario in which people are compelled to act in a certain way yet are unable to cope with the mental tension. Stress, in other words, is the adaptation of a person to new circumstances. A slight adjustment can cause a person to become stressed. Stress is defined by (Halgin, R.P., Whitebourne, & S.K., 2003) as a state in which a person perceives threatening or frightening events. Stress is an unpleasant emotional reaction to an unexpected or unpleasant occurrence.

3. Research Methodology

This research is based on primary data gathered using convenient random sampling method. It is an empirical study which aims to assess the influence of demographic variables on the stress level of employees during the COVID 19 pandemic. A goggle form was sent around people on various social networks, and a total of 306 responses were received. The data was obtained during the month of June 2020, when the pandemic was at its peak. Secondary data for the literature review was gathered from a variety of journals and websites.

3.1 Research design

For the objective of this study, an exploratory research approach was used. To obtain acceptable responses to the paper's intended study objectives, a quantitative research method was applied.

3.2 Data sources and collection

A self-administered questionnaire was employed as the major data gathering instrument. Using the same, total of 307 responses were received. Secondary data on variable understanding was gathered from published studies on the internet; several online journals and papers were consulted to establish a clear backdrop for the study's many variables.

3.3 Sample technique and analysis

The study adopted convenient random sampling for the purpose of data collection. The research methodologies used for the purpose of analysis are descriptive statistics, independent t-test and ANOVA.

4. Data Analysis
### 4.1 Hypotheses and analysis

Hypothesis 1: Assessment of stress level of employee during COVID 19 pandemic on the basis of number of dependents of the employees.

H1: There is significant difference in stress of the employees during COVID-19 due to number of dependents.

H0: There is no significant difference in stress of the employees during COVID-19 due to number of dependents.

Descriptive statics and ANOVA

No of Dependencies	N	Mean Score	SD	Minimum	Maximum	p-value
0	117	56.49	8.2	37	71	
1—2	85	57.8	8.302	35	79	0.001
3--4	67	59.24	10.137	26	79	
5 & More	37	62.97	7.069	50	74	

Error bars: +/- 1 SD
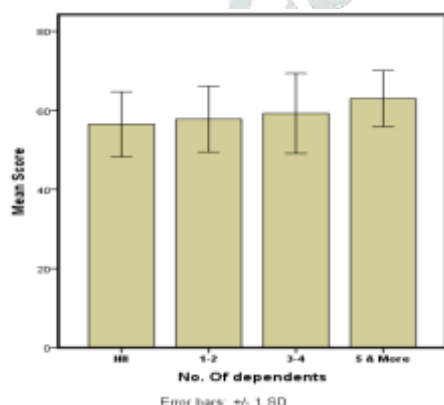
Inference: The above-given table shows that 117 participants have 0 dependent, 85 participants have 1-2 dependencies, and 64 participants have 3--4 dependencies and 37 participants have 5 & More dependencies. The statics score shows a significant difference in stress level with regard to the dependencies. Mean score of 56.49±8.2 for 0 dependencies, 57.8±8.30 for 1-2 dependencies, 59.24±10.18 for 3-4 dependencies, and 62.97±7.07 for 5 & More dependencies. The p-value of the ANOVA test is 0.001, which shows a significant difference. ***Hence null hypotheses were rejected.***
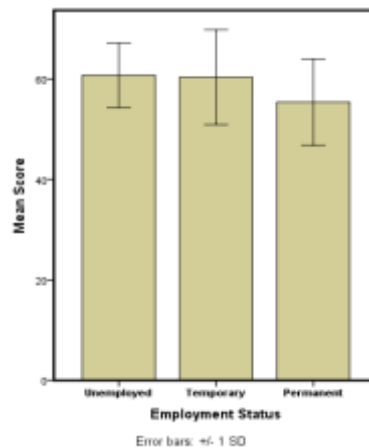
Hypothesis 2: Assessment of stress level of employee during COVID 19 pandemic on the basis of employment status of the employees.

H1: There is significant difference in stress of the employees during COVID-19 on the basis of employment status of the employees

H0: There is no significant difference in stress of the employees due to COVID-19 on the basis of employment status of the employees.

Descriptive statistics and ANOVA

Category	N	Mean Score	SD	Minimum	Maximum	p-value
Unemployed	74	60.73	6.447	42	75	
Temporary	96	60.35	9.439	37	79	<0.0001
Permanent	136	55.39	8.585	26	71	

Error bars: +/- 1 SD

Inference:

The above-given table shows that 74 participants are unemployed, 96 participants have temporary employment 136 participants have permanent employment. Statistics show a significant difference in stress level with regard to employment status. Unemployed participants have a higher score with 60.73 ± 6.44, which shows a higher level of stress. Participants with temporary employment score are 60.35 ± 9.43 and participants with permanent employee status shows lesser stress with score 55.39 ± 8.58. P values of a test are 0.000. This shows the differences in the stress level with employment status. ***Hence null hypotheses were rejected.***
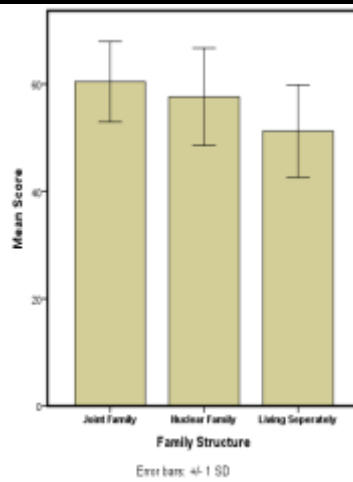
Hypothesis 3: Assessment of stress level of employee during COVID 19 pandemic on the basis of family type of the employees'.

H1: There is significant difference in stress of the employees during COVID-19 on the basis of family type of the employees'.

H0: There is no significant difference in stress of the employees due to COVID-19 on the basis of family type of the employees'.

Descriptive statistics and ANOVA

Category	N	Mean Score	SD	Minimum	Maximum	p-value
Unemployed	74	60.73	6.447	42	75	
Temporary	96	60.35	9.439	37	79	<0.0001
Permanent	136	55.39	8.585	26	71	

Inference:

P-value of ANOVA statistics is 0.001, shows a significant difference in family type. The mean score of living separately is 51.21 and SD is 8.6 shows lesser effects than to nuclear family. The score is 57.6 ±9.099 and 60.44±7.488 is a joint family. That means participants who were living separately were less stressed and the participants who were living in the joint family were more stressed. ***Hence null hypotheses were rejected.***
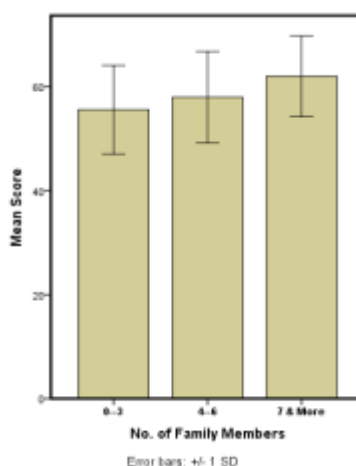
Hypothesis 4: Assessment of stress level of employee during COVID 19 pandemic on the basis of number of family members of the employees.

H1: There is significant difference in stress of the employees during COVID-19 on the basis of number of family members of the employees.

H0: There is no significant difference in stress of the employees due to COVID-19 on the basis of number of family members of the employees.

<div align="center">Descriptive statistics and ANOVA</div>

No. of Family Members	N	Mean Score	SD	Minimum	Maximum	p-value
0--3	76	55.55	8.52	35	67	
4--6	164	57.97	8.79	26	79	<0.001
7 & More	66	62	7.756	38	79	

Inference: P-value of ANOVA statics is 0.001, less than 0.05, shows the significant difference in stress level and number of family members having participants. Participants who were having more than 7 and more family members were found more stressed with a score of 62±7.75. People who were having 4-6 family members and 0-3 family members were found less affected with the score of 57.97 ±8.79 and 55.55 ±8.52 respectively. ***Hence null hypotheses were rejected.***

Hypothesis 5: Assessment of stress level of employee during COVID 19 pandemic on the basis of number of earners in the family of the employees.

H1: There is significant difference in stress of the employees during COVID-19 on the basis of number of earners in the family of the employee.

H0: There is no significant difference in stress of the employees due to COVID-19 on the basis of number of earners in the family of the employees.

Descriptive statistics and ANOVA

Earners	N	Mean Score	SD	Minimum	Maximum	p-value
Single Earner	114	59.77	8.984	35	79	
2 Earners	117	58.03	8.884	26	79	0.024
3&MoreEarners	75	56.24	7.879	38	74	
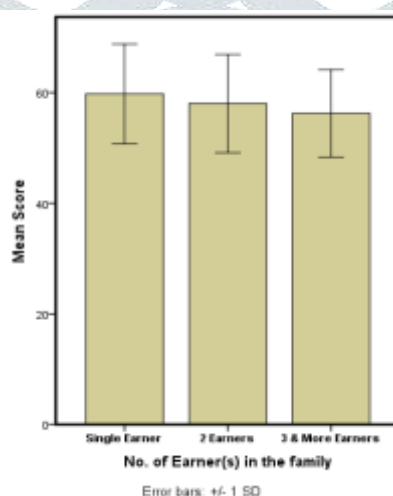
Error bars: +/- 1 SD

Inference: P-value of ANOVA statics is 0.024, less than 0.05 which shows the significant difference in stress level and number of earners in the family having participants. Participants who were having 3 and more earners in the family were less stressed with a score of 56.24 ±7.89. Participants who were having 2 and 1 earners in the

family were more affected with the score of 58.03±8.88 and 59.77 ±8.98 respectively. ***Hence null hypotheses were rejected.***

5. Findings and limitations of the study

5.1 Findings

The findings of the study, titled 'Influence of Demographic Variables on Stress Level of Employees during COVID-19 Pandemic is an empirical study conducted to know how the demographic profile of employees been affected due to the stress caused due to COVID. On the basis of the collected and analyzed responses it was found that number of dependents of the employees has major bearing on the level of stress caused due to COVID. The statistical results have shown that the mean score of 56.49±8.2 for 0 dependencies, 57.8±8.30 for 1-2 dependencies, 59.24±10.18 for 3-4 dependencies, and 62.97±7.07 for 5 & More dependencies. The p-value of the ANOVA test is 0.001, which shows a significant difference. Analysis conducted on the basis of employment status of the employees showed that there is significant difference in stress level with regard to employment status. Unemployed participants have a higher score with 60.73 ± 6.44, which shows a higher level of stress. Participants with temporary employment score are 60.35 ± 9.43 and participants with permanent employee status shows lesser stress with score 55.39 ± 8.58. P values of a test are 0.000. This shows the differences in the stress level with employment status. The assessment of stress on the basis of type of family has shown a significant difference in family type. The mean score of living separately is 51.21 and SD is 8.6 shows lesser effects than to nuclear family. The score is 57.6 ±9.099 and 60.44±7.488 is a joint family. That means participants who were living separately were less stressed and the participants who were living in the joint family were more stressed. When we analyzed the level of stress on the basis of number of family member of the employees, it was examined that there is significant difference in level of stress and number of family members of the employees. Participants who were having more than 7 and more family members were found more stressed with a score of 62±7.75. People who were having 4-6 family members and 0-3 family members were found less affected with the score of 57.97 ±8.79 and 55.55 ±8.52 respectively. Lastly, when we assessed the stress level during COVID on the basis of number of earners in the family of the employees, we concluded that Participants who were having 3 and more earners in the family were less stressed with a score of 56.24 ±7.89. Participants who were having 2 and 1 earners in the family were more affected with the score of 58.03±8.88 and 59.77 ±8.98 respectively.

5.2 Limitations of the study

The major limitations of the study are as follows-

1. This study views ONLY the demographic variables of the employees for the purpose of analysis.
2. The data collection period is limited to a specified time, whereas the stress pertaining to COVID 19 is continued till date.

6. Conclusion

COVID-19 continues to have a deleterious impact, as seen by the rising number of cases of the pandemic. The COVID-19 has resulted in significant transformations in people's lives. It has had an impact on the economy, social class, and people's survival. Negative emotions such as anxiety, despair, weariness, and tension are on the rise. It is critical for people to understand that the outbreak of COVID-19 has impacted every aspect of society and every sector of the economy. The coronavirus pandemic of 2020 had a primarily catastrophic impact in India. India's growth dropped to 31% in the fourth quarter of fiscal year 2020, according to the ministry of statistics. The analysis of the paper 'Influence of Demographic Variables on Stress Level of Employees during COVID-19 Pandemic' is an endeavour to exhibit the impact of demographic profile on stress level of employees. The study focuses on the variables such as number of dependents, employment status, type of family, number of family members and number of earners pertaining to the respondents. The statics score shows a significant difference in stress level with regard to the dependencies. The p-value of the ANOVA test is 0.001. Mean score of 56.49±8.2 for 0 dependencies, 57.8±8.30 for 1-2 dependencies, 59.24±10.18 for 3-4 dependencies, and 62.97±7.07 for 5 & more dependencies. Statistics pertaining to employment status of the respondents show a significant difference in stress level with regard to employment status. Unemployed participants have a higher score with 60.73 ± 6.44, which shows a higher level of stress. Participants with temporary employment score are 60.35 ± 9.43 and participants with permanent employee status shows lesser stress with score 55.39 ± 8.58. P values of a test are 0.000. This shows the differences in the stress level with employment status. As far as the results on the basis of family type of the respondents are concerned the *P-value* of ANOVA statistics is 0.001 which shows a significant difference in family type. The mean score of living separately is 51.21 and SD is 8.6 shows lesser effects than to nuclear family. The score is 57.6 ±9.099 and 60.44±7.488 is a joint family. That means participants who were living separately were less stressed and the participants who were living in the joint family were more stressed. Moreover, the results on the basis of number of family members is concerned, P-value of ANOVA statics is 0.001, less than 0.05 which shows the significant difference in stress level and number of family members having participants. Participants who were having more than 7 and more family members were found more stressed with a score of 62±7.75. People who were having 4-6 family members and 0-3 family members were found less affected with the score of 57.97 ±8.79 and 55.55 ±8.52 respectively. Lastly, on the basis of number of earners in the family, it was evident that the P-value of ANOVA statics is 0.024, less than 0.05 which shows the significant difference in stress level and number of earners in the family having participants. Participants who were having 3 and more earners in the family were less stressed with a score of 56.24 ±7.89. Participants who were having 2 and 1 earners in the family were more affected with the score of 58.03±8.88 and 59.77 ±8.98 respectively. As a result, we may conclude that COVID-19 has had a significant stress impact. Since the data was obtained in 2020, there is a good likelihood that the study's findings are still in circulation and that people are still suffering from COVID-19's negative effects.

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