

## Navigating the Crossroads: Understanding the Interplay between Stress and Anxiety in India

**Soni Jaiswal, Indrani Regon**

Gargi College, University of Delhi

**Abhay Pratap Pandey**

University of Allahabad

Stress and anxiety have been the most common disorders reported in general population. These may be caused due to various psychological and socio-cultural factors. It has been stated that anxiety and stress can cause severe challenges in human beings related to their physical and emotional health. The research aims to assess stress and anxiety in individuals about their age, gender, and occupation. A total of 1458 (Female 615 and Male 843) participants were selected in the study through a purposive sampling technique. Individuals falling in the age range of 18 to 60 years from different occupations were included in the study. Participants having a confirmed mental disorder or any serious physical condition were not allowed to participate in the research. Descriptive analysis, variance analysis, and correlation statistical techniques were utilized to analyse the data. Results indicated significant differences in the stress and anxiety levels among different occupations, whereas no significant difference was reported in the level of stress and anxiety among different age groups. The correlational analysis also reported no significant association between gender and occupation, gender and age, and occupation and age. Participants from both genders have reported symptoms of stress and anxiety. Stress and anxiety are commonly found in the population irrespective of occupation, age group, and gender.

**Keywords:** stress, anxiety, occupation, mental health

Anxiety and stress are widespread psychological conditions that impact the physical and emotional health of individuals globally. Anxiety is interpreted as feelings of worry, fear, and apprehension, whereas stress is the body's reaction to external stimuli. One of the most prevalent mental illnesses was anxiety disorder. Anxiety disorders have been diagnosed in 301 million persons worldwide (GBD Results, 2019). Eustress is needed to perform better and stay motivated, while prolonged or severe stress can cause serious issues. In the long term, it can impact one's quality of life, productivity, and physical and mental health.

Stress-inducing elements, such as fast-paced lifestyles, technological advancements, and socioeconomic barriers, have

significantly increased in current times. Particularly, anxiety disorders have grown to be among the most common mental health issues around the world, with serious social and financial repercussions. Researchers, medical experts, and legislators have taken notice of these problems, highlighting the necessity of comprehending the underlying mechanisms and practical management and preventative techniques.

To evaluate the prevalence of depression, anxiety, as well as stress-related symptoms in young people in Ranchi, India, Sahoo and Khess (2010) carried out a dimensional as well as categorical study. 405 participants were finalized for data analysis and 18.5% of the population was found to have extremely severe depressive symptoms,

24.4% had anxiety symptoms and 20% of them indicated stress symptoms (Sahoo & Khess, 2010).

The prevalence of stress was 29.6% with a total sample size of 9074, while the prevalence of anxiety was 31.9% having a sample size of 63,439 (Salari et al., 2020). Verma et al. (2020) evaluated the effect of COVID-19 on psychological distress worldwide by involving 1653 individuals from 63 nations. The findings showed that 59% of respondents satisfied the criterion for clinically significant anxiety, while more than 70% of respondents experienced stress levels higher than moderate. Additionally, age-based differences showed that younger age groups were more susceptible to feelings of anxiety, despair, and stress.

Kasinathan et al. (2023) conducted a research to assess the level of stress in the old age population of a village in Puducherry, India. Kasinathan et al. (2023) included a total of 450 candidates in the research. The majority of the participants (210, 46.6%) were reported to have high levels of stress and family was a significant association among the participants.

Multiple researches have indicated a strong link between sleep and stress. Poor sleep can increase the occurrence of stress, which can negatively affect academic performance and mental health (Wang et al., 2014, as cited in De Filippis & Foysal, 2024). Psychological factors also perform a critical function in the progress of stress symptoms, these factors can include self-esteem, anxiety, and depression (Ramón-Arbués et al., 2020).

The most prevalent mental illness in the general population is anxiety. To ascertain the prevalence of anxiety, its contributing factors, and predictors among adults in the Selangor, Malaysia, population, a study involving 1556 individuals was carried out. Results indicated an 8.2% prevalence rate of anxiety among participants. Depression,

cancer, major work-related issues, non-organizational religious involvement, domestic abuse, bad family relationships, intrinsic religiosity, and high perceived stress were all found to be predictors of anxiety (Maideen et al., 2015)

Stress and anxiety have been reported as common disorders among the population and multiple intervention studies have also been reported around the world to manage stress and anxiety. Empirical studies have indicated the effectiveness of the brief intervention, behavior therapy, cognitive behavior therapy, mindfulness based therapeutic techniques, and various relaxation techniques. Studies have also been conducted to assess the efficacy of yoga and meditation in improving the symptoms of stress as well as anxiety in general population and they have been reported to be effective.

### **Aim**

The aim of the study is to assess the level of stress and anxiety in individuals between the age range of 18 to 60 years of age from different occupations residing in Delhi-NCR.

### **Objective**

- To assess the level of stress in different age groups of individuals and from different occupations.
- To assess the level of anxiety in different age groups of individuals and from different occupations.
- To assess the gender difference in stress and anxiety in different age groups and different occupations.
- To assess the relationship between gender and occupation, gender and age group, and age group and occupation on stress and anxiety.

### **Method**

#### **Sample**

A total of 1458 participants (Female 615 & Male 843) from different regions of Delhi-

NCR falling in age varies from 18-60 years were included in the study. Candidates were included through purposive and convenience sampling techniques.

**Measures**

*Perceived Stress Scale (PSS):* Cohen et al. created PSS in 1983 to gauge people's perceived levels of stress (Sülođlu & Güler, 2021). It is a self-report measure. It has a total of 14 items, which measures stress on a 5-point Likert scale. Cronbach's alpha for this scale showed internal consistency between .71 and .91, while  $r > .70$  indicated retest reliability. (Mozumder, 2022)

*Hamilton Anxiety Rating Scale (HAM-A):* The subjects' level of anxiety was measured using the HAM-A. This scale was developed by Hamilton in 1959 to assess and quantify symptoms of anxiety in a clinical population. It measures the intensity of anxiety symptoms with a total of 14 items. With a total score ranging from 0 to 56, responses were stated on a 5-point Likert scale from 0-4. The sum of the response scores for each of the 14 items was utilized to determine the final score. The reliability of the scale was found to be 0.86 (CI 95% 0.78-0.91) and the validity was 0.85 (Shear et al., 2001).

**Results**

Table 1. Level of Stress among different Occupations

Groups	Count	Sum	Average	Variance
Government	132	6922.5	52.44	130.19
Private	408	20080	49.21	102.60
Self	137	7507.5	54.79	147.98
Teacher	123	7365	59.87	192.09
Unemployed	57	3462.5	60.74	220.52
Retired	54	2530	46.85	225.27
Student	546	33752.5	61.81	158.49

*Note.* The above table shows an average and variance of participants from different occupations.

Between groups analysis of variance was applied and p-value (2.74E-59) was found to be very small ( $p\text{-value} \ll 0.05$ ). So it's safe to say that we've enough evidence to reject null hypothesis  $H_0$ . Hence, there is significant difference in level of stress among different occupation.

Table 2. Summary about the Level of Stress among different Age Group

Groups	Count	Sum	Average	Variance
24-30	186	10077.5	54.18	157.26
30-36	213	11242.5	52.78	152.39
36-42	161	8517.5	52.90	141.63
42-48	158	8492.5	53.75	153.24
48-54	98	5140	52.44	128.86
54-60	57	2977.5	52.23	154.39

ANOVA was used to analyse the significant different in level of stress among different age groups. Analysis indicated p-value to be 0.76, which clearly indicates that stress level among different age groups don't differ significantly.

Table 3. Level of Anxiety in different Occupations

Groups	Count	Sum	Average	Variance
Government	132	7141.667	54.10	232.18
Private	408	22237.5	54.50	234.53
Self	138	7466.667	54.10	233.92
Teacher	123	7841.667	63.75	274.91
Unemployed	57	3441.667	60.38	253.05
Retired	53	2725	51.41	279.74
Student	546	34858.33	63.84	239.33

Analysis of variance was run to check significant difference in the level of anxiety among different occupations. p-value (4.44E-26) was found to be very small ( $p\text{-value} \ll 0.05$ ) so it's safe to say that we've

enough evidence to reject null hypothesis  $H_0$ . Hence, there is significant difference in level of anxiety among different occupation.

Table 4. Summary about the Level of Anxiety among different Age Group

Groups	Count	Sum	Average	Variance
24-30	105	6437.5	61.30	127.44
30-36	34	2033.33	59.80	173.48
36-42	45	2870.83	63.79	80.35
42-48	52	3037.5	58.41	98.37
48-54	39	2270.83	58.22	109.18
54-60	25	1537.5	61.5	175.46

To test the significant difference on level of anxiety among different age groups, ANOVA was run and p-value was found to be 0.14. We can say that anxiety level in different age group do not differ significantly.

Table 5. Contingency Table (To test whether or not a relationship exists between variables)

Variable	Gender & Occupation	Gender & Age Group	Occupation & Age Group
Stress	< 2.2e-16	< 6.186e-11	< 2.2e-16
Anxiety	< 2.2e-16	< 2.465058e-05	< 2.475774e-07

Note. In contingency table, the p-value of test statistic was greater than the value at 5% upper level. In terms of probability value, the result can be stated as probability value was less than 5% in all the six cases. So, we have insufficient evidence to reject  $H_0$ . It means that there exists no association amongst all the categories taken pairwise on the basis of the sample of 1458 people across Delhi-NCR considering stress and anxiety.

### Discussion

The investigation was performed to assess the level of stress and anxiety in individuals from different age groups (18-60 years) and different occupations (Government job, private job, self, teacher,

unemployed, retired, student). Both genders were included in the investigation to see the difference in the level of stress and anxiety in male and female participants. A total of 1458 (Female 615 & Male 843) participants were selected for the study. PSS and HAM-A are two most commonly used measures of stress and anxiety, were used in this study.

In the study, around 58 percent of participants were women as well as 42 % of the participants were men. Symptoms of stress and anxiety were reported in both the genders from each age group and occupation. Table 1 shows the level of stress among different occupations, where students have reported the highest level of stress followed by unemployed and teacher categories. Analysis of variance indicated significant differences in the level of stress among different occupations. A research conducted was conducted in Jharkhand, India to evaluate the prevalence as well as risk factors of stress among college going students (Sonthalia et al., 2022). The study included 236 college students in the age range of 18-30 years and results indicated that 5% of participants for low stress, 89% for moderate stress, and 6% for a high level of stress.

For determination of the prevalence as well as risk factors for stress, anxiety, and depression in higher-educated migrant youth in Kolkata, India, a further investigation was carried out. A total of 400 migrant youth aged 21-35 years residing in Kolkata participated in the study. Prevalence rates for anxiety and stress were reported to be 61.8% and 47.9 percent respectively. Compared to their worked peers, youngsters without jobs showed noticeably higher levels of anxiety and depression symptoms. (Biswas et al., 2024) All age groups have reported experiencing stress, however, statistical research showed no discernible variation in stress levels among age groups. Students followed by unemployed participants from

both the genders have reported highest levels of stress.

Level of anxiety in the participants from different occupations is presented in Table 3. Students followed by teacher and unemployed participants indicated highest level of anxiety. Analysis of variance indicated significant differences in the level of anxiety among different occupations. S. A research by Biswas and Biswas (2021) evaluated the degree of fear experienced by 209 students from various Indian colleges and universities throughout the COVID-19 lockdown. Results of GAD-7 indicated severe anxiety in 1.44%, moderately severe anxiety in 14.35%, moderate anxiety in 36.36%, and mild anxiety in 47.85% whereas HAM-A scoring indicated severe in 0.96%, high in 4.31%, moderate in 13.40%, and mild anxiety in 34.93%. They reported that COVID-19 was a strong precipitating factor of anxiety in students.

Female students and teachers have indicated highest levels of anxiety, whereas unemployed males have indicated the highest level of anxiety among all the occupation categories. Anxiety was reported in all the age groups, but statistical analysis indicated no significant difference in the level of anxiety among different age groups.

Relationship between variables on stress and anxiety were assessed, which has been presented in Table 5. No significant relationship between gender and occupation, gender and age group, and occupation and age group was reported on stress and anxiety.

Though the samples from each age group and occupation were collected but majority of the candidates were from 18-36 years of age. Samples from multiple occupations were limited and study included largely students and employees of private organizations. Unequal distribution of samples in all the age groups and occupations must have affected the outcome of the study.

The majority of the candidates had been from the age group of 18-36 years which may have affected the results of the study. Obtaining qualitative data along with quantitative must have given more knowledge about stress and anxiety and its impact on human beings. A mixed method would have been helpful in finding the precipitating and perpetuating factors of the stress along with anxiety in population.

### Conclusion

This study aimed to assess stress and anxiety and its relation with age and occupation in the general population. The study has indicated that these two are major concerns in the population irrespective of their age and occupation. It was reported that stress and anxiety significantly differed in participants from different occupations. The findings of the study will help to understand occupation as one of the factors of anxiety as well as stress in individuals. It will also help in developing age and occupation-specific intervention modules for people in Indian context.

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- Soni Jaiswal**, Assistant Professor, Department of Psychology, Gargi College, University of Delhi
- Indrani Regon**, Assistant Professor, Department of Applied Psychology, Sri Aurobindo College (Evening), University of Delhi.
- Abhay Pratap Pandey**, Assistant Professor, Department of Statistics, University of Allahabad