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A correlational and comparative study of perceived stress, intolerance of uncertainty and resilience among students and working individuals during the COVID-19 Pandemic

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ABSTRACT

This study is aimed at investigating the correlation and comparison of perceived stress, intolerance of uncertainty and resilience among students as well as working individuals. The two main objectives of the research are to see if these three variables correlate with each other significantly; as well as to see the if there is a difference in the perception of intolerance of uncertainty, perceived stress and resilience between students and working individuals. The total sample consisted of 373 individuals falling between 18-40 years of age. Methodology consisted of snowball and purposive sampling. Descriptive, correlational and comparative research designs were used. Standardized tools of Perceived Stress Scale, Resilience Scale-14 and Intolerance of Uncertainty Scale were used for data collection in order to assess perceived stress, intolerance of uncertainty and resilience. The parametric measure of Pearson product moment correlation, independent sample t-test as well as regression were used for data analysis. The results revealed a significant positive correlation between intolerance of uncertainty and perceived stress and a significantly negative correlation between resilience and intolerance of uncertainty and resilience and perceived stress (significant at 0.01 level). There is also a significant difference between perceived stress and resilience of the students and working individuals (significant at 0.05 level).

Keywords: *Perceived stress, Intolerance of uncertainty, Resilience, Students, Working, COVID-19.*

1. INTRODUCTION

The COVID-19 pandemic has brought the world to a standstill. Mental health issues following the COVID-19 pandemic stem from 'normal' people being exposed to 'extraordinary situations'. The presentations are myriad, and include emotional difficulties like anxiety, depression, biological effects like sleep, appetite disturbances as well as severe mental illness and substance misuse. For most, these symptoms are mild and transitory, but a minority may develop severe mental health issues that require additional mental health support. As COVID-19 initially creeps in and subsequently spreads at a galloping pace, it has been ravaging country after country. The pandemic has significant and variable psychological impacts in each country, depending on the stage of the pandemic. In India, the first and foremost responses to the pandemic have been fear and a sense of clear and imminent danger. The social distancing and lockdown have also led to several changes in day-to-day activities, redistribution of home chores, extensive working from home and greater time spent with those living together. Notwithstanding the importance of social distancing (although many prefer to use the term physical distancing), such a

requirement has meant long separation from families (for those working away from their hometowns), financial stress and interpersonal strain. Reactions can range from boredom and moodiness to anger, irritation, and frustration. Another maladaptive coping is through the use of mind-altering substances. Uncertainty and a sense of loss of control are undoubtedly the pathogenic agents for anxiety, panic, and depression. Pandemic situations, like COVID-19 are also unique in identifying effective interventions; this, in turn will prepare us to proactively handle future crises.

Keeping this in mind, it was very important to study the impact of this pandemic on the mental health of individuals on the 3 most important areas affected -

- Resilience: Resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress, or "bouncing back" from difficult experiences. -APA

- Perceived Stress: Perceived stress is the perception of threat, resulting in anxiety, emotional tension and difficulty in adjustment.

- Intolerance of Uncertainty: Uncertainty is a situation of doubt in which something is not known. Intolerance of uncertainty is the inability of an individual to tolerate the aversive reactions triggered by a perceived lack of sufficient information and maintained by the related perception of uncertainty.

2. STATEMENT OF THE PROBLEM

A correlational and comparative study of Perceived Stress, Intolerance of Uncertainty and Resilience among students and working individuals.

3. OBJECTIVES

The objectives of the study are as follows:

- To study the correlation between perceived stress and resilience among adults.
- To study the correlation between perceived stress and intolerance of uncertainty among adults.
- To study the correlation between the resilience and intolerance of uncertainty among adults.
- To compare perceived stress between students and working individuals.
- To compare the resilience level between students and working individuals.
- To compare the intolerance of uncertainty between students and working individuals.

4. HYPOTHESES

- There will be a positive correlation between Perceived Stress and Intolerance of Uncertainty.
- There will be a negative correlation between Resilience and Perceived Stress.
- There will be a negative correlation between Resilience and Intolerance of Uncertainty.
- There will be a significant difference in Perceived Stress between students and working individuals.
- There will be a significant difference in Resilience between students and working individuals.
- There will be a significant difference in Intolerance of uncertainty between students and working individuals.

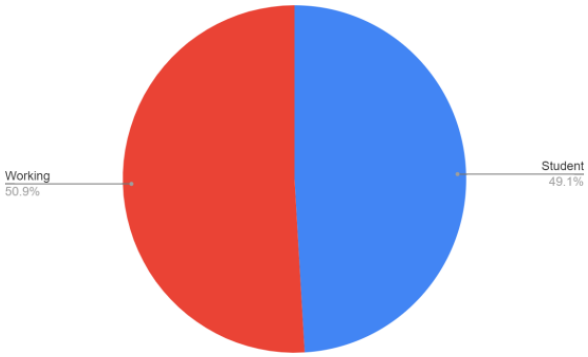
5. RESEARCH METHODOLOGY

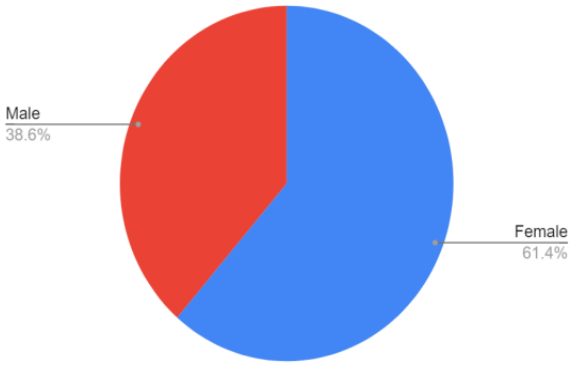
5.1 Research Design

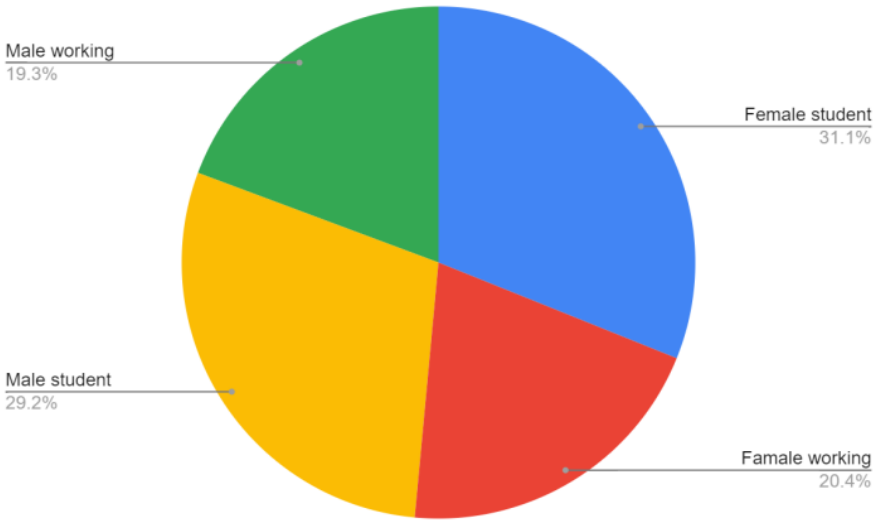
The research design used for this research was descriptive research design. The descriptive design that was used in the research were correlational research design and comparative research design as the aim of the study was to study the statistical relation between the variables – Resilience, Intolerance of uncertainty and Perceived Stress and to have a comparison between the student and working class on the given variables.

5.2 Sampling

A sample of 373 in the age range between 18 to 40 years of age was recruited for the study using the purposive and snowball sampling method. The sample was distributed according to shown in the figure. All the participants were administered with the standardized test measuring the concerned variables.







5.3 Tools

The sample was administered on the tests to measure Resilience, Intolerance of Uncertainty and perceived stress. The Tools used for the measurement are as following:

- Demographic details - Demographic data about subjects was obtained through completion of a questionnaire. Participants were requested to provide the following information: gender, age, level of education and area of residence, occupation etc.
- The Resilience Scale - 14 (RS-14) was used to measure the variable of Resilience. The test consisted of 14 items which were to be answered. The items of RS-14 are scored on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). Scores on the scale range from 14 to 98. The closer the score to 98, the greater is the ability to respond with resilience and lower score indicates lower resilience. RS-14 has internal consistency reliability (r=0.93).
- Intolerance of Uncertainty Scale 27 item - Intolerance of Uncertainty Scale was used in the study. The test has 27 items which are scored on a five point scale ranging from 1 (Not at all characteristic of me) to 5 (Entirely characteristic of me). The test has excellent internal consistency (r = 0.91), and there is a strong correlation between the 12-item IUS and the original 27-item IUS (r = 0.96).
- Perceived Stress Scale - The Perceived Stress Scale was used to measure the perceived stress of the population in the current scenario. The scale consists of 10 items which are scored on a five point likert scale, 0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very Often. PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. The scores for the scale range from 0 to 40.

5.4 Statistical Analysis

Once the data collection was completed the scores of the tests was organized in the excel sheet for further statistical analysis. Mean, median and mode of the data was also computed using the SPSS. The data was found to be parametric according to the statistics hence the Pearson product moment correlation was computed for the data to compute the correlation between the variables. Further regression was done using SPSS. Comparison between the student and the working population was made using SPSS.

6. RESULT

Table 1: Descriptive Statistics of the variables (N = 373)

	Perceived stress	Intolerance of uncertainty	Resilience
Mean	18.05	71.42	78.85
Std. Deviation	6.539	19.359	10.109
Skewness	.069	.034	-.523
Std error of skewness	.126	.126	.126
Kurtosis	-.436	-.604	.030
Std error of Kurtosis	.252	.252	.252

The above table is indicating the values of mean, standard deviation, skewness, standard error of skewness, kurtosis and standard error of kurtosis of the variables Perceived stress, Intolerance of uncertainty and Resilience.

Table 2: Pearson product moment correlation between Perceived Stress, Intolerance of Uncertainty and Resilience

Pearson Correlation	Intolerance of Uncertainty	Perceived Stress	Resilience
Intolerance of Uncertainty	1	.503**	-.347**
Perceived Stress	.503**	1	-.294**
Resilience	-.347**	.503**	1

**Correlation is significant at the 0.01 level (2-tailed)

The above table shows significantly positive correlation between intolerance of uncertainty and perceived stress at 0.01 level; significantly negative correlation between intolerance of uncertainty and resilience at 0.01 level; and significantly negative correlation between perceived stress and resilience at 0.01 level.

Table 3: R square, Adjusted R square and Std. error of estimate of Intolerance of Uncertainty and Perceived Stress

R	R Square	Adjusted R Square	Std. Error of the Estimate	Significance
.503[a]	0.253	0.251	5.659	.000[a]

a. Predictors: (Constant): Intolerance of uncertainty
b. Dependant Variable: Perceived stress

Table 3 shows that 25.3% variance is created by intolerance of uncertainty on perceived stress.

Table 4: Comparison between Perceived stress, Intolerance of uncertainty and Resilience among students and working population.

Variables	Mean values of groups		df	Sig. (2 tailed)
	Students	Working		
Perceived stress	18.8	17.2	372	.013*
Intolerance of uncertainty	72.9	69.88	372	.128
Resilience	77.31	80.43	372	.003*

*Significant at .05 level

The above table depicts the t-ratio (p value) between the students and working population of variables Perceived stress, Intolerance of uncertainty and Resilience are .013, .128 and .003 respectively. It indicates that there is a statistically significant difference ($p < 0.05$) between perceived stress and resilience of students and working individuals.

7. DISCUSSION:

The current pandemic situation has made it imperative to study and understand the mindset of people in order to gauge what individuals are going through. Keeping this in mind, this research aimed at studying the correlation between perceived stress, intolerance to uncertainty and resilience among people. The analysis yielded expected results. There is a strongly significant positive correlation between intolerance of uncertainty and perceived stress at 0.01 level of significance. In these highly uncertain times, it is but obvious that people would feel stressed out about numerous things. The pandemic situation has brought with it a complete standstill in all the daily activities and normal schedules of students and working populations alike. A significantly negative correlation was found between intolerance of uncertainty and resilience at 0.01 level. Since resilience is the process of bouncing back from negative experiences, the results show that when people are faced with uncertainty, it is especially difficult for them to emerge or bounce back from this mindset. This could be because every day we are faced with more and more problems with no concrete solution in apparent sight. This decreases people's tolerance and they have become more intolerant to such uncertainties. The results also showed a significantly negative correlation between perceived stress and resilience at 0.01 level. Stress brings with it the perception of threat, that in turn gives rise to anxiety, tension and a bigger difficulty in adjustment. This experience of stress affects the overall motivation and will of people to face adversities and fight back, thus resulting in a negative correlation between the two variables. The Regression analysis concluded that intolerance of uncertainty explains 25.3% variance of the overall perceived stress among individuals.

In the current research, the comparison between perceived stress, intolerance of uncertainty and resilience among students and working individuals was also done. Since the p value of the variables perceived stress and resilience is less than 0.05 ($p < 0.05$), both are significant at 0.05 level. The p value of perceived stress is 0.013 which is smaller than 0.050 and the p value of resilience is 0.003 which is also less than 0.050 and hence we can conclude that there is a significant difference between perceived stress and resilience of the students as well as working individuals. Since the p value of intolerance of uncertainty is .128 which is greater than 0.05, there is no significant difference between intolerance of uncertainty of the students and working individuals. The groups which we have compared in this study are students and working individuals. They are exposed to different kinds of stressors, tensions and situations in the pandemic. The students are worried about their careers, exams, job opportunities, etc. The working population is going through a heavy workload due to work from home, uncertainty of jobs, financial stability, etc. They are trying to cope with this pandemic situation by using different coping mechanisms. Resilience depends on the situation, internal as well as external factors. The differences between all these things are collectively responsible for the significant difference between the perceived stress and resilience.

8. IMPLICATIONS

- Conducting webinars and sessions on an online platform to help participants to cope with the pandemic situation.
- Developing modules (designing activities, games and exercises) by using the current results in fields of Stress Management, dealing with intolerance of uncertainty as well as improving the overall resilience.
- Helping in improving levels of resilience will aid individuals in dealing with future stressors as well as uncertainties, and will lower the resulting tensions and anxieties.
- Incorporating Stress Management Programmes in classrooms as well as the workplace will reduce the overall effects of stress, which will in turn enhance performance.

9. CONCLUSION

Dealing with this pandemic situation is really difficult for all of us. People are trying to cope with this but it is definitely affecting the mental health of the people. The conclusions of the research are as follows:

- There is a significantly negative correlation between intolerance of uncertainty and resilience.
- There is a significantly negative correlation between perceived stress and resilience.
- There is a significantly positive correlation between perceived stress and intolerance of uncertainty.
- There is a significant difference between perceived stress and resilience of the students and working individuals.
- There is no significant difference between intolerance of uncertainty among students and working individuals.

10. FUTHER DIRECTION

- Future researches could compare groups which are geographically and culturally different from one another. This will help in understanding the various ways in which people adapt, perceive and understand various situations.
- In order to examine the difference in people's mind-sets regarding perceived stress, intolerance and the resulting resilience, post pandemic data collection can be done.
- Variables such as locus of control, risk perception, positive/negative behavioural responses, adaptability, adjustment, etc. can also be further studied.

11. ACKNOWLEDGEMENT

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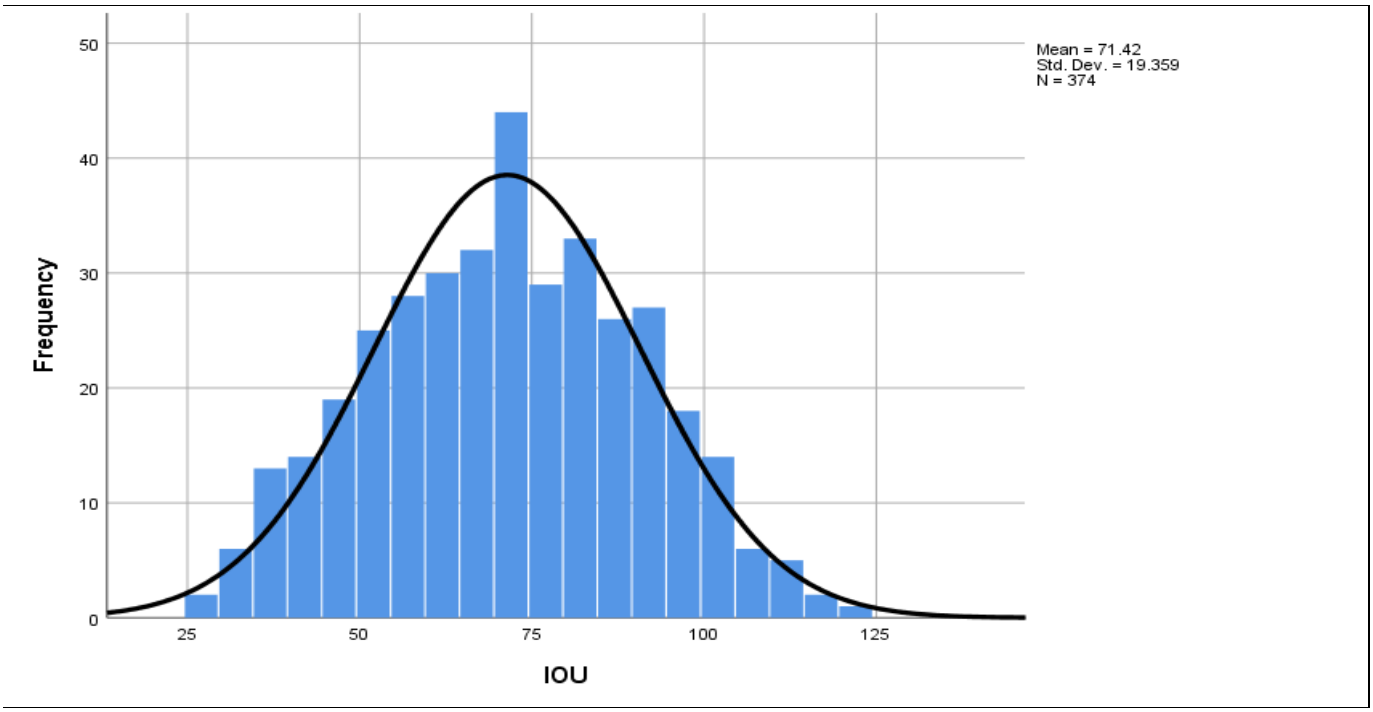
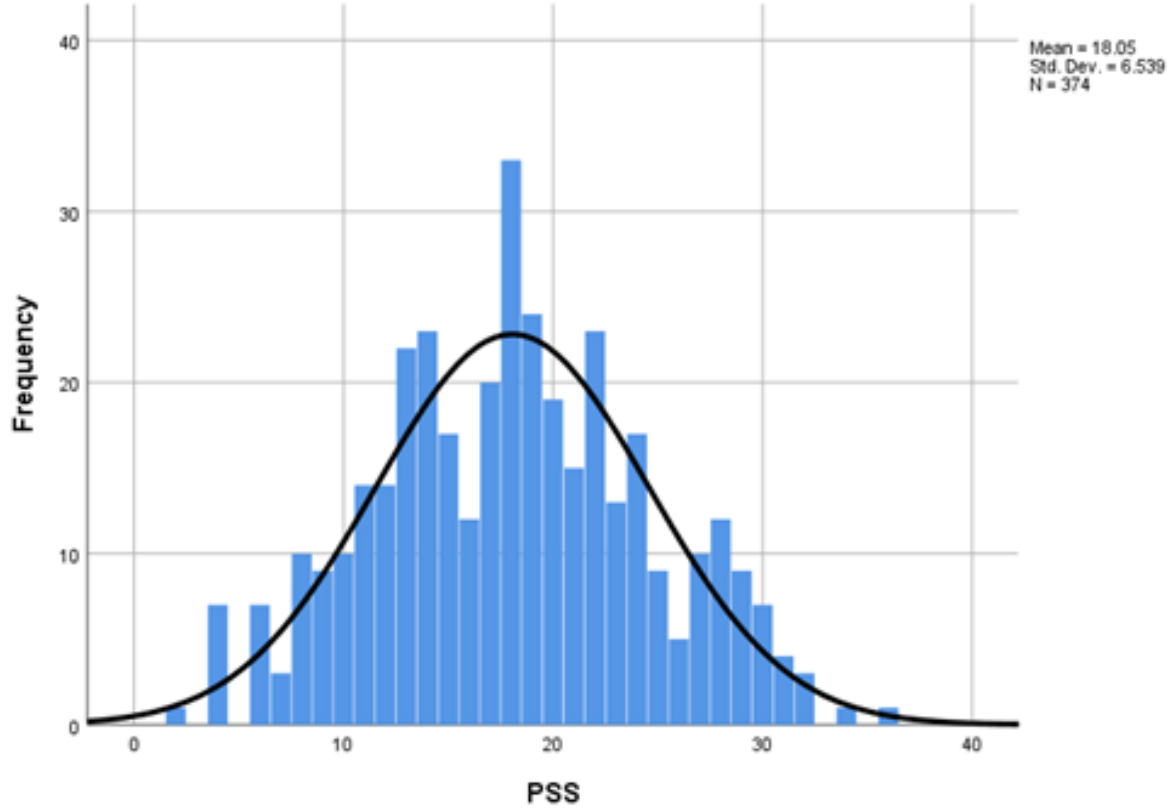
APPENDIX A: Graphs

Graph 1: Normal distribution curve of intolerance of uncertainity



Graph 2: Normal distribution curve of perceived stress



Graph 3: Normal distribution curve of resilience