

**Comparative Study**

## **A Comparative Study on the Levels of Perceived Stress in Young Adults of Rural and Urban Population**

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### **ABSTRACT**

There are various factors that have been observed to influence the level of perceived stress in individuals are different for urban and rural young adults like media, peers, fashion, competition, and academic stress. The aim of this research study is to compare the levels of Perceived stress among young adults in rural and urban populations. We have administered the Perceived Stress scale, originally developed in 1983 by Cohen, through a comprehensive online questionnaire to a total of 160 young adults (80 from Bengaluru and 80 from Madanapalle, Andhra Pradesh). We used convenience and snowball sampling methods to select participants belonging to the ages of 18 to 25 years. The hypothesis posited that urban young adults would express more perceived stress than their rural counterparts. The scored the responses according to the interpretation norms given by Cohen and calculated the descriptive statistics for both sample groups. We then proceeded to compare the scores of both the groups to each other using the independent sample t-test method with the help of JAMOVI 2.6.13 software. Analysis showed that there is a statistically significant difference in the levels of perceived stress between the two groups with the urban young adults expressing higher levels of perceived stress ( $M = 20.7$ ) than young adults from rural town. ( $M = 19.1$ ). This study has concluded that urban young adults experience higher level of perceived stress than rural young adults, supporting the hypothesis.

**Keywords:** *Young Adults, Perceived Stress, Urban, Rural, Comparison*

**Y**oung adulthood (ages 18-25) is an essential and complex chapter in life filled with transitions in education, socialization, and work, all of which can contribute to elevated stress levels. Stressors are not the same, varying significantly for rural and urban young adults. For instance, in urban settings youth experience high stress levels owing to busy lifestyle, cut-throat competition and high exposure to media, among other causes. On the other hand, rural areas which are generally slow-paced and quitter may expose young adults to unique stressors like lack of access to facilities, resources, low possibility, and opportunity for development.

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This study endeavors to analyze the differences in the level of perceived stress that young adults experience depending on the place of their residence. By exploring these differences future research can help us understand the underlying factors that result in disparities in mental health. The results of this study could help in designing interventions for the management of stress and psychiatric illnesses in young adults belonging to both settings.

### **Perceived Stress**

Perceived stress refers to the degree to which events in a person's life are assessed as stressful, unpredictable, and uncontrollable (Cohen, Kamarck, & Mermelstein, 1983; Phillips, 2012). It includes the amount of stress they are under at a given time or over a time period. It consists feelings of unpredictability and uncontrollability about events that happen in a person's life, how often one has to deal with irritating inconveniences, how much change takes place, and how much confidence they have in their ability to cope and overcome challenges. Perceived stress measures the general stressfulness of an individual and not the frequency and type of stress faced (Phillips, 2015). Individuals may face similar stressors but appraise, interpret, and react to these in different ways according to their unique personalities, coping resources, and support received. In this way, we can understand the complex interaction between an individual and the environment (Anna C. Phillips, 2013).

### **Stress**

Stress is a normal reaction to pressure or threat, and it often appears in situations when people feel that things are out of control or that they are unable to cope. According to Lazarus & Folkman (1984; Taylor, 1999), Stress is our response to events that disrupt, or threaten to disrupt, our physical or psychological functioning. The American Psychological Association suggests that stress can become unhealthy when it interferes with daily functioning, even though it commonly occurs in everybody's life.

### **Perception**

According to the American Psychological Association Dictionary (2018), perception is the result or process of gaining awareness about objects, relationships, and events with the help of senses. Perception includes important activities like recognizing, observing, and discriminating. These processes enable individuals to organize and interpret the vast amounts of incoming stimuli into meaningful information and concepts and to act accordingly. Each individual's perception of an event differs depending on their prior experience, interest, and style of information processing. So individual differences play a key role in perception. (Kendra Cherry, 2023).

### ***Interaction of Perception and Stress***

The way we perceive our situations and the world around us can have a direct impact on our personal wellbeing. Beliefs about the amount of control an individual has in their life can be a buffer to negative stress. Feeling that things are out of control can be a major cause of stress; sometimes people may actually be in control but simply not acknowledge it (Buttler, 2014).

### ***Key Components of stress according to Lazarus***

Two concepts are central to any psychological stress theory: the first is appraisal, which is the individuals' evaluation of the significance of what is happening and how stressed they feel by it, and the second is coping; individuals' efforts in thought and action in order to fulfill the demands (Lazarus, R.S. 1993).

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**Appraisal.** According to the appraisal theory of emotions, our evaluations of events impact how much stress we experience. (Alleydog Glossary).

**Coping.** Folkman and his colleagues defined Coping as “the thoughts and behaviors used to manage the internal and external demands of situations that are appraised as stressful” (Folkman, S. Moskowitz, JT. 2004).

### ***Young Adulthood***

Young adulthood, spanning approximately from 18 to 26, is a developmental period that is characterized by normal and predictable biological and psychological growth and maturation, but the specific social roles and tasks expected of each cohort of young adults are determined by the particular society, culture, and particular time in history that they belong to (Bonnie, RJ. Stroud, C. Breiner H. 2015).

## **REVIEW OF LITERATURE**

Bovier, A.P., et al. (2004) surveyed 2000 randomly selected university students in Geneva, Switzerland, to assess the role of perceived stress, social support, and internal resources as determinants of mental health and concluded that perceived stress was a risk factor for low mental health among young adults.

Sun and Liang (2022) investigated a total of 356 young adults from both urban and rural Taiwan to test how unsupportive relationships, perceived stress, and authentic self-presentation influence loneliness. Their study concluded that unsupportive relationships and perceived stress in both the urban and rural groups positively affect their loneliness.

Rohallia, S.S., et al. (2017) studied the mental health, wellbeing, and perceived stress among 60 students from urban and 60 students from rural schools in Chandigarh aged 15-17 years and concluded that there were significant differences in the amount of perceived stress experienced by the two groups.

Thorsteinsson, E.B., et al. (2012) examined the effects of social support and coping on stress-depression relationship among 510 rural and urban adolescents in Australia, and their study concluded that maladaptive coping mechanisms and social support were partial mediators of the relationship between perceived stress and depression.

Pramanik, R. et al. (2019) investigated 102 Bengali school-going adolescents from a rural block in Eastern Bengal to examine the levels of perceived stress and its indicators concluding that stress can be alleviated by arranging motivational programs, life skills training, and counseling.

Barbara Zust (2012) conducted a pilot study to assess stress perception in rural and urban perinatal patients and her findings indicated that rural participants attended more perinatal classes and the urban participants reported higher overall perception of stress. This pilot study offers feasibility for future researchers wanting to study perinatal stress influenced by sociocultural and geographical factors.

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### **METHODOLOGY**

A total of 160 young adults were selected for this study. 80 participants lived in Bangalore and 80 participants lived in Madanapalle, Andhra Pradesh. All responses of the participants to the Perceived Stress scale by Cohen were collected online through Google forms.

#### ***Research Objective***

To compare the level of perceived stress between young adults living in urban and rural areas.

#### **Hypotheses**

**H1-** there is no statistically significant difference in level of perceived stress between urban and rural group.

**H2-** The level of Perceived stress in urban young adults is higher than that of rural young adults on the Perceived Stress Scale by Cohen et al.

- **Independent Variable.** Place of residence: urban or rural.
- **Dependent Variable.** Level of Perceived stress

#### ***Research Design***

A Cross- sectional research design is employed for statistical quantitative analysis of Perceived stress.

#### **Sample**

The sample population for this research study is young adults aged 18 to 25 years.

#### ***Sampling Method***

College going students were selected from Bangalore and Hyderabad for urban population and from Madanapalle, Andhra Pradesh for rural population. We used the convenience and snowball sampling methods.

- **Sample size.** The sample consists of 160 young adults, 80 from urban and 80 from rural populations. The sample consists of both females and males.
- **Inclusion Criteria.** the age criteria and place of residence was the deciding factor to include participants.
- **Exclusion Criteria.** participants outside of the age criteria were not included in the sample.

#### ***Tool for data collection***

Perceived Stress Scale by Cohen et al. (1983)

#### ***Procedure for Data Collection***

We converted the Perceived Stress Scale into a comprehensive online questionnaire for both groups with the 10 questions and a 5-option Likert scale from which the participants could choose their responses. It was administered to the sample via Google Forms and circulated through different online platforms like WhatsApp and Instagram.

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### *Procedure for data analysis*

The participants were asked to answer the 10 questions of the Perceived Stress Scale by choosing from the 5 alternative options to reflect how they felt in the last month. The Likert scale consists of the following 5 options: Never, Almost never, Sometimes, Fairly often and Very often. Item numbers 1, 2, 3, 6, 9 and 10 of the questionnaire measured the appraisal aspect of stress, and the scores assigned to the options of these questions were Never-0, Almost never-1, Sometimes-2, Fairly often-3, and Very often-4. Item numbers 4, 5, 7 and 8 of the questionnaire measured the coping aspect of stress, and the scores are reversed: Never-4, Almost Never-3, Sometimes-2, Fairly Often-1, and Very Often-1. All the 10 responses of each participant have been scored and interpreted according to the interpretation table provided by Cohen.

**Table 1 Interpretation of Perceived Stress Scale**

Total Score	Interpretation
0-13	Low Perceived Stress
14-26	Moderate Perceived Stress
27-40	High Perceived Stress

The total group mean, standard deviation, and statistical difference in the levels of perceived stress was calculated using between-groups design, which is the Independent t-Test, with the help of JAMOVI 2.6.13 software.

**Ethical Considerations:** Informed consent was obtained from all the participants after informing them about the purpose and procedure of the study. No participant was forced, coerced or manipulated into participating in this study. We protected the participant's identity by anonymizing their responses and strong their data privately with limited access with the utmost confidentiality. Respecting their autonomy and decision-making all participants were given complete control over their involvement and the option to opt out of the study at any time. We also ensured them that all the data collected would be used exclusively for research purposes only.

## **RESULTS AND DISCUSSION**

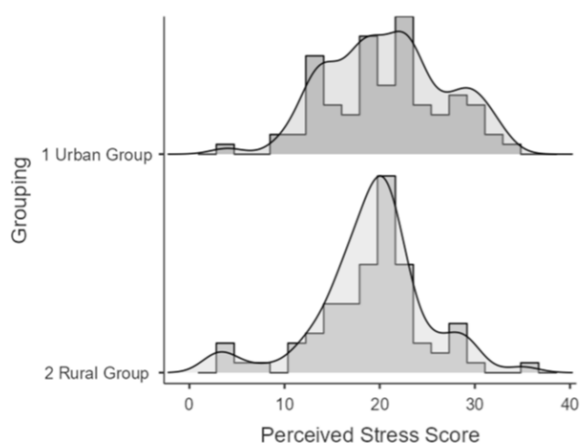
The responses from 160 young adults (80 from rural and 80 from urban populations) in total were collected and analyzed statistically. The average age of the urban group is 21.31 years, and that of the rural group is 21.57 years. The average Perceived stress score of the urban group is 20.7 and that of the rural group is 19.1. The standard deviation scores are 6.13 for the urban group and 5.81 for the rural group, respectively [Table 2].

**Table 2 Group Descriptives**

	Group	N	Mean	Median	SD	SE
Perceived Stress Score	1 Urban Group	80	20.7	20.5	6.13	0.686
	2 Rural Group	80	19.1	20.0	5.81	0.650

This is a histogram and density chart that shows us the distribution of scores for both the groups.

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Upon analyzing the Perceived stress scores using Independent t-test method, the student's t value is 1.67 with degree of freedom (df) being 158, and the p score is 0.049 at a confidence interval of 95% and at the 5% significance level ( $\alpha = 0.05$ ). The mean difference is 1.58, SE difference is 0.945, and effect size (Cohen's d) is 0.264. [Table 3]. From this analysis, it can be concluded that there is a significant difference in the levels of perceived stress between urban and rural young adults ( $0.049 < 0.05$ ). The level of perceived stress in young adults belonging to the urban population ( $M = 20.7$ ) is higher than that of young adults belonging to the rural population ( $M = 19.1$ ). We can thus, reject the null hypothesis which states that "there is no statistically significant difference in level of perceived stress between urban and rural group" while accepting the alternative hypothesis which states that "The level of Perceived stress in urban young adults is higher than that of rural young adults on the Perceived Stress Scale by Cohen et al."

**Table 3 Independent Samples T-Test**

		Statistic	df	p	Mean difference	SE difference
Perceived Stress Score	Student's t	1.67	158	0.049	1.58	0.945

Note.  $H_a \mu_1 \text{ Urban Group} > \mu_2 \text{ Rural Group}$

### **Findings**

The average perceived stress score obtained for young adults in the urban setting is 20.7, while that of their rural counterparts is 19.1. This difference of 1.58 is statistically proven to be significant ( $p = 0.049$ ,  $t = 1.67$ ,  $df = 158$ ), implying that the level of stress perception is higher in the youth living in urban areas than that of the youth living in rural settings. This proves the argument that urban settings and living conditions can increase perceived stress levels in growing adults as opposed to rural settings.

The observed difference in mean scores, though statistically significant, is quite small (1.58 points). Nevertheless, this difference is noteworthy, especially in the context of young adults, as even minor differences in levels of perceived stress can greatly impact mental health and well-being. Given that Cohen's d score is 0.264, the effect size is small to moderate, suggesting that though there is a noticeable statistically significant difference in levels of perceived stress, it is relatively small.

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The confidence interval of 95% for the mean difference does not include zero, suggesting a true difference in levels of perceived stress between the groups. Young adults residing in urban areas are increasingly exposed to risk factors, like environmental factors such as noise, crowding, fast moving lifestyles, and class differences (Evans & Kim, 2010). Young individuals living in cities might also be expected to achieve more in terms of career, education, and other more socially related activities, which leads to this generation expressing higher levels of stress.

On the other hand, residents in the rural towns might lead a more leisure-oriented lifestyle and even more likely develop close relationships with people, all of which could work the other way and protect them from stress (Harten et al., 2011). Nonetheless, rural regions may come with their own stressors, like limited health care facilities, etc., lesser education or job provisions, and even a lack of connections to people outside their communities. These might predispose young adults in rural settings in a manner different from that experienced by urban young adults.

### ***Limitations***

Although the study's sample size of 160 young adults (80 for each group), is adequate for a statistically useful study, the research, however, focused on young adults only, which may limit the generalizability of findings to other age groups. Furthermore, the urban and rural populations were not matched on other possible confounding variables, for instance, their social class, educational background, and working status, which may have affected perceived stress levels.

Madanapalle in Andhra Pradesh, is considered a town, however, its proximity to Bangalore which is an urbanized metropolitan city, could have influenced the perceived stress levels in this area. As urbanization spreads rapidly, small towns and rural areas surrounding major urban hubs experience the influx of modern lifestyle practices in terms of basic communication as proven by the fact that we were able to reach the young adults online with no need to visit them in person, peer pressures, media exposure and other factors which are common to urban areas. Young adults may face challenges like balancing traditional rural values and the competitive pressures of staying updated like their urban counterparts. Obtaining responses from actual rural places that are far away from urban exposure or influence, having no proper access to social media or online communication may actually yield a higher difference in levels of perceived stress between the two sample groups.

Though a significant difference in perceived stress levels was detected, it does not tell us about causality, which would be possible if a systematic longitudinal study was conducted.

### ***Suggestions for future research***

Certain factors, which were not incorporated into this study, for instance, access to social support, involvement in physical activity, and coping tactics, may also be associated with levels of perceived stress. It would be beneficial for further research to include these variables to enhance the understanding of stressors among young adults in various settings. Further exploration of specific environmental stressors can be helpful in the development of policies and better access to health care facilities. Research can be conducted by selecting a rural sample from isolated villages that do not have urban influence to any extent which could provide insights into their pace of living and their perceptions of stress.

## **CONCLUSION**

This study was conducted to explore the perceived stress levels in urban and rural young adults with the hypothesis expecting the urban young adults to express higher levels of perceived stress than rural young adults. The results of the independent sample t-test provide statistically significant support for this hypothesis, showing higher scores of perceived stress in urban young adults ( $M = 20.7$ ) than rural young adults ( $M = 19.1$ ) and a  $p$  value of 0.049. While this finding highlights the disparity, it is important to consider the complexity of stress and the interaction of various sociocultural, economic, and psychological factors. These results underscore the need for targeted mental health interventions, especially for urban youth who may be facing unique challenges like fast-paced lifestyle, costly and high-stress living conditions.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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